



GOVERNMENT OF KERALA

Kerala Economic Review 2006

State Planning Board, Thiruvananthapuram



ECONOMIC REVIEW 2006

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CHAPTER 1

AN OVERVIEW

Kerala's development trajectory during the recent period bears a striking resemblance to that of the national economy as a whole. Even its GSDP growth rates, 8.2 percent in 2004-05 and 8.0 percent in 2005-06, are very similar to the GDP growth rate figures, 7.5 percent and 8.4 percent respectively, for the national economy. Its primary sector growth rate, like that of the national economy as a whole, has been abysmal. And it too, like the national economy, derives the main stimulus for its growth from the secondary and tertiary sectors, the latter in particular.

1.2 There are however two important differences between the Kerala situation and that of the national economy. The first relates to the relative shares of the different sectors in gross output. The relative shares of the three sectors in Kerala, while showing a pattern that is not too dissimilar from that of the national economy as a whole, do differ in their absolute magnitudes: 15.7, 23.8, and 60.5 percent respectively for the primary, secondary and tertiary sectors in 2005-06 compared to the national level figures of 22.0, 24.0 and 54.0. The primary sector's share is markedly lower in Kerala, but this is almost exactly offset by the higher share of the tertiary sector, leaving the share of the secondary sector almost identical in the two cases. The second difference consists in the fact that within the secondary sector, the predominant position is occupied, both with respect to relative size and with regard to growth rate, by construction rather than manufacturing.

1.3 These differences point to at least two specific features of Kerala's economy. The first is the preponderance of small and traditional industries within its overall industrial structure. The growth trajectory of the state has been such that the demand for these industries does not increase much even when there is high growth. This leaves them mired in a crisis that arose originally from the constraints that the exports of their products faced in the national and international market. At the same time, such demand for industrial products, as is generated in the context of the high growth rate experienced in the state, leaks out to producers located in the neighbouring states. The second feature is the remittance-inflow-driven nature of the state's economy. Such inflows generate *inter alia* an enormous demand for construction activity, which by its very nature has to be met largely locally, with only small leakages to the neighbouring states. Manufacturing therefore remains small and stunted while construction burgeons. Likewise, since the demand for services too has to be largely locally met, the regular and substantial inflows of remittances which boost such demand, give the service sector a preponderant position, which accounts for its greater importance than in the national economy as a whole.

1.4 Notwithstanding these specificities, however, the basic pattern, of an economy growing with extraordinary rapidity, but its primary sector that employs the bulk of the work-force experiencing stagnation or retrogression, is common to both Kerala and India. This basic pattern gets reflected in a significant increase in income inequalities, so significant indeed that scarcely any consolation can be derived from the fact that real per capita income in the state in 2005-06 increased by as much as 8 percent, which even exceeded the corresponding national figure of 6.9 percent. Just as the national figure, so impressive in absolute terms, accompanies growing malnutrition and rural poverty (a fact that does not come out in official poverty statistics), likewise Kerala's figure too camouflages significant, and non-diminishing, deprivation and destitution. An indication of such destitution is given by the number of households registering under the National Rural Employment Guarantee Scheme in the two districts where it operates. The number exceeds 150000 in Palakkad and 105000 in Wyanad.

1.5 This dichotomy, between a high overall growth rate and stagnation in the primary sector, would not matter if the work-force hitherto employed in the primary sector was getting pulled

into the faster growing sectors. The increase in income inequality that arose from such dichotomy would in such a case be only a transitional one, until enough workers had been pulled out of the primary sector, either to make it an altogether insignificant receptacle of work-force, or to allow an increase in its labour productivity to match that of the other sectors. The central feature of the current growth trajectory however is that this is not happening. The primary sector continues to be the main repository of work-force in the country, with agriculture alone, which provides just over a fifth of the GDP, accounting for as much as 60 percent of the work-force.

1.6 What is more, even such growth in employment as is occurring can scarcely be attributed to any dynamic employment-creating effects of the fast-growing non-agricultural sectors. While National Sample Survey data show an increase in the rate of growth of employment in the recent period, the unemployment rate in the country has nonetheless increased. What is more, the increase in employment shown by the NSS is largely under the category of “self-employment” which is indistinguishable from “disguised unemployment”. The rapidly increasing army of “self-employed” workers now accounts for more than half of the total work-force of the country, and it remains “self-employed” because it has been excluded from proper paid employment, which is not increasing rapidly enough. The bulk of it belongs not to the *active army of labour* but to the *reserve army*. It follows then that since the rapid growth of the secondary and tertiary sectors is not pulling primary sector workers into better-paid employment, relying on such growth to overcome poverty and destitution is pointless. An effort has to be made directly to revive the primary commodity producing sectors, not through the infusion of corporate capital from above (which could worsen destitution) but through a massive effort from below.

1.7 This is necessary for yet another reason, namely the grim situation relating to the food economy. The 1990s were the first decade since independence over which per capita foodgrain production in the country actually declined. And yet, because *inter alia* of a sharp deflation in rural development expenditure, which was part of the general deflationary stance of fiscal policy under neo-liberalism (of which the Fiscal Responsibility Acts were a manifestation), there was such a sharp squeeze on purchasing power with the people that per capita foodgrain absorption fell even more sharply than per capita foodgrain output. The result was a massive build-up of foodgrain stocks with the government, amounting to 63 million tones by July 2002, even as per capita foodgrain absorption was falling to pre-war levels. To get rid of this build up, the central government adopted three sets of measures: it resorted to substantial exports (in reality dumping) in the international market; it started winding down its procurement operations; and it kept down support and procurement prices in order to discourage what was called “over-production” of foodgrains. So successful were these measures that we now have a situation of acute food crisis, with very little stocks in hand, with virtually stagnant foodgrain output since the beginning of this century, and with a spurt in the rate of inflation, including in food prices, to subdue which the government is embarking on large-scale imports.

1.8 The threat to food security is particularly alarming in Kerala. If the foodgrain growth rate in the country as a whole has fallen behind the rate of population growth for quite some time and has come close to zero of late, in Kerala it has been significantly negative over a long period. This negative growth rate could be ignored earlier since a nation-wide Public Distribution System existed for foodgrains and Kerala could rely upon it for meeting its foodgrain requirement. But since public procurement of foodgrains which fed this system has got whittled down, and since per capita output of foodgrains in the country as a whole, which had been declining for some time, has fallen sharply this century, Kerala’s food situation is likely to become quite grim in the near future. If the challenge before the country as a whole is to restore the foodgrain economy back to health through a plethora of technological and institutional initiatives, this challenge is particularly urgent for Kerala. For Kerala however self-sufficiency in foodgrains is neither a feasible nor a rational objective. Since it contributes so much to the country’s cash crop and

foreign exchange requirements, it must insist on getting its full quota of foodgrain needs from the central kitty.

1.9 The resurgence of inflation is clearly the most serious immediate problem facing the country and the state. The cause for concern however is not just the increase in the rate of inflation, but more importantly the change in the nature of inflation. Till recently, since demand in the economy, especially for essential commodities, had been compressed through expenditure deflation by the government, both at the center and in the states, inflation had been of the “cost-push”, rather than of the “demand-pull”, kind. Hikes in administered prices, including of petro-products, arising from world crude price increases, had been the main stimuli behind inflation. Not surprisingly, it is the secondary and tertiary sectors which were the main locations for price increases, and not the primary sector. Matters however have changed suddenly and drastically. It is the primary sector that is now leading the inflation rate: the point-to-point inflation rate for February 10, 2007, for instance, has been 6.43 percent for manufactured products, 11.52 percent for primary articles and 2.30 percent for fuel, power, light and lubricants, resulting in an overall rate of 6.63 percent. And in the primary sector the cause of inflation is an excess of demand, including for speculative purposes, over supply. While considerable “slack” in the form of unutilized capacity exists in the secondary sector, the supply of primary commodities remains tight, prompting the central government to resort to imports and to consider de-hoarding. In short, the current inflation represents a return to the inflationary episodes of the pre-liberalization period. What is significant is that it is occurring even in the midst of liberalization and its attendant expenditure deflation.

1.10 The reasons behind this inflation are not far to seek. The introduction of forward trading in a number of sensitive commodities, and the whittling down of the procurement system, both of which were seen as part of the march to free markets, have unleashed speculative forces pushing up prices. But underlying speculation is the fact of basic tightness of supplies of essential commodities like cereals, pulses, and edible oils, on account of sluggish production trends. With per capita absorption and per capita output chasing each other in a downward slide, if the former had declined more than the latter until recently, now it is the turn of the latter to overshoot in the downward direction.

1.11 The challenge before the country today is that while undertaking “supply management” in the short-run, it must reverse the prolonged stasis in foodgrain production, in agriculture and in primary production in general. It must overcome the hiatus between an apparently high growth rate in the overall economy and the sluggish growth in the primary sector where the bulk of the work-force resides and works. But if instead of doing so, the central government adopts the alternative path of carrying out further expenditure deflation, of further curtailing purchasing power with the people in the belief that per capita absorption should be pushed further down compared to per capita output as a means of controlling inflation, then this would put a heavy burden on the people. This latter option may appear to be the “easier” one, but it will “solve” the problem of inflation only by achieving the same result that inflation would have otherwise achieved, namely a squeeze on the people’s living standards, by other means: instead of a squeeze on them through prices it would have substituted a squeeze on their purchasing power. No section of the people, not even the primary producers, have been beneficiaries of the inflationary process, the “gains” from which have been cornered entirely by intermediaries, big and small. Under the circumstances, any squeeze on them, whether through inflation or through a deflation in purchasing power (if this is the chosen mode of combating inflation), would affect all sections of the people adversely and would constitute a net additional burden which they can ill-afford. The challenge before policy-makers today is to resist this “soft option” of combating the inflationary process through a further expenditure deflation, though neo-liberalism would favour such a “soft option”.

CHAPTER 2

STATE FINANCES

The fiscal health of State Governments deteriorated sharply in the late-nineties. The policies of the Central government, in the form of exorbitantly high interest rates charged on Central loans and reduced transfers, were an important contributory factor towards its deterioration. This deterioration itself was evident from the deterioration of deficit indicators like Revenue Deficit (RD), Gross Fiscal Deficit (GFD) and Primary Deficit (PD) of all the states, even in a situation where the states were making no great thrusts in their plan outlays. The GFD/GDP ratio of all states which was 2.6 per cent in 1995-96, increased year after year and reached a peak of 4.7 per cent in 1999-2000. Thereafter it fluctuated around a stationary level. Revenue deficits and Primary deficits also moved almost in the same manner (See Table 2.1). Even though state governments' tax effort during the nineties was on the whole quite satisfactory, and certainly far more commendable than of the Centre, the ratio of whose tax revenue to GDP witnessed an actual decline, by the end of the decade the states were in dire fiscal straits.

Table 2.1
Key Fiscal Deficits of All States

Year	Gross Fiscal Deficit	Revenue Deficit	Primary Deficit
1995-96	31426 (2.6)	8201 (0.7)	9494 (0.8)
1996-97	37251 (2.7)	16114 (1.2)	11675 (0.9)
1997-98	44200 (2.9)	16333 (1.1)	14087 (0.9)
1998-99	74254 (4.2)	43642 (2.5)	38381 (2.2)
1999-00	91480 (4.7)	53797 (2.7)	46309 (2.4)
2000-01	89532 (4.3)	53569 (2.5)	37830 (1.8)
2001-02	95994 (4.2)	59188 (2.6)	33488 (1.5)
2002-03	102123 (4.1)	55111 (2.2)	31981 (1.3)
2003-04	123070 (4.5)	61145 (2.2)	41306 (1.5)
2004-05 (RE)	123635 (4.0)	44302 (1.4)	35737 (1.2)
2005-06 (BE)	110070 (3.2)	24770 (0.7)	16772 (0.5)

Source : State Finances : A study of Budgets of 2005-06
(Figures in brackets are percentage to GDP)

2.2 This fact constrained them in taking up development activities. For a while they could make do with larger borrowings, including from external agencies, which explains their larger fiscal deficits; but after they enacted Fiscal Responsibility legislation, their capacity to sustain sizeable plan outlays was seriously curbed. Rising commitments on salaries, pensions and interest payments, not to mention losses of public sector undertakings, added further to their predicament. To tackle this situation, many states have launched measures for revenue augmentation, curtailment of expenditures, public sector reforms etc. But while these measures have succeeded in reducing somewhat the percentage of their fiscal deficit to GDP, serious constraints on their ability to undertake development and welfare expenditures persist.

Kerala

Overall Fiscal Position

2.3 The major deficit indicators of Kerala, which peaked in 1999-00, showed a downward trend thereafter right until 2005-06. A casualty of this process however was plan outlay. The

actual plan outlay over the first four years of the tenth plan was no more than about three-quarters of the plan target. Kerala brought down deficits *inter alia* by cutting back on plan outlays. It did so because the pressure to curtail deficits was enormous.

2.4 The Fiscal Responsibility and Budgetary Management Act (FRBMA) of the Centre, passed in 2003, wants the Central government to bring down its fiscal deficit to 3 percent of GDP by 2007-08. The Centre also insists that the state governments should do the same as regards their fiscal deficit-to-GSDP ratio. (Kerala meanwhile had passed, entirely of its own volition, its own Fiscal Responsibility legislation, putting a cap on the FD/GSDP ratio at 2 percent). Accordingly, borrowing limits have been placed on the states. In this backdrop, the detailed public finance scenario of Kerala is discussed below.

2.5 The overall debt position of the state has shown an improvement during 2003-04 to 2005-06 (Table 2.2) but, at the cost of lowering expenditures and not by substantial revenue increase. The revenue deficit which was Rs.4118.66 crore in 2002-03 came down to Rs.3680.30 crore in 2003-04, to Rs.3668.92 crore in 2004-05, and further to Rs.3129 crore in 2005-06. The fiscal deficit came down from Rs.5539.05 crore in 2003-04 to Rs.4181.72 crore in 2005-06. The primary deficit also declined considerably. The primary deficit which was Rs.2210.75 crore in 2003-04, sharply declined to Rs.382 crore in 2005-06 (only 0.30% of GSDP). As per budget estimate for 2006-07 fiscal deficit is Rs.7534.54 crore and primary deficit Rs.3106.73 crore, comparatively higher figures of recent years.

2.6 The first LDF budget which inherited a salary-hike undertaken in accordance with the Pay Commission report on the eve of its coming to power, decided to break with fiscal conservatism and to provide for a significant increase in the plan outlay. Accordingly, the budget estimate for 2006-07 showed an increase in revenue deficit to Rs.5414 crore, an increase in primary deficit to Rs.3106.73 crore, and an increase in fiscal deficit to Rs. 7534.54 crore .

Table 2.2
Major Deficit Indicators

Year	Revenue Deficit		Fiscal Deficit		Primary Deficit	
	Amount	% to GSDP	Amount	% to GSDP	Amount	% to GSDP
1995-96	402.82	1.04	1302.66	3.36	378.50	0.98
1996-97	643.03	1.45	1542.48	3.47	439.07	0.99
1997-98	1122.90	2.27	2413.85	4.88	1127.76	2.28
1998-99	2029.96	3.61	3012.2	5.36	1565.94	2.78
1999-00	3624.21	5.8	4534.56	7.25	2582.29	4.13
2000-01	3147.06	4.51	3877.8	5.56	1620.20	2.32
2001-02	2605.64	3.28	3269.4	4.12	779.94	0.98
2002-03	4118.66	4.53	4990.04	5.49	2043.28	2.25
2003-04	3680.30	3.59	5539.05	5.41	2210.75	2.16
2004-05	3668.92	3.66	4451.9	4.44	839.36	0.84
2005-06	3129.15	2.80	4181.72	3.70	382.00	0.30
2006-07 B.E.	5414.78	4.29	7534.54	5.97	3106.73	2.46

Source : Finance department, govt. of Kerala

2.7 The Balance from Current Revenue (BCR) continues to be negative, but with a diminishing trend. The share of capital outlay on capital receipts that has marked a marginal improvement in 2004-05, declined in 2005-06. Return on investment ratio has marginally improved in 2005-06. The asset liability ratio has continued to remain unchanged since 2002-03. (Table 2.3).

Table 2.3
Financial Indicators for Government of Kerala

Particulars	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 B.E
Balance of Current Revenue (BCR) (Rs in Crore)	-1704	-1660	-1811	-1983	-1496	-575	-3704.68
Interest Ratio	0.26	0.27	0.28	0.28	0.27	0.25	0.23
Capital Outlay/Capital Receipt	0.17	0.16	0.15	0.12	0.15	0.11	0.1
Return of Investment ratio	0.006	0.003	0.005	0.009	0.013	0.8	N.A
Outstanding Guarantees/ Revenue Receipt	1.09	1.30	1.19	1.18	0.91	0.78	N.A
Assets/ Liabilities	0.47	0.44	0.4	0.4	0.4	0.4	N.A

Source : Finance department, Government of Kerala

Pattern of Revenue Receipts

2.8 The revenue receipt of the state government is the sum of state's own revenue and central transfers. State's own revenue comprises state's own tax revenue and state's own non-tax revenue. State's share of union taxes and grant in-aid and other receipts from central government for plan and non-plan are the components of central transfers.

2.9 The revenue receipts of the state increased by Rs.1685 crore in 2004-05 (14.26 per cent) as against the increase of Rs.1178 crore in 2003-04. But it has declined by Rs.267 crore and reached Rs.13233.59 crore in 2005-06. (See Table 2.4).

Table 2.4
Revenue Receipt

(Rs. Crore)

Year	State's own Revenue				Total (2+4)	Growth rate	Share of Central Taxes and Grants	Growth rate	Total Revenue (6+8)	Annual Growth rate
	State's own Tax Revenue	Growth rate	State's own Non Tax Revenue	Growth rate						
1	2	3	4	5	6	7	8	9	10	11
1995-96	3382.68	-	535.49	-	3918.17	-	1505.39	-	5423.56	-
1996-97	3898.50	15.25	513.8	-4.05	4412.3	12.61	1732.78	15.11	6145.08	13.30
1997-98	4501.05	15.46	552.11	7.46	5053.16	14.52	2065.06	19.18	7118.22	15.84
1998-99	4649.56	3.30	557.66	1.01	5207.22	3.05	1990.9	-3.59	7198.12	1.12
1999-00	5193.51	11.70	530.71	-4.83	5724.21	9.93	2217.53	11.38	7941.75	10.33
2000-01	5870.26	13.03	659.09	24.19	6529.35	14.07	2201.51	-0.72	8730.86	9.94
2001-02	5923.42	0.91	543.38	17.56	6466.8	-0.96	2589.59	17.63	9056.39	3.73
2002-03	7302.54	23.28	681.26	25.37	7983.8	23.46	2653.58	2.47	10637.38	17.46
2003-04	8088.78	10.77	806.98	18.45	8895.76	11.42	2919.61	10.03	11815.37	11.07
2004-05	8963.65	10.82	819.08	1.50	9782.73	9.97	3717.75	27.34	13500.48	14.26
2005-06	9779.64	9.10	936.77	14.37	10716.41	9.54	2517.18	-32.29	13233.59	-1.98
2006-07 (BE)	11662.86	19.26	1112.62	18.77	12775.48	19.21	3027.00	20.25	15802.48	19.41
AAGR from 1995-96 to 2006-07		12.08		7.69		11.53		7.89		10.40

Source : Finance Department, Govt. of Kerala

2.10 During the period 1995-96 – 2006-07, the revenue receipts in the state increased by an annual average growth rate of 10.40 per cent. The total revenue receipt in the state which was Rs.5423.56 crore in 1995-96 increased to Rs.15802.48 crore in 2006-07 (BE). The component wise growth rates during this period are: 12.08 per cent for own tax revenue, 7.69 per cent for own non-tax revenue and 7.89 per cent for central transfers to the states.

State's Own Tax Revenue

2.11 States own tax revenue in 2005-06 recorded a growth rate of 9.10 per cent as against the growth of 10.82 per cent in 2004-05. The total own tax revenue realized during 2005-06 was Rs.9779.64 crore, out of which Rs.7037.97 crore (71.97%) was on account of sales tax and Rs.841 crore (8.60%) on account of state excise duties. Stamps and registration fees accounted for Rs.1101.42 crore (11.26%) and motor vehicle tax for Rs.628.51 crore (6.43%). All components of own tax revenue registered increases during 2005-06 compared to the previous year (See Table 2.5).

Table 2.5
State's Own Tax Revenue

(Rs. Crore)

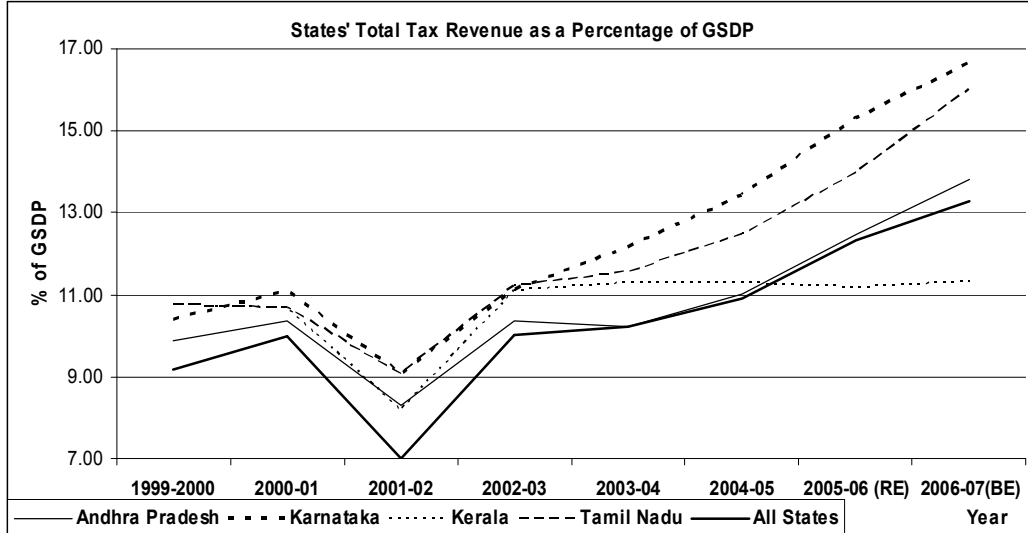
Year	Land Revenue	Stamps and Registration fees	State Excise Duties	Sales tax	Motor vehicles tax	Others	Total	Annual Growth rate
1995-96	23.71	3053.79	449.29	2285.96	222.87	47.06	3382.68	
1996-97	22.33	360.30	418.53	2772.28	247.59	77.47	3898.50	15.25
1997-98	23.75	331.36	543.41	3084.09	301.63	216.81	4501.05	15.46
1998-99	32.73	301.15	529.62	3366.62	323.31	96.13	4649.56	3.30
1999-00	34.67	279.65	591.10	3853.54	380.83	53.72	5193.51	11.70
2000-01	39.35	341.10	688.94	4344.33	394.85	61.69	5870.26	13.03
2001-02	34.93	394.28	541.46	4440.85	452.18	59.72	5923.42	0.91
2002-03	38.40	486.53	663.07	5343.15	513.20	258.20	7302.55	23.28
2003-04	40.59	549.81	655.91	5991.43	585.78	265.26	8088.78	10.77
2004-05	43.85	775.35	746.45	6701.05	610.48	86.47	8963.65	10.82
2005-06	43.88	1101.42	841.00	7037.97	628.51	126.86	9779.64	9.10
2006-07 (BE)	55.72	1400.36	944.00	8129.22	760.00	373.56	11662.86	19.26
AAGR from 1995-96 to 2006-07	8.9	14.7	7.9	12.3	12.0	-	-	12.08

Source : Finance Department, Govt. of Kerala

2.12 According to the budget estimates for 2006-07 own tax revenue is supposed to have increased by Rs.1883.22 crore (19.26%) compared to 2005-06. During the period 2005-06 the highest growth rate was achieved by stamps and registration fees (42.05%) followed by excise duty (12.67%). Though the revenue from tax on sale has increased in 2005-06 the rate of growth was only 5.02 per cent as against the growth rate of 11.84 per cent during 2004-05. The Value Added Tax (VAT) was introduced in the state from 1st April 2005. In 2005-06 the Government of India released Rs.456 crore as grant to state government to cover the revenue loss due to introduction of VAT. It is noteworthy in this context that only 50 per cent of the State's revenue expenditure can be met with the state's own revenue. Effective measures have to be initiated for augmenting state's own tax revenue at the earliest.

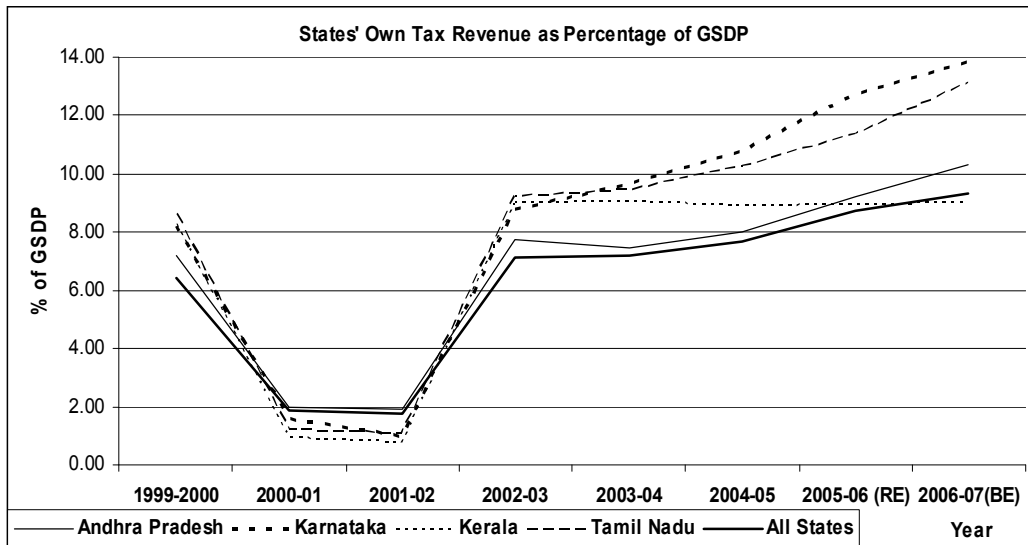
2.13 The Annual average growth rate of state's own tax revenue during the period 1995-96 to 2006-07 was 12.08 per cent: 8.9 per cent for land revenue, 14.7 per cent for stamps and registration fees, 7.9 per cent for state excise duty, 12.3 per cent for sales tax and 12 per cent for motor vehicle tax.

2.14 If we compare Kerala with the other South Indian States and with All States' weighted average with respect to Tax-GSDP ratio, we find that in general South Indian States lie above the All States' average. The Tax-GSDP ratio has been continuously increasing since 2001-02 in all cases, except Kerala. Kerala's total Tax as a percentage of GSDP has been stagnant at slightly above 11% of GSDP since 2002-03.



Source: *State Finances: A Study of Budgets - Various Issues*, Reserve Bank of India (RBI).

2.15 We see a similar picture as far as States' own tax revenue is concerned. Here also Kerala's own tax revenue to GSDP ratio has been stagnating slightly above 9% of GSDP, whereas the other South Indian States have succeeded in raising their tax-GSDP ratio quite significantly, and even the All-States average has been on the rise since 2001-02.



Source: *State Finances: A Study of Budgets - Various Issues*, Reserve Bank of India.

State's Own Non-Tax Revenue

2.16 State's own non-tax revenue constitutes on an average, only 8 to 12 per cent of state's own revenue. Table 2.6 shows the component-wise details of non-tax revenue receipt from 1995-96 to 2006-07. In 2005-06 the non-tax mobilisation increased by Rs.118 crore

(14.37%), from Rs.819.08 crore in 2004-05 to Rs.936.77 crore in 2005-06. As per budget estimates the total non-tax revenue in 2006-07 is Rs.1112.62 crore. Analysing the pattern of revenue it can be seen that revenue from social development services is gradually emerging as the major component of non-tax revenue, a position which was occupied earlier by revenue from forest. During 2005-06 while the revenue from forest was Rs.189.63 crore (growth rate - 5.04%) the revenue from social development services stood at Rs.236.67 crore (growth rate 12.78%). The annual average growth rate of non-tax revenue over the period 1995-96 to 2006-07 is 7.70 per cent while that of state's own tax revenue is 12.08 per cent.

Table 2.6
State's Own Non-Tax Revenue

(Rs.Crore)

Year	Forest	Annual Growth rate	Debt Services (interest)	Annual Growth rate	Social Development Services*	Annual Growth rate	Others	Annual Growth rate	Total	Annual Growth rate
1995-96	160.77	-	100.32	-	96.42	-	177.98	-	535.49	-
1996-97	162.00	0.77	55.73	-44.45	86.30	-10.50	209.77	17.86	513.80	-4.05
1997-98	144.91	-10.55	53.48	-4.04	106.73	23.67	246.99	17.74	552.11	7.46
1998-99	121.03	-16.48	70.96	32.69	122.66	14.93	243.01	-1.61	557.66	1.01
1999-00	109.88	-9.21	37.31	-47.42	118.41	-3.46	265.11	9.09	530.71	-4.83
2000-01	141.24	28.54	36.81	-1.34	165.07	39.36	315.97	19.18	659.09	24.18
2001-02	113.70	-19.50	31.08	-15.57	135.51	-17.88	263.09	-16.74	543.38	-17.55
2002-03	149.50	31.56	35.86	15.38	185.67	37.02	310.15	17.89	677.76	24.64
2003-04	187.18	25.14	32.40	-9.65	207.90	11.97	379.50	22.36	806.98	19.15
2004-05	199.69	6.68	40.51	25.03	209.85	0.94	369.03	-2.76	819.08	1.50
2005-06	189.63	-5.04	46.35	14.42	236.67	12.78	464.12	25.77	936.77	14.37
2006-07 (BE)	250.32	32.00	49.51	6.82	240.59	1.66	572.20	23.29	1112.62	18.77
AAGR from 1995-96 to 2006-07		5.81		-3.10		10.04		12.00		7.70

Source : Finance Department, Govt. of Kerala

* It includes education, medical and public health, Agriculture, Rural Development, Animal husbandry, Co-operation, Industries, Community Development and miscellaneous Social Development Organisation

2.17 The changing pattern of non-tax revenue receipts of Kerala and all states from 2003-04 to 2005-06 is given in Table 2.7. General Services and Economic Services are the sectors that contribute the major share of non-tax revenue of the state. This accounts for more than half of the own non-tax revenue. Lotteries contributed about 25 per cent of the total non-tax revenue collected during 2005-06. Though the receipts from lotteries were Rs.235 crore, with equally high expenditure of Rs.171.84 crore, the net yield from lotteries was only Rs.63.16 crore. The share of dividends and profits though low is slowly picking up. Revenue from forest, a major source of non-tax revenue, which has shown a declining trend in the previous years, revived in 2003-04 and continued its growth. Interest receipts, though meager, also show a rising trend.

Table 2.7
Component – wise realisation of Own – Non Tax Revenue–Kerala & All States
(Rs. Crore)

Item	2003-04		2004-05		2005-06 (BE)	
	Kerala	All states	Kerala	All states	Kerala	All states
States Own-Non tax Revenue	807 (100)	38189 (100)	846 (100)	49181 (100)	843 (100)	46420 (100)
Interest receipts	32 (4)	8617 (22.6)	36 (4.3)	11827 (24)	40 (4.7)	8299 (17.9)
Dividend & Profit	20 (2.5)	391 (1.0)	22 (2.6)	398 (0.8)	28 (3.3)	378 (0.8)
General Services	307 (38)	9372 (25.5)	275 (32.5)	12255 (25)	203 (24)	13933 (30)
(Of which) State Lotteries	134 (16.6)	5821 (15.2)	89 (10.5)	7604 (15.5)	235 (28)	9714 (21)
Social & Community Service	127 (15.7)	3283 (8.6)	145 (17.1)	3343 (7)	157 (18.6)	3187 (6.9)
Economic Service	320 (40)	16525 (43.3)	368 (43.5)	21357 (43.4)	415 (49.2)	20623 (44.4)
(Of which) Forestry & Wild Life	187 (23.2)	1928 (5)	217 (25.7)	1994 (4.1)	250 (29.7)	2118 (4.6)

Source : State Finances : A study of Budgets of 2005-06 (RBI. Dec 2005)

2.18 Table 2.8 shows the comparative position of non-tax revenue in the neighbouring states for 2005-06. The ratio between non-tax revenue and revenue expenditure in Andhra Pradesh, Karnataka and Tamil Nadu are 11.78%, 14.42% and 6.64% respectively. In Kerala it is only 5.09 per cent. It is interesting to note that while the ratios of non-tax revenue to revenue receipts for Andhra Pradesh, Karanataka and Tamil Nadu are 12.24%, 14.00% and 6.94% respectively, the same for Kerala is 7.08%, which is slightly higher than for Tamil Nadu.

Table 2.8
Comparative Position of States Own Non-Tax Revenue in four neighbouring States 2005-06

	<i>(Rs. Crore)</i>			
	Andhra Pradesh	Karnakata	Tamil Nadu	Kerala
Own Non tax Revenue	4403	4090	2101	937
Revenue Expenditure (RE)	37378	28364	31655	18424
Revenue Receipts (RR)	35976	29218	30251	13234
NTR/RE	11.78	14.42	6.64	5.09
NTR/RR	12.24	14.00	6.94	7.08

Source : State Finances : A study of Budgets of 2005-06 (RBI. Dec 2006)

Central Transfers

2.19 Tax devolution and grants are the main components of central transfers to the state. Table 2.9 shows the central transfers to Kerala during the period from 1995-96 to 2006-07. The growth rate in central transfers to Kerala shows considerable fluctuations. The annual growth rate of total transfers to the state during 1999-2000 was 11.38 percent but declined to -0.72 percent in 2000-01. It increased again by 17.62 percent in 2001-02. In 2004-05 growth rate was 27.34 percent which declined to 23.14 percent in 2005-06. The budget estimate for 2006-07 shows an increase of 39.02 percent in central transfers to the state. The total

transfers to Kerala during 2005-06 was Rs.4578.11 crore, as against Rs.3717.15 crore received in 2004-05. The increase was mainly on account of Rs.456 crore received as grant against revenue loss due to the introduction of VAT. Out of the transfers for 2005-06, Rs.2517.18 crore was state share in union taxes and Rs.2060.93 crore was grant-in-aid and other receipts from central government for plan and non-plan purposes. The average annual growth rate of central transfers for the period from 1995-96 to 2006-07 is 14.63 per cent.

Table 2.9
Central Transfers : 1995-96 to 2006-07

(Rs. Crore)

Year	Share in Central taxes & Duties		Grant-in-aid and other receipts from Centre for Plan & Non-Plan		Total Transfers	
	Amount	Annual Growth rate	Amount	Annual Growth rate	Amount	Annual Growth rate
1995-96	1036.96		468.43		1505.39	
1996-97	1242.65	19.84	490.13	4.63	1732.78	15.11
1997-98	1271.74	2.34	793.32	61.85	2065.06	19.18
1998-99	1382.30	8.69	608.60	-23.28	1990.90	-3.59
1999-00	1535.22	11.06	682.31	12.11	2217.53	11.38
2000-01	1585.61	3.28	615.90	-9.73	2201.51	-0.72
2001-02	1614.26	1.81	975.33	58.36	2589.59	17.62
2002-03	1715.21	6.25	938.37	-3.79	2653.58	2.47
2003-04	2012.00	17.31	907.61	-3.28	2919.61	10.03
2004-05	2404.95	19.53	1312.80	44.64	3717.75	27.34
2005-06	2517.18	4.67	2060.93	57.00	4578.11	23.14
2006-07 (BE)	3027.00	20.30	3337.57	61.94	6364.57	39.02
AAGR from 1995-96 to 2006-07		10.46		23.68		14.63

Source : Finance Department, Govt. of Kerala

2.20 Table 2.10 presents a comparative position of central transfers to the neighbouring states of Kerala during 2005-06. Kerala occupies the lowest position, both in terms of share of central taxes and grants from the centre. Compared to all states, Andhra Pradesh is at the top with 6.88 per cent of total transfers, followed by Tamil Nadu (4.45%) and Karnataka (3.83%).

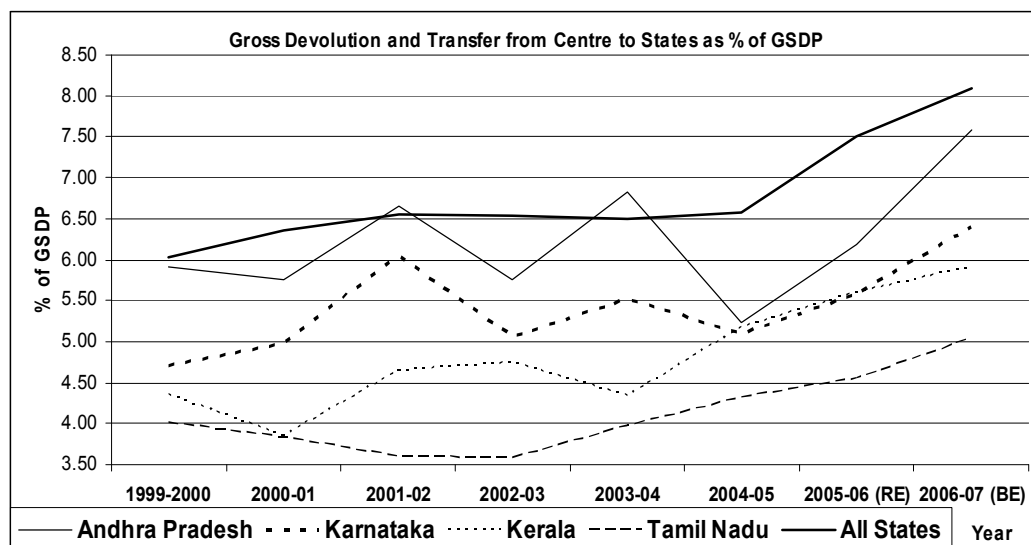
Table 2.10
Comparative Position of Central Transfers to Neighbouring States

(Rs. Crore)

State	2005-06			
	Share of Central Taxes	Grant from Centre	Total Amount	%
Andhra Pradesh	6688	4904	11592	6.88
Karnataka	3760	2688	6448	3.83
Tamil Nadu	4672	2827	7499	4.45
Kerala	2517	2061	4578	2.72
All States	90003	78472	168475	100.00

Source : State Finances : A study of Budgets of 2005-2006 (RBI. Dec 2005)

2.21 The ratio of Central transfers to GSDP, it should be noted, is lower for the South Indian States than for all states taken together (see Chart). But among these States Kerala appears to fare better than Tamil Nadu.



Source: State Finances: A Study of Budgets – Various Issues, RBI.

2.22 During the last two years the situation with regard to Central transfers, relative to GSDP, appears to have improved slightly. The gross transfer to all States taken together has increased from 6.5% of GDP to more than 8%, and the net transfer has increased from below 4.5% to above 7% of GDP. This improvement however is illusory, since it is caused by the inclusion of compensation for revenue loss owing to the introduction of VAT.

Expenditure Pattern

Revenue Expenditure

2.23 Revenue expenditure in the state has grown by an annual average rate of 14.46 per cent during the last decade where as revenue receipts have increased by 10.40 per cent. In 2005-06 the revenue expenditure increased by Rs.1254.27 crore (7.30%) over 2004-05 and reached at Rs.18423.68 crore. The budget estimate for the period 2006-07 shows an increase in revenue expenditure by Rs.6131.14 crore over 2005-06, i.e. by 33.28 per cent. A noticeable feature is that the share of development expenditure to total expenditure in the state is on the decline. The share of development expenditure which was 58.56 per cent of the total expenditure in 1995-96, declined to 52.96 per cent in 2005-06. When the development revenue expenditure increased by an annual average growth rate of 12.84 per cent only, the non-development revenue expenditure increased by 15.13 per cent during the period from 1995-96 to 2006-07 (See Table 2.11).

Table 2.11
Trend in Revenue Expenditure

(Rs. Crore)

Year	Total Revenue Expenditure		Development Expenditure		Non Development Expenditure	
	Amount	Annual Growth rate	Amount	% to total Revenue expenditure	Amount	% to total Revenue expenditure
1995-96	5826.38		3412.16	58.56	2414.22	41.44
1996-97	6788.10	16.51	4047.96	59.63	2740.14	40.37
1997-98	8241.12	21.41	5031.26	61.05	3209.86	38.95
1998-99	9228.08	11.98	5642.03	61.14	3586.05	38.86
1999-00	11565.96	25.33	6510.24	56.29	5055.72	43.71
2000-01	11877.92	2.69	6396.50	53.85	5481.42	46.15
2001-02	11662.03	-1.18	6028.34	51.69	5633.69	48.31
2002-03	14756.05	26.53	8064.80	54.65	6691.25	45.35
2003-04	15495.67	5.01	8061.94	52.03	7433.73	47.97
2004-05	17169.41	10.80	9244.46	53.84	7924.95	46.16
2005-06	18423.68	7.30	9757.89	52.96	8665.79	47.04
2006-07 (BE)	24554.82	33.28	13626.33	55.49	10928.49	44.51
AAGR from 1995-96 to 2006-07		14.46				

Source : Finance Department, Govt. of Kerala

2.24 Revenue expenditure amounts to about 96 per cent of the total expenditure in 2005-06. The share of the state's expenditure on education is more or less the same but the share of state's revenue expenditure on health sector gradually falls. The trend in revenue expenditure in the state is given in Table 2.12.

Table 2.12
Trend in Revenue Expenditure

(Rs.Crore)

Year	Development Expenditure						Non Development Expenditure				
	Education	Health	Agri. AH & Co- op	Industries, Labour & Employment	Others	Total	Interest Payments	Pension	Others	Total	Total Revenue Expenditure
1995-96	1435.13	498.62	388.96	157.83	931.62	3412.16	924.15	716.85	773.21	2414.22	5826.38
1996-97	1616.45	535.33	474.75	201.42	1220.01	4047.96	1103.41	753.67	883.06	2740.14	6788.10
1997-98	1761.05	634.12	575.65	214.61	1845.83	5031.26	1286.09	913.02	1010.75	3209.86	8241.12
1998-99	1957.90	694.86	615.43	191.75	2182.09	5642.03	1446.26	1154.32	985.47	3586.05	9228.08
1999-00	2609.49	870.38	643.67	216.87	2169.83	6510.24	1952.27	1808.29	1295.16	5055.72	11565.96
2000-01	2620.24	837.04	594.69	178.34	2166.19	6396.5	2257.60	1929.48	1294.34	5481.42	11877.92
2001-02	2471.00	861.21	487.57	176.36	2032.20	6028.34	2489.47	1837.93	1306.29	5633.69	11662.03
2002-03	2967.56	954.78	594.50	197.58	3350.38	8064.80	2946.77	2282.9	1461.58	6691.25	14756.05
2003-04	3080.12	1062.00	498.38	283.12	3138.32	8061.94	3328.30	2408.83	1696.60	7433.73	15495.67
2004-05	3254.19	1153.76	623.93	367.10	3845.48	9244.46	3612.54	2600.77	1711.64	7924.95	17169.41
2005-06	3456.85	1165.73	730.54	306.34	4098.43	9757.89	3929.84	2861.18	1874.77	8665.79	18423.68
2006-07 B.E	4941.46	1786.8	986.18	597.67	5314.22	13626.33	4427.81	4054.83	2445.85	10928.49	24554.82
AAGR from 1995-96 to 2006-07	12.7	13.2	10.2	19.5	19.2	14.2	15.5	18.2	11.5	15.1	14.4

Source : Finance department, Govt. of Kerala

Capital Expenditure

2.25 Capital expenditure in the state which was declining continuously, year after year has shown a slight revival in 2005-06. The ratio of capital expenditure to total expenditure which was 8.82 per cent in 1995-96 nose divided to 3.82 per cent in 2004-05. But in 2005-06, it arose and became 4.25 per cent. In the budget estimate for 2006-07, this ratio is calculated to be 8.27 per cent. The decline in capital expenditure despite higher growth in borrowings is one of the most disturbing features of the state's finances. The development needs of the state urgently require a shift in the composition of total expenditure in favour of capital expenditure. The figures for capital expenditure in the state during the period from 1995-96 to 2006-07 are presented in Tables 2.13 and 2.14.

Table 2.13
Trend in Capital Expenditure

(Rs.crore)

Year	Capital Expenditure		Total Expenditure		Capital expenditure as % to total expenditure
	Amount	Annual Growth Rate	Amount	Annual Growth Rate	
1995-96	563.47		6389.62		8.82
1996-97	622.52	10.48	7410.62	15.97	8.40
1997-98	738.87	18.69	8979.96	21.18	8.23
1998-99	651.63	-11.81	9879.96	10.02	6.60
1999-00	648.18	-0.53	12214.14	23.63	5.31
2000-01	577.20	-10.95	12455.11	1.97	4.63
2001-02	558.36	-3.26	12220.39	-1.88	4.57
2002-03	698.66	25.13	15454.71	26.47	4.52
2003-04	639.71	-8.44	16135.37	4.40	3.96
2004-05	681.75	6.57	17851.16	10.63	3.82
2005-06	816.95	19.83	19240.63	7.78	4.25
2006-07 (BE)	2213.25	171.00	26768.08	39.12	8.27
AAGR from 1995-96 to 2006-07		2.40		14.48	

Source : Finance Department, Govt. of Kerala

Table 2.14
Trend in Capital Expenditure

(Rs.Crore)

Year	Irrigation	Growth rate	Agriculture & Allied services	Growth rate	Industries	Growth rate	Public works	Growth rate	Others	Growth rate	Total	Growth rate
1995-96	170.34		52.49		91.50		137.05		112.09		563.47	
1996-97	187.59	10.13	51.14	-2.57	110.69	20.97	155.65	13.57	117.45	4.79	622.52	10.48
1997-98	188.29	0.37	53.57	4.75	106.11	-4.14	236.04	51.65	154.86	31.84	738.87	18.69
1998-99	177.76	-5.59	40.57	-24.27	80.06	-24.55	182.68	-22.61	170.56	10.14	651.63	-11.81
1999-00	169.57	-4.61	54.67	34.75	68.79	-14.08	241.96	32.45	113.19	-33.64	648.18	-0.53
2000-01	154.50	-8.89	36.59	-32.89	58.20	-15.39	187.99	-22.31	139.92	23.72	577.20	-10.95
2001-02	147.21	-4.72	29.18	-20.47	30.24	-48.04	222.13	18.16	129.60	-7.31	558.36	-3.26
2002-03	132.32	-10.11	44.95	54.04	33.09	9.42	287.42	29.39	200.88	55.00	698.66	25.13
2003-04	159.20	20.31	35.44	-21.16	30.55	-7.68	272.73	-5.11	141.79	-29.42	639.71	-8.44
2004-05	175.18	10.04	33.19	-6.35	74.53	143.96	260.34	-4.54	138.51	-2.31	681.75	6.57
2005-06	198.43	13.3	43.70	31.7	31.24	-58.1	68.21	-73.8	475.37	243.2	816.95	19.8
2006-07 (BE)	203.67	2.60	135.79	210.7	23.78	-23.9	32.27	-52.7	1003.44	111.1	1398.95	71.2
AAGR from 1995-96 to 2006-07		2.5		17.40		10.5		-8.8		37.01		10.6

Source : Finance department, Govt. of Kerala

Non-Plan Expenditure: Interest, Pension and Salary

2.26 The non-plan expenditure consists mainly of expenditure commitments on account of interest, pensions and salaries. During the period 2005-06, 93 percent of the total revenue receipt was utilized for meeting the above three commitments: 28.7 per cent for interest payment, 21.6 percent for pensions and 42.4 per cent for salaries. The budget estimate for 2006-07 shows an excess of expenditure on interest, pensions and salaries over the total revenue receipt of the year. This is mainly due to the pay revision of state employees implemented in 2006. During the period 1995-96 to 2006-07, the average annual growth rate of revenue receipts was only 10.40 percent, whereas the growth rate of total commitment for the above three items was 14.7 per cent. The total commitment on interest, pensions and salary which was 71.4 per cent of revenue receipts and 66.4 percent of revenue expenditure in 1995-96, gradually increased and reached a high level of 94.2 per cent of revenue receipt and 73.1 per cent of revenue expenditure in 2001-02. But from 2002-03 these ratios began to decline, and in 2004-05 they even came down to 85.5 per cent and 67.3 per cent respectively. The XII Finance Commission has recommended that states should endeavour to keep interest payments as a ratio of revenue receipts to within 15 per cent by 2009-10. For Kerala on the other hand interest payments as a percentage of revenue receipts have ranged between 25 and 28 during the last five years. The annual growth rate of interest payments has come down from 8.5 per cent in 2004-05 to 5.17 per cent in 2005-06, mainly due to swapping of high cost loans availed from GIC, NCDC, NABARD and Govt. of India for low interest-bearing loans. However, interest payments and pensions constitute largest share of non-development expenditure of the state. The growth characteristics of interest, pension and salaries are given in Table 2.15.

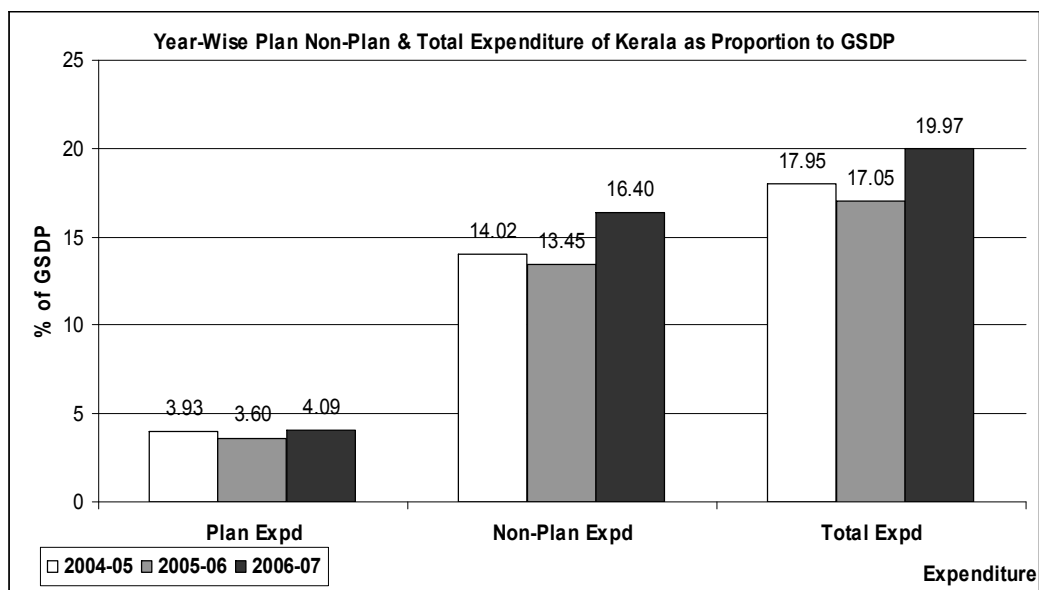
Table 2.15
Trend in Expenditure on Interest, Pension and Salary

(Rs.Crore)

Year	Interest			Pension			Salary			Total		
	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.	Amount	% to revenue receipt	% to revenue expdr.
1995-96	924.20	17.0	15.9	716.90	13.2	12.3	2230.40	41.1	38.3	3871.50	71.4	66.4
1996-97	1103.40	18.0	16.3	753.70	12.3	11.1	2616.70	42.6	38.5	4473.80	72.8	65.9
1997-98	1286.10	18.1	15.6	913.00	12.8	11.1	2803.30	39.4	34.0	5002.40	70.3	60.7
1998-99	1446.30	20.1	15.7	1154.30	16.0	12.5	3254.70	45.2	35.3	5855.30	81.3	63.5
1999-00	1952.30	24.6	16.9	1808.30	22.8	15.6	4502.90	56.7	38.9	8263.50	104.1	71.4
2000-01	2257.60	25.9	19.0	1929.50	22.1	16.2	4491.60	51.4	37.8	8678.70	99.4	73.1
2001-02	2489.47	27.5	21.3	1837.90	20.3	15.8	4200.80	46.4	36.0	8528.20	94.2	73.1
2002-03	2946.77	27.7	20.0	2282.90	21.5	15.5	4678.99	44.0	31.7	9908.66	93.1	67.1
2003-04	3328.30	28.2	21.5	2408.83	20.4	15.5	5067.09	42.9	32.7	10804.22	91.4	69.7
2004-05	3612.54	26.8	21.0	2600.77	19.3	15.1	5336.00	39.5	31.1	11549.31	85.5	67.3
2005-06	3799.25	28.7	20.6	2861.18	21.6	15.5	5605.49	42.4	30.4	12265.92	93.0	66.6
2006-07 B.E	4427.81	28.0	18.0	4054.83	25.7	16.5	8055.00	51.0	32.8	16537.64	105.0	67.3
AAGR from 1995-96 to 2006-07	15.5			18.3			13.3			14.7		

Source : Finance department, Govt. of Kerala

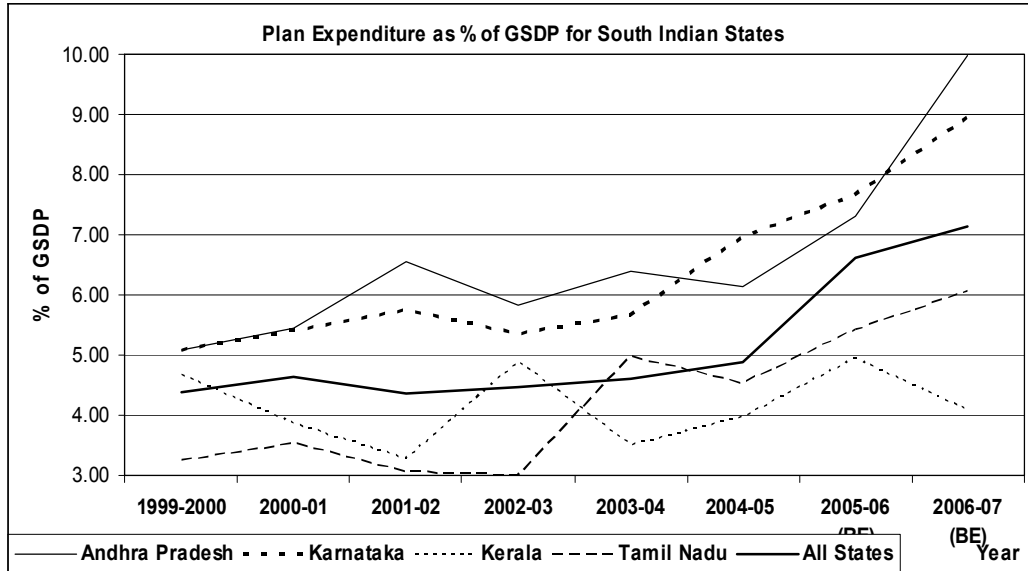
2.27 Total estimated expenditure of the government of Kerala during 2006-07 (BE) has been Rs.26768 Crore, which is nearly 20% of the estimated GSDP. Again, plan expenditure is around 20% of the total budget and the remaining 80% is non-plan expenditure. As a proportion of GSDP the estimated plan expenditure is higher (4.09%) in the revised budget estimate of 2006-07, compared to the revised estimate (3.6%) of 2005-06. Non-plan expenditure as a proportion to GSDP also shows an increase and in the revised budget estimate of 2006-07 it is 16.4% of GSDP compared to 13.5% (actuals) during 2004-05. Altogether, the ratio of total government expenditure to GSDP has gone up from 17% during 2005-06 to 20% in 2006-07 (BE). The graph below summarises the last three years' expenditures of Kerala Government.



Source: Revised Budget, Govt. of Kerala - 2006-07.

Note: Nominal GSDP has been assumed to grow at a flat rate of 14% per annum.

2.28 In the revised budget for 2006-07 plan expenditure has been increased by Rs. 232.13 crore and non-plan expenditure by Rs. 1320.67 crore. The ratios of developmental expenditure and of plan expenditure to GSDP have been compared for all South Indian States and all the States in India taken together. In Kerala these are the lowest among South Indian States (Kerala's figures for 2006-07 are taken from non-revised budget) on both counts.



Source: *State Finances: A Study of Budgets - Various Issues*, Reserve Bank of India (RBI), Kerala Revised Budget 2006-07 and Central Statistical Organisation (CSO).

Note: GSDP figures up to 2004-05 are from CSO and for last two years these are estimated on the basis of their respective recent trends and for Kerala we assumed 14% growth rate of nominal GSDP for last two years.

2.29 Developmental expenditure as a ratio of GSDP experienced a major and consistent contraction. The table below shows how there has been a cut in expenditures on health, education, water supply and sanitation and social services as a whole during the recent past in Kerala. Expenditure on health as a proportion of GSDP was 1.14% in 1999-2000, and came down to 0.92% during 2004-05. Similarly in the case of education, the expenditure as a proportion of GSDP came down from 4.2% to 3.26% during same time period.

Year	Health	Education	Water Supply & Sanitation	Social Services
1999-2000	1.14	4.20	0.29	6.83
2000-01	0.99	3.78	0.23	6.08
2001-02	1.04	3.44	0.18	5.71
2002-03	0.99	3.68	0.24	6.31
2003-04	0.96	3.46	0.26	5.68
2004-05	0.92	3.26	0.26	5.94
2005-06 (RE)	1.03	3.41	0.28	6.31

Source: *State Finances: A Study of Budgets - Various Issues*, RBI.

Debt Profile

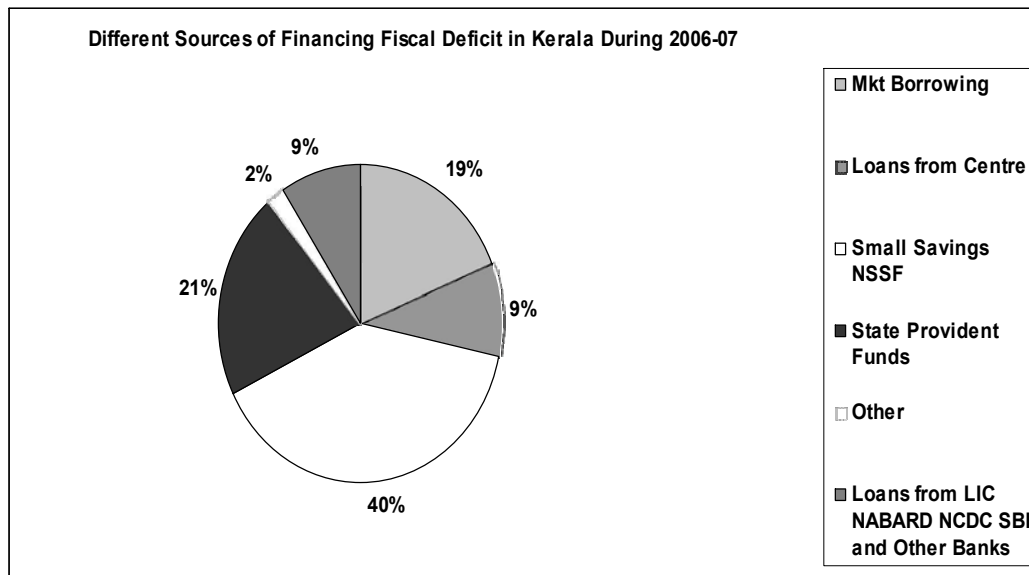
2.30 Internal debt, small savings/provident fund and loans and advances from the central government are the three main components of debt liabilities of the state. Within the period from 1995-96 to 2006-07, the total debt of the state increased from Rs.10113.54 crore in 1995-96 to Rs.55320.49 crore in 2006-07 (up to 31.12.2006). The ever growing debt of the state at this rate is a matter of serious concern (See Table 2.16).

Table 2.16
Debt of the State

(Rs. Crore)

Year	Internal Debt	Growth rate	Small Savings Provident Fund, Others	Growth rate	Loans and Advances from the Central Govt.	Growth rate	Total	Growth rate
1995-96	2486.28		3389.01		4238.25		10113.54	
1996-97	2970.85	19.49	3837.52	13.23	4612.54	8.83	11420.91	12.93
1997-98	3585.12	20.68	4292.51	11.86	4990.51	8.19	12868.14	12.67
1998-99	4424.36	23.41	5627.78	31.11	5648.13	13.18	15700.27	22.01
1999-00	5735.61	29.64	8537.67	51.71	5902.79	4.51	20176.10	28.51
2000-01	7627.34	32.98	10189.75	19.35	6101.88	3.37	23918.97	18.55
2001-02	9342.46	22.49	11261.65	10.52	6346.46	4.01	26950.57	12.67
2002-03	11747.02	25.74	12778.37	13.47	6534.88	2.97	31060.27	15.25
2003-04	17420.94	48.30	14403.33	12.72	5627.96	-13.88	37452.23	20.58
2004-05	21676.23	24.43	14790.83	2.69	5410.82	-3.86	41877.88	11.82
2005-06	25670.72	18.43	14840.93	0.34	5417.40	0.12	45929.05	9.70
2006-07 (BE)	31459.46	22.54	17434.74	17.50	6426.29	18.62	55320.49	22.62
AAGR from 1995-96 to 2006-07		26.2		16.8		4.2		17.00

Source : Finance Department, Govt. of Kerala



Source: Finances: A Study of Budgets - Various Issues, RBI, GoI.

2.31 Internal debt grew faster with an annual average growth rate of 26.2 per cent during the period 1995-96 to 2006-07. The major portion of the debt liabilities was created by high cost borrowings made for meeting recurring revenue expenditure. The debt-GSDP ratio as well as the percapita liability of the state is much higher than that of neighbouring states and all states' average (Table 2.17). The per capita debt of Kerala which was Rs.6285 in 2000

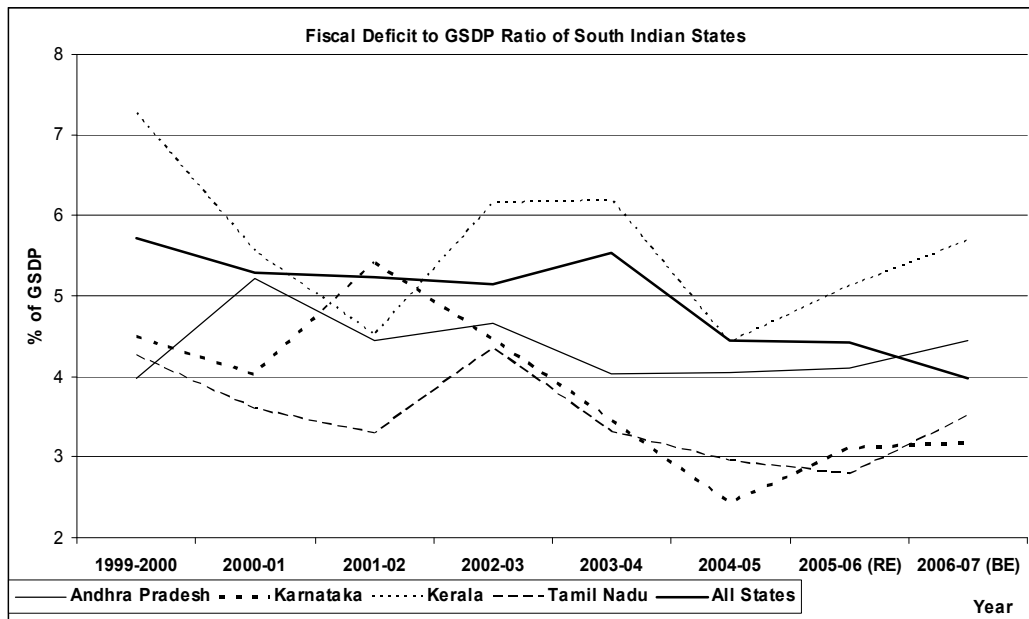
increased to Rs.10922 in 2004. The percapita debt of neighbouring states in 2004 was only Rs.7290 for Andhra Pradesh, Rs.6587 for Karnataka and Rs.7382 for Tamil Nadu. Even the percapita debt of all states in 2004 was only Rs.7405. When the debt-GSDP ratio of neighbouring states ranged between 19 per cent and 24 per cent in 2000, that of Kerala was 31 per cent. The debt-GSDP ratio of Kerala was 40 per cent in 2004.

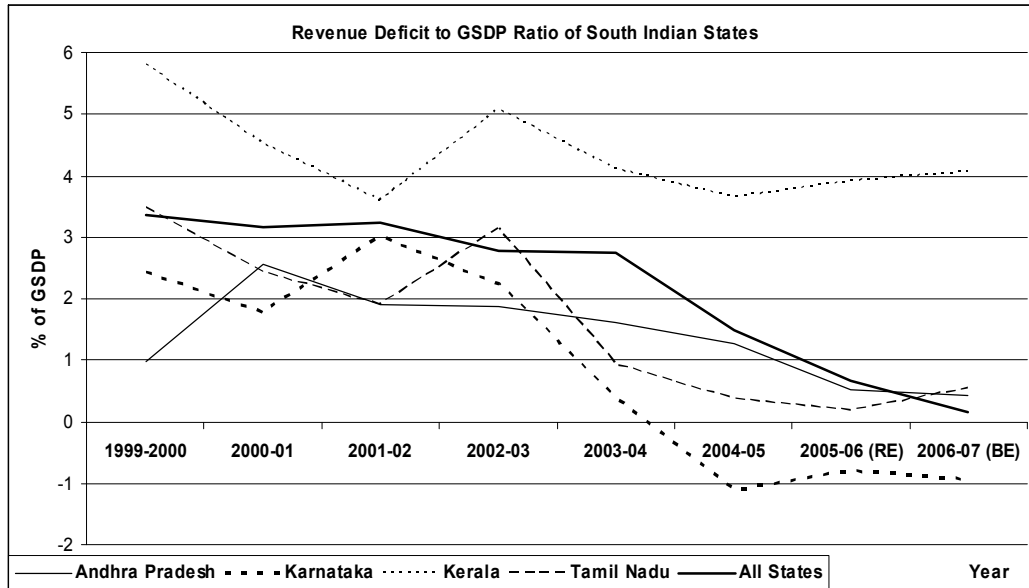
Table 2.17
Debt Position : Comparison with Other States

State	Debt/GSDP Ratio(%)					Per Capita Debt (Rs)				
	2000	2001	2002	2003	2004	2000	2001	2002 *	2003 *	2004 *
Andhra Pradesh	24	26	28	31	32	3882	4724	5542	6420	7290
Karnataka	20	21	25	28	-	3623	4254	5073	5838	6587
Kerala	31	32	35	39	40	6285	7414	8388	9723	10922
Tamil Nadu	19	21	22	25	28	3877	4644	5211	6207	7382
All States	22	24	-	31	32	4257	4996	5639	6402	7405

Source : Budget in Brief, Govt. of Kerala 2006-07

2.32 Both the fiscal deficit to GSDP ratio and the revenue deficit to GSDP ratio are the highest in Kerala among all South Indian States and stand above the all States' average.





Source: *State Finances: A Study of Budgets - Various Issues*, Reserve Bank of India (RBI), Gov.

2.33 The debt profile of the state is shown in Table 2.18. The gross retention (receipt minus disbursement) as well as net retention (gross retention minus interest) which were at a comparatively higher level in 2003-04 at Rs.6391.96 crore and Rs.3063.66 crore respectively declined to Rs.4372.72 crore and Rs.573.11 crore in 2005-06. The budget estimate for 2006-07 shows the gross retention as Rs.7529.45 crore and net retention as Rs.3101.63 crore.

Table 2.18
Debt Profile of the State (1997-98 to 2006-07)

(Rs. Crore)

Item		1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (BE)
Loans and advances from Government of India	Receipts	567.15	869.59	1072.97	483.11	780.69	1192.86	968.17	1482.11	603.29	1350.78
	Disbursements	189.18	211.96	246.95	284.01	536.12	1004.44	1875.09	1699.25	596.71	666.69
	Interest	550.71	606.54	703.74	732.26	778.56	805.02	809.92	671.60	412.50	462.39
	Gross Retention	377.97	657.63	826.02	199.10	244.57	188.42	-906.92	-217.14	6.58	684.09
	Net Retention	-172.74	51.09	122.28	-533.16	-533.99	-616.60	-1716.84	-888.74	-405.92	221.70
Small Savings and Deposits	Receipts	2396.71	3875.61	6986.41	6295.44	5917.95	8147.87	7011.55	6317.80	6146.25	7449.26
	Disbursements	2168.57	2935.66	4981.87	5332.26	4830.22	6770.85	5824.84	6523.40	6381.50	7137.44
	Interest	76.70	78.92	273.00	357.84	441.64	578.5	662.46	668.33	633.16	1038.2
	Gross Retention	228.14	939.95	2004.54	888.02	1087.73	1377.02	1186.71	-205.60	-235.25	311.82
	Net Retention	151.44	861.03	1731.54	530.18	646.09	798.52	524.25	-873.93	868.41	-726.38
State Provident Funds	Receipts	972.17	1128.11	1731.92	1722.63	1268.51	1685.99	1761.58	1578.63	1595.75	3091.96
	Disbursements	779.95	770.01	859.97	1033.71	1284.34	1546.29	1323.33	985.53	988.85	1553.02
	Interest	253.69	276.32	364.19	391.02	290.03	375.98	353.86	449.14	537.74	517.51
	Gross Retention	192.22	358.10	853.95	688.92	-15.83	139.70	438.25	593.10	606.9	1538.94
	Net Retention	-61.47	81.78	489.76	297.90	-305.86	-236.28	84.39	143.96	69.16	1021.43
Internal Debt	Receipts	947.81	3101.91	4858.25	6975.36	7849.7	10518.26	14120.87	14442.36	11366.48	10364.97
	Disbursements	333.54	2262.67	4118.37	5083.63	6134.58	8113.70	8446.95	10187.07	7371.99	5370.37
	Interest	388.50	465.38	589.23	747.71	941.14	1140.29	1502.06	1823.45	2216.21	2409.72
	Gross Retention	614.27	839.24	739.88	1891.73	1715.12	2404.56	5673.92	4255.29	3994.49	4994.6
	Net Retention	225.77	373.86	150.65	1144.02	773.98	1264.27	4171.86	2431.84	1778.28	2584.88
Total Debt	Receipts	4883.84	8975.22	14631.55	15476.5	15816.85	21544.98	23862.17	23820.90	19711.77	22256.97
	Disbursements	3471.24	6180.30	10207.16	11733.6	12785.26	17435.28	17470.21	19395.25	15339.05	14727.52
	Interest	1269.60	1427.16	1930.16	2228.83	2451.37	2899.79	3328.30	3612.52	3799.61	4427.82
	Gross Retention	1412.60	2794.92	4424.39	3742.93	3031.59	4109.70	6391.96	4425.65	4372.72	7529.45
	Net Retention	143.00	1367.76	2494.23	1514.10	580.22	1209.91	3063.66	813.13	573.11	3101.63

Source : Finance department, Govt. of Kerala

Contingent Liabilities

2.34 Contingent liabilities are not direct debt burden of the state. In the event of default by borrowing Public Sector Units, for which government is a guarantor, the state will be liable. In such cases, like other debt liabilities, contingent liabilities will also become debt obligations for the state. The outstanding guarantees of the state government from 1995-96 to 2005-06 are shown in Table 2.19. The outstanding liabilities increased from Rs.2082.32 crore in 1995-96 to Rs.11934.69 crore in 2005-06. But it is lesser by Rs.381.27 crore than the liability of Rs.12315.96 crore of 2004-05.

Table 2.19
Outstanding Guarantees
(Rs. Crore)

Year	Maximum Amount Guaranteed	Amount Outstanding
1995-96	5167.48	2082.32
1996-97	5867.82	1948.97
1997-98	6656.89	3292.29
1998-99	9078.16	5112.96
1999-00	11431.59	7952.24
2000-01	12797.80	9553.17
2001-02	14222.46	11817.53
2002-03	14922.61	12623.88
2003-04	15612.67	14009.18
2004-05	14783.36	12315.96
2005-06	13751.80	11934.69

Source : Finance Department, Govt. of Kerala

2.35 To contain the guarantees, the Government of Kerala have inserted a ceiling by enactment of "Kerala Ceiling on Government Guarantees Act" in 2003. As per the ceiling, the outstanding guarantees of the state shall not exceed Rs.14000 crore as on the first day of April of every year. Consequently, the government is encouraging the public sector units to secure loans on the strength of their own assets.

Performance During 10th Five Year Plan

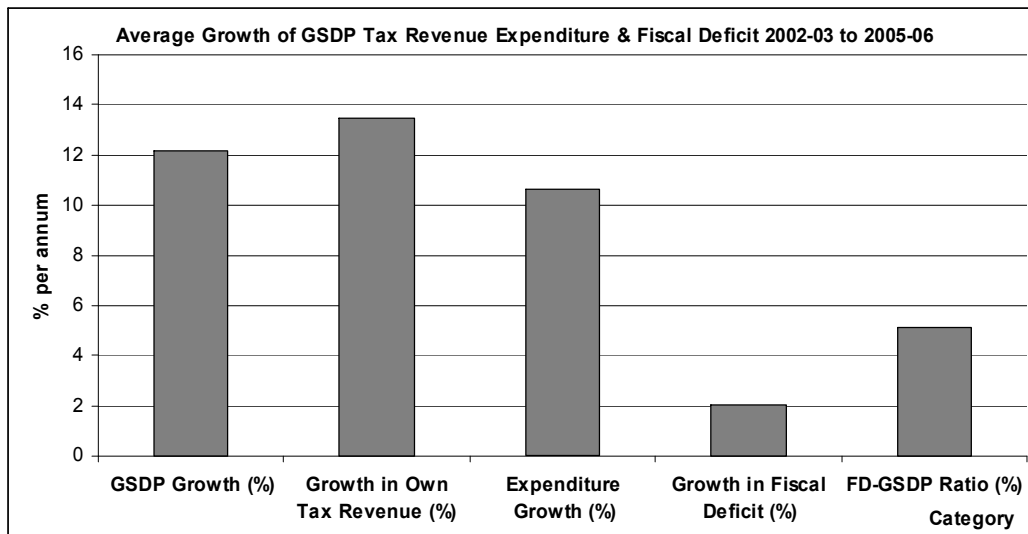
2.36 The overall fiscal performance of Kerala during 10th Five year Plan could be summarised as under. The nominal GSDP grew at an annual average rate of more than 12.5% and if we consider the first four years of the plan, the own tax revenue of the State increased at a rate of only 13.5% registering an extremely low tax buoyancy as compared to other States in India.

Growth Rates of Some Important Fiscal Variables for Kerala during X Plan Period

Year	2002-03	2003-04	2004-05	2005-06	2006-07
GSDP at Current Prices	81146	89461	100531	114605	130650
GSDP Growth (%)	12.08	10.25	12.37	14.00	14.00
Total Revenue	10634	11815	13501	15295	19140
Revenue Growth (%)	17.42	11.11	14.26	13.29	25.14
State's Own Tax Revenue	7303	8089	8964	9780	11663
Growth in Own Tax Revenue (%)	23.28	10.77	10.82	9.10	19.26
Centre to State Transfer	2654	2920	3718	4578	6365
Growth in Transfer (%)	2.47	10.03	27.34	23.14	39.02
Total Government Expenditure	15705	17427	18048	19546	26768
Expenditure Growth (%)	19.59	10.97	3.56	8.30	36.95
Total Plan Expenditure	3974	3119	3953	4129	5345
Growth in Plan Expenditure (%)	67.62	-21.50	26.73	4.44	29.45
Total Non-Plan Expenditure	11731	14308	14094	15417	21423
Growth in Non-Plan Expenditure (%)	9.01	21.97	-1.49	9.38	38.96
Gross Fiscal Deficit	4994	5539	4452	4200	7535
Growth in Fiscal Deficit (%)	22.52	10.92	-19.62	-5.66	79.40
Gross Revenue Deficit	4119	3680	3669	3562	5415
Growth in Revenue Deficit (%)	58.05	-10.64	-0.31	-2.92	52.03
Revenue Deficit to GSDP Ratio (%)	5.08	4.11	3.65	3.11	4.14
FD-GSDP Ratio (%)	6.15	6.19	4.43	3.66	5.77

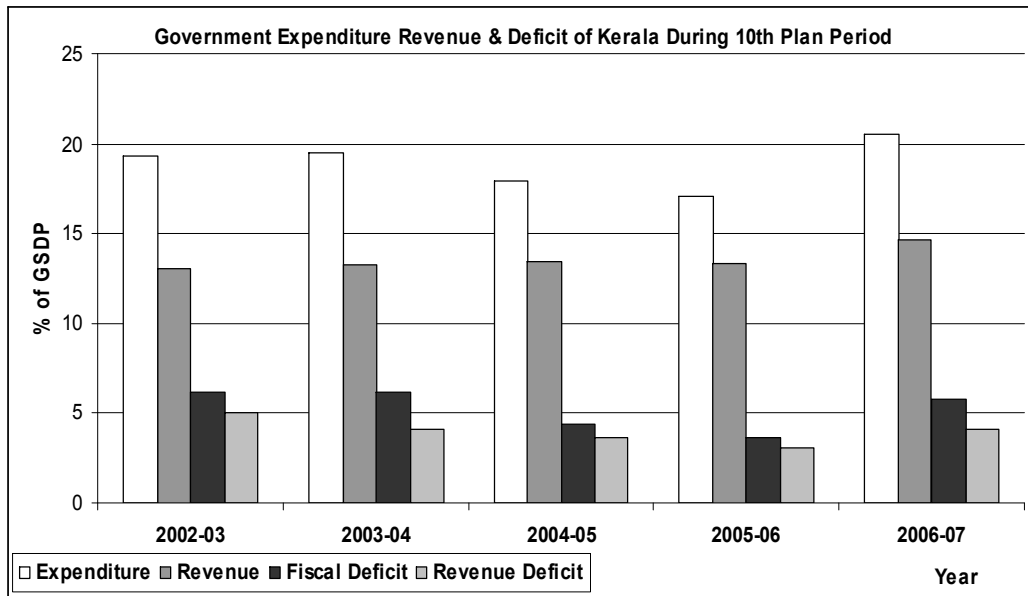
Source: Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

2.37 The expenditure grew only at an annual average rate of 10.6%, registering an expenditure elasticity of less than unity with respect to GSDP and lowering the government expenditure to GSDP ratio during first four years of 10th Plan for which data are available. As a result, during this period, the fiscal deficit grew only at an annual average of 2% as compared to 12% growth in nominal GSDP. In fact, actual revenue deficit registered negative growth rates during 2003-04, 04-05 and 05-06 lowering its proportion to GSDP from 5% to just 3%. The fiscal deficit to GSDP ratio has also come down from 6.2% to 3.66% by 2005-06. Comparatively lower tax buoyancy caused lower growth rate in revenue and most of the extra revenue has been utilized in lowering the deficit as a proportion to GSDP. As a result, given the increasing trend of non-plan expenditure, the developmental and plan expenditure have suffered (graph below) and grown at a much lower rate than GSDP.



Source: Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

2.38 The graph below shows the total government expenditure, revenue, fiscal and revenue deficit as percentages of GSDP during 2002-03 to 2006-07. We can see that the revenue-GSDP ratio has been more or less stagnant during this period excepting the budget estimate of last year. The expenditure to GSDP ratio came down continuously to bring down the fiscal deficit and revenue deficit as a proportion to GSDP. Therefore, Kerala's failure has been in raising tax buoyancy even after experiencing very high growth of GSDP during the period under consideration. To maintain 'fiscal discipline' according to FRBM legislation, the state had to compromise with the government expenditure and particularly plan and developmental expenditures.



Source: Revised Budget Estimates of Kerala 2006-07, Govt. of Kerala.

CHAPTER 3

INCOME AND POPULATION

Global Economy

The global economy which has witnessed a prolonged period of slowdown in growth after the era of the so-called “Golden Age of Capitalism” (1950-73), has been experiencing a temporary boom of late. The growth rate which was 5.3 percent during 2004, stood at 4.8 percent during 2005. While the International Monetary Fund (IMF) predicts growth rates of 5.1 percent during 2006 and 4.8 percent during 2007, stimulated by the rapid expansion of China and India, it is likely that the world economy is entering into a recession after the collapse of the Construction Boom in the U.S., of which the February 27 stock market crash is a portent. And in such a case, India and China, far from sustaining a world boom, may themselves become victims of a downturn, and find it difficult to sustain their recent growth performance.

National Scenario

3.2 While a question mark remains over the performance of the world economy, and with it of the Indian economy, in the coming months, the growth rate of the Indian economy during 2006-07, according to the *Economic Survey* of the Government Of India, was 9.2 percent. This followed a 9 percent growth rate in 2005-06, and thus carried forward the high growth witnessed since 2003-04.

Box. 3.1

India has been in the Top 10 per cent of all Countries in growth performance since the 1980s. India ranked ninth among 107 Countries in per capita growth of Gross Domestic Product in the 1992/93 –2003/04 period (India - Development Policy Review May 2006- World Bank).

3.3 As per the statistics published by Central Statistical Organisation the Revised Estimate of Gross Domestic Product (GDP) of India at factor cost at constant (1999-2000) prices for the year 2005 –06 has been estimated at Rs. 25,95,339 crore as against the Quick Estimate of Rs. 23,93,671 crore in 2004-05. At current prices the Revised Estimate of GDP for the year 2005 – 06 is estimated at Rs. 32,09,397 crore, showing a growth rate of 12.9 percent over the Quick Estimate of GDP of Rs. 28,43,897 crore in 2004-05.

Table 3.1
National Product, Domestic Product & Per Capita Income at Factor Cost (All India)
(Rs. Crore)

Sl. No.	Item	At 1999-2000 Prices			At Current Prices		
		2003-04	2004-05*	2005-06 **	2003-04	2004-05*	2005-06 **
1	Gross National Product (GNP)	22,08,196	23,76,729 (7.6)	25,71,310 (8.2)	25,25,146	28,25,981 (11.9)	31,82,949 (12.6)
2	Net National Product (NNP) (National Income)	19,86,858	21,41,776 (7.8)	23,25,282 (8.6)	22,68,576	25,31,223 (11.6)	28,58,862 (12.9)
3	Gross Domestic Product (GDP)	22,26,041	23,93,671 (7.5)	25,95,339 (8.4)	25,43,396	28,43,897 (11.8)	32,09,397 (12.9)
4	Net Domestic Product (NDP)	20,04,703	21,58,718 (7.7)	23,49,311 (8.8)	22,86,826	25,49,139 (11.5)	28,85,310 (13.2)
5	Per Capita NNP (Rs)	18,517	19,649 (6.1)	21,005 (6.9)	21,142	23,222 (9.8)	25,825 (11.2)

Source: Central Statistical Organisation

Note: The figures in Parenthesis show the percentage change over previous year.

*-Quick Estimate, **- Revised Estimate

3.4 The Revised Estimate of National Income (Net National Product at factor cost) at 1999 -2000 prices is estimated at Rs. 23,25,282 crore during 2005-06 as against the previous year's Quick Estimate of Rs. 21,41,776 crore. In terms of growth rates, the National Income is estimated to rise by 8.6 percent during 2005-06 compared to the growth rate of 7.8 percent in 2004.05. At current prices the Revised Estimate of National Income at factor cost in 2005-06 is estimated at Rs. 28,58,862 crore, showing a growth rate of 12.9 percent over the Quick Estimate of National Income for 2004-05 of Rs. 25,31,223 crore.

3.5 The details of GDP and National Income at current and constant (1999-2000) prices from 1999-2000 to 2005-06 with per centage change over previous year are given in Appendices 3.1 to 3.4

Per Capita National Income

3.6 The per capita income in real terms (at 1999-2000 prices) during 2005-06 is estimated to attain a level of Rs. 21,005 as compared to the Quick Estimates for the year 2004-05 of Rs. 19649. The growth rate in per capita income is estimated at 6.9 per cent during 2005-06. The per capita income at current prices during 2005-06 is estimated to attain a level of Rs. 25,825 showing a rise of 11.2 per cent as compared to the Quick Estimates for the year 2004-05 of Rs.23,222.

3.7 The sectoral distribution of GDP at constant (1999-2000) prices and current prices with percentage change over previous year is given in Table 3.2 and Table 3.3.

Table 3.2
Sector wise Distribution of GDP at Factor Cost by Economic Activity- All India
(At 1999-2000 prices)

Sl. No	Industry	2003-04	2004-05 (Quick Estimate)	2005-06 (Revised Estimate)	Percentage change over previous year	
					2004-05	2005-06
1	Agriculture forestry & fishing	4,93,690	4,97,351	5,16,603	0.7	3.9
2	Mining & quarrying	49,714	52,594	53,090	5.8	0.9
3	Manufacturing	3,33,848	3,60,822	3,93,186	8.1	9.0
4	Electricity, gas & water supply	50,927	53,097	55,888	4.3	5.3
5	Construction	1,38,548	1,55,920	1,74,712	12.5	12.1
6	Trade, hotels, transport and communication	5,51,542	6,10,115	6,80,208	10.6	11.5
7	Financing, insurance, real estate & business services	2,93,545	3,20,554	3,51,582	9.2	9.7
8	Community, Social & Personal services	3,14,227	3,43,218	3,70,072	9.2	7.8
	GDP at factor cost	22,26,041	23,93,671	25,95,339	7.5	8.4

Source: Central Statistical Organisation

3.8 A high growth rate of 8.4 per cent in GDP for India could be achieved because of high growths in sectors like construction (12.1%); trade, hotels, transport and communication (11.5%); financing, insurance and real estate (9.7%); manufacturing (9%) etc.

Box.3.2

Average agricultural growth over the past three years has been 1.3 per cent –against a Tenth plan target of 4 per cent per year. Agricultural growth appears to be decelerating from 3.2 per cent in 1980-92 to 2.4 per cent in 1992-2003 and to 1.3 per cent over the past few years. As two-thirds of India's people depend on rural employment for their main source of income, this is directly affecting many households. The deceleration seems to be general across all crops and appears to reflect a broadly based deceleration in productivity growth (India- Development Policy Review May 2006-World Bank).

Table. 3.3
Sector wise Distribution of GDP at Factor Cost by Economic Activity-All India
(At Current Prices)

(Rs. Crore)

Sl. No	Industry	2003-04	2004-05 (Quick Estimate)	2005-06 (Revised Estimate)	Percentage change over previous year	
					2004-05	2005-06
1	Agriculture forestry & fishing	5,34,689	5,56,146	6,08,681	4.0	9.4
2	Mining & quarrying	66,101	75,179	84,713	13.7	12.7
3	Manufacturing	3,90,470	4,53,666	5,09,845	16.2	12.4
4	Electricity, gas & water supply	56,365	60,719	66,508	7.7	9.5
5	Construction	1,59,415	1,86,392	2,18,131	16.9	17.0
6	Trade, hotels, transport and communication	6,08,330	6,99,762	7,99,842	15.0	14.3
7	Financing, insurance, real estate & business services	3,69,456	4,05,801	4,64,453	9.8	14.5
8	Community, Social & Personal services	3,58,570	4,06,232	4,57,223	13.3	12.6
GDP at factor cost		25,43,396	28,43,897	32,09,397	11.8	12.9

Source: Central Statistical Organisation

3.9 An analysis of the percentage distribution of GDP shows that the contribution from primary sector to the GDP is decreasing and that from secondary and tertiary sectors are increasing.

3.10 The percentage distribution of GDP during 2005-06 at constant prices (1999-2000) shows that 26.2 percent of the GDP is from Trade, Hotels, Transport and Communication followed by Agriculture, Forestry, and Fishing (19.9 percent) and manufacturing (15.1 percent). At current prices the maximum contribution to GDP during 2005-06 is from Trade, Hotels, Transport and Communication (24.9 percent) followed by Agriculture, Forestry and Fishing (19 percent) and manufacturing (15.9 percent) (Table 3.4).

Table 3.4
Gross Domestic Product at Factor Cost by Economic Activity – Percentage Distribution
(All India)

Sl. No.	Industry of Origin	At 1999-2000 Prices			At Current Prices		
		2003-04	2004-05 (Quick Estimate)	2005-06 (Revised Estimate)	2003-04	2004-05 (Quick Estimate)	2005-06 (Revised Estimate)
1	Agriculture, Forestry & Fishing	22.2	20.8	19.9	21.0	19.6	19.0
2	Mining & Quarrying	2.2	2.2	2.1	2.6	2.6	2.6
	Sub Total -Primary	24.4	23.0	22.0	23.6	22.2	21.6
3	Manufacturing	15.0	15.1	15.1	15.4	16.0	15.9
4	Electricity, Gas & Water Supply	2.3	2.2	2.2	2.2	2.1	2.1
5	Construction	6.2	6.5	6.7	6.3	6.5	6.8
	Sub Total -Secondary	23.5	23.8	24.0	23.9	24.6	24.8
6	Trade, Hotels, Transport and Communication	24.8	25.5	26.2	23.9	24.6	24.9
7	Financing, Insurance, Real Estate & Business Services	13.2	13.4	13.5	14.5	14.3	14.5
8	Community, Social & Personal	14.1	14.3	14.3	14.1	14.3	14.2
	Sub Total – Tertiary	52.1	53.2	54.0	52.5	53.2	53.6
	GDP	100	100	100	100	100	100

Source: Central Statistical Organization

State Income

3.11 As per the statistics published by Department of Economics and Statistics, the quick estimate of Gross State Domestic Product (GSDP) at factor cost at constant prices (1999-2000) is Rs. 1,00,433.80 crore during 2005-06 as against the provisional estimate of Rs. 92,984.11 crore during 2004-05, registering a growth rate of 8 per cent in 2005-06. At current prices the Gross State Domestic Product is estimated at Rs. 1,20,564.39 crore (quick estimate) during 2005-06 as against the provisional estimate of Rs. 107908.63 crore during 2004-05. The growth rate at current prices is 11.7 per cent in 2005-06 compared to 11.4 per cent in 2004-05.

3.12 The quick estimate of Net State Domestic Product (State Income) at factor cost at constant prices (1999-2000) is Rs. 92741.77 crore during 2005-06 compared to the provisional estimate of Rs. 84950.67 crore during 2004-05 recording a growth rate of 9.2 percent in 2005-06. At current prices the State Income is estimated at Rs. 109806.44 crore (quick estimate) in 2005-06 compared to the provisional estimate of Rs. 98201.88 crore during 2004-05. The growth rate of State Income at current prices is 11.8 per cent in 2005-06 compared to 11.3 per cent in 2004-05 (Table 3.5).

Table 3.5
State Domestic Product and Per capita Income of Kerala

Sl. No	Item	Income (Rs. Crore)			Growth rate (Per cent)	
		2003-04	2004-05 (P)	2005-06 (Q)	2004-05 (P)	2005-06 (Q)
1	2	3	4	5	6	7
1	Gross State Domestic Product					
	a) At Constant (1999-2000) prices	85954.36	92984.11	100433.80	8.2	8.0
	b) At Current prices	96883.36	107908.63	120564.39	11.4	11.7
2	Net State Domestic Product (State Income)					
	a) At Constant (1999-2000) prices	78460.05	84950.67	92741.77	8.3	9.2
	b) At Current prices	88223.70	98201.88	109806.44	11.3	11.8
3	Per Capita State Income (Rs)					
	a) At Constant (1999-2000) Prices	23986	25687	27746	7.1	8.0
	b) At Current Prices	26971	29693	32852	10.1	10.6

Source: Department of Economics & Statistics

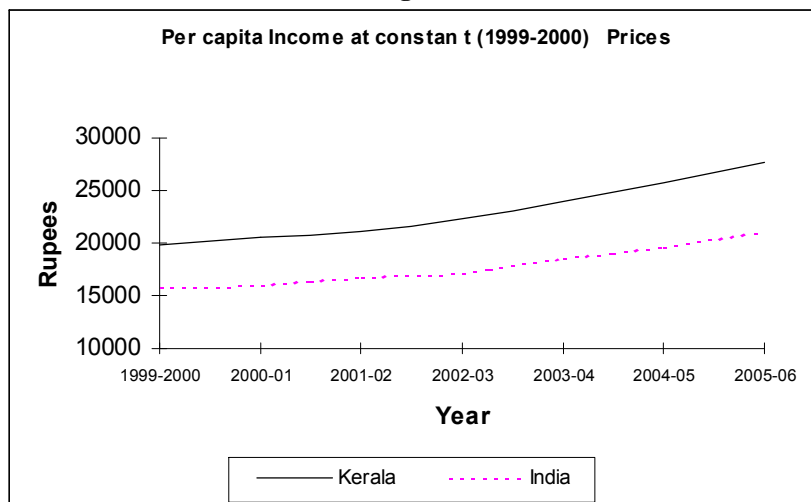
P: Provisional, Q: Quick Estimate

Per Capita State Income

3.13 As per the quick estimates in 2005-06, the per capita Gross state Domestic Product at constant (1999-2000) prices was Rs.30048 as against provisional estimate of Rs.28116 in 2004-05 recording a growth rate of 6.9 per cent in 2005-06. At current prices, the per capita GSDP in 2005-06 was Rs.36070 registering a growth rate of 10.5 per cent over the estimate of Rs.32628 in 2004-05.

3.14 The per capita state income at constant prices (1999-2000) increased from Rs. 25687 in 2004-05 to Rs. 27746 in 2005-06, registering a growth rate of 8 percent. At current prices the per capita state income during 2005-06. is Rs. 32852 as against Rs. 29693 during 2004-05, recording a growth rate of 10.6 percent in 2005-06. The per capita state income is higher than the per capita national income (See Fig. 3.1)

Fig. 3.1



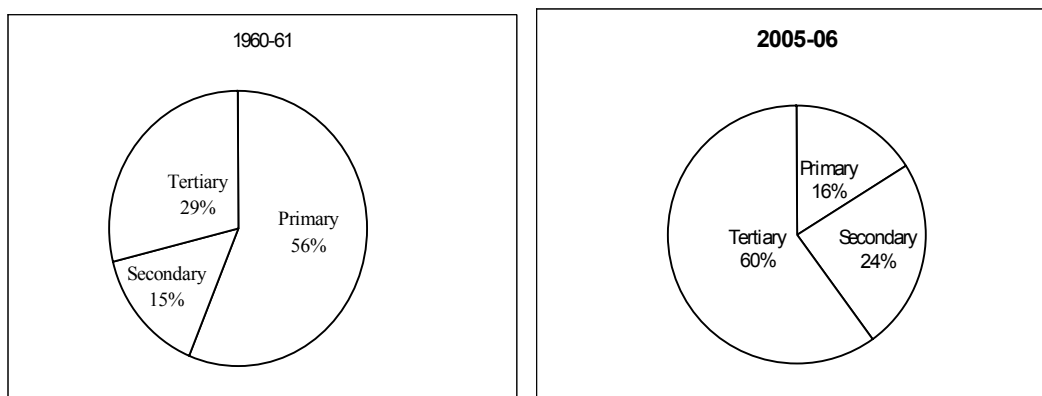
Source: Central Statistical Organization and Department of Economics and Statistics

3.15 The NSS Report No.508 regarding level and pattern of consumer expenditure, 2004-05, reveals that 22.1 percent of the rural population has an average monthly consumer expenditure level of below Rs. 510, 54.1 percent could spend between Rs. 510 and Rs.1155 and only 23.8 percent claims an expenditure above Rs.1155 . In the case of urban population 51.9 percent comes under the monthly expenditure below Rs. 930, 40.2 percent between Rs. 930 and Rs.2540 and 7.9 percent could spend above Rs.2540.This means while a large proportion of the population is striving hard to survive, a few portion is in the midst of luxurious lavishness. It is evidently cleared that even though the growth rate of the economy is shooting high, the inequality in income distribution is widening as far as Kerala is concerned.

Sectoral Distribution of GSDP

3.16 During 2005-06 the contribution from primary, secondary and tertiary sectors to the GSDP at constant prices (1999-2000) constitutes 15.7%, 23.8% and 60.5% respectively. At current prices, the primary, secondary and tertiary sectors contribute 15.6%, 23.9% and 60.5% respectively to the GSDP during 2005-06. While analysing the sectoral distribution of state income it is seen that the contribution from primary sector is decreasing and tertiary sector is increasing. But secondary sector remains almost stagnant. The details of sectoral distribution of GSDP with percentage during the last three years is given in Table 3.6.

Fig.3.2
Sectoral Distribution of GSDP



Source: Department of Economics and Statistics

Table 3.6
Sectoral Share of Gross State Domestic Product (GSDP) at Factor Cost (2003-04 to 2005-06)

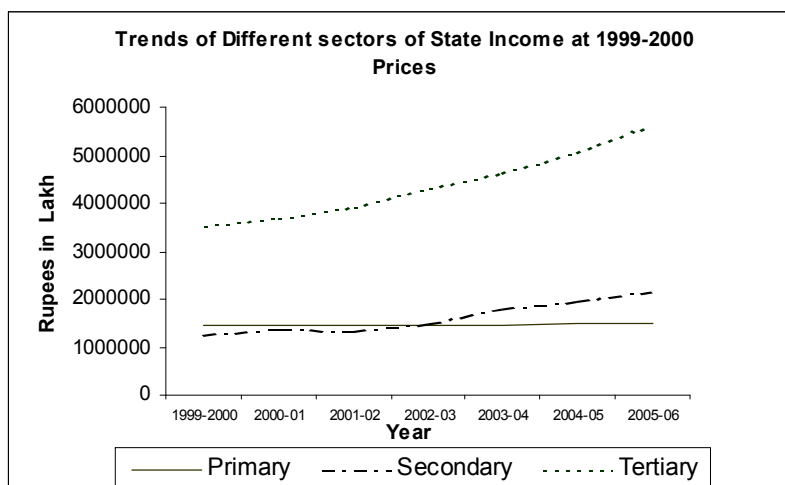
(Rs. Crore)

Sl. No.	Industry of origin	At Current Prices						At Constant Prices (1999-2000)					
		2003-04		2004-05(P)		2005-06 (Q)		2003-04		2004-05(P)		2005-06 (Q)	
		GSDP	%	GSDP	%	GSDP	%	GSDP	%	GSDP	%	GSDP	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Agriculture & Allied Activities	12721.49	13.1	14078.69	13.0	14778.97	12.3	11955.10	13.9	12597.08	13.5	12712.39	12.7
2	Forestry & Logging	1442.39	1.5	1338.86	1.3	1302.24	1.1	1466.91	1.7	1466.37	1.6	1466.23	1.5
3	Fishing	1490.58	1.6	1814.22	1.7	2481.96	2.0	1545.32	1.8	1535.53	1.7	1441.84	1.4
4	Mining & Quarrying	207.58	0.2	218.76	0.2	231.12	0.2	133.20	0.2	138.57	0.1	145.47	0.1
	Sub-Total Primary	15862.04	16.4	17450.53	16.2	18794.29	15.6	15100.53	17.6	15737.55	16.9	15765.93	15.7
5	Manufacturing	8190.54	8.4	8680.67	8.5	9170.35	7.6	7200.30	8.4	7168.81	7.7	7288.36	7.3
6	Electricity, Gas & Water Supply	2199.96	2.3	2630.39	2.5	2965.53	2.4	1931.48	2.2	2170.32	2.4	2352.48	2.3
7	Construction	12132.90	12.5	14145.09	13.1	16707.33	13.9	10810.66	12.6	12194.65	13.1	14227.39	14.2
	Sub-Total: Secondary	22523.40	23.2	25456.15	23.6	28843.21	23.9	19942.44	23.2	21533.78	23.2	23868.23	23.8
8	Transport, Storage & Communication	9587.37	9.9	10748.93	9.9	11919.03	9.9	9312.86	10.8	10390.56	11.2	11555.98	11.5
9	Trade, Hotels & Restaurants	21337.34	22.0	24406.38	22.7	27930.05	23.1	18125.09	21.1	20180.11	21.7	22297.91	22.2
10	Banking and Insurance	5946.72	6.1	6100.92	5.7	6967.73	5.8	4757.83	5.5	5207.40	5.6	5755.73	5.7
11	Real Estate ownership, Business, legal	9286.06	9.6	10705.58	9.9	12187.92	10.1	8035.42	9.3	8938.07	9.6	9856.52	9.8
12	Public Administration	4309.65	4.5	4540.65	4.2	4793.99	4.0	3663.11	4.3	3770.36	4.0	3839.18	3.8
13	Other Services	8030.78	8.3	8499.49	7.9	9128.17	7.6	7017.08	8.2	7226.28	7.8	7494.32	7.5
	Sub-Total-Tertiary	58497.92	60.4	65001.95	60.2	72926.89	60.5	50911.39	59.2	55712.78	59.9	60799.64	60.5
	Total-GSDP	96883.36	100	107908.63	100	120564.39	100	85954.36	100	92984.11	100	100433.80	100

Source:- Department of Economics & Statistics

P: Provisional, Q: Quick Estimate

Fig.3.3



Source: Department of Economics and Statistics

3.17 The analysis of annual sectoral growth rate of Gross State Domestic Product shows that secondary sector recorded the highest rate of growth of 13.3 per cent in 2005-06 at current prices followed by tertiary sector (12.2%) and primary sector (7.7%). At constant prices (1999-2000), the secondary sector recorded a growth rate of 10.8 per cent, tertiary sector 9.1 per cent and primary sector 0.2 per cent in 2005-06.

Table 3.7
Sector wise Annual Growth Rate of GSDP- Kerala
Percentage change over Previous Year

Sl.No	Industry Origin	At Current Prices			At Constant Prices (1999-2000)		
		2003-04	2004-05 (P)	2005-06 (Q)	2003-04	2004-05 (P)	2005-06 (Q)
1	2	3	4	5	6	7	8
1	Agriculture & Allied Activities	9.6	10.7	5.0	-3.1	5.4	0.9
2	Forestry & Logging	11.4	-7.2	-2.7	9.9	-0.1	0
3	Fishing	1.4	21.7	36.8	0.7	-0.6	-6.1
4	Mining & Quarrying	4.0	5.4	5.7	3.3	4.0	5.0
	Primary Sector	8.8	10.0	7.7	-1.5	4.2	0.2
5	Manufacturing	11.6	6.0	5.6	5.7	-0.4	1.7
6	Electricity, Gas & Water Supply	19.1	19.6	12.7	12.7	12.4	8.4
7	Construction	33.6	16.6	18.1	32.9	12.8	16.7
	Secondary Sector	23.3	13.0	13.3	19.7	8.0	10.8
8	Transport, Storage & Communication	15.5	12.1	10.9	13.9	11.6	11.2
9	Trade, Hotels & Restaurants	14.2	14.4	14.4	8.9	11.3	10.5

10	Banking, Insurance & Real Estate	8.0	2.6	14.2	-0.6	9.5	10.5
11	Real Estate ownership Business, legal	13.5	15.3	13.9	8.2	11.2	10.3
12	Public Administration and other services	5.9	5.4	5.6	0.8	2.9	1.8
13	Other Services	7.3	5.8	7.4	2.6	3.0	3.7
	Tertiary Sector	12.0	11.1	12.2	7.2	9.4	9.1
	GSDP	13.9	11.4	11.7	8.1	8.2	8.0

Source: - Department of Economics & Statistics

P: Provisional, Q: Quick Estimate

District-wise Gross State Domestic Product

3.18 District-wise distribution of Gross State Domestic Product at factor cost at current prices shows that Ernakulam District continues to have the highest income of Rs. 17245.03 crore in 2005-06 as against Rs. 15408.02 crore in 2004-05 registering a growth rate of 11.9%. At constant (1999-2000) prices it comes to Rs. 14335.14 crore during 2005-06 compared to Rs. 13222.66 crore during 2004-05. Thiruvananthapuram District stands second with an income of Rs. 12993.8 crore in 2005-06 at current prices followed by Thrissur (Rs. 11878.24 crore), Kozhikode (Rs.10822.28 crore), Malappuram (Rs. 9361.87 crore) and Palakkad (Rs. 9138.13 crore). The lowest income of Rs. 2533.05 crore was recorded in Wayanad District at current prices during 2005-06 preceded by Kasaragod (Rs. 3719.5 crore), Idukki (Rs. 4368.6 crore) and Pathanamthitta (Rs.4770.57 crore).

Table 3.8
District-wise Distribution of Gross State Domestic Product

(Rs. Crore)

Sl. No	District	Gross State Domestic Product at Factor Cost				Growth Rate (%)	
		At 1999-2000 Prices		At Current Prices		At 1999-2000 Prices	At Current Prices
		2004-05 (P)	2005-06 (Q)	2004-05 (P)	2005-06 (Q)	2005-06	2005-06
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	10021.50	10853.08	11659.68	12993.80	8.3	11.4
2	Kollam	6967.55	7546.67	8078.70	9062.45	8.3	12.2
3	Pathanamthitta	3793.95	4080.12	4317.24	4770.57	7.5	10.5
4	Alappuzha	5995.15	6476.48	6999.86	7892.90	8.0	12.8
5	Kottayam	6363.99	6875.87	7362.75	8190.50	8.0	11.2
6	Idukki	3518.44	3732.63	3998.65	4368.60	6.1	9.3
7	Eranakulam	13222.66	14335.14	15408.02	17245.03	8.4	11.9
8	Thrissur	9117.88	9798.55	10579.95	11878.24	7.5	12.3
9	Palakkad	7083.20	7582.59	8237.95	9138.13	7.1	10.9
10	Malappuram	7244.88	7842.95	8412.42	9361.87	8.3	11.3
11	Kozhikode	8193.65	8846.52	9560.52	10822.28	8.0	13.2
12	Wayanad	2011.69	2152.98	2296.77	2533.05	7.0	10.3
13	Kannur	6571.73	7177.83	7662.22	8587.48	9.2	12.1
14	Kasaragod	2877.83	3132.37	3333.91	3719.50	8.8	11.6
	GSDP	92984.11	100433.80	107908.63	120564.39	8.0	11.7

Source: Department of Economics & Statistics

P - Provisional, Q - Quick Estimate

District-wise Per Capita Income

3.19 The analysis of district wise per capita income shows that Ernakulam district stands first with the per capita income of Rs. 40364 at constant (1999-2000) prices in 2005-06 as against Rs.36800 in 2004-05. Kottayam District has the second largest per capita income of Rs. 31180 in 2005-06 at constant prices followed by Idukki (Rs.29426), Thrissur (Rs.29320), Pathanamthitta (Rs.29299) and Thiruvananthapuram (Rs.28984). The lowest per capita income was recorded in Malappuram District (Rs.18960) in 2005-06 at constant prices preceded by Kasaragod (Rs.23241), Wayanad (Rs.24533) and Kollam (Rs.25326)

3.20 The highest rate of growth of per capita income of 14.8% was recorded in Kottayam District in 2005-06 followed by Pathanamthitta (10.6%), Palakkad (10.4%), and Ernakulam (9.7%). The lowest growth rate was recorded in Idukki District (1.1%) preceded by Wayanad (3.9%), Kasaragode (5%) and Malappuram (5.1 %). The district wise per capita income with growth rate is given in Table 3.9

Table 3.9
District-wise Per Capita Income at constant (1999-2000) Prices

Sl. No.	District	2004-05 (P) (Rs)	Rank	2005-06 (Q) (Rs)	Rank	Growth Rate (%) 2005-06
1	2	3	4	5	6	7
1	Thiruvananthapuram	26801	5	28984	6	8.1
2	Kollam	23331	11	25326	11	8.6
3	Pathanamthitta	26481	6	29299	5	10.6
4	Alappuzha	25453	8	26755	8	5.1
5	Kottayam	27164	3	31180	2	14.8
6	Idukki	29092	2	29426	3	1.1
7	Eranakulam	36800	1	40364	1	9.7
8	Thrissur	27148	4	29320	4	8.0
9	Palakkad	23080	12	25479	10	10.4
10	Malappuram	18035	14	18960	14	5.1
11	Kozhikode	25617	7	27375	7	6.9
12	Wayanad	23605	10	24533	12	3.9
13	Kannur	24520	9	26449	9	7.9
14	Kasaragod	22136	13	23241	13	5.0
	State	25687		27746		8.0

Source: Department of Economics & Statistics

P: Provisional , Q: Quick Estimate

District-wise Sectoral Distribution of Gross State Domestic Product

3.21 District wise and sector-wise analysis of GSDP shows that the highest contribution from primary sector income of Rs. 1451.43 crore at constant (1999-2000) prices was in Kollam district during 2005-06 followed by Malappuram (Rs.1408.73 crore), Idukki (Rs.1382.93 crore) and Kottayam (Rs. 1335.72 crore). During 2005-06 the lowest primary sector income was in Kasaragod district (Rs. 658.85 crore). The highest income from secondary sector during 2005-06 was in Ernakulam district (Rs. 5307.90 crore) followed by Thiruvananthapuram (Rs. 2854.66 crore), Thrissur (Rs. 2415.45 crore) and Kozhikode (Rs. 2109.12 crore). Lowest secondary sector income was in Wayanad district (Rs. 242.73 crore). Regarding tertiary sector the highest income during 2005-06 was in Ernakulam district (Rs.7771.07 crore) followed by Thiruvananthapuram (Rs. 6836.51 crore), Thrissur (Rs. 6256.70 crore) and Kozhikode (Rs. 5627.52 crore). Lowest tertiary sector income was in Wayanad district (Rs. 1063.70 crore).

3.22 While analysing the growth rates, in primary sector it ranges between -8.3% in Thrissur district and 4.3% in Kannur district. Growth rate in secondary sector is lowest at 8% in Palakkad, highest at 15.2% in Kasaragod. Growth rate in tertiary sector is between 8.7% in both Thiruvananthapuram and Malappuram districts and 9.5% in Ernakulam district. The district wise details of sectoral income and growth rate are presented in Table 3.10

Table 3.10
District wise and Sector-wise Distribution of Gross State Domestic Product during
2005-2006 at constant (1999-2000) Prices (Quick Estimate)

Sl. No.	District	(Rs.Crore)					
		Primary		Secondary		Tertiary	
		GSDP	Annual Growth Rate (%)	GSDP	Annual Growth Rate (%)	GSDP	Annual Growth Rate (%)
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1161.92	1.5	2854.66	10.4	6836.51	8.7
2	Kollam	1451.43	3.1	1462.09	11.5	4633.15	9.0
3	Pathanamthitta	908.53	0.1	633.64	12.8	2537.96	9.2
4	Alappuzha	791.18	-1.9	1482.59	10.8	4202.71	9.2
5	Kottayam	1335.72	1.2	1341.00	11.4	4199.15	9.4
6	Idukki	1382.93	1.2	627.32	9.4	1722.39	9.1
7	Ernakulam	1256.18	-0.3	5307.90	9.1	7771.07	9.5
8	Thrissur	1126.40	-8.3	2415.45	11.2	6256.70	9.4
9	Palakkad	1292.06	-0.5	1860.15	8.0	4430.38	9.1
10	Malappuram	1408.73	2.6	1513.82	12.7	4920.40	8.7
11	Kozhikode	1109.89	-5.4	2109.12	13.2	5627.52	9.1
12	Wayanad	846.56	3.3	242.73	11.9	1063.70	9.1
13	Kannur	1035.56	4.3	1533.72	13.2	4608.55	9.1
14	Kasaragod	658.85	3.1	484.05	15.2	1989.48	9.4
	State	15765.93	0.2	23868.23	10.8	60799.64	9.1

Source: Department of Economics and Statistics

3.23 District-wise sectoral distribution of Gross State Domestic Product from 2003-04 to 2005-06 at current and constant (1999-2000) prices are given in Appendices 3.9 to 3.14.

Population

3.24 The World Population in 2004 is 634.51 crores (World Development Report 2006) and the population of India is 107.97 crores accounting for 17% of world population.

3.25 The population of India as per 2001 Census was 102.7 crore comprising of 53.13 crore males and 49.57 crore females. Kerala's population as per Census 2001 was 318.41 lakh consisting of 154.69 lakh males and 163.72 lakh females. Kerala's share in the population of India is 3.1%. In Kerala, 74% of the population lives in rural areas. Projected population of Kerala is 334.25 lakhs in 2005.

Decadal Growth of Population

3.26 An analysis of the decadal growth rate of all India population shows that it increased from 1921 to 1981 and since then it started declining gradually. In Kerala the decadal growth rate had been at higher rate from 1941 to 1971 and since then growth rate has been declining. The details of decadal growth rate of population at All India and Kerala from 1901 to 2001 are given in Table 3.11.

Table 3.11
Population and Its Growth from 1901 to 2001

Census Year	All India				Kerala			
	Population (lakhs)			Decadal Growth Rate(%)	Population (lakhs)			Decadal Growth Rate(%)
	Rural	Urban	Total		Rural	Urban	Total	
2	3	4	5	6	7	8	9	10
1901	2125.4	258.5	2383.9	-	59.4	4.5	63.9	-
1911	2261.5	259.4	2520.9	5.75	66.2	5.3	71.5	11.75
1921	2232.3	280.9	2513.2	-0.31	71.2	6.8	78.0	9.16
1931	2455.2	334.6	2729.8	11.0	85.9	9.2	95.1	21.85
1941	2745.1	441.5	3186.6	14.22	98.3	12.0	110.3	16.04
1951	2986.5	624.4	3610.9	13.31	117.2	18.3	135.5	22.82
1961	3602.9	789.4	4392.3	21.64	143.5	25.5	169.0	24.76
1971	4390.5	1091.1	5481.6	24.8	178.8	34.7	213.5	26.69
1981	5238.7	1594.6	6833.3	24.66	206.8	47.7	254.5	19.24
1991	6286.9	2176.1	8463.0	23.86	214.1	76.8	290.9	14.32
2001	7416.6	2853.6	10270.2	21.34	235.7	82.7	318.4	9.42

Source: Census of India

3.27 Among the Districts in Kerala, Malappuram has the highest population of 36.3 lakhs followed by Thiruvananthapuram (32.35 lakhs) and Ernakulam (30.98 lakhs). Wayanad is the lowest populated district in Kerala with a population of 7.87 lakhs preceded by Idukki (11.29 lakhs) and Kasaragod (12.03 lakhs). Among the districts, Pathanamthitta had the lowest decadal (1991-2001) growth rate of population of 3.72% and Malappuram the highest growth rate of 17.22%. All districts in Kerala showed a decrease in decadal growth rate (1991-2001) compared to 1981-1991 decade. Malappuram district achieved a deduction of about 11 points between the two decadal growth rates, which is the highest among the districts in Kerala.

3.28 The details of State-wise all India population and District-wise Kerala population are given in Appendices 3.15 and 3.16

Annual Growth Rate

3.29 The annual average growth of world population is 1.2 per cent in 2004 and it is 1.5 per cent in India (World Development Report 2006).

3.30 The average annual growth in population of Kerala during 1991-2001 was 0.91 per cent as against the average annual growth rate of 1.93 percent in India. In addition to achievements, such as low infant mortality rate and high life expectancy the population growth rate in the state remains the lowest in the country.

3.31 Kerala's Population consists of 82.96 lakhs in the age group 0-14, 201.82 lakhs in the age group 15-59 and 33.35 lakhs above the age of 60. Between 1991 and 2001, children in the age group 0-14 have declined by 4.24%. Population in the 15-59 age group increased by 12.91% and people above 60 years increased by 30.22%. In Kerala when the number of children (0-14 years) decreased, their number increased over 22 per cent in India. The proportion of people in the working age group is 63.4 % in Kerala as against 55.6% in India. This indicates very high potential for economic growth. The age group population in 2001 and their percentage distribution is given in Appendix 3.17.

3.32 The proportion of children (0-14) to the total population is 26.1 percent in Kerala, which is the lowest among the major states in India. In the proportion of people in the working age group (15-59) Kerala is second only to Tamil Nadu (63.7%). The proportion of population above 60 years in Kerala is 10.5 percent, which is the highest among the major states in India.

Table 3.12
Age Group Population of India & Kerala

Sl.No.	Age Group	Population 1991		Population 2001		Growth Rate (%)	
		India (crore)	Kerala (Lakhs)	India (crore)	Kerala (Lakhs)	India	Kerala
1	2	3	4	5	6	7	8
1	0-14	31.96 (37.76%)	86.64 (29.78%)	39 (37.3%)	82.96 (26.1%)	22.02	-4.24
2	15-59	47.03 (55.57%)	178.74 (61.42%)	57 (55.6%)	201.82 (63.4%)	21.19	12.91
3	60+	5.64 (6.66%)	25.61 (8.8%)	7 (6.7%)	33.35 (10.5%)	24.11	30.22
Total		84.63 (100%)	290.99 (100%)	103 (100%)	318.41 (100%)	21.7	9.42

Source: Census of India

Population Density

3.33 The World Population Density in 2004 is 49 persons per sq.km. and it is 363 persons per sq. km. in India (World Development Report 2006). The density of population in low-income countries, middle-income countries and high-income countries are 80, 44 and 30 respectively. Higher population density puts greater pressure on infrastructure and environment but reduces the per capita costs of supply of public goods and services.

3.34 As per 2001 Census, the density of population for India as a whole is 324 persons per sq. km. where in Kerala it is 819 persons per sq. km. Among the Indian States, Kerala is in third position in respect of density, the first being West Bengal (904) and the second Bihar (880).

3.35 Among the Districts in Kerala, Alappuzha has the highest density with 1489 persons per sq. km. followed by Thiruvananthapuram with 1476 persons per sq. km. Idukki District has the lowest density of 252 persons per sq. km. Eight districts have densities higher than the State average and six Districts lower than the State average.

Sex Ratio

3.36 Sex ratio is measured as the number of females per thousand males. It is a measure of the degree of gender bias. Gender inequity causes preference for male children. Practice of female infanticide has been reported from some states. Migration of male workers, women literacy, accesses to medical service etc. influence the sex ratio.

3.37 Kerala has a unique position in regard to sex ratio. In all the Censuses, females outnumbered males in Kerala, which is contrary to All India pattern. The sex ratio of Kerala has gradually increased from 1004 in 1901 to 1028 in 1951 and then to 1058 in 2001. The 2001 Census shows that Kerala is the only state in India where sex ratio is above the equality ratio and is a 100-year high with 1058 females per 1000 males. District-wise analysis shows that the highest sex ratio of 1094 is in Pathanamthitta District and the lowest in Idukki District with 993 females per 1000 males. Details of sex ratio for India and Kerala from 1951 to 2001 is given in Table 3.13

Table 3.13
Sex Ratio - India & Kerala(1951 to 2001)

Year	Sex Ratio	
	India	Kerala
1	2	3
1951	946	1028
1961	941	1022
1971	930	1016
1981	934	1032
1991	927	1036
2001	933	1058

Source: Census of India 2001

Ageing Population

3.38 The number of aged persons as a proportion of the total population has increased all over the world. The rate is more in developed countries as compared with developing countries. The increasing proportion of aged people is accompanied by a falling proportion of young persons. The average annual global growth rate of older population (60 +) is 1.9 percent, which is higher than the total population growth at 1.2 percent (2000-02). The average annual global growth rate of persons aged 80 years and above (3.8 per cent) is currently twice as high as the growth rate of the population over 60 years of age (1.9 percent).

3.39 India has the second largest number of elderly persons after China. India is home to 10 per cent of the total senior citizens of the world. There were about 4.3 crore elderly in 1981, comprising 6.5% of the population. Their number increased to 5.7 crore (6.7%) in 1991 and again increased to 7.0 crore (6.7%) in 2001. The proportion of elderly to total population in rural areas is higher than that in urban areas.

Box. 3.3

The number of aged persons as a proportion of the total population in Kerala has increased at a rate double than the overall growth rate of population.

(Report on Survey of Aged in Kerala by Department of Economics and Statistics.)

3.40 It is a noteworthy feature of Kerala that the percentage of aged population (above 60 years) is increasing fast. During 1961, the aged population constituted only 5.9% of the total population in Kerala. It increased to 6.2% in 1971, 7.5% in 1981, 8.8% in 1991 and to 10.5 % in 2001. As per 2001 Census, the total number of old age persons was 33.36 lakhs.

3.41 In Kerala the highest percentage of old age population is in Alappuzha district followed by Ernakulam, Kottayam, Thrissur and Thiruvananthapuram. The lowest is in Kozhikode and Wayanad Districts.

CHAPTER 4

AGRICULTURE AND ALLIED SECTORS

The prices of agricultural commodities of the State are extremely volatile and output price variability originates from both endogenous and exogenous market shocks. The agricultural production cycles of most of the crops stretches over long periods due to the production nature of perennial crops. This leads to potential cash flow problems, which are often exacerbated by lack of access to credit and high cost of borrowing, excessive reliance on money lenders, problems of marketing and adverse terms of trade leading to severe crisis in agriculture. This is further compounded by the trade policies leading to higher import of commodities into the State resulting in depression and instability of prices. The most extreme manifestation of the crisis is the suicide of the farmers, who are typically driven to the desperate act by the inability to repay debt incurred in the process of cultivation and associated activities.

4.2 The districts of Alappuzha, Idukki, Wayanad, Palakkad and Kasaragod were affected seriously by the crisis and Government of India has approved a Special Package for the revival of the agrarian economy of three districts viz., Palakkad, Kasaragod and Wayanad and accepted in principle support for Alappuzha and Idukki districts subsequently. Government of India has identified 31 districts in four States of the country for support under the Special Rehabilitation Package.

Rehabilitation Package

4.3 The rehabilitation package aims at establishing a sustainable and viable farming and livelihood support system through debt relief to farmers, improved supply of institutional credit, assured irrigation facilities, watershed management, better extension and farming support services, improved marketing facilities and value added income opportunities through horticulture, livestock, dairy and fisheries for alleviating the hardships caused to debt stressed families of farmers in the affected districts. The ex-gratia assistance from Prime Minister's National Relief Fund will also be provided.

4.4 Burden of the interest waiver will be shared equally by the State and Central Government in the ratio 50:50. An amount of Rs. 360 crores has been provided as grant for interest waiver. For restructuring and rescheduling of loans in a time bound manner an amount of Rs. 815.53 crores has been provided and Rs. 1945.07 crores for credit flow. Apart from rescheduling and credit flow, the amount approved for support is Rs. 765.24 crores.

4.5 Out of Rs. 765.24 crores, Rs. 188.00 crores is approved under loan to the State and another Rs. 180.00 crore is the burden of the interest waiver component to be borne by the State government. The package is not attractive for the vulnerable groups of the farmers because it does not address fundamental issues leading to the extreme step of suicide. Addressing the Principal portion of the loan amount is very much essential for which constitution of a credit risk fund is essential. Instead of preparing a uniform Package for all 31 districts, State Specific support seems to be required with more support from Government of India.

4.6 The Government of Kerala has already taken several steps to address the crisis in the agricultural sector. For the first time in the Country a Debt Relief Act has been passed.

The Agricultural Debt Relief Commission Act 2006

4.7 In order to provide relief for the debt stricken farmers and to make suitable recommendations to solve the grievances of such farmers, the Kerala State Legislative Assembly passed the Agricultural Debt Relief Commission Bill on December 29, 2006. The Act envisages the setting up of a Farmers Debt Relief Commission with powers to adjudicate petitions relating to farmers debt, fix outstanding debts at fair limits, negotiate settlement of disputes and recommend to the Government cases that genuinely deserve to be written off. The Commission will approach the problem on a case-by-case basis, negotiate debt waiver by banks, and fix the amount payable to private money lenders.

4.8 The salient features of the Act is given in Box: 4.1

Box. 4.1

The Agricultural Debt Relief Commission Act- 2006

- Under the purview of the Act the term “Agriculture” is defined as all activities including horticulture, medicinal plants cultivation, nursery management and farming activities , cultivation of crops, intercrops , fruit trees, vegetables, flowers, grasses, fodder, trees or any type of cultivation in the world, breeding and rearing of fish, oyster, honey bee, silviculture, poultry, duck, cattle, pig and other agriculture related activities or utilisation of land for other agricultural purpose.
- Under the act the term “farmer “ is defined one who is an owner of the land or oral leasey , Government land leasey etc. who hold not more than 4 ha of land and having an annual income of not more than 2 lakh Rs. and having agriculture as major occupation which also include the agricultural labourer and SHG’s and Kudumbasree Units who take up land on lease agreement and cultivate.
- The structure of the commission shall include a retired High –Court Judge as Chairman and an agriculture expert, two farmer representatives and a person closely associated with financial and cooperative sector as members. The period of the commission will be for 3 years but can be extended further as required by the Govt.
- The powers and duties of the commission include
 - Making recommendations to the Govt. for declaring a District/ Districts/ parts of the District and a crop or crops as calamity affected area and crop. Also declaring the applicant farmer as affected after making suitable enquiries.
 - To decide upon the assessment of debt and rate of nominal rate of interest to be paid by the affected farmer and to settle the claims except in cases wherein the SBI or its subsidiary banks or any scheduled bank act as the lender.
 - To pass the awards in connection with both the parties based on judgments and also to write off the debt to reduce the rate of interest , to rearrange the loan or to arrange the loan moratorium as the case may be.
 - To make recommendations to the Govt. on volume of debt relief and type of debt.
 - To make recommendations to the Govt. to take over the loan completely or partly and to relieve the farmers from the aftermaths of the debt.
 - To make recommendations to ensure that the future loan requirement of the farmers will be fulfilled through identified agencies.
 - To give current reports to the Govt. on any issues relating to the farmer debt.

The Commission has the legal powers to stop the recovery of loan (except incases if the lender is Nationalised or Scheduled Banks.) for a period of 1-3 years based on nature of crop and crop loss.

The act has the special provisions regarding the settlement of loans availed by the farmers in following respects

- The commission can initiate discussions for mutual agreement irrespective of the verdicts of other legal bodies
- The commission can take steps
 - (i) to rearrange the short term loans availed by the farmers as medium term or long term loans
 - (ii) to facilitate provisions for one time settlements of debts
 - (iii) to avoid penal interest as per RBI and NABARD norms

The civil court has no legal rights to take up issues coming under the purview of this act or to be handled by the Commission or Govt.

National Commission on Farmers

4.9 The National Commission on Farmers formulated a National Policy for farmers and the final draft of the policy was submitted to the Union Govt. for consideration and approval on 4th October 2006. The National Commission on Farmers(NCF) was constituted in 2004 and reconstituted in the same year under the Chairmanship of Prof. M.S. Swaminathan with terms of references to workout a comprehensive medium-term strategy for food and nutrition security in the country and to propose methods of enhancing productivity, profitability, stability and sustainability of major farming systems of the country.

4.10 The recommendations envisaged in the final draft on National Policy for Farmers are given in Box: 4.2

Box. 4.2

Salient Features of the National Policy For Farmers – Revised Draft(2006)

- Revise land acquisition act and provide at least 1 acre land /household to land less families in the name of woman member/ in joint names of both the spouses.
- Bring 10 m ha of new area under irrigation and a water literacy movement to be launched for sustainable use of ground water. Establish Pani Panchayat in every village to distribute available water on equitable basis.
- Establish Livestock Feed and Fodder Corporation at state level and a National Livestock Development Council at national level. In case of poultry, quarantine and testing facilities to be established at all ports of entry.
- Establish a National Fisheries Development Board to deal overall development in fisheries sector. The coastal communities to be enabled to raise bio-shields to safe guard the coastal life against natural hazards like tsunami.
- Document traditional knowledge through biodiversity registers with involvement of women. Incentives to be provided to conserve animal breeds under biodiversity act.
- Research strategy should be pro-nature and pro-small farmers and crop diversification efforts should be accompanied by effective market support to alternate crops.
- Organise National Agricultural Biosecurity Programme with effective home and regional quarantine facilities to insulate the country from invasive alien species of pests,pathogens and weeds as well as from the introduction and release of GMO's.
- Establish a National Land Use Advisory Services to help farm families in their production planning.
- Train experienced men and women as climate managers in drought and flood prone areas.
- With regard to inputs, empower women SHG's to provide hybrid seeds on contract for seed companies. A soil health pass book should be provided for every farm family. Organise agri-business centers to provide machinery and other implements on custom- hire basis. A grampanchayat Mahila Fund should be established to enable the SHG's and women groups to meet needs such as child care centers.
- The NABARD's mandate should be revised and there is a need for agriculture credit policy.
- The ICT based knowledge systems should be established at block and village level.
- To strengthen the marketing opportunity, Minimum Support Price Mechanism and the Market Intervention Scheme should be developed. Community Food Grain Banks should be established for marketing of under utilized crops. Indian Trade Organisation and Indian Single Market should be established to safe guard the market interest of Indian farm families
- The PDS system should include crops of dry areas like bajra, jowar, ragi, minor millets and pulses.
- Recognise Farm Graduates as registered practitioners through an All India Agricultural Council.
- Establish a National Biotechnology Regulatory Authority to assess the risks and benefits of GM crops.
- A code of conduct for contract farming to be developed for major group of farm commodities.
- Educated youth should be attracted to take farming as a profession.
- Agriculture Insurance Policies to cover health problems of farm families and Protection against tuberculosis and HIV should be provided.

Agricultural Income

4.11 The trends in agricultural income in Kerala during the last six years is shown in Table-4.1. The provisional estimate for 2004-05 indicated an increase of 5.37 per cent in growth. The quick estimate for 2005-06 showed an increase of 0.91 per cent over the previous year.

Table 4.1
Growth of Agricultural Income in Kerala (1999-00 Prices)

Sl.No.	Year	Agricultural income (Rs. in crores)	Rate of change over previous year	Percentage contribution to State income
1.	2000-01	12334	0.47	17.30
2.	2001-02	12272	-0.50	16.53
3.	2002-03	12334	0.50	15.52
4.	2003-04	11955	-3.07	13.91
5.	2004-05 *	12597	5.37	13.55
6.	2005-06 **	12712	0.91	12.66

Source: Directorate of Economics and Statistics

* Provisional ** Quick

4.12 Even though the sector has recorded positive trend in growth performance in nineties, it has not been consistent. Food crops in general have suffered a set back in area and production despite a sizeable investment. The contribution of agriculture to State income (share) has been on the decline as the other sectors registered higher rates of growth. The share of agricultural income declined from 17.30 per cent in 2000-01 to 12.66 per cent in 2005-06.

Rainfall

4.13 In Kerala, the rainfall was 2587.3 mm in 2006, against the normal of 2630.5 mm. The highest departure from the normal in the last two decades was recorded during the Southwest Monsoon of 2002. The deviation in rainfall, apart from affecting production and productivity of annual crops, also affects the productivity of perennial crops such as coconut, rubber and pepper in the long run. Deficient rainfall was recorded in one district during South West Monsoon and one district during North East monsoon of 2006 in the State. (Appendix 4.4).

4.14 The cumulative rainfall in the country during the South West Monsoon was one per cent below normal and out of 533 meteorological districts, 59 per cent received excess/normal rainfall while the remaining 41 per cent received deficient/scanty rainfall. Further 130 district (25%) experienced moderate drought and 30 districts (6%) experienced severe drought conditions at the end of South West Monsoon of 2006 in the country.

4.15 The cumulative rainfall recorded in the country during the North East Monsoon of 2006 was 21 per cent below normal as compared to 10 per cent above normal during the corresponding period of the previous year. Out of the 533 meteorological districts in the country, 24 per cent of the total number of districts alone received excess or normal rainfall and the remaining received deficient/scanty rainfall

Table 4.2

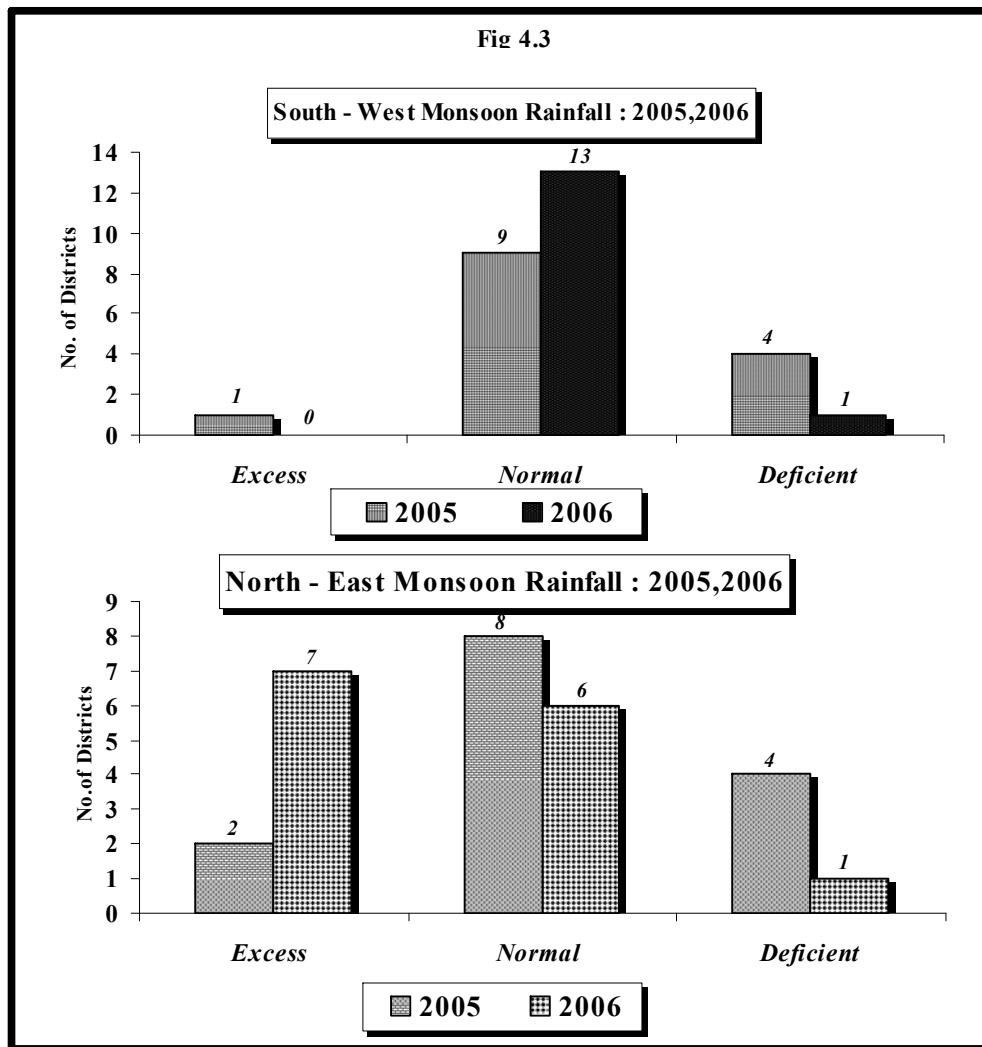
Percentage Departure of Rainfall from Normal (1998 to 2006) in Kerala

Sl. No.	Year	Annual	South West Monsoon	North East Monsoon
1	1998	0	2	30
2	1999	-8	-25	23
3	2000	-21	-18	-27
4	2001	-6	-13	0
5	2002	-14	-33	32
6	2003	-14	-24	5
7	2004	-3	-19	12
8	2005	0	-2	2
9	2006	-2	-7	22

Source: IMD website

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Drought situation in India

4.16 Among various disasters devastating the country, droughts are major ones to which 68 % of the area in the country is vulnerable. India faced more than 26 drought events in its recorded history with more than 5 severe drought instances causing irrecoverable damages to the countries socio-economic Progress. In 2004 , drought in India was characterized by late onset of rainfall in many of the states causing severe damage to countries agricultural productivity.

4.17 According to the recent reports of UN Intergovernmental Panel on Climate Change (IPCC February 2007) ,at continental, regional, and ocean basin scales, numerous long-term changes in climate have been observed. These include changes in Artic temperatures, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensive of tropical cyclones. Intense and longer droughts have been observed over wider areas since the 1970s, particularly in the tropics and subtropics. Increased drying linked with higher temperatures and decreased precipitation have contributed to changes in drought. Changes in sea surface temperatures (SST), wind patterns, and decreased snow pack and snow cover have also been linked to droughts.

4.18 The frequency of heavy precipitation events has increased over most land areas, consistent with warming and observed increases of atmospheric water vapour. Widespread changes in extreme temperatures have been observed over the last 50 years. Cold days, cold nights and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent.

4.19 The US space agency NASA has warned that global warming may worsen droughts in water strapped parts of the world and lead to more rainfall elsewhere. The rainfall pattern will change and decrease further in different parts of the world including South East Asia (NASA, 2007).

4.20 Overcoming drought highlights the need and directions for intensifying efforts to deliver better packaged knowledge-based assistance to the affected communities, so as to enable a sustainable drought adaptation process. A Long term drought mitigation plan should be prepared for the State in association with Kerala Agricultural University and other leading institutions. Contingency crop planning is also to be developed.

Land Use

4.21 Data on land use pattern of Kerala for the year 2005-06 is given in Table 4.3. Out of a total geographical area of 38.85 lakh ha. net sown area is about 55 per cent. Forest occupies around 28 per cent. Agriculture and forest sectors together account for over 83 per cent of the land area. There was no perceptible improvement in the extent of land use for agriculture. In fact net sown area is declining over the period. Land under non-agricultural uses was 9.10 percent in 1999-00 and has increased to 11.67 per cent in 2005-06. There was an increase in the area under current fallow (389 ha) and an increase in the area under fallow other than current fallow (403 ha). during 2005-06 over 2004-05. The area under cultivable waste also declined by 2200 ha. and barren and uncultivated land declined by 111 ha. The land use pattern in Kerala during 2005-06 are shown in Fig 4.4.

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Table 4.3
Land use Pattern in Kerala

Sl. No.	Classification of Land	2004-05	2005-06*	per cent of Geographical Area	Change in Area between 2004-05 and 2005-06	
					Actual	Percentage
1	Total Geographical Area	3885497	3885497	-	-	-
2	Forest	1081509	1081509	27.83	-	-
3	Land put to non agricultural uses	430084	453397	11.67	23313	5.42
4	Barren and uncultivated land	28891	28780	0.74	-111	-0.38
5	Permanent Pastures and Grazing land	292	290	0.01	-2	-0.68
6	Land under miscellaneous tree crops	10193	9416	0.24	-777	-7.62
7	Cultivable waste	70092	67892	1.75	-2200	-3.13
8	Fallow other than current fallow	40917	41320	1.06	403	0.98
9	Current fallow	68634	69023	1.78	389	0.57
10	Net area sown	2154885	2133870	54.92	-21015	-0.97
11	Area sown more than once	841408	918341	23.64	76933	9.14
12	Total Cropped area	2996293	3037868	78.18	41575	1.39
13	Cropping intensity	139	142			

* Provisional

Trend in Area, Production and Productivity of Crops

4.22 Data regarding the area, production and productivity of important crops grown in Kerala are shown in Table 4.4 and Appendix 4.5. Out of a gross cropped area of 30.38 lakh ha. in 2005-06, food crops comprising rice, pulses, minor millets and tapioca occupy only 12.5 per cent. Kerala state which had a low base in food production is facing serious challenges in retaining even this meagre area. Kerala agricultural economy is undergoing structural transformation from the mid seventies by switching over a large proportion of its traditional crop area which was devoted to subsistence crops like rice and tapioca to more remunerative crops like coconut and rubber.

Table 4.4
Area, Production and Productivity of Principal crops

Sl. No	Crops	Area (ha)		Production (MT)		Productivity (kg./Ha.)	
		2004-05	2005-06*	2004-05	2005-06*	2004-05	2005-06*
1	Rice	289974	275742	667105	629987	2301	2285
2	Pulses	8428	8000	8390	8080	995	1010
3	Pepper	237669	240551	74980	75704	315	315
4	Ginger	9991	9285	45305	38747	4535	4173
5	Turmeric	2881	3000	6244	6477	2167	2159
6	Cardamom	41378	38865	8616	9329	208	240
7	Arecanut	107572	108207	110340	110641	1026	1022
8	Banana	58866	62141	475371	488061	8075	7854
9	Other Plantains	54612	55460	416115	421415	7619	7599
10	Cashewnut	81547	80727	60584	57624	743	714
11	Tapioca	88486	94982	2400043	2585096	27123	27217
12	Coconut **	899267	899943	6001	6013	6673	6575
13	Coffee	84644	84644	54300	60175	642	711
14	Tea	35040	35043	49508	56384	1413	1609
15	Rubber	480661	494400	690778	739225	1437	1495

** Production million nuts and Productivity in nuts/ha.

* 2005-06 figures are provisional except Paddy, Cardamom, Coffee, Tea and Rubber

Source: Directorate of Economics and Statistics and UPASI

4.23 The area under rice has declined from 2.90 lakh ha. in 2004-05 to 2.76 lakh ha. in 2005-06. In the case of tapioca the area has increased from 0.88 lakh ha. to 0.95 lakh ha during this period. The area under commercial crops in general and rubber in particular has increased considerably during the last two decades. The trend seems to have slowed down recently. During Ninth plan average annual increase in area under rubber was 1951 ha while during 2005-06 area increased by 13339 ha compared to previous year and the increase was mainly due to upsurge in prices. The index of area, production, productivity of crops in Kerala for the year 2003-04 to 2005-06 with the base of triennium ending 1993-94 is shown in Appendix-4.6. The index of food grain production declined by 3.57 points and non-food grains increased slightly. While index of area of food grains declined by 2.77 points and productivity declined by 0.62. However non-food grains showed slight increase and the indices increased by 1.42, 6.31

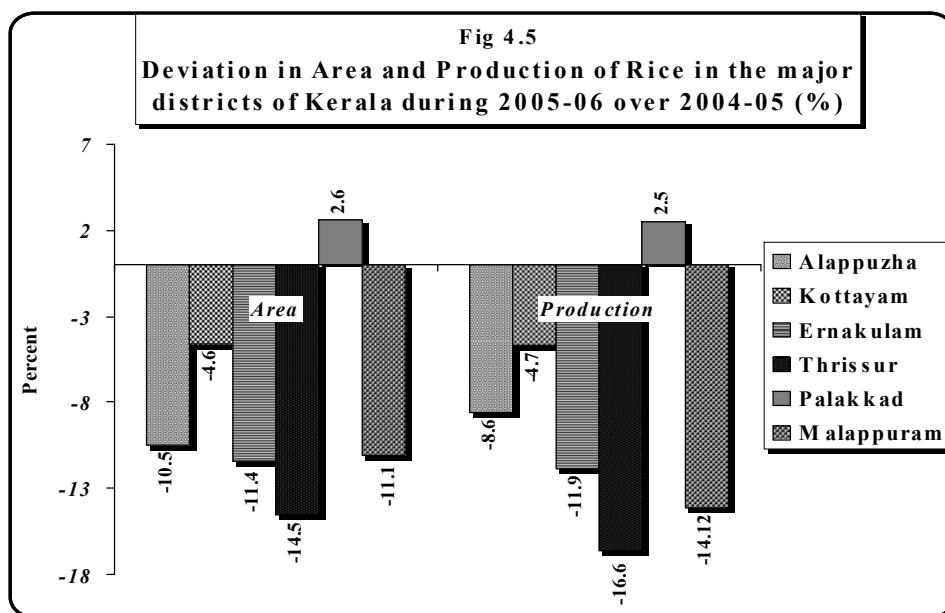
and 5.11 respectively. The production of plantation crops showed slight improvement during the year by 13.07 points. (Appendix-4.6)

4.24 In the case of coconut, area was at its peak during 2000-01. During the year 2005-06 area increased by 676 ha. over 2004-05. Major commercial crops which had recorded expansion of area during 2005-06 from previous year include pepper (2882 ha), tapioca (6496 ha) and Arecanut (635) Banana (3275 ha) and rubber (13339 ha). The major crops with considerable loss in area include cardamom (2513 ha), cashewnut (820 ha), ginger (706 ha). Crops which have failed to sustain the production level in 2005-06 compared to previous year include cashewnut (-2960 MT), ginger (-6558 MT), and rice (-37118 MT). Increase in production reported during this period include rubber (48447 MT), Cardamom (713MT), Arecanut (+ 301 MT), Turmeric (+ 233 MT) other plantains (+ 5300 MT), Pepper (+ 724 MT), Tapioca (+185053 MT), Coconut (+12 MN), Coffee (+5875 MT) and Banana (+12690 MT)

Crop wise analysis

Rice

4.25 The average annual decline in area under rice during the Eighth Five year Plan was around 22000 ha, whereas it has come down to an average of 13000 ha. during the Ninth Plan period. The average annual reduction in area during Tenth Plan was 11657 ha. During 2005-06, decline in area was 14232 ha. from 2.90 lakh ha. in 2004-05 to 2.76 lakh ha and rice production declined from 6.67 lakh MT to 6.30 lakh MT, a decline of 6 per cent during this period compared to an increase of 17 per cent in 2004-05 with that of 2003-04. The department of agriculture has introduced a scheme on Promotion of Paddy cultivation in fallow lands in 2004-05. In terms of increase in area under rice, the scheme seems to be less effective.



4.26 The average productivity which was stagnant at around 2.2 MT/ha for the last four years has increased to 2.29 MT/ha in 2005-06. (Table-4.5). Maximum increase in productivity during the year to the tune of 4 per cent was recorded in Idukki district. Rice productivity at current

level is sub optimal. Instead of providing area based subsidies , suitably designed incentive system is essential to promote productivity of rice in the state.

Table - 4.5
Area, Production and Productivity of Rice in Kerala and India

	Year	Area (000' ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	347	44710	751	84980	2162	1901
2	2001-02	322	44620	704	93080	2182	2086
3	2002-03	311	40410	689	75720	2218	1874
4	2003-04	287	42496	570	88280	1984	2077
5.	2004-05	290	41665	667	85310	2301	2047
6.	2005-06	276	-	630	-	2285	-

Source : Directorate of Economics and Statistics, CMIE

4.27 The sharp increase in the prices of fertilizers and wages and non-availability of labour in peak seasons in certain locations, the failure of the irrigation system to serve the areas to the extent desired etc. are problems to be tackled to sustain this crop.

4.28 Local governments are also investing a significant amount for the promotion of rice. However there is no apparent coordination between the schemes of State Plan and those of local governments. A coordinated approach is needed for the development of rice in the State.

4.29 The future of rice production in the state lies in improving productivity through promotion of high yielding varieties under scientific management in potential areas. Strengthening of group farming samithies with the required facilities and gradually raising them to the level of self supporting institutions is perhaps one way to circumvent these problems. However past experience with the group farming programme suggests that neither input subsidies nor infrastructure support *per se* can bring about substantial change in area and production. Instead of pumping in more money by way of additional incentives, appropriate institutional arrangements for organising common services coupled with participatory irrigation management, local water resources development, promotion of supplementary income sources, low cost credit, organized marketing and selective mechanisation could improve the situation. Applied research on emerging technologies and participatory technology development are also equally important.

4.30 A State level project has to be prepared for the promotion of rice production by linking the schemes of Department of Agriculture, local governments and Kudumbashree. Padasekharam based action plans have to be prepared linking with credit, input support, water management, procurement and supplementary income sources.

4.31 A matter of additional concern is the declining and negative growth rates in area and production of rice in neighbouring states like Tamil Nadu, Karnataka and Andhra Pradesh. The share of rice production of Tamil Nadu, Karnataka, Andhra Pradesh and Kerala was 25.34 per cent in 1996-97 which declined to 17.35 per cent in 2003-04. The annual decline in growth of rice production in Tamil Nadu from 1996-97 to 2003-04 was to the tune of -7.09 per cent while in Andhra Pradesh it was -2.18 per cent.

Speciality rice

4.32 Concerted efforts are needed to promote scented rice cultivation in Wayanad, organic rice production in Pokkali lands and medicinal rice in identified potential panchayats with necessary brand promotion and marketing support in association with LSGs. Adequate processing facilities have to be established before launching a major project for the development of scented rice in Wayanad district. Value added products from medicinal rice could also be promoted on SHG basis in collaboration with ayurvedic industry.

Season wise performance

4.33 Season wise data on the performance of rice during the last three years is shown in Appendix 4.7 Data shows increase in area in Mundakan season with decline in Punja and virippu seasons. There was 6.7 per cent decline in area during Virippu season in 2005-06 compared to previous year and 38.8 per cent reduction in Punja season. Area under Virippu is gradually shrinking and about 45000 ha out of double cropped land are remaining fallow during Virippu season. Group farming samithies should concentrate their efforts in such areas with a view to bringing such areas under double cropping. Mundakan season accounts for highest share in production with 56.8 per cent followed by 33.7 per cent in Virippu and 9.5 per cent in Punja season. The productivity recorded in Punja is the highest with 2733 kg. per ha. during 2005-06 which is 8.8 per cent higher than that in 2004-05.

High Yielding Varieties

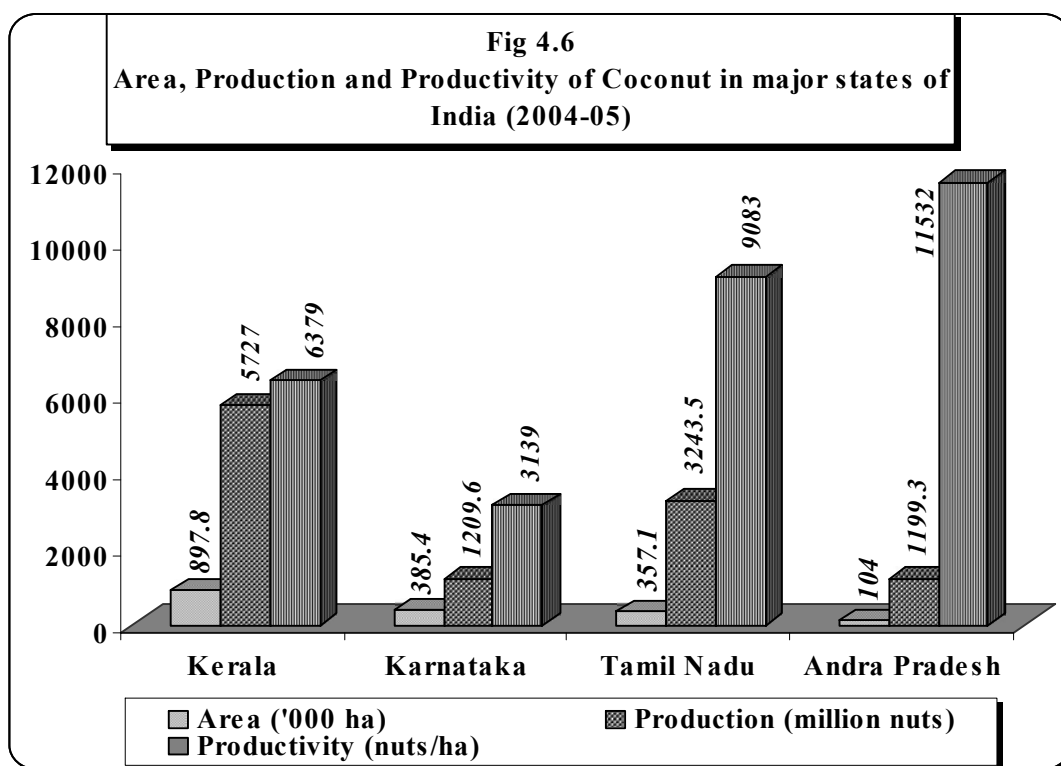
4.34 The coverage with high yielding varieties is given season wise in Appendix.4.8 In spite of sharp decline in the area under rice, the coverage under high yielding varieties remains steady and is increasing. The coverage which was stagnating in the range of 1.65 to 1.77 lakh ha during the last decade, has registered marked improvement in the last five years. It increased from 1.77 lakh ha in 1998-99 to 2.24 lakh ha in 2005-06. However During 2005-06, a slight decline of 10 per cent in area compared to previous year was recorded Maximum high yielding variety coverage was in Punja season with 99 percent. followed by Virippu (93 per cent) Mundakan (71 per cent) and overall coverage was 81 percent. (Appendix-4.8). The average productivity of high yielding varieties during 2005-06 was 2382 kg/ha indicating 0.21 per cent decline during the year, compared to the previous year.

4.35 Eventhough Mundakan season accounts for the largest share in coverage of area under rice its share in high yielding varieties is lower compared to Virippu season. This is mainly because of inadequate research support to evolve varieties with multiple disease resistance suitable for cultivation in different localities in Kerala during Mundakan season.

Coconut

4.36 In India, coconut is grown in an area of 1.94 million ha. producing 12830 million nuts with a per hectare productivity of 6632 nuts. (Table 4.6) Kerala's share in area as well as

production of coconut in the country is declining over time. The share of area declined from 57 per cent in 1991-92 to 46 per cent in 2004-05, while share of area in Karnataka and Tamil Nadu together increased from 29 per cent in 1992-93 to 38 per cent in 2004-05 (Fig. 4.6).



4.37 With a coverage of 9 lakh ha, coconut occupies 42 per cent of the net cropped area and provides livelihood to over 3.5 million families in Kerala. Production increased by 2.1 per cent in 2004-05 compared to the previous year and increased by 0.20 per cent in 2005-06 compared to previous year. The average productivity has slightly declined in 2005-06 by 1.5 per cent to 6575 nuts/ha compared to 2004-05. The productivity levels in Kerala are also lower than other major producing states. The productivity in 2004-05 in Maharashtra was 15189 nuts and 9083 nuts in Tamil Nadu.

Table- 4.6
Area, Production and Productivity of Coconut in Kerala and India

Sl. No	Year	Area (000'Ha.)		Production (Million Nuts)		Productivity (Nuts/ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	926	1840	5536	12597	5980	6847
2	2001-02	906	1890	5479	12822	6049	6776
3	2002-03	899	1922	5709	12535	6349	6523
4	2003-04	898	1934	5876	12178	6540	6298
5	2004-05	899	1935	6001	12830	6673	6632
6.	2005-06	900	-	6013	-	6575	-

Source: Directorate of Economics and Statistics, CMIE, CDB

4.38 Apart from sizeable percentage of senile and unproductive palms and the higher incidence of root wilt affected palms, the share of younger non-bearing palms is around 25 per cent as reported in the survey of Department of Economics and Statistics. Over population of palms in holdings (231 nos. per ha) is another reason for low productivity of palms.

4.39 Though India is among the leading producers of coconut in the world, its relative share in the international trade of value added products is insignificant as compared to other major producing countries like Philippines, Indonesia and Sri Lanka. More concerted efforts are needed to promote value addition in coconut. Promotion of Hitech ventures in cooperative sector as well as micro enterprises offer scope in the state. Promotion of Neera also could be taken up on Pilot scale.

4.40 However it should be recognised that mere diversification and value addition will not make the Indian coconut economy internationally competitive, unless the cost of production of coconut is contained and brought down in real terms over time. For this the primary task is to raise the yield of coconuts for which technology adoption is crucial. Massive replanting of root wilt affected palms with seedlings of elite palms could be initiated immediately. The present level of adoption suggests the need for further intervention to enhance technology adoption. Generation of technologies for different agro ecological situations may improve the level of adoption. Integrated farming system with due emphasis on multi tier cropping systems needs to be promoted in different agro ecological situations.

Pepper

4.41 Vietnam is the largest producer with a share of 30.5 per cent followed by India (23.7 per cent) in 2005. India became the second largest producer from the first position in 2002. A 13 per cent increase in production was recorded in India during 2005 while World pepper production had registered a 9 per cent decline during 2005. In 1991, Vietnam was in seventh position with a share of just 3.8 per cent of world production. There is consistent increase in area, production and productivity in Vietnam over the period and productivity in Vietnam is around 1.3 MT /ha.

4.42 The state continues to enjoy a near monopoly in area and production of pepper, accounting for 98 per cent each in the country. The productivity achieved its peak level of 376 kg. per ha during 1998-99. The productivity of pepper recorded during 2005-06 was only 315 kg, per ha. The production increased from 74980 MT during 2005-06 to 75704 MT in 2005-06. Pepper produced in Kerala fetches a premium price in international market in view of its intrinsic quality.

4.43 However consequent to the liberalisation of imports, there are reports of low quality pepper arriving from other producing countries. The import of pepper has increased from 4028 MT in 2000-01 to 18857 MT in 2005-06 affecting the interests of pepper farmers of the State. The Indo Sri Lankan Free Trade Agreement allowing free import of pepper has to be modified to safeguard the interests of Kerala farmers.

4.44 Government of India should build in adequate safety mechanism and monitoring system to see that the issue of certification of origin and the condition relating to origin of the goods are

not violated. Similarly in respect of import for re-export of pepper which enjoys duty free status, a minimum value addition needs to be prescribed.

4.45 India could export 42806 MT of pepper in 1999-00, which declined to 16700 MT in 2005-06. The value realization was at Rs. 140.50 crores compared to Rs. 121.40 crores in 2004-05 and unit value realization is almost stagnant at Rs. 85.80 to Rs. 84.13 per kg. respectively in the corresponding period. USA is the major export market for India accounting for 39 per cent in 2005-06. Vietnam is the leading exporter with 46 per cent followed by Brazil 16.2% with 20 per cent, Indonesia 14.3 per cent and India 7.6 per cent. Vietnam exports more than its production, while Indian exports account for only 22.6 per cent of its production.

4.46 Price of pepper moved consistently upwards from early nineties and reached a peak level in 1999-00 with Rs. 215 per kg. Since then declined to Rs. 174 per kg. in 2000-01, further down to Rs. 80 per kg. in 2001-02 to Rs. 60/kg. in 2005-06. Pepper prices continued its declining trend since 2000. In recent months, the prices started an increasing trend.

4.47 The state has to bestow specialised attention for upgrading the productivity through an organised replanting programme. The productivity in India is the lowest among the major producing countries. It is the highest in Thailand with 4.3 MT/ha. followed by Malaysia with 2 MT/ha in 2001. The varietal selection and improvement through genetic upgradation is also important for stabilizing and retaining its lead share in global trade.

4.48 The quality issues reported in consignments exported from India include presence of pesticide residues, mycotoxins and microbial contaminations. In the liberalised policy regime, exporters with the status of trading house, star trading house or with in process quality control system can export spices without preshipment inspection and certification. Quality control is very important in the post WTO context to retain the market share and the SPS norms are gradually becoming a weapon to discriminate trade, and the role of Spices Board assumes crucial, in enforcing quality control norms. Spices Board may take further initiatives to fix maximum pesticide residue limits at the Codex level.

4.49 The pattern of global demand for the crop is undergoing changes. The consumer preference is for value added form of pepper such as white pepper, pepper in brine, oleoresin etc. Kerala could not take full advantage of the emerging opportunities for want of raw material of desired quality.

4.50 Emerging trends and market potential indicate that both supply and demand for organic spices are growing throughout the world. India has developed the national standards for organic production and prescribed the guidelines for production of organic spices. Accreditation criteria for inspection and certification agencies are stipulated. Production programmes for promotion of organic spices in collaboration with Spices Board can go a long way in exploiting the world organic spice market. A major portion of Wayanad and Idukki could be brought under organic production of pepper.

Cashew

4.51 India is the largest producer and exporter of cashew in the world (Fig. 4.7). India's share in world production is 17 per cent with a production of 4.6 lakh MT in 2004. Area under the crop in Kerala, has been declining steadily from 1.25 lakh ha. in 1988-89 to 0.81 lakh ha. in 2005-06 and the production declined from 1.08 lakh MT to 0.58 lakh MT during the period (Table 4.7). The share of Kerala in the area under cashew in the country has come down from 23

per cent in 1987-88 to 9.4 percent in 2005-06 and the corresponding decline in share of production from 31 per cent to 10.05 per cent. Area and production are increasing steadily in other producing states in the country. Maharashtra is the leading producer with 31.94 percent share in production during 2005-06, whose share was only 10 per cent in 1990-91.

Table 4.7

Area, Production and Productivity of Cashew in Kerala and India

Sl. No	Year	Area (000'Ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2000-01	92.1	720	66.2	450	718	625
2	2001-02	89.7	750	65.8	470	734	710
3	2001-03	88.5	770	66.1	500	746	760
4	2003-04	88.4	730	65.2	535	737	733
5	2004-05	81.5	820	60.6	544	743	810
6.	2005-06	80.7	855	57.6	573	714	815

Source: CMIE, Directorate of Economics and Statistics, Directorate of Cashewnut and Cocoa Development.

4.52 In spite of operating special schemes for expansion of area under cashew, the coverage has been steadily declining during the last two decades. The decline in area from 1980-81 to 2005-06 was to the tune of 60543 ha. Productivity of the crop, which was around 900 kg. per ha. during late eighties has also started declining from 1995-96 onwards, reaching 562 kg. per ha. during 1998-99 and thereafter hovering around 740 kg. In 2005-06, it further declined to 714 Kg.

4.53 India exported cashew kernels worth Rs. 2514.86 crore during 2005-06 and imported raw nuts worth Rs. 2162.95 crore resulting in a net foreign exchange earning of Rs. 351.91 crore indicating 33 per cent decline in value terms compared to 2004-05 and 9.9 per cent decline in quantity of cashew kernels exported and 2.3 per cent decline in the quantity of raw nuts imported. U.S.A. is the major export market with 38 per cent export share followed by Netherlands (16 per cent). The unit export price of cashew kernels increased during the year 2005-06 by 3.01 per cent compared to 2004-05. The total raw nuts imported into India during 2005-06 was 5.65 lakh MT. Around 26 per cent of total raw nuts imported is from Ivory Coast followed by Guinea Bissau (17.36 per cent). Tanzania has emerged as another supplier of raw cashew nuts with a share of 12.21 per cent of total imports. Out of imported nuts 54 per cent of imported raw nuts is bought to Kerala during 2005-06 which was 46 per cent in 1998-99. Cashew processing industry is finding it extremely difficult even to maintain the present level of capacity utilization because of the lower availability of local raw cashew nuts. Concerted efforts are needed to nurture this crop in the state with programmes to promote high density planting with high yielding cashew grafts. Cashew could form one of the major crops supported under the newly established State Horticulture Mission.

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Organic Agriculture

4.54 Organic agriculture is a fast growing segment in the international and domestic markets. However, developing countries face a number of obstacles in trying to penetrate these markets. The most talked about problem facing exporters is the need for Certification and accreditation.

Certification is costly where international agencies are involved and few developing countries have established their own accredited agencies. Argentina has made enormous efforts into this area. A multitude of difficult national standards in importing countries and lack of transparency constitute a practical barrier. The marginal and small farmers in China, India and Latin America and most probably in other developing countries have a comparative advantage in shifting to organic agriculture, as the technologies they use are often very close to organic practices (IFAD, 2005).

4.55 The size of the price premium varies between countries, level of market development and product, but a premium of 20-30 per cent is common. Now organic agriculture is moving into the economic main stream and many large food companies are developing organic products as an element of their business. A portion of the price premium alone are reaching to farmers, but the down stream supply chain typically accounts for a large share of higher price.

4.56 Kerala could exploit the growing international markets especially in pepper, tea, coffee etc. Detailed action plan to promote organic agriculture in collaboration with Commodity Boards and Non-Governmental organizations would help in exploiting the emerging international markets. It should be ensured that the price benefits of the premium reach the farmers so that they are motivated to take to organic farming. It is important to provide access to technical and market information on organic production and strengthen producer organizations (World Bank 2005)

4.57 Effective steps are also required for supporting farmers during the transition period for 2-3years as well as for augmenting supply of organic inputs. The State Horticulture Mission could support in a significant way to promote organic agriculture.

Plantation crops

4.58 Plantation crops in general are either export oriented or import substituting and therefore assume special significance from the national point of view. It is estimated that nearly 14 lakh families are dependent on the plantation sector for livelihood. Each of the four plantation crops of South India has its distinct characteristics and economic problems. Consequent to the removal of quantitative restrictions on import, plantation crops in general are facing the threat of low quality imports.

4.59 Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 6.53 lakh ha, accounting for 31 per cent of the net cropped area in the state and 43 per cent of the area under these crops in the country. Kerala's share in the national production of rubber is 92 per cent, cardamom 78 per cent, coffee 20 per cent and tea 6 per cent.

Rubber

4.60 Global production recorded 8.68 million tonnes in 2005, which was about 0.4 percent higher than the production in 2004. Production in Thailand, the world's largest producer, declined slightly to 2.91 million tonnes from 2.96 million tonnes in 2004. Higher prices have been the major factor to induce intensive tapping. The two leading producers, Thailand and Indonesia continue to dominate the market, accounting for 34 and 26 per cent each, followed by Malaysia and India with 13 and 9 per cent. After declining for several years in the late 1990s, production in Malaysia recovered recently and reached 1.1 million tonnes in 2005, about 53 percent higher than that in 1999. The higher price of natural rubber resulted in a shift in the comparative advantage of rubber production against other crops, in particular oil palm, which

attracted small holders to revive rubber tapping. Indonesia also experienced a significant increase in production in the past few years.

4.61 India is the fourth largest producer of natural rubber with a share of nine per cent in the world after Thailand, Indonesia and Malaysia. The production of natural rubber in the country was 8.03 lakh MT in 2005-06, registering a 7.1 per cent growth compared to the previous year while it was 5.3 per cent growth over the previous year during 2004-05. India is at the same time the fourth largest consumer of natural rubber after China, USA and Japan

4.62 Kerala accounts for 83 percent of the area under rubber in the country. The coverage under the crop in 2005-06 was 4.94 lakh ha, higher by 13339 ha. over the previous year. The production of natural rubber in Kerala during the year was 7.39 lakh tonnes indicating a 7 per cent increase over the previous year. The increasing trend in productivity continued during 2005-06. It was 1190 kg. per ha in 1998-99, which rose to 1495 kg. during 2005-06. In terms of tapping area, productivity recorded was 1765 kg. per ha during the year 2004-05.

4.63 Even though the domestic prices of natural rubber were more or less comparable to international prices during 2005-06 (See Appendix-4.17) the industrial sector still resorts to imports in bulk quantities since the import duty is only 25 per cent. The total quantity imported was 68718 MT in 2004-05 which declined to 45285 MT in 2005-06. The annual average growth of the domestic natural rubber industry for the period 1996-97 to 2005-06, showed an annual average increase of 3.86 per cent in production where as consumption had increased at 3.61 per cent per annum while import of natural rubber increased by 8.64 per cent.

Table 4.8
Consumption of Rubber during 2004-05, 2005-06

Sl. No	Item	Consumption (in MT)		Growth per cent
		2004-05	2005-06	
	Natural Rubber			
1	Auto Tyres and Tubes	406226	442921	9.0
2	Others	349179	358189	2.6
	Total NR	755405	801110	6.1
	Synthetic Rubber (SR)			
3	Auto Tyres and Tubes	131267	141580	7.9
4	Others	93383	95915	2.7
	Total SR	224650	237495	5.7
	NR and SR			
5	Auto Tyres and Tubes	537493	584501	8.7
6	Others	442562	454104	2.6
	Total of NR and SR	980055	1038605	6.0

Source: Rubber Board

4.64 The higher prices in the international market is reflected in the domestic market also. The average price of RSS4 in the domestic market at Kottayam was Rs. 55.70 per kg. in 2004-05 which increased to Rs. 66.99 in 2005-06. The international price of RSS3, equivalent of RSS4 of

India, increased from Rs. 57.51 to Rs. 73.98 in the corresponding period. The price of RSS 4 in Kottayam reached Rs.106.92 during June 2006 and then declined to Rs.87.09 in October 2006. The Indian price (RSS4) which was higher than the international price till June 2006 started moving below the international price during the remaining months of the year owing to the sharp increase in the international price.

4.65 World rubber prices may continue to show some strength in the near future largely due to the high oil price and continuing global economic growth. If global economic growth, especially in developed countries such as the EU, Japan and the United States and large developing countries such as China and India continues at the current pace, further price strengthening could be expected. It would, however, be limited in the long run by the good potential to increase supply by more intensive tapping and by increasing yield in the major producing countries.

Coffee

4.66 The estimated World production of 2006-07 is 7.2 million tonnes recording an increase of 12.5 per cent. This increase largely reflects Brazil's higher output from last season's production. India is the 5th largest producer of coffee in the world with a share of 4.1 per cent. The top producers being Brazil (32 per cent), Vietnam (11 per cent) and Columbia (10 per cent), during 2005-06. The share of Robusta production increased from 53.7 per cent in 1995-96 to 65 per cent in 2005-06 indicating a 6.5 per cent annual growth while Arabica production remained more or less static.

4.67 The area under coffee in Kerala was 0.846 lakh ha out of 3.28 lakh ha in the country during 2005-06, which works out to 26 per cent. The share of Kerala in production is 21.66 per cent during 2005-06. Major variety grown in Kerala is Robusta with a share of 95 per cent in planted area. Production of coffee during the year was only 0.60 lakh MT against 2.82 lakh MT for the country. Productivity of the crop in Kerala (711 kg/ha) is lower than the national level of 860 kg./ha. Area under coffee registered substantial increase during the last two decades with an annual growth rate of over 2 per cent. The increase in production recorded during the period was much higher and registered an annual average growth rate of nearly nine per cent. Coffee provides opportunities for livelihood to nearly one lakh families including agricultural labourers. In Kerala, coffee is also one of the small holder plantation crops with nearly 76,000 holdings coming under the category with an average size of 1.1 ha. Consumption of coffee has remained more or less static at around 55,000 tonnes for the past one and half decades till 1999 and then slightly improved to 70,000 tonnes in 2003. Out of this, 28000 MT is robusta coffee.

4.68 Coffee is a highly export dependent crop and more than 80 per cent of domestic production is exported. The unit value realization has declined drastically from Rs. 95.37 per kg. in 1997-98 to Rs. 57.83 per kg. in 2004-05 which improved to Rs. 74.92 per kg in 2005-06. The quantity of coffee exported from India declined in 2005-06 to 2.01 lakh tonnes from 2.12 lakh tonnes in 2004-05.

4.69 International Coffee prices made a remarkable recovery during 2005 with Robusta prices averaged to \$ 1.09/Kg. up from \$ 0.79/Kg. in 2004.

Tea

4.70 World tea production increased at an annual growth rate of 2.8 per cent between 1970 and 2000 expanding from 1.27 million MT to 2.91 million MT. During the period 1997 to 2005,

the annual growth rate of world production was 2.30 per cent while the world consumption was 1.90 per cent. The gap had increased from 5 million Kg. to 97 million Kgs. during the period resulting in price crisis. Most of the growth was due to the increase in productivity rather than expansion in area. Estimates indicate that world tea production in 2005 reached 3.37 million MT showing 1.39 per cent increase over the previous year. Black tea accounts for more than 70 per cent of world tea production and 22 per cent by green tea. India is the leading producer and accounts for 28 per cent of global production followed by China with 26 per cent production (Fig. 4.8). All the major producing countries realized increased output in 2005. The output in India is estimated to have increased by 3.9 per cent in 2005 to 928 M. kgs.

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4.71 A declining trend in production in the State was observed for the last six years from 68.9 m. kgs. in 2000 to 67 m. kgs. in 2005. Against the total area of 5.11 lakh ha under tea in the country Kerala accounts for only 0.35 lakh ha. In respect of production the share of Kerala is 7 per cent in 2005. Tea plantations owned by big companies employ a labour force of over 84,000 in the organised sector. There is fluctuation in production and it ranged from 64.8 M. kgs. in 1995-96, reaching to 69.1 M.kgs. in 2000-01 which declined to 56.4 M kgs. in 2005-06.

4.72 After the removal of quantitative restrictions in April 2001, one of the major threats faced by the tea industry is the increased import of inferior quality teas into India particularly from Indonesia resulting in further depression in prices. Imports increased from 13.4 M. kg. in 2000 to 16.6 M. kg. in 2001 and slightly declined to 16.48 M kg. in 2005. However during 2003 the import declined substantially to 9.8 M. kgs. The maximum quantity of tea was imported from Nepal (22 per cent), followed by Vietnam (19.6 per cent) and Kenya (19.3 per cent). The unit value of imported tea was the lowest from Vietnam (Rs.37/kg) while the average being Rs.59/kg. The disturbing fact is that most of the countries are exporting to India at low prices.

4.73 The average auction prices for 1999 at Kochi was Rs. 62 per kg. which declined to Rs. 52.14 per kg. in 2004. The price of tea in south India during January-April 2006 has slightly improved to Rs. 49.57 per kg from Rs.49.44 during the corresponding period during 2005. The auction price of three centers (Colombo, Kolkata and Mombassa) averaged US\$ 1.66 /kg. during 2005, which is slightly lower compared to 2004 level.

4.74 Productivity of Tea in India is much lower than that in Vietnam. The organic tea production is a major shift in this sector. (eg. Darjeeling tea). In Kerala coverage under organic tea could be increased. Nellyampathi (Palakkad dist) estates have already got Organic Certification.

4.75 On the types of tea imported by major countries the orthodox tea accounted for 51 per cent and CTC accounted for 39 per cent and the rest by green tea and others. The CTC market is shrinking. In South India orthodox tea production had declined from 94 per cent in 1961 to 25 per cent in 1991 and to 16 per cent in 2003. There is a need to correct this, especially in the context of the global demand for orthodox teas.

Cardamom

4.76 The total production from India and Guatemala was estimated at 22500 MT in 2002. The production in Guatemala improved by 14.4 per cent in 2002 over the previous year while it declined by 21 per cent in India and estimated at 9000 MT in 2002. On an average, Guatemala

exported around 73 per cent of its production, where as India's share of export in total production is only 8 per cent.

4.77 Productivity which was more or less stagnant around 50 kg./ha. in the 1980s has improved to the level of around 203 kg. per ha by 2001 and declined to 170 kg/ha in 2005-06. Kerala was lagging behind the national level till 1992-93 but has improved its position by raising its productivity to 215 kg. per ha over the last five years. Consequently, the share of Kerala in production at the All India level also increased from 28 per cent in 1992-93 to 78 per cent in 2005-06. While area under cardamom in the country has declined from 0.97 lakh ha to 0.74 lakh ha. in the period. In Kerala it has come down from 65,000 ha to 38865 ha. On the export front cardamom has been facing competition from Guatemala although the quality of Guatemala cardamom is inferior. The country could tide over the challenge by expanding domestic market through market promotion. The average auction price during 2000-01 was Rs. 570 per kg. which improved to Rs. 622.96 in 2001-02 and declined to Rs. 561.13 in 2002-03 and further declined to Rs. 215.56 in 2005-06. The Indian export of cardamom has increased from early nineties and reached a peak level of 1545 MT in 2000-01 and then declined by 43 percent in 2005-06 to reach 875 MT. The unit price of exported Cardamom declined steadily to Rs. 308.69 per kg. in 2005-06 from Rs. 367.54 per kg. in 2004-05. However the market for cardamom is largely domestic as could be seen from the declining share of exports and the share of exports is only 7 per cent of the production.

Price Stabilisation Fund (PSF) Scheme

4.78 Price Stabilisation Fund Scheme was launched by the Government of India in April 2003. The scheme is being operationalised through the Price Stabilisation Fund Trust, New Delhi. The scheme was launched by the Department of Commerce, GOI with a view to providing sustained long term support to the small growers of Tea, Coffee, Rubber and Tobacco. The scheme provides Rs. 1000/- as financial assistance to enrolled growers in the event of price decline below the Price Spectrum band. The Price Spectrum band is estimated on the basis of international price of each commodity.

4.79 During 2003-04, Rs. 200.00 crores and during 2004-05 Rs. 232.88 crores have been made to the PSF Corpus fund by GOI and the entry fee deposit of members were Rs. 1.16 crores and Rs. 0.30 crores respectively. During 2005-06 entry fee deposit was Rs. 0.77 crores. At the end of March 2006, 2874 coffee growers, 12 tea growers and 16192 rubber growers were enrolled from Kerala against a total of 45188 numbers in the country. Of the total, 42.2 per cent is enrolled from Kerala.

4.80 The scheme is not attractive for the small and marginal farmers. GOI have constituted a Task Force under the Chairmanship of Shri. Rangachary, former Chairman, IRDA to review the scheme as it has not helped the vast majorities of cultivators. A Group of Ministers has also been constituted.

4.81 The Govt. of India constituted a Task Force on 24th July 2006 to examine the problems faced by the small growers in the plantation sector. The suggestions made by the Task Force are expected to yield to a resolution of many of the problems faced by the growers. The salient suggestions made by the Task Force is given in Box No: 4.3

Box No: 4.3
Report of the Task Force on the Plantation Sector

- The Price Stabilisation Fund Scheme launched by the Ministry of Commerce may be restructured to encompass additional responsibilities such as coverage of spices (cardamom, chillies & pepper) and Floriculture exports, operationisation of a comprehensive insurance package for the plantation sector, insurance of bonds and similar nature of financial instruments by way of financial assistance to growers and coordination with Commodity Boards relating to various developmental schemes in plantation sector
- The insurance coverage may be provided to the small growers(a grower holding upto 10 ha of plantation land) and the periodical premium may be shared between the beneficiary and and the Govt-PSFT, roughly on 50-50 basis
- The farmers ,processors and exporters should be able to utilize the instrument of derivative contracts and options instituted by the Commodity Derivatives Exchanges of India. The small growers should be encouraged to form co-operatives to derive benefits under this scheme.
- An innovative market literacy programme on trading and futures trading is to be launched at the level of producers and processors, traders and exporters & small corporates.
- To make the price risk management feasible, option for subscription to IOU may be implemented on pilot basis and in due course, the Task Force will suggest a proper institutional frame work to replace the crop insurance programme.
- The banking institutions in the country should be exposed to derivative trading and futures trading.
- The institution of plantation development bonds to be subscribed by the members of the public to be wholly available to development of infrastructure and plantation areas. The bond could be of long term duration ie. 10 years. These bonds should be issued by the PSFT.
- Measures should be taken to facilitate Commodity Boards through empowerment of SHG's and other farmers groups in fair marketing for their produce.
- The group insurance and group life insurance should be extended to the tobacco growers and labourers. The price stabilization measures are suggested for tobacco to overcome the tempering of price volatility by the market intervention measures adopted by the Boards.

Source: Ministry of Commerce & Industry, 2007

State Horticulture Mission (SHM)

4.82 During 2005-06, a State Horticulture Mission has been established in the State to formulate and implement schemes for the holistic development of horticulture in the State. The scheme envisages end to end development of the horticulture sector from production to Marketing. The important horticulture crops of the State like pepper, cashew, banana, pineapple, mango, gooseberry, ginger, turmeric, medicinal plants etc. are included in the SHM programme. This includes establishment of nurseries for production of planting materials, establishment of new gardens, processing and value addition. During the 10th plan period the GOI assistance was 100% and Rs. 75.83 crores was the approved during 2005-06 from GOI. A major project on replanting of senile and old plants could be undertaken with 50 per cent assistance under this Mission.

Lease land farming through Kudumbashree

4.83 'Harithashree', the lease land farming promoted by the State Poverty Eradication Mission, Kerala, through 'Kudumbashree', has helped women farmers to stay on in agriculture for their livelihood. The number of Grama Panchayats involved in the programme has increased to 914. with 19 more Grama Panchayats getting involved, compared to the previous year 2005. There are about 35130 NHGs and 354513 families presently involved in the 'Harithashree' programme covering an area of 23159.79 ha. The area under leased land farming increased from 21554 ha. in 2004-05 to 23159.79 during 2005-06. The details are given in Table – 4.9

Table 4.9
Lease Land Farming through Kudumbashree in 2005-06

Sl.No.	Name of District	No. of GPS	No. of NHGs	No. of families	Area in Hectares
1.	Thiruvananthapuram	68	1991	24795	873.38
2.	Kollam	69	1881	9533	473.77
3.	Pathanamthitta	52	1562	15779	1656.01
4.	Alappuzha	72	5385	77142	3660.17
5.	Kottayam	64	1214	12290	620.10
6.	Idukki	49	6989	63388	3602.00
7.	Ernakulam	82	3243	34085	3095.80
8.	Thrissur	79	1223	16596	907.42
9.	Palakkad	91	2685	20273	1751.08
10.	Malappuram	66	1505	8356	2317.00
11.	Kozhikode	77	1442	10909	734.31
12.	Wayanad	25	1073	15662	1445.97
13.	Kannur	81	3018	30041	1291.13
14.	Kasaragod	39	1919	15664	731.66
	Total	914	35130	354513	23159.79

Source: Kudumbashree

4.84 Paddy, Tapioca, other tuber crops, vegetables etc. are the major crops cultivated under lease land farming. Certain innovative groups are experimenting fewer other crops such as water melon in Pathanamthitta district and Basmathi and scented rice in Wayanad district. Many Grama panchayats are also promoting organic farming through their women groups.

Lease land farming in Kerala

4.85 The data from 59th round of NSS (2003) showed that out of the estimated 2.1 million farmer households in Kerala, 6.6 per cent leased in land during the Kharif season and 5.35 per cent during the Rabi season. The leasing in of land by SHGs are widespread in the State and such lease arrangements falls outside the purview of NSS sampling, since it is concentrated only on households. Analysis of the micro level data by CDS in 2005, has brought about following findings (Box No: 4.4)

Box No: 4.4

Some of the features of Land leasing in Kerala

- The prevalence of tenancy reported in these studies are much higher than the situation revealed by large scale surveys.
- Tenancy arrangements are found in seasonal and annual crops like banana, vegetables, pineapple, ginger etc. It is found largely in the paddy lands, and to a limited extent in garden lands.
- Agricultural labourers and sub marginal farmers are numerically dominant in tenant farming, there exists also the participation of larger land holders and persons with non-agricultural activities who take up this as a commercial proportion.
- The terms of leasing are characterised by fixed rent except in one location where both fixed and crop share exists paid in one or two installments with the normal duration of lease for one crop year.
- There is some amount of variation in the recent rates across location reflecting the differences in land productivity and the demand for land for lease cultivation.
- Though the prevailing rent rates for cash crops are high, the tenants have realised returns from lease cultivation.
- The study suggested to examine the prospects for the expansion of lease farming in the State. The scope of the activity has been widened with the large scale entry of SHGs to take up lease land farming.
- Panchayats could play a larger role, by creating a land bank. Land bank could also work out an insurance scheme as a risk management strategy.

CDS – 2005

Crop Husbandry

Crop Development Programme - Review of Annual Plan 2005-06

4.86 During the Annual plan 2005-06 an amount of Rs. 11397.96 lakhs was provided to crop husbandry which include Rs. 592.16 lakhs for partially aided schemes and Rs. 5638.40 lakhs under 100 per cent Centrally sponsored including Macro management schemes. (Table 4.10). The State sector schemes incurred an expenditure of Rs. 4514.39 lakh (87.36 per cent).

Table 4.10

Financial Performance of Crop Husbandry during 2005-06

(Rs. Lakh)

Sl. No.	Item	Outlay	Expenditure	per cent of Expdr. to outlay
1.	State Plan Schemes	5167.40	4514.39	87.36
2.	Partially Assisted Central schemes	592.16	553.86	93.53
3.	100 per cent Centrally Sponsored Schemes including MOU	5638.4	5240.53	92.9
	Total	11397.96	10308	90.43

4.87 Major crop wise financial achievements made during the period is furnished below (Table 4.11). An amount of Rs. 30.50 crore was utilised for the development of rice in the State from the State and Central Plan schemes. For Horticulture crops, apart from the amount shown in Table above, State Horticulture Mission also provided separate funds.

Table 4.11
Major Scheme wise Expenditure during 2005-06

<i>(Rs. Lakh)</i>		
Sl.No.	Schemes	Expenditure
1.	Rice based farming system	1581.1197
2.	MOU Rice Development	1468.9602
3.	Coconut based Farming System	454.6778
4.	Integrated Farming in Coconut Holdings	784.3816
5.	Pepper Development	452.6257
6.	Cashew Development	361.6454
7.	Arecanut Development	218.9536
8.	Floriculture	480.4205
9.	Market Intervention Support Price to Farmers	592.6712
10.	Organic Farming	196.8995
11.	Women in Agriculture	289.0208

Rice

4.88 Rice development activities in the State were carried through State schemes and Centrally sponsored schemes. The ultimate objective of rice development programme during the Tenth Plan period is to sustain rice cultivation in 4 lakh ha and to augment the average productivity to more than 2.8 tonnes per ha. Revitalisation of group farming samithies in predominant rice growing areas like Palakkad, Thrissur, Ernakulam and Alappuzha, assistance to paddy development agencies and assistance to seed development agencies were continued under State plan for attaining the targeted level of rice production and productivity. During the year 2005-06 it was targeted to introduce revitalisation activities in 1.15 lakh ha and attained progress in 1.11 lakh ha.

Coconut Development

4.89 Productivity of coconut during 2005-06 was 6675 per hectare as against the national average of 6345 nuts/ha. It is estimated that 1/3rd of the plant are senile and unproductive. Yield loss due to root wilt disease is a major concern among the farming community. During 2005-06 240089 root wilt affected palms were removed and 142144 palms were replanted with seedlings

4.90 As per the Centrally sponsored scheme the Coconut Development Board provides assistance for production and distribution of quality hybrid coconut seedlings. During the year 0.65 lakh coconut hybrid seedlings were produced and distributed against the target of 0.75 lakh seedlings.

Pepper

4.91 Pepper development programme include production and distribution of pepper cuttings, area expansion, rehabilitation of old pepper gardens, promotion of organic pepper, integrated pest management for pepper and promotion of soil conservation measures. During the year 94 lakh pepper cuttings were produced and distributed, Pepper rehabilitation was introduced in 4000 ha. Promotion of organic pepper was introduced in 800 ha. Along with pepper other spices such as ginger, turmeric, chillies and tree spices also received support during this period.

Cashew

4.92 In the case of cashew development, rehabilitation, plant protection and establishment of cashew nurseries were given importance during the Annual plan 2005-06. Through Centrally Sponsored programme an area of 974.5 ha was brought under rehabilitation programme against the annual target of 2900 ha.

Vegetable and Fruit Promotion Council's Programme

4.93 Vegetable and Fruit Production Council, Keralam, was involved in the implementation of vegetable and Fruit Promotion Programme. The programme covers production, formation of SHGs, credit management and marketing.

4.94 During the year 20653 farmers were inducted and 1272 SHG's were formed. 27 farmers markets were established. 25073 farmers were covered under the 'Karshaka Raksha' medical insurance scheme. During the year Rs. 4985lakh was disbursed as crop loan. 385 MT of vegetables and fruits were exported during 2005-06 and 40022 ha of area was covered under vegetable cultivation.

Supplies and Services

4.95 The State has a strong network for supplies and services. This include Krishi Bhavans in all the Grama panchayats for transfer of technology and organising agricultural services. Planting material delivery system has been developed which includes 33 state seed farms, 10 district farms, 10 special farms and 8 coconut nurseries. The paddy seed farms and the District Agricultural Farms are under the control of the District Panchayats for facilitating appropriate seed planning at the grass root level. In spite of such elaborate progeny support, supply of quality seeds of paddy and other seasonal crops remain as a weak link in the production front.

Agricultural Insurance

4.96 A survey conducted by FAO in the early 1990s revealed that various types of crop insurance programmes are present in more than 140 countries. Low insurance penetration despite high premium subsidies, mostly captured by large farmers, poor financial performance with claims consisting exceeding to premiums, inappropriate pricing methodologies are few of the key endemic problems that plague national insurance programmes worldwide.

4.97 Two crop insurance schemes are currently in operation in the State, viz., The State Crop Insurance Scheme and The National Agricultural Insurance Scheme. The State Crop Insurance Scheme, being implemented since 1995, provides insurance cover to 24 major crops against crop loss due to natural calamities like drought, storm, cyclone, flood, landslip, forest fire, sea erosion, earth quake and lightening. The National Agricultural Insurance Scheme (NAIS), was introduced from 1999-2000, replacing the Comprehensive Crop Insurance Scheme (CCIS) which was in operation since 1985. NAIS is implemented in the State through the GIC of India, and provides insurance cover to Paddy, Banana, Tapioca, Pineapple, Ginger and Turmeric against risks such as natural fire and lightening, storm, hailstorm, cyclone, typhoon, tempest, hurricane, tornado, flood, inundation and land slide, drought, dry spells, pests and diseases. Small and marginal farmers are eligible for 50 per cent subsidy on premium, which is equally shared by the State and Central Governments. The scheme is being implemented in 23 States and 2 Union Territories.

4.98 The State Crop Insurance Scheme, has so far enrolled 128195 farmers. It is also required to include more perennial crops like, Coconut, Rubber, Pepper etc. in the National Agricultural Insurance Scheme, and withdraw these crops from the State Insurance Scheme. An amount of Rs.75.00 lakhs, provided under the State budget has been credited to the Crop Insurance Fund during 2005-06.

4.99 At present State Insurance Scheme and NAIS are in operation in the State. As on March 2006, 225634 farmers were enrolled and an amount of Rs. 533.84 lakhs was collected as premium. An amount of Rs. 581.10 lakh was disbursed as compensation for crop loss to 45401 farmers. The Agricultural Insurance Corporation has prepared a pilot scheme for the insurance of coconut in the state.

Weather based insurance

4.100 Recently Private insurers have executed Pilot projects to sell rainfall insurance to farmers as a substitute for or complement to Crop insurance provided by government. ICICI Lombard has designed rainfall insurance policies with support from the World Bank and IFC. The pilot project was carried out in Andhra Pradesh through a Local Area Bank. The pilot scheme was launched in June 2003 for the kharif season of 2003-04. The insurance policy makes payment if the cumulative rainfall during the season falls below the historical average. This is implemented through a rainfall index.

4.101 The State has to generate reliable rainfall data from different locations within the districts to address variations in microclimates. Satellite based automatic weather stations could be established on a pilot basis in selected districts. Simultaneously meteorological studies also to be initiated to analyse the rainfall yield relationship in various crops.

Agricultural Research and Education

4.102 The Kerala Agricultural University is the principal institution in the state providing human resources and technology required for the sustainable development of agriculture encompassing all production activities based on land and water, including crop production, animal husbandry, forestry and fisheries. The university fulfills its obligations and commitments through a network of 36 big and small campuses spread through out the state consisting of ten colleges, six RARS's , 26 Research Stations, 3 centers of Advanced studies, the Central Training Institute(CTI), the ATIC (Agriculture Technology Information Center), 7 KVK's (in Kollam, Kottayam, Thrissur, Palakkad, Malappuram, Kannur and Wayanad Dsts.), the KAU Press, the Central Library and various other research programmes. The University has a strong technical manpower consisting of 1000 academics and over 800 technical staff.

4.103 Research initiatives undertaken in the University are focused on increasing productivity of crops, livestock and fish currently raised in the state through manipulating the genetic base, improving management practices, managing pests, diseases and parasites, increasing efficiency of biophysical and human resources, designing policies and programmes and designing machinery suitable for Kerala's Agriculture. Over 500 research projects are currently in operation including 38 AICRP/Network Projects, 29 Ad-hoc projects, 87 KSCSTE projects and 112 other external aided projects funded by DST, DBT, DoE&F , Western Ghat Cell, BARC, Cadbury India Ltd. etc. Research Highlights of Kerala Agricultural University are given in Box No. 4.5.

Box. 4.5
Research Highlights of Kerala Agricultural University

Rice and rice based cropping systems-

- The mutant rice culture Cul.20 D1 was found to be third best entry in National Testing trials and approved for presentation before Varietal Release Committee.
- Application of 15 Kg S ha⁻¹ along with recommended dose of NPK is sufficient to realize higher yield from soils low in sulphur content.

Coconut and coconut based cropping system

- The hybrids COD x WCT had superior annual nut production compared to WCT.
- The entomopathogenic fungi *Verticillium suchlasporium* and *Metarhizium anisopliae* caused sizeable mortality in mite and corid bug in coconut.

Vegetables and tuber crops

- Vegetable varieties Vellayani Vijai in tomato, Vellayni Athulya in chilli Jyothika in cowpea Anjitha and Manjima in bhindi were released.
- In coleus, mutants TC9 and M131 were evolved which are photo insensitive and can be grown throughout the year.

Commercial crops

- Two promising hybrids H-7 and H 1593 are proposed for release in cashew.

Floriculture

- Four flowering orchid combinations belonging to *Dendrobium* are registered with Royal Horticulture Society, England.

Biotechnology

- Protocol for tissue culture technique was standardized in banana varieties Kadali and Njalipoovan.
- HMGR gene capable of imparting pest and disease resistance isolated from different *solanum* sp.

Spices

- An amphidiploid interspecific hybrid was developed for the first time in the history of black pepper cultivation which is resistant to *Phytophthora* foot rot disease.

Food Science & Nutrition

- Technology developed for preparing spray dried instant sapota-milk shake.

Beneficial micro-organisms

- New method for mushroom spawn production has been prepared.

Agri. Engineering

- Low cost drying structure developed

Fisheries

Captive breeding of 5 fish species accomplished

Source : Annual Report, KAU 2005-06

4.104 The Planning Commission of India appointed a Task Group under the Chairmanship of Dr.M.S.Swaminthan to come up with suggestions and recommendations to re-vamp the Research and Development structure in National Agricultural Research System of the country. The Task Group submitted its recommendations in 2005 and this report offers recommendations for re-tooling and re-energetizing our NARS and State Agricultural Universities to help the country to become not only a leader in science based sustainable agriculture, but also fostering job-led economic growth in rural areas through integrated attention to on farm and non-farm livelihood. The excerpts of the recommendations relevant to the state are given in Box No: 4.6

Box No: 4.6
Report of the Task Group on Revamping and Refocusing of National Agriculture Research

- Agricultural Universities Association may initiate a review of current recruitment and professional advancement procedures in consultation with Chairman of UPSC and ASRB and propose to their respective governing bodies appropriate reforms.
- In order to professionalise skill management , there is a need to revamp the organizational structure of the DARE and at the apex level technocrats should be posted instead of bureaucrats. The entire agricultural activity of the state(R&D) should only be governed by agricultural Scientist especially R&D Departments related to agriculture.
- The State Agricultural University may be allowed and facilitated for production of foundation and certified seeds on their own farm or through adopted seed villages/ seed producers supplementing the seed availability in the state. The seed processing and packaging facilities at SAU's are to be modernized. Pre-treatment, surface coating for precision planting germination promotion treatments 2have to be introduced.
- The variety release should be made more decentralized that follow defined guidelines. The state seed sub-committee should play a more proactive role in release of varieties.
- A Science and Technology Consortium involving public and private sector R&D Institutions , Agriculture, Rural & Women Universities as well as IIT's may be formed in each selected District under the National Food For Work Programme. At state level S&T consortium should be in co-operation with DRDO's to initiate technological upgrading work. This state level S&T consortium can be hosted by State Agricultural University.
- To re-establish the linkage between farmers , extension agencies and research institute, a Research Advisory Committee should be established at Research Institute having Senior Extension Specialist, Scientists, NGO's and Farmer Organisations as members. The state agricultural departments can also set up Agriculture Development Council/Committee to help the scientist to design specific studies to tackle the regional problems.
- Virus and nematodes study centers should be established at SAU's for their use and control of pathogens. The SAU animal clinics need to be strengthened. Animal Disease Diagnostics and Monitoring Lab should be established in every state. The single window advisory through ATIC and consultancy cells should be strengthened.
- The National Virtual University is to be established at NAARM and the Virtual University for Agriculture Trade in the state could form a consortium for the co-ordinated use of ICT in accelerating agricultural projects.
- Establishment of farm school in the field of farmer achievers which can serve as the grass root learning centers can lead to learning revolution in farming.

- The KVK programmes in different states are to be redefined with qualitative and quantitative targets and funds to be released depending upon achievement of targets. A national monitoring and evaluation system may be established through a KVK Board which has authority to regulate and oversee their working and release of funds. A post harvest technology wing should be added to existing KVK's so as to make the KVK's Krishi and Udyog Vigyan Kendras.
- The Project Directorates, Co-ordinated Projects, NRC's etc. should be given complete financial and administrative authority in financial matter. Every institution should earmark 10% of its budget for Human Resource Development and the Director of the Institute shall be the authority to approve foreign travel of the scientist.
- The project planning and implementation in the research system should be done in a realistic method. Research councils of Institutes & SAU's should ensure that only projects for which there are funds adequate to generate a critical mass of effort should be undertaken and these projects should have a sharp focus with well defined output indicators.
- SAU's and KVK's should launch a quality literacy movement of agriculture produce in tune with WTO agreement besides developing well developed quality standards for Indian organic products. Research on specialty foods and crop varieties like medicinal rice (Eg.Njavara) should be strengthened. Quality control, standardization and validation procedures for medicinal plants and herbal medicines should be improved to ensure purity of products.
- National Participatory Research Demonstration and Training Centers should be established for various areas to bring together at one location all the new, socially and environmentally relevant technologies available with research institutes and SAU's. The concerned State Government shall provide about 100 ha of land free of cost for such RDT centers. Farmers, scientists and local bodies should be associated with design and management of these RDT Centers.
- Following new areas are suggested to have more intensive & interdisciplinary action through setting up of new National Institutes/Institutes to undertake mandatory research.
 - (i) Implications of WTO agreement in agriculture
 - (ii) Climate change & its implications in agriculture and food security
 - (iii) Rural non-farm employment
 - (iv) Space applications and precision farming
 - (v) ICT and agrarian prosperity
 - (vi) National Institute for bio-fuel
 - (vii) National Institute for technology empowerment of Panchayati Raj members.

Source: Planning Commission ,2006

4.105 The extension network, for the transfer of latest technological innovations of the University is operationalised through the Agricultural Technology Information Centre (ATIC), University Communication Centre, KAU Press, Central Training Institute and the Centre of Excellence for Training in Plantation Crops. Extension activities are also taken up through the 10 teaching institutions, 6 zonal research stations and 26 other research stations of the University. The ATIC envisages to provide a single window delivery system for products and technologies

developed by the University, to strengthen farm advisory services, to provide a mechanism for feedback and to function as a repository of agricultural information. During the financial year 2003-04, the transactions through ATIC has exceeded one crore. The communication centre, apart from its farm advisory services and media publications, is instrumental in bringing out the 2 research journals and publication of many books and periodicals. The KVKs located in the major-agro-ecological zones of the state cater to the specific technology and socio-economic requirements of the respective regions.

4.106 A number of research stations were established under the KAU decades back and a restructuring of the stations with changes in mandate as well as incorporation of new courses in agricultural education are needed if they have to play any useful role in the changed and changing agricultural scenario.

4.107 A number of research institutions funded both by Government of Kerala as well as Government of India are located in the state. The contributions made by these institutions over a period of time are substantial. However in the changing scenario of post WTO context and shrinking financial support to these institutions a consortium approach has to be adopted for the identification of research problems and recommendations especially in farming systems research. Institutional synergies in transfer of technologies also have to be implemented for realising the maximum benefits to the farmers.

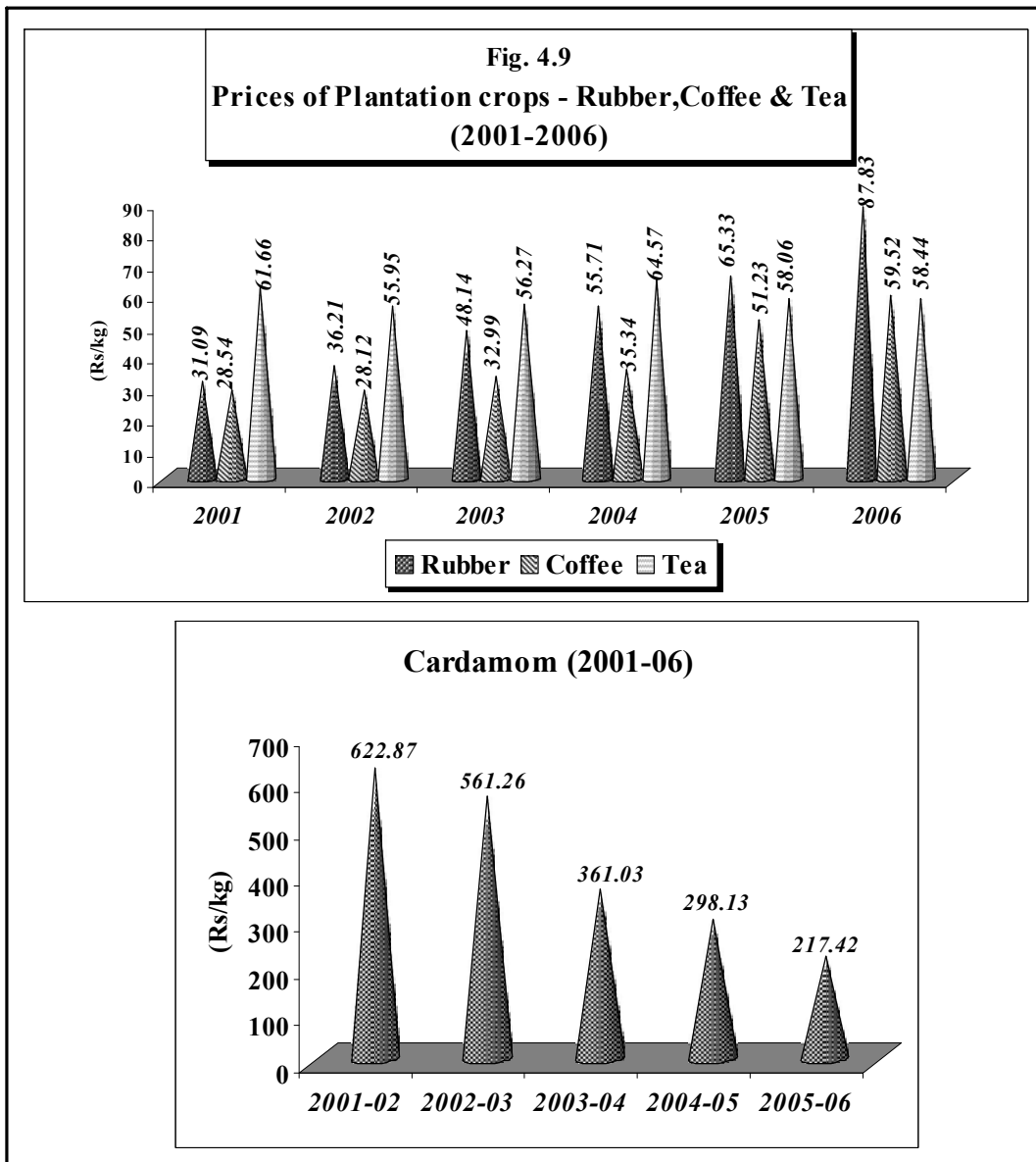
Farm Commodity Price

4.108 Data on average farm price of principal crops grown in Kerala are shown in Table 4.12. The table shows increase in 2005-06 compared to previous year in respect of most of the commodities, namely arecanut (9.33 per cent), Rubber (28.24 per cent) and tapioca (7.09 per cent), and banana (12.21 per cent). Decline was reported to pepper (-0.86%), Cashewnut (-17.92%), Coconut (-22.06%) and Paddy (-6.18%). Global agricultural prices have also indicated a recovery path from the later half of 2002 onwards. Data on month-wise prices of the commodities during 2005-06 are shown in Appendix 4.18. The prices of plantation crops for the last four years are shown in Fig. 4.9

Table 4.12
Average Farm Price of Important Agricultural Commodities

Year	Paddy (qtl.)	Coconut with husk (in 00' nos.)	Arecanut (00' nos.)	Cashewnut (qtl.)	Banana (00' nos.)	Tapioca (qtl.)	Pepper (qtl.)	Rubber (qtl.)
2000-01	646.36	281.43	41.88	2368.81	1042.51	397.24	12401.24	3036
2001-02	600.27	340.64	32.81	2569.33	949.51	321.01	6745.43	3228
2002-03	649.76	475.63	32.11	2730.30	971.34	394.01	7692.17	3919
2003-04	694.69	582.73	34.62	2831.75	1167.00	389.36	6802.46	5040
2004-05	651.00	635.00	40.00	3533.00	1112	404	6032	5224
2005-06	610.78	494.89	43.73	2899.54	1247.81	432.63	5979.84	6699
	-6.18	-22.06	9.33	-17.92	12.21	7.09	-0.86	28.24

Source: Directorate of Economics and Statistics



Futures Trading

4.109 An efficient agricultural marketing system is indispensable for the overall development of the economy. In the changing scenario, the nature of marketing support required for safeguarding the interest of the small and marginal farmers is different. In an increasingly globalised market arising out of trade liberalisation, *inter alia* through WTO Agreement, impact on Kerala agriculture needs to be analysed in the context of both exports from Kerala and imports into Kerala especially spices and plantation crops. The risk in marketing especially Price risk has to be addressed through alternative instruments.

4.110 In the summer 1999, the World Bank established a task force to examine the nature of price risk in internationally traded commodity markets. The objective was to explore the market based solutions for risk reduction, in LDCs. Given Commodity Prices are generally volatile,

producers in poorer countries face individual price and possibly income risk, while the country as a whole might face export earnings risk. One solution offered was to establish commodity futures markets as a mechanism for spreading these risks. The case has been advanced more forcefully since the demise of aggregate intervention policies such as International Commodity Agreements (IICAs) and the failure of large scale international financing schemes such as the IMF's Compensatory Finance Fund and the European Union's STABEX programme.

4.111 Futures markets have existed since the Seventeenth Century, when they were informally established in Coffee in Amsterdam and centered on the trade in Tulips.

4.112 With the issue of notification dated 1.4.2003, Futures Trading is not prohibited in any commodity. Futures Trading can be conducted in any commodity subject to the approval and recognition of the Government of India.. 91 commodities are in the regulated list. Futures trading is taking place in 78 commodities through 25 exchanges/associations.

4.113 The history of Policies directed towards commodity markets has tended to show failures and a general inability to help those that need it most, the smaller poor producers.

4.114 The role of futures markets is to be looked into in detail. The usefulness of futures markets for safeguarding the small and marginal farmers in the present liberalized economy, in the context of the absence of a scientifically developed price dissemination mechanism, uncertain crop production situation, and the institutional set up that prevails now in the State as well as in the country, seems to be quite low; and the benefits will be more for the intermediaries. Commodity futures markets are vulnerable to speculative activities that harm the interest of farmers and the farming sector.

Box. 4.7

Success and Failures of Agricultural Futures Contracts

Silber (1981) estimates that between two-thirds and three quarters of new contracts fail to attract and sustain a profitable level of trading volume. Kolb (1991) estimates that only three of ten new futures contracts become profitable.

Daily closing price, total volume, total open interest and futures price changes for January 15, 1987 through December 31, 1992 were analysed for commodities with futures markets for corn, wheat, soybeans, live cattle, live hogs etc. in USA in a study. A number of factors were included in the model to analyze the success and failures of futures contracts.

An implication of this research for countries considering the development of their own futures markets is that unless an active cash market exists, resources invested in developing futures markets will be wasted. Moreover these countries should first direct their efforts toward developing active cash markets, and effective grading systems, and then consider the possibility of developing futures markets. Other factors like cash market size, liquidity cost, and market structure are also crucial in determining the success of futures markets.

Source: Journal of Agribusiness, 2001

Eleventh Plan

4.115 A major revival package is essential for the growth and development of the agriculture sector in the eleventh plan linked to higher investment. The regionally differentiated strategies in combination with technology, low cost credit, marketing, risk management and institutional support would be required, and eleventh plan was formulated accordingly. A clear shift in priorities has been made with more focus on food security, risk management, agricultural infrastructure and market related areas.

4.116 A Statewide food security project would be launched to augment food production in Eleventh Plan. A fifty percent increase in rice production is targeted in the Eleventh Plan A comprehensive development plan for the Horticulture sector would be implemented. The Schemes of State Horticulture Mission would be restructured to benefit more small and marginal farmers with more focus on major projects. Promotion of fruits and vegetables, cashew, spices, high value horticulture and organic farming would be supported through State Horticulture Mission.

4.117 Extension also is proposed to be strengthened in Eleventh Plan. Production risk and marketing risk are threatening the very foundations of agriculture. During the plan period it is proposed to give more importance for the management of risk in agriculture.

4.118 A flagship project on agriculture infrastructure would be implemented in the plan period. As a part of the project the following strategies are proposed. Laboratories covering soil testing, quality control, biocontrol, biofertilizer and tissue culture would be established in the state in adequate numbers and the existing labs would be strengthened. Adequate infrastructure for the production of planting materials of all major crops would be strengthened.

4.119 Minor irrigation is one of the neglected areas in the state and in order to increase area under irrigation adequate thrust would be given for coverage under irrigation. A perspective plan for the development of minor irrigation would be prepared, with focus on local water resources.

Livestock Development

4.120 Livestock rearing is one of the most important economic activities in the rural area providing supplemental income for most of the families dependent on agriculture and also the mainstay for many landless families. Rearing of livestock such as cattle, buffaloes, goats, pigs, poultry etc. not only provides a subsidiary income to the families but also is a source of protein in the form of milk, eggs and meat. The sector has high potentiality for alleviating poverty and unemployment in rural areas. A large majority of livestock owning households comprise of small and marginal farmers and landless households, which also account for a large share of poor households. As the ownership of livestock is more evenly distributed with landless laborers, small and marginal farmers, the progress in this sector will result in a more balanced development of the rural economy, particularly in the reduction of poverty ratio. In view of its suitability for combining with crop sub sector and sustainability as a household enterprise with the active involvement of women, it is emerging as a very popular supplementary avocation in the small farms. Over 70 per cent of the rural households in India depend on livestock farming for supplementary income. The sector is highly gender sensitive and over 90 per cent of activities related to care and management of livestock are carried out by family's women folk.

4.121 Livestock sub sector is a part of a dynamic development process and has emerged as one of the key components of agricultural growth in developing countries in recent years. At World level consumption of livestock products is growing even faster than the increase in world population. Rising affluence, particularly in the developing countries where average real incomes have doubled since the early 1960's, means that more people can afford the high-value protein that livestock products offer. There are more people with more disposable income to spend on the food they desire and, in ever-greater numbers, those people are living in towns and cities. Over 80 per cent of the world's population growth occur in the cities of the developing countries, and urban population consumes more animal products than those based in rural areas.

4.122 An analysis of trends over the last two decades indicates that growth in poultry and milk production has far exceeded the growth in cereal production mainly due to rapid urbanisation, population growth, rise in levels of income and fall in prices of livestock products. At present livestock numbers world-wide are increasing. The cattle and sheep population in the developing countries grow slower than the human population in the same areas. The goat, pig and poultry population is increasing fast in developing areas, mainly in Asia, whereas these are slightly declining in the developed world.

4.123 The livestock sub sector which makes significant contribution to the State's economy is now facing serious constraints due to inadequate fodder base as a result of sharp and continuous decline in the area under livestock-supporting seasonal crops especially paddy and the limited scope for fodder cultivation in the State. The biggest challenge faced by the State in the livestock sector is the threat of foot and mouth disease because of large scale inflow of cattle from the adjoining states. The sector of Kerala is now showing a declining trend in respect of livestock population and livestock products. This sub sector which flourished well during the last three five year plans, showed signs of declining during the X plan period. Compared to 1996 Livestock Census, the Census conducted during 2000 and 2003 showed drastic reduction in different categories of livestock. Estimate of milk and egg production reveals a declining trend in milk production after 2001-02 and in egg production after 1999-00.

4.124 Tenth Plan strategy of Kerala is framed in consonance with the national strategy with due adaptation to the Kerala context giving due importance for upgradation of standards of veterinary institutions and services, establishment of disease free zones, extending health cover and stock upgradation and increasing production through scientific and better management. Enhancing fodder availability, promotion of farming systems approach, development of micro enterprises for poverty reduction are also given importance.

4.125 Establishment of Disease Free Zone, conservation and promotion of malabari goats, promotion of buffalo, popularisation of backyard poultry were some of the initiatives of the department of Animal Husbandry during the first three years of the plan period.

Trend in Livestock Population

4.126 As per the report of FAO, the World's livestock population in 2005 comprised of 1365 million cattle, 172 million buffaloes, 1059.8 million sheep, 790 million goats and 943.8 million pigs. During 2004 the poultry population was estimated at 16.4 million and duck population 1 million. Compared to 2000, the worlds' cattle population increased by 2.7 per cent during 2003 and by 3.8 percent during 2004.. During the same period buffalo population increased by 4.2 and 5.2 percent, goat population by 6.9 and 9.4 percent and pig by 5 and 5.3 per cent.

4.127 As per the provisional figures of 2003 livestock census, India has 187.38 million cattle, which are about 14 per cent of the world cattle population. Out of the 187.38 million cattle, 22.63 million were crossbred, which is 12.07 per cent of the total cattle population. Between 1997 and 2003, crossbred population increased by 12.6 per cent. The states of Tamilnadu, Maharashtra, Kerala, Uttar Pradesh, Karnataka and Punjab account for about 60 per cent of the crossbred cattle population. The country has 96.62 million buffalo population, which is about 56.5 per cent of the world buffalo population. Between 1997 and 2003, the buffalo population increased by 7.5 per cent. In spite of India's position as highest producer of milk, productivity per animal is very poor. It is only 987 Kgs/lactation as compared to the world average of 2038 Kgs/lactation. This is mainly due to poor level of nutrition as well as low genetic potential for milk production and health care.

4.128 Kerala's cattle population which accounted for 1.75% of the total cattle population in the country during 1987 declined to 1.61 % by 1996 and 1.13 % by 2003 . The cross bred cattle population which stood at 12.26 lakhs and 68% as per 1996 Census decreased to 7.73 lakh Nos and in percentage terms increased to 83% by 2003. This increase in proportion of cross bred population was made possible by expanded health care facilities and AI services available in the State . So far out of 2,961 artificial insemination centres, 2445 centres were established by the Animal Husbandry Department, 10 by Dairy Development department and 506 by other agencies

4.129 Over the Census periods buffalo population is the most affected one. Concerted efforts are to be undertaken for implementing buffalo development programme. KLD Board has been producing frozen buffalo semen and the same is made available through AI units for artificial insemination. Goat population is also on the decline mainly due to indiscriminate slaughter, shrinking of grazing lands and urbanisation. A programme for the development of buffaloes started during 2005-06 and it is proposed to included buffaloe Calves under SLBP Programme during Eleventh Plan.

4.130 Of the total cattle population Palakkad district accounts for 12.4 per cent (highest) and Wayanad for 4.89 per cent (lowest). Higher number of buffaloes is concentrated in Malappuram (19%), goat in Thiruvananthapuram (12%) and pig in Idukki (30%). Regarding poultry Malappuram accounts for 13 per cent of fowls, Alappuzha for 38 per cent of ducks.

Trend in Production of Major Livestock Products

4.131 As per CSO estimates the value of output from livestock sector to Indian economy during 2001-02 at current price was about Rs.1515.33 billion which increased to Rs.1733.50 billion during 2004-05 ie., an increase of 14.4 percent over three years. But, the major contributor is the milk group and during the period the per cent share staggered around 67 per cent. During 2001-02 the contribution of meat group was 18.50 per cent which declined to 17.5 per cent during 2004-05. (See Table 4.13).

Table 4.13
Value of Output from Livestock sector (All India) (2001-02 to 2004-05)

(At current prices in Rs. Billions)

Item *	2001-02	%age share	2002-03	%age share	2003-04	%age share	2004-05	%age share
1 Milk Group	1012.16	66.79	1055.37	66.99	1089.78	67.07	1159.70	66.90
2 Meat Group	281.18	18.56	284.15	18.04	287.51	17.69	304.01	17.54
2.1 Meat	239.79	15.82	241.81	15.35	244.23	15.03	259.84	14.99
2.1.2 Mutton	84.10	5.55	90.94	5.77	91.65	5.64	103.29	5.96

2.1.4 Poultry Meat	119.26	7.87	110.20	7.00	112.83	6.94	112.59	6.49
2.2 Meat Products	9.37	0.62	9.21	0.58	9.59	0.59	10.18	0.59
3 Eggs	48.74	3.22	49.56	3.15	50.13	3.09	55.67	3.21
5 Dung	113.56	7.49	125.99	8.00	129.59	7.98	138.77	7.95
Total of All Items	1515.33	100	1575.34	100	1624.86	100	1733.50	100

Source: Central Statistical Organisation, GOI * only details of Major items are included

4.132 Trends in requirement and availability (based on domestic production) of major livestock products in Kerala are given in Table 4.14. A wide gap is existing between the requirement and production of animal products. A comprehensive strategy needs to be put in place to augment production of all major livestock products in the state with appropriate linkage with plans of the local governments. Block level credit plans are also to be prepared realistically by incorporating these concerns since credit absorption potential is projected to be high in the animal husbandry sub sector.

4.133 With a view to enhance the availability of milk and egg, it is proposed to launch a new programme during Eleventh Plan as part of Flagship Project. The aim is to enhance milk production by 70% from 2005-06 level and doubling of egg production.

Table 4.14

Requirement and production of Livestock Products in Kerala

Sl. No.	Year	Milk (Lakh MT)		Egg (Million Nos.)		Meat ('000 MT)	
		Requirement	Production	Requirement	Production	Requirement	Production*
1	2002	23.46	24.20	4301	1347	253	177.74
2	2003	23.69	21.11	4395	1277	260	188.22
3	2004	23.91	20.25	4490	1197	268	200.17
4	2005	24.13	20.63	4588	1196	276	199.51

Source: Animal Husbandry Department

*including unauthorised sector * Anticipated Requirement estimated based on projected population figures

4.134 The total milk production of the State is showing a declining trend from 27.18 lakh tonnes in 2001-02 to 20.63 lakh tonnes during 2005-06. At the same time over the period, at national level the milk production has been continuously increasing. Kerala's contribution to national milk production which stagnated around 3.2 per cent during 1993-94 to 2001-02 declined to 2.1 per cent during 2005-06. The gap between the production and requirement of egg is widening at an alarming rate. Meat production alone is increasing over the years to keep in pace with the demand.

4.135 The average annual growth rates of milk and egg production in Kerala and India for the period from 1950-51 to 2005-06 are given in Table -4.15

Table 4.15
Average Annual Growth Rate of Milk and Egg Production
(Per cent)

Sl.No.	Year	Milk		Egg	
		Kerala	India	Kerala	India
1	1950-51 to 1960-61	2.50	1.64	NA	4.63
2	1960-61 to 1970-71	2.52	1.15	NA	7.91
3	1970-71 to 1980-81	12.52	4.51	NA	3.79
4	1980-81 to 1990-91	6.41	5.50	4.89	7.70
5	1990-91 to 2000-01	4.24	4.16	2.75	4.59
6	1996-97 to 2001-02	3.78	4.32	(-) 0.22	7.09
7	2001-02 to 2005-06	- 6.66	3.57	-12.08	4.49

Source: based on Sample Survey reports of animal Husbandry Department

4.136 In spite of a shrinking fodder base, the dairy sector in Kerala could maintain a growth rate of 4.24 per cent in the 1990s, compared to India (4.16 per cent). But during the Ninth Plan period (1997-02) it came down to 3.78 per cent while that of India increased to 4.32 per cent. Compared to 9th Plan period during 2001 –06 a negative growth rate is reflected in the milk production of Kerala (- 6.66%) and at India level the growth rate declined to 3.57 per cent.

4.137 The egg production of Kerala, which recorded a growth rate of 4.89 per cent during 1980 – 90 period, declined subsequently and by 2000 –06 it reached a negative growth rate of 12.08 per cent

Dairy development

4.138 Dairy industry in India has made significant progress from 8th plan onwards. During 2004, world milk production was estimated to be 622 million tonnes and India contributed 92.5 million tonnes i.e., 14.9 per cent. India's share of cow milk in world total is 7.2 percent and in buffalo milk it is 66 percent. To milk production of India, the contribution of cow milk was 40.54 per cent and buffalo milk 54.85 per cent and goat milk 2.98 percent. India is the largest contributor of buffalo milk to the world. Government of India's efforts to increase the productivity of livestock resulted in significant increase in milk production to the level 92.5 million tonnes at the end of 2004 compared to 17 million tonnes in 1950.51. The per capita availability of milk is low at 233g/day at 2004 production and is below the world average of 267gm/ day.

4.139 Though the percapita availability of milk is low compared to world average a substantial increase in this regard is attained over a period of ten years from 195gm/day to 231 gm/day. This increase together with attainment of near self sufficiency in milk and milk products has been achieved mainly on account of the tremendous amount of marketing support and technical inputs provided and the infrastructure developed in the country through the network cooperatives. More than 50 per cent of the milk in the country is produced by small and marginal farmers and landless labourers, producing about one to three litres of milk per day.

4.140 There are significant inter state differences in productivity of cows and buffaloes. The milk yields of indigenous cows were highest in Gujarat (7.5 kg. per day), followed by Punjab (7.4 kg. per day) and Maharashtra (6.6 kg. per day). the average yield of buffaloes was highest in

Punjab (5.7 kg. per day). In general, the milk yields of both cows and buffaloes were lowest in Orissa.

4.141 The year wise estimate of production is shown in Table 4.16. The season wise milk production from 2001-02 to 2004-05 are shown in Table 4.17. The maximum share in production in the state is during the rainy season.

Table 4.16
Year-wise Estimate of Milk production

Sl.No.	Year	Milk Production (lakh tonnes)				% contribution of Kerala
		India	% change over previous year	Kerala	% change over previous year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	2001-02	844	4.7	27.18	4.3	3.2
2	2002-03	867	2.7	24.20	-11.0	2.8
3	2003-04	881	1.6	21.11	-12.8	2.4
4	2004-05	925	4.9	20.25	-4.1	2.2
5	2005-06	971	5.0	20.63	1.9	2.1

Source: Economic Survey and Department of Animal Husbandry

Table 4.17
Season wise Estimated Production of Milk

(Lakh MT)

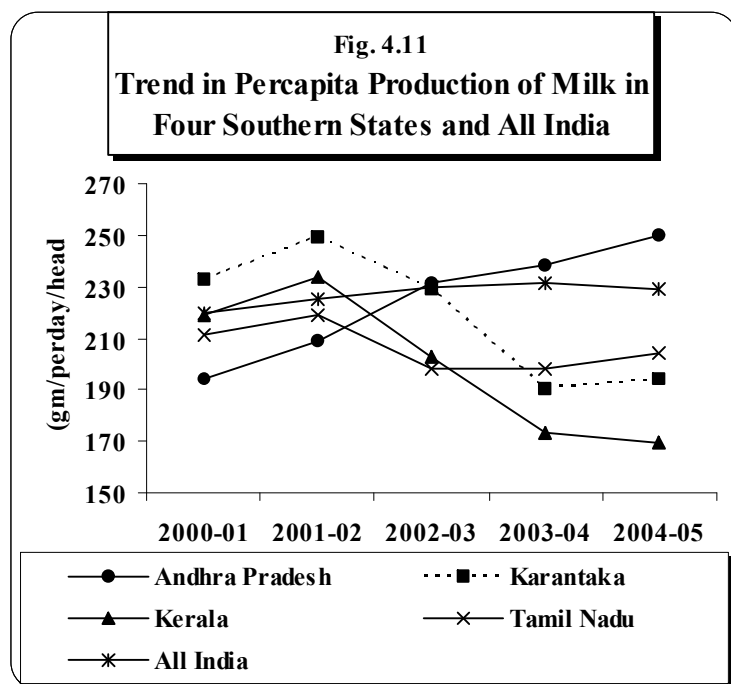
Sl. No.	Year	Summer		Rainy		Winter		Total
		Quantity	% to total	Quantity	% to total	Quantity	% to total	
1	2001-02	8.43	31.02	9.74	35.84	9.01	33.14	27.18
2	2002-03	7.77	32.12	8.59	35.51	7.83	32.37	24.19
3	2003-04	6.88	32.59	7.46	35.34	6.77	32.07	21.11
4	2004-05	6.68	32.99	7.25	35.80	6.32	31.21	20.25

Source: Integrated Sample Survey

4.142 Trend in Year-wise milk production for the period from 1994-95 to 2005-06 is given in Fig.4.10.

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4.143 Regarding the per capita availability of milk based on 2004-05 figures for the southern states viz., Andhra Pradesh, Karnataka, Tamil Nadu and Kerala, Andhra Pradesh ranks first with an availability of 250g/day and Tamil Nadu ranks second with 204g/day. (Trend from 2000-01 to 2004-05 is shown in Fig.4.11). Kerala has the lowest figure of 169g/day (See Appendix-4.31). Among the major states at all India level Punjab ranks first with 917g/day and the lowest in the case of Orissa with 72g/day. Compared to previous year total milk production and per capita availability of milk is increasing in other 3 States, but in Kerala it is further decreasing.



Better Management of Young Calves

4.144 Despite considerable increase in the proportion of high yielding crossbred cattle, average milk yield per animal per day remains low at 6 litres compared to its potential of 8-10 litres. In order to increase productivity, management of calves is crucial. Bringing down the age at first calving and reduction in the inter calving period of cross-breds have been recognized as the most effective measures for augmenting milk production. With this objective, a 'calf rearing programme by subsidising cattle feed for rearing cattle up to 32 months along with health cover and insurance has been under implementation from Eighth Plan. With the adoption of this scheme in larger areas it is expected to increase productivity of cattle in the state. It has helped in reducing the age at maturity and inter calving period and improving milk production. During 2004-05, 17941 Calves and in 2005-06 period 21819 calves were enrolled under the programme.. Details are furnished in Table 4.18.

Table 4.18
Year-wise Details of Calves Enrolled under Special Livestock Breeding Programme

Sl. No	Year	No. of calves enrolled
1	2001-02	4485
2	2002-03	6700
3	2003-04	23683
4	2004-05	17941
5	2005-06	21819

Source: Animal Husbandry Department

Milk Marketing

4.145 As per Report of NDDDB, the number of Dairy Co-operatives under organised sector in India is nearly 1.13 Lakh (with 123.26 lakh farmer members) of which the southern area accounts for 0.26 Lakh (23 %). The total processing capacity is 29657 lakh litre/day and total liquid milk sale is 15628 Lakh litre/day

4.146 In Kerala there are 3243 dairy co-operatives including 2404 Anand pattern societies functioning under KCMMF. Besides the societies functioning under the Co-operative Sector, 4 Societies viz., Malanadu, Nirmalgram, PDDP, Perambra and PDDP, Kalady are working under Charitable Institutions.

4.147 MILMA represents more than 7.63 lakh dairy farmers who have organised 2404 Anand Pattern Cooperative Societies (as on Aug 2006). It has helped in ensuring better returns to the dairy farmers. It also represents 10 dairies handling 9.90 lakh litres of milk/day, 14 chilling plants, two cattle feed plants, a milk powder plant, an established training centre and 5000 distribution outlets. Of the total 2669 APCOs registered, only 2404 are functional. The average milk procured per day by APCOs during the year 2005 was 8.40 lakh litres against the previous year average of 7.33 lakh litres. The procurement /day/society is 350 litres. By August 2006 milma has procured 9.08 lakh litre of milk and this is the all time highest procurement. The performance of KCMMF is presented in Appendix 4.40.

4.148 In Kerala, where the production of milk is concentrated in the small farm sector and ultimate supply is dependent on seasonal factors, maintaining uninterrupted supply particularly during lean period is very difficult. The federation is thus forced to import milk from the neighbouring States during lean periods when the internal supplies used to shrink. To bridge the supply demand gap and to cater the demand for making value added products they have to rely on outside States. Presently the milk was imported from AAVIN and KMF. The total import during 2005-06 was 500 lakh litres against 625 lakh litres during 2004-05. Season-wise milk production is given in Table 4.18. The procurement of milk by KCMMF stood at 2121, 2218 and 2508 lakh litres respectively against the sale of 2650, 2889 and 3047 lakh litres during 2003, 2004 and 2005. During 2006, procurement and sale of milk by KCMMF stood at 1829 and 2177 lakh litres respectively as on Aug. 2006. Data on procurement and sale of milk by different dairies of KCMMF during 2002 to 2006 is presented in Appendix 4.41.

4.149 The veterinary services rendered by KCMMF are noteworthy. They have a well established Veterinary Wing at Thiruvananthapuram and Ernakulam Regional Milk Unions. During 2006 (as on Aug 2005), services were provided through 13 regular and 31 emergency routes and 0.31 lakh animals were treated. KCMMF has sold 0.82 lakh MT of cattle feed during 2006 (as on Aug). It also produced and sold 1914 MT of ghee during the year. Year wise details for the period from 1997 to 2005 are furnished in Appendix 4.40.

4.150 Besides milk, a variety of milk products are manufactured by KCMMF. A comparison of sales by KCMMF from 2003-04 to 2005-06 is given in Appendix 4.45. Among the products, sale of milk, ghee ('milma ghee' and 'Samrudhi Ghee'), ice cream, curd and Milma Plus recorded a steady increase. They had started production of a new product viz., Water Sip up during 2005-06.

Dairy Farmers Welfare Fund

4.151 The dream pension to dairy farmers was realised through promulgation of an ordinance to form Dairy Farmers Welfare Board. In order to create the Corpus for the Fund the leadership of Milma agreed to contribute 9paise/litre of milk procured by milma for six months. There were 12000 dairy farmers receiving pension @ Rs.250/- per month.

Weak Feed and Fodder Base

4.152 The future scenario of demand and supply position as shown in Tenth Plan Working Group Report of the Planning Commission on Animal Husbandry and dairying reveals a huge deficit in green fodder in the country. The available fodder can meet the demand of only 46.7 per cent of the total livestock. As per the report, the deficit in green and dry fodder in the country which was estimated at 61.96 per cent and 22.08 per cent respectively during 2005 will increase to 62.76 per cent and 23.46 per cent during 2010. The situation appears all the grimmer in case of green fodder.

4.153 Kerala's Fodder production efforts have not borne fruits to the extent of bridging the gap left by rapid decline in paddy cultivation. With the shift in cropping pattern of Kerala, the area under rice has come down by 50 per cent over the last two decades leading to drastic reduction in the availability of straw for feeding cattle. It is estimated that the state produces only 60 per cent of the roughage requirement for cattle in Kerala. One of the main constraints for increasing milk production is the shortage of quality fodder. To overcome this situation department is implementing fodder promotion programmes using root slips/stem cuttings of high yielding fodder varieties.

4.154 Focussed strategies and concerted efforts are the need of the hour to face this challenge. Popularisation of high yielding fodder varieties like CO3 and large scale intercropping in coconut holdings are to be taken up with the support of local governments. Perennial fodder varieties like Hybrid Napier and Guinea, which is widely acceptable to farmers, and the department is supplying the planting material free of cost to the farmers.

4.155 Realising the importance of fodder development in optimising economic return from the dairy activity, the KLD Board and Dairy Development department have taken up fodder development as an important activity right from the beginning. The Board with the participation of farmers has taken up production of selected varieties of tropical grasses and legumes in a large scale. They produced 7.12 MT of fodder seeds during 2005-06 against 13.89 MT of seeds during 2004-05. This includes Congo signal grass seeds (6.53 MT) and Guinea grass seeds(0.20 MT). Besides they produced 45.52 lakh Nos of Grass slips. The quantity of seeds supplied by KLD Board during the period was 24.36 MT against 10.88 MT during 2004-05. (See Table 4.19). The existing trend reflects the farmers' reluctance to use seeds for fodder cultivation.

Table 4.19
Production and Sale of fodder seeds by KLD Board

Sl.No.	Year	Quantity of Seeds Produced (MT)	Quantity of Seeds Supplied* (MT)
1	2001-02	15.98	20.68
2	2002-03	13.51	12.57
3	2003-04	10.80	15.65
4	2004-05	13.89	10.88
5	2005-06	7.12	24.36

Source: KLD Board Annual Reports

* Including sales to outside agencies and used for KLDB programme

4.156 During 2005-06, under department programmes 240 lakh fodder slips/stem cuttings were supplied to cover an area of 1840 ha. The trend over the five year period shows a continuous decline in total area brought under fodder cultivation through department programmes (See Table 4.20). Also the preference of slips over seed is increasing.

Table 4. 20
Procurement & Supply of Fodder seeds / Root Slips and Area Covered under Fodder Cultivation

Sl. No.	Year	Procurement of seeds	Total quantity of seeds supplied to farmers	Area covered	Fodder root slips/stem cuttings supplied	Area covered	Total area covered under fodder cultivation
		(in MT)	(in MT)	(in Ha)	(in lakh)	(in Ha)	(in Ha)
1	2001-02	51.30	51.30	2315	400	2000	4315
2	2002-03	60.00	60.00	2000	160	800	2800
3	2003-04	4.80	4.48	1798	282.5	1412.5	3210.5
4	2004-05	Nil	Nil	Nil	375	1840	2230
5	2005-06	Nil	Nil	Nil	240	1200	1840

Source: Dairy Development Department

* as on October 2005

4.157 Regarding the cattle feed concentrate, which will have to supplement the shortage in quality fodder production, the production is not enough to satisfy the requirement. Now KCMMF and Kerala Feeds Ltd., are taking conscious steps for facing this challenge.

4.158 Kerala farmers have adjusted to the situation by restricting the number of cattle and that too by preferring high yielding cross breeds. This is evident from the steady increase in the proportion of crossbred animals, which Kerala could achieve during the last three decades. (see Appendix 4.23). There is drastic reduction in other categories of livestock such as bullocks, indigenous female cattle, male calves etc. (Appendix 4.24 & 4.25).

Breeding Support

4.159 Regarding breeding infrastructure, India is among the countries having the largest breeding infrastructure in the world with 159 bull semen stations, 152 frozen semen banks and more than 50000 AI Centres. Due to poor quality semen produced by most of the semen stations in the country, the conception rate ranges from 20 per cent to 45 per cent only where as in the developed countries the rate is more than 50 per cent.

4.160 As per the data available during 2006 of the 36085 AI Centres under Animal Husbandry department in the Country 2445 are in Kerala

4.161 Kerala Livestock Development Board (KLDB) is involved in the production and distribution of frozen semen and maintains three bull stations at Mattupetty, Dhoni and Kulathupuzha for the production of crossbred and purebred cattle and buffalo bulls. Compared to 2004-05, when semen production increased by 19.3 percent to 27.10 lakh doses during 2005-06. The distribution inside the State increased by 6 per cent and outside the State increased 3 fold. Details are furnished in Appendix 4. 35.

4.162 The number of AI centres under Animal Husbandry Department during 2005-06 is 2445. Along with 516 centres operated by other agencies the total number of AI centres operational is 2961. (Appendix 4.36)

4.163 The number of inseminations done during 2005-06 was 11.80 lakh and calvings recorded was 3.55 lakh. This is against 3.58 lakh calvings recorded out of 11.76 lakh AI during 2004-05. Correspondingly the average number of insemination done by one centre increased from 481 in 2004-05 to 483 in 2005-06. The average number of inseminations needed for producing one calf is four which remained stagnant 2001-02, is showing signs of improvement by declining to three (Table 4.21). This shows that the quality of AI is improving over the last 3 years.

Table 4.21
Number of Artificial Inseminations Conducted and recorded Calving

Sl. No.	Year	No. of artificial Insemination Centres	No. of Artificial Inseminations done	No of AI Done Per centre	Recorded Calving	No of inseminations per calving
1	2	3	4	5	6	7
1	2001-02	2505	1248996	499	332967	4
2	2002-03	2523	1369112	543	402173	3
3	2003-04	2538	1231407	485	353764	3
4	2004-05	2445	1176318	481	357718	3
5	2005-06	2445	1179801	483	355011	3

Source: Animal Husbandry Department

4.164 Apart from the frozen semen technology, KLD Board is also engaged in research and development activities like progeny testing, embryo transfer, production of liquid nitrogen, fodder seed and training programmes. During the year, the Board has produced 165 Malabari kids, 185 boer goats, 9005 piglets, collected 128 embryos and trained 1099 personnel. Other activities of the Board are given in Appendix 4.37

4.165 Herd Book Scheme is operated complementary to the Progeny Testing Programme. This would help to assess the improvements happening in the field with respect to traits to support the field progeny testing programme. So far against the target of 80000 animals, 11359 animals have been identified and registered under the programme. During 2005-06 against the target of registering 5000 calves, 3691 calves were registered under the programme. The Scheme covers a breedable population of about 60000 cross bred females spread around 83 AI Centres. Under the programme farmers are provided with deworming medicines and advice on scientific aspects of calf rearing.

4.166 Another notable achievement of KLD Board is the introduction of Boer goats which are considered far superior to any other goats for meat production, into the Kerala scene. They have high disease resistance. Crosses of local goats with Boer goats have proved to be a suitable genotype for the goat production system and well adapted to all types of climate.

4.167 During 2004 KLD Board has launched a project for dissemination of Malabari Germ plasm aiming at genetic improvement of goat herd of the State. Specific objectives includes identification of superior bucks based on individual performance for growth and dams performance for milk yield and prolificacy , improving marketing outlets for superior bucks, upgradation of the non descript stock to Malabari etc.. During 2004-05, 2053 and during 2005-

06, 2639 bucks are identified for selection and are selected for buck production during the period are 180 and 740 Nos. During 2005-06 buck production is the area is 829 against the target of 1100 and males selected for breeding numbers to 107 against the target of 220.

Cattle Feed

4.168 As per available estimates the potential daily requirement for concentrated cattle feed in Kerala has been estimated at 5372 MT. At present the State has three cattle feed plants functioning at Pattanakkad (300 MT/day capacity) and Malampuzha (200MT /day capacity) and Kerala Feeds Ltd., Kallettumkara (650 MT/day). The third one is operating under a separate management. Also there is a custom packing arrangement at Erode under KCMMF. The per day production capacity of Kerala Feeds ltd., increased from 500 MT to 630 Mt during 2005-06. The production of the three plants is insufficient to meet the demand

4.169 During 2004-05, the two plants and custom packing operations under KCMMF produced 1.08 lakh tonnes and sold 1.20 lakh MT of cattle feed. The major customer is APCOS. The production was hampered during Sept. 2005 to November 2005 and the capacity utilization was reduced to 77%.

4.170 The production of cattle feed by Kerala Feeds Ltd., increased from 1.26 lakh MT in 2004-05 to 1.39 lakh MT in 2005-06 .The Company has a good marketing network which includes 400 dealers and 450 Co-operatives. The company has evolved a growth plan “Vision 2010” to enhance the production capacity to 1500 MT per day by 2010. The first phase to enhance the capacity to 650 TPD will be completed by March 2006. Production details of the above cattle feed plants are given in Table 4.22

Table 4.22
Production of Cattle Feed

Factory	Production				
	2001-02	2002-03	2003-04	2004-05	2005-06
Pattanacaud (KCMMF)				0.58	0.595
Malampuzha(KCMMF)	1.17	1.08	1.07	0.34	0.18
Erode CPA	-	-	-	0.18	0.30
Kerala Feeds Ltd.	0.82	1.06	1.16	1.26	1.39
Total	1.99	2.15	2.23	2.37	2.47

Egg and Meat

4.171 In a country like India where the average level of nutrition is very low chicken and eggs, which are not expensive, can contribute considerably towards improving diet as a source of animal protein. As per estimates available, the per capita availability of egg is very low at 41 eggs/year and poultry meat is 0.9 kg/year against the world average of 147 eggs and 11 kg poultry meat /year. Government of India has set a target for achieving production of over 52 billion eggs by 2011-12, at a growth rate of 4.3 per cent.

4.172 Poultry farming for egg production relying on purchased feed are uneconomic in Kerala. Poultry rearing on commercial lines is therefore largely confined to broiler production. The egg production which reached 2054 million in 1999-2000 is continuously showing declining trend and in 2005-06 it reached a lower level of 1196 million recording a drastic fall of 41.75per cent.

The per capita availability of egg based on production during 2003-04 is 44/ year and during 2004-05 it further declined to 39/year. The per capita consumption of egg during 2004-05 is 62/year. The gap is filled by importing eggs from neighbouring State. An alarming factor to be noted in this regard is that over the last three years the domestic production of egg is declining to a lower level than that of 1984 - 85 (See Appendix 4.33). The decline in poultry population and hike in cost of feed were the major reason for the decline in production

4.173 Trend in Egg production during the period from 1994-95 to 2005-06 is given in Table-4.23 and Fig. 4.12

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Table 4.23
Year-wise Estimate of Egg production

SINo.	Year	Egg Production (million numbers)				% contribution of Kerala
		India	% change over previous year	Kerala	% change over previous year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	2001-02	38729	5.72	2002	-1.57	5.2
2	2002-03	39823	2.82	1347	-32.7	3.4
3	2003-04	40403	1.46	1277	- 5.20	3.2
4	2004-05	45201	1.87	1197	- 6.26	2.9
5	2005-06	46166	2.13	1196	- 0.08	2.6

Source: Economic Survey and Department of Animal Husbandry

Back yard poultry

4.174 Backyard poultry system has good potential in the state. Around 8-10 lakh chicks are being introduced every year in the state. Apart from Animal Husbandry department and KSPDC, a few NGOs and private farms are also involved. But the system is yet to develop to the required extent. The functioning of the department farms is to be strengthened to foster the backyard poultry system. On the contrary, in India as a whole it was transferred into a vibrant scientifically organised industry.

4.175 The main breeds of backyard poultry supplied by Animal Husbandry Department Farms are Kalinga brown, Mumbai Desi, Rhode Island Red and CARI Nirbheek. During 2004-05 they produced 7.14 Lakh Nos of Chicks, 0.25 lakh Nos of ducklings and quails 0.20 lakh Nos. The birds distributed by the department are “low technology/low input” birds and they have a survival rate of above 90 per cent.

Poultry Rearing and Kerala State Poultry Development Corporation

4.176 Kerala State Poultry Development Corporation was established in 1989 to give special attention for the revival of poultry farming. The Corporation had built up a broiler breeding farm and hatchery at Kudappanakunnu in Thiruvananthapuram District with a total investment of Rs.5.95 crore. The Corporation has partially commissioned a project to rear 15,000 parent stock with a target of 25,000 and to hatch 28 lakh day-old chicks with a target of 58 lakh by utilising financial assistance from the State Government and commercial banks. Now the Corporation is

producing and supplying 45000 day old chicks per week for distributing to the farmers. During 2005 a modern meat processing plant was commissioned in Pettah with a capacity to process 1200 birds/day. Presently 450 to 500 birds are being processed and supplied from this plant

4.177 During 2004-05, under backyard poultry rearing scheme, KSPDC distributed about 5 lakh chicks to the farmers of the State.

Broiler Production

4.178 The total broiler chicken production in the state is around 27609 MT/year. Nearly 10-15 Private hatcheries, working as satellite hatcheries also contribute to this local production of chicks and chicken meat. Approximately 40000-50000 direct employment is generated through broiler production. Apart from this around 30000-40000 MT of chicken meat, which includes broilers, layer chicks, broiler and layer parent culls etc. is being imported from neighbouring state.

Poultry Feed

4.179 There is need of broiler feed to the extent of 2000-3000 MT per month which is being catered to by 6-7 private feed manufactures.

Meat production

4.180 India is endowed with more than 11 per cent of worlds' livestock population comprising a variety of meat animals such as buffaloes, goat, sheep, pigs, cattle and poultry, The per capita animal protein availability is about 10g against world average of 25g. The minimum requirement targeted is 20g per capita/day of animal protein of which 4g will come from meat. The estimated demand for meat would be 7.7 million tonnes against the present production of 5.7 million tonnes. Meat production in Kerala comprises of beef, mutton, pork and broiler chicken. Out of this, beef is almost entirely from the culled animals brought from the neighbouring states. The rearing of goat and pig is concentrated in selected pockets. As in the case of poultry, meat production under stall-fed condition in general is not economical in Kerala. However, there is scope for fostering this activity in selected areas largely by utilising the bio wastes available. The annual production of meat is shown in Table. 4. 24

Table 4.24
Year-wise Estimate of Meat production

Kerala					
Sl. No.	Year	Poultry Meat		Meat other than Poultry Meat	
		Production (tonnes)	%age increase over previous year	Production (tonnes) @@	%age increase over previous year
(1)	(2)	(3)		(4)	(5)
1	2001-02	47693	14.88	125100	1.87
2	2002-03	52611	10.31	125130	0.02
3	2003-04 @	45226	-14.04	142992	14.27
4	2004-05 @	37610	-16.84	162567	13.69
5	2005-06	31750	-15.58	167763	3.20

Source: Economic Survey and Department of Animal Husbandry

@ Considering spent chicken production as 15 per cent of Broiler production

@@ including unauthorised sector

4.181 Details of meat production in the unauthorised sector are not available. It is estimated that about 2/3rd of the meat production in the State is from unauthorised sector. Total Quantity of meat and poultry meat produced during the period 2001-02 to 2005-06 are furnished in Table 4.24. Production of Poultry meat decreased by 15.58 per cent during 2005-06. From 2003-04 onwards the trend is one of decline. Production figures for meat other than poultry meat is on the increase during 2005-06 also. But rate of increase is lowering

4.182 In Kerala beef is the cheapest meat costing only 50 per cent of the prices elsewhere till 2004-05. This is because of the migration of large number of cattle and buffalo from the neighbouring states for slaughter. But the trend has changed and now the price of beef (Rs.70/kg) is higher than broiler(Rs.61/kg)

4.183 There are 889 authorised slaughter places in the State by the end of 2005-06.. Category wise number of animals slaughtered and quantity of meat produced during 2002-03 to 2005-06 are given in Table 4.25

Table 4.25
Meat Production under Authorised Sector in Kerala

Sl. No	Category	Period	Numbers (000' Nos)	Qty. of meat produced (MT)
1	Cattle	2002-03	524.25	25897
		2003-04	598.30	29864
		2004-05	627.57	33181
		2005-06	606.00	31358
2	Buffalo	2002-03	151.53	8637
		2003-04	162.99	8620
		2004-05	182.12	9846
		2005-06	256.00	13478
3	Goat	2002-03	665.74	6276
		2003-04	748.92	6696
		2004-05	684.72	6677
		2005-06	732.00	6709
4	Pig	2002-03	44.50	1994
		2003-04	53.14	2484
		2004-05	95.81	4485
		2005-06	95.00	4378
	Total(1-4)	2002-03	1386.02	42804
		2003-04	1563.35	47664
		2004-05	1590.22	54189
		2005-06	1689.00	55923
	Chicken-Total *	2002-03	41241.40	52611
		2003-04	28091.00	39327
		2004-05	27253.00	32704
		2005-06	17624.00	27609

Source: Integrated Sample Survey for Estimation of Production of Milk, Meat & Egg

** data for spent chicken was not collected from 2003-04 onwards and hence not included*

4.184 Compared to previous year's meat production (excluding chicken) under authorised sector, share of beef decreased from 61 per cent to 56 per cent, buffalo meat increased from 18 to 24 per cent, mutton remained around 12 per cent and pork around 8 per cent.

4.185 The production of broiler was on the increase till 2002-03. From 2003-04 the production is continuously declining and it reached 27609 MT in 2005-06. As per sample survey, the poultry meat production during 2004-05 is 32704 MT. The outbreak of bird flu in other countries had an adverse impact on the consumption of poultry meat and thereby affecting production.

Pig Rearing

4.186 Pig rearing has ample scope in Kerala Scene. The AH department has one pig farm and seven piggery units to cater the needs of the farmers. High quality piglets will be produced in the pig farm at Kappad and pig breeding units at Kudappanakkunnu, Mundayad and Central Hatchery, Chengannur. MPI and KLD Board are also engaged in Pig Development. These 3 Institutions are at the service of the pig farmers of the State. A Study of the Socio Economic Status of the Pig Farmers in Kerala is given in Box No: 4.8

Box No: 4.8

Observation on study on Socio Economic Status of Pig farmers in Kerala.

Pig production in the rural sectors is in the path of progress and development of this not only fills up the gap between requirement and availability of food, but also a boost to the economy of the rural community.

A survey work was conducted to study the influence of various resources like land, agriculture, animal, man power etc; in the rural sector in different agroclimatic zones of Kerala under pig production systems. The socio-economic status of pig farmers in terms of age, religion, average monthly income, land holding (cents), type of agriculture and animal husbandry activities, interest of the farmers and experience in pig rearing was evaluated.

Results of study

- The socio economic status of pig farmers in different agroclimatic zones of Kerala revealed that the farmers belonging to the age group of 31 to 50 years readily took up pig farming. Youngsters lacks interest in pig farming due to the prevailing socio cultural attitude and high literacy rate of the state.
- Among religion sects studied, Christians dominated in pig rearing in all the Zones surveyed followed by Hindus while none of the Muslims took up pig farming.
- The farmers with average monthly income between Rs.4001 to 6000 were more involved in pig farming. The result also revealed that education and family income of pig owners had positive effect on the imbibing of improved pig rearing practices.
- Farmers engaged in pig farming were largely involved in Coconut, Banana, Vegetables and Arecanut cultivation. The waste from the piggery unit were utilised as a manure to the agricultural purpose. Majority of the farmers maintained cattle besides pig rearing except in coastal regions where fish farming was the main subsidiary animal husbandry activity. In the coastal zone, the wastes and washing from the piggery units are very well utilised for fish production.
- Rationale of rearing of pigs revealed that it was a source of additional income to the farmers. Survey at north zone showed that the pig rearing is source of security for crop failure and complement to their salaries.

Source: Socio Economic Status of Pig Farmers in Kerala, College of Veterinary and Animal Sciences, Trissur, 2006

Meat Products of India Ltd.

4.187 Meat Products of India Ltd., is engaged in production and marketing of meat and meat products derived from pork, beef, chicken, mutton, rabbit, quail etc. It also produces feed for the poultry and pig farms of AH dept. During 2005-06 MPI sold 129 MT of pork products worth Rs.147 lakhs, 113 MT of beef products worth Rs.95 lakhs 57 MT Chicken products worth Rs.45 lakhs. They marketed 892 MT of various kinds of feed worth Rs.104 lakh during the year. As an extension activity 1792 Piglets were supplied to farmers and on maturity were taken back at remunerative prices.

Import and export of Milk and Milk products

4.188 The Export of Milk Products Rules (Quality control, Inspection and Monitoring) 2000 sets out the requirements related to quality of milk products destined for export and mechanisms to ensure pre shipment inspection as well as approval of establishment for export. Quality requirements include animal health at farm level and hygiene requirements at farm, collection centre, processing establishments, storage and transportation.

4.189 GOI have amended the Livestock Importation Act, 1898 under which import of all livestock products are allowed against Sanitary Import Permits(SIP) which are issued after conducting risk analysis with regard to the disease status of the exporting country in accordance to the International Scientific Principles and Guidelines of OIE.

4.190 Global prices of dairy products have been rising throughout 2004-05. As a result, India's exports of dairy products during 2004-05 increased from the previous year and were worth about Rs.3520 million. The value of milk product imports was close to Rs.514 million

4.191 During 2005-06 it was estimated that 38.31 lakh eggs, 56.83 MT of meat and 5080 Kg., of butter were exported from Kerala against 39.02 lakh eggs, 68.95 MT of meat and 3896 kg butter during 2004-05. Compared to 2004-05 the export of egg decreased by 2%, meat by 18% and butter increased by 30%.

4.192 With the establishment of the WTO, the global trade in the food sector is increasingly being governed by quality and safety aspects. There is a likelihood that countries may impose standards and regulations not only for protection of consumers but also as non-tariff trade barriers. Under the SPS Agreement, developed countries are imposing stringent standards.

4.193 It is essential to strengthen the animal health and product certification laboratories in the state not only to provide certification but also to ensure quality of raw materials across the value chains.

Animal Health Care

Indian Scenario

4.194 With the introduction of extensive cross breeding programmes and improvement of quality of cross bred cattle, the susceptibility of these to various diseases including exotic diseases has increased. In order to reduce morbidity and mortality, efforts are being made by the State/UT Governments to provide better health care. For it, a network of 8732 polyclinics/hospitals and 18830 dispensaries and 25195 veterinary aid centres (including

stockmen centres/mobile dispensaries), supported by about 250 disease diagnostic laboratories are functioning in the country. These institutions employ some 36000 professional staff and over 70000 para veterinarians. For the production of vaccines, there are 26 veterinary vaccine production units. The primary emphasis is on clinical services and as a result, endemic diseases such as Foot and Mouth Diseases (FMD) are still prevalent in India.

4.195 The efforts of States/UTs for preventing/controlling of various animal diseases are being supplemented by way of providing central assistance during the Tenth Five Year Plan through the following components of the scheme on “Livestock Health and Disease Control”:

- (i) Assistance to States for Control of Animal diseases (ASCAD)
- (ii) National Project on Rinderpest Eradication (NPRE) and
- (iii) Foot and Mouth Disease Control Programme (FMD-CP)

Kerala

4.196 At the end of 2005-06 Plan period all village panchayats in the State were provided with a veterinary institution (hospital/dispensary). There is a strong network for veterinary health care now in the State comprising 210 Veterinary hospitals, 883 veterinary dispensaries, 47 veterinary poly clinics, 14 District Veterinary Centres, 9 mobile hospitals/dispensaries at district level, 13 district level clinical labs, four diagnostic labs and other related health care institutions.

4.197 The state is implementing a programme for Foot and Mouth disease control with the assistance of Government of India. Also Brucellosis has now emerged as a new threat to the livestock wealth of the State. Helminthiasis control also needs attention. Worms and other internal parasites cause considerable economic loss to the farmers. Data regarding outbreaks, attacks and deaths of major contagious diseases of animals in Kerala for the period from 2001 to 2005 are given in Appendix. 4.46 .

4.198 Even though vaccinations were carried out, frequent outbreaks were reported which lead to production loss to farmers. During 2002, 2003, 2004 and 2005 frequent F&M disease outbreaks are reported. Among the 4 years severe situation prevailed during 2003 and during the period 2383 outbreaks, 19207 attack and 1302 deaths were reported (Appendix 4.46). The most affected districts are Kannur., Alappuzha and Ernakulam. A project for the creation of disease free zone with assistance from NDDB, FMD CP with 100 per cent Central assistance and ASCAD has been already started implementing in the State and now the diseases are under control. During the succeeding two years the intensity of the attack decreased considerably and during the year 2006 only 94 outbreaks, 772 attacks and 48 deaths were reported . Compared to 2003 there is 96% reduction in outbreaks, attacks and deaths.

4.199 During the period of last six years from 2001 onwards the attack of black quarter ranges between 1 and zero and no death is reported. But during 2006, 160 attacks were reported and the disease is showing a sign of creeping back. The reports of major diseases like Anthrax, Black Quarter and Hemorrhagic Septicemia are also very rare. During 2005 and 2006, 6 and 8 attacks of Anthrax and 10 deaths during each year is reported. Even though Hemorrhagic Septicemia is under control, the attacks are slowly increasing from 17 during 2003 to 132 during 2006. But number of deaths are only 4 and 6 during 2005 and 2006.

4.200 The State has already eradicated the dreadful disease of Rinderpest and no outbreak was reported after 1994.

Production of Vaccine in Veterinary Biological Institute, Palode

4.201 The Veterinary Biologicals, Palode is the sole agency engaged in the production and distribution of animal vaccine in the State. The production details of vaccines manufactured here are shown in Table 4.26

Table 4.26
Production of Vaccine by Veterinary Biological Institute (2001-02 to 2005-06)
(lakh doses)

Sl. No.	Name of Vaccine	2001-02	2002-03	2003-04	2004-05	2005-06
1	RDVK	26.65	54.45	120.06	104.02	69.46
2	RDVF	12.87	17.61	31.16	19.86	10.01
3	FPV	3.12	0.45	0.20	8.17	1.97
4	DPV	11.46	10.64	28.25	2.48	27.84
5	HS Oil adjuvant	0.13	0.41	1.14	1.47	0.77
6	HS Broth	0.73	0.67	2.67	1.03	0.27
7	BQ	0.59	0.67	1.39	0.32	0
8	Anthrax	0.84	0.28	0.14	0.48	0.79
9	FMD Vaccine**	8.30	12.15	Nil	Nil	Nil

Source: Animal Husbandry Department * till December 2005

**Supply from Other Sources

4.202 Apart from the production of vaccines, the institute is engaged in the manufacture of diagnostic reagents and other animal health products.

4.203 Compared to previous year poultry vaccine production during 2005-06 decreased by 19 per cent to 109.48 lakh doses and livestock vaccine by 44 per cent to 1.84 lakh doses. Number of vaccinations done during the year was 19.31 lakh for livestock and 96.03 lakh doses for poultry respectively. Compared to previous years vaccination to cattle increased by 45 per cent and vaccination to poultry decreased by 56 per cent. Details are given in Appendix 4.34

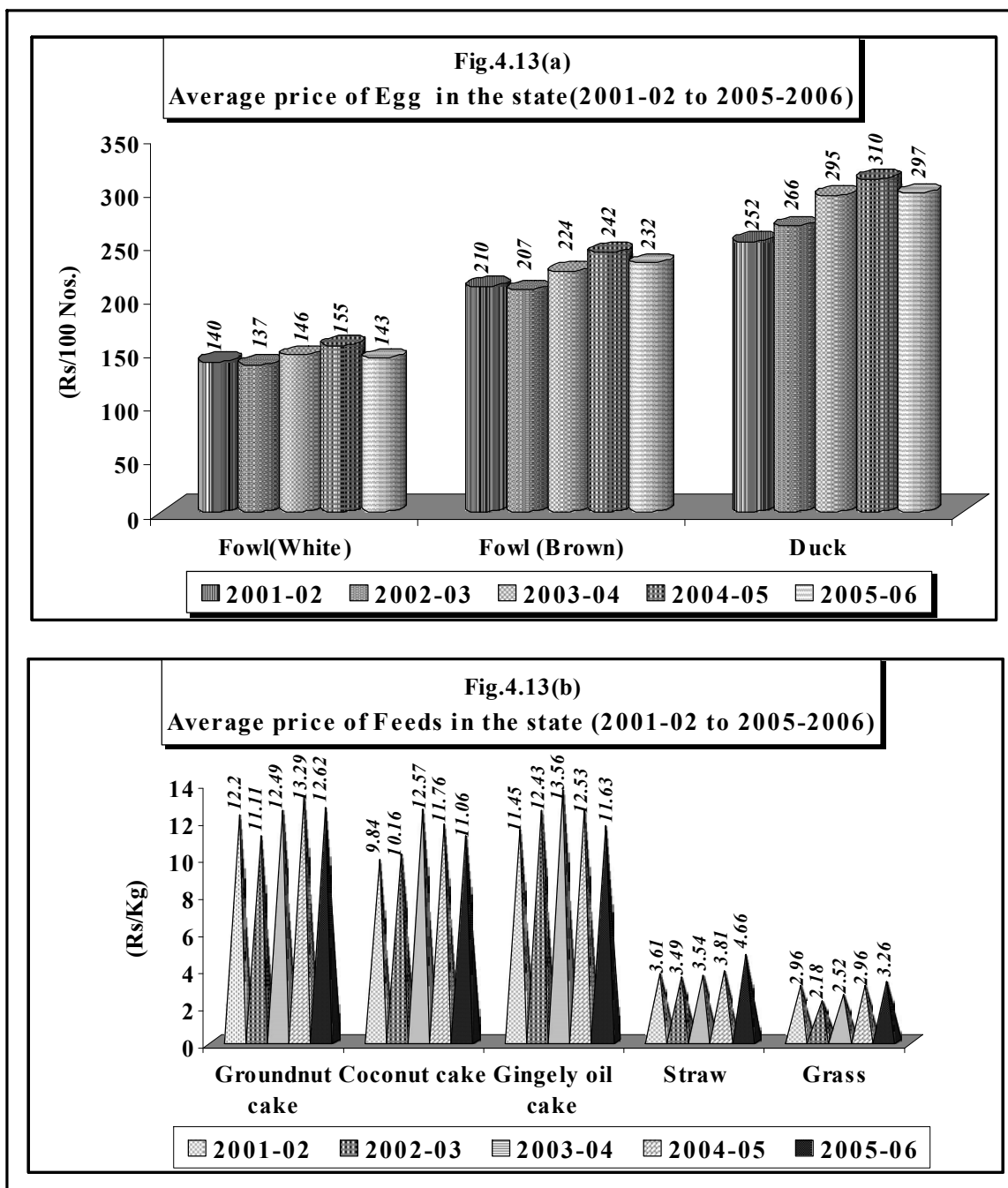
4.204 The production of vaccines viz., RDVK lowered to 69.46 lakh doses from 104.02 lakhs doses, RDVF from 19.86 to 10.01, FPV from 8.18 to 1.97, HS oil adjuvant from 1.47 to 0.77, HS broth to 1.03 to 0.27 lakh doses. DPV vaccine production increased from 2.48 lakh doses to 27.84 lakh doses and Anthrax vaccine from 0.48 to 0.70 lakh doses

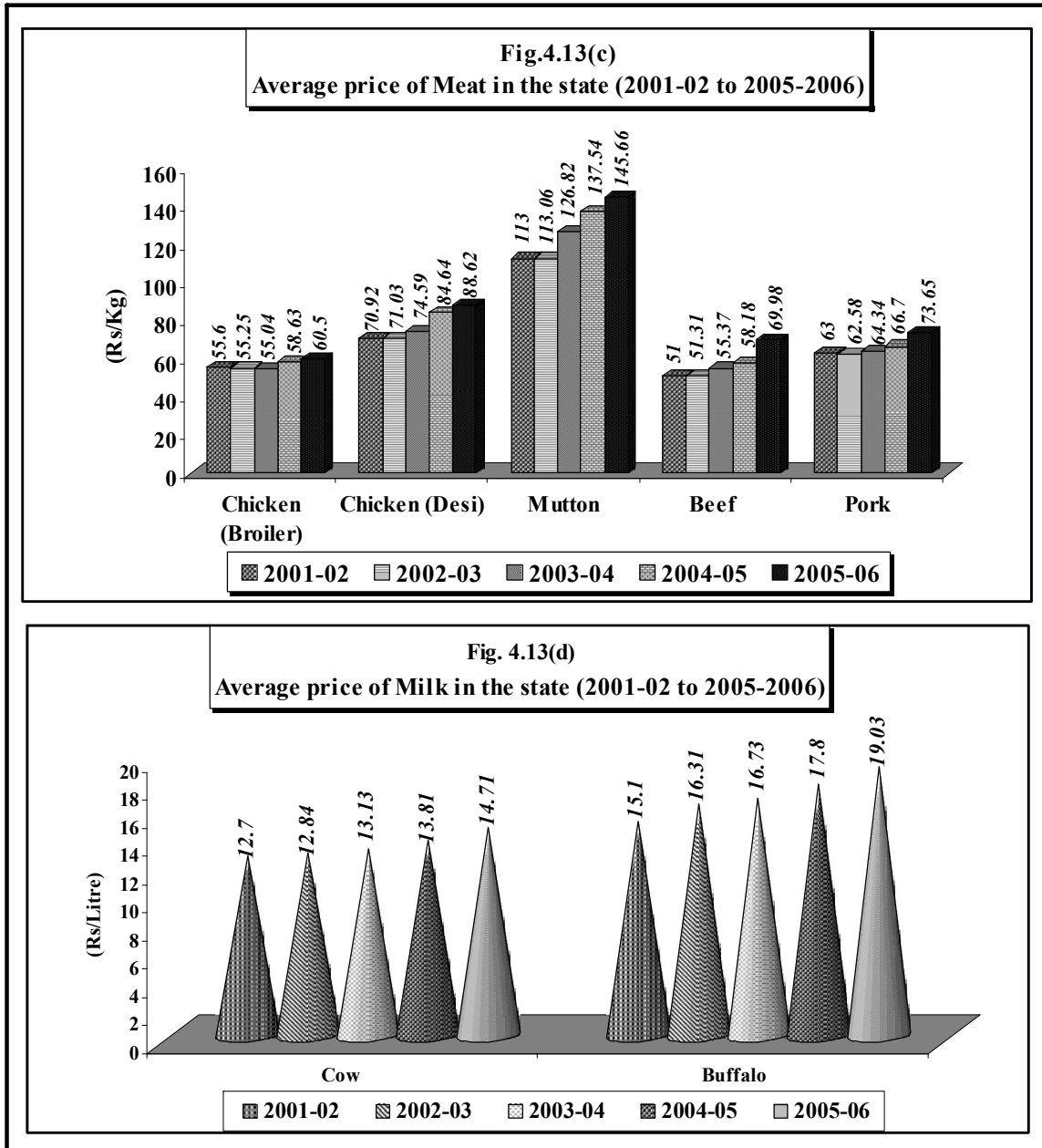
Prices

4.205 Average price of important inputs and products of livestock sector for the last five years is presented in Appendix 4.38. Compared to 2004-05 there was increase in the price of meat categories during 2005-06. The highest increase is in the case of beef (20.28%) and pork (10.12%). Among the different types of meat, price of beef recorded an all time hike and compared to 2001-02 the increase is 37.22%. The rate of increase in price is lower in the case of chicken (broiler and desi) and mutton. The increase in the price of beef and pork may be attributed to the increase in the demands for pork and beef due the occurrence of Avian Influenza among poultry in other states and rare occurrence of Anthrax in the State. The price of fowl-white egg increased by 6.2 per cent, brown egg by 8 per cent and duck egg by 5 per cent during

2004-05 and decreased by 8%, 4% and 4.19% respectively during 2005-06 (compared to previous year).

4.206 On the input side, the price of grass which recorded 17.5% hike during 2004-05 increased further by 10.14% during 2005-06. The highest increase is in the case of straw which recorded an increase of 22.31% compared to an increase of 6.3% during previous year. Over the period from 2001-02 to 2005-06 the increase is Rs.1.06/kg and 2003-04 the hike is 85ps/kg. The price of grass also recorded an increase of 10.14% over 2004-05. The price of gingely oil cake decreased further by 7.18%, coconut oil cake by 5.95%,. Also the price of ground nut cake decreased by 5.05%. The trend in average price of livestock products are shown in Fig. 4.13 (a to d)





Annual Plan 2005 -06 : A Review

4.207 The total outlay approved for the livestock subsector under Annual Plan (2005-06) was Rs.47.39 crores. This included Rs.44.19 crores for Animal Husbandry and Rs.2.20 crores for Dairy Development (Table – 4.27 & 4.28). Against this actual expenditure in AH sub sector amounts to Rs.43.38 crores (95.99 %) and Dairy Development sub sector amounts to Rs.3.16 crores (143.69 %). If livestock sector is taken as a whole then the expenditure is 46.54 crores. ie

98.20 per cent of the total outlay of Rs.47.39 crores. On the whole the performance is better compared to previous years and compared to 2004-05 Annual Plan during which the total expenditure on Animal husbandry Sector is 29.88 Cr (73% of BE) the achievement during 2005-06 is appreciable.

4.208 During the year, an amount of Rs. 6.49 cr. was also expended as central share of Centrally Sponsored Schemes in the Sub Sector . Of the total amount expended as central share Rs.5.01 Cr. is in Animal Husbandry Sector and 1.48 Cr. is in Dairy Sector. Also substantial outlays have been earmarked by the local governments for livestock development. The outlay earmarked by local bodies during the year is Rs.38.15 Cr. ie., 83% of outlay earmarked under State sector.

Table 4.27
Financial Performance of Livestock sub Sector during Annual Plan 2005-06

(Rs. in lakh)

Sl. No	Sub Sector	Approved Outlay	Expenditure	Expenditure as % to total outlay
1	Animal Husbandry	4519	4337.63	95.99
2	Dairy Development	220	316.12	143.69
Total :Livestock sub sector		4739	4653.75	98.20

Table: 4.28
Outlays and Expenditure for Major Schemes under Annual Plan 2005-06

(Rs. lakh)

Sl. No.	Name of Scheme	Approved Outlay	Actual expenditure	Expd. as % to Total
1	Strengthening of Veterinary Service	1400	845	60
2	Expansion of Cross Breeding facilities	622.50	520.28	84
3	Special Livestock Breeding Programme	700	1094.30	156
4	Assistance to Public Sector undertaking viz., KLD Board, KCMMF, KSPDC and MPI	250	202.35	81
5	Commercial Fodder Production Programme	190	178.83	94
6	Poultry Farms and Expansion of Poultry Production Incl. Farms under KSPDC	120	164.98	137
Total		3282.50	3005.74	92

4.209 For the major schemes under Animal Husbandry Sector, an amount of Rs.30.06 Cr. is expended against the BE of Rs.32.83 Cr. ie., 92% expenditure.

4.210 Under the programme Strengthening of Veterinary Services, the expenditure recorded is very low ranging from 22 percent to 35 percent of outlay set aprt during the first 3 years of the Tenth Five Year Plan. Compared to this Annual Plan 2005-06 recorded better performance of 60% expenditure against outlay.

4.211 During the year 23 panchayats, which doesn't have veterinary institutions were provided with one, 24.71 lakh animals were protected against F&M disease, 33486 persons were given training in various aspects of Animal husbandry practices. About 21850 farmers given awareness on scientific management so as to reduce inter calving period etc., through 437 awareness camps.

4.212 Under commercial fodder production programme 1840 ha are brought under fodder cultivation during 2005-06. Under rural dairy extension and advisory services 14 district level and 152 block level cattle shows, 456 farmers contact programmes, 15 consumer interface programmes were conducted. Under Milk shed development programme assistance was given for establishment of 245 dairy units during the year.

Eleventh Five Year Plan

Approach and Strategies

4.213 Aiming at the revival in production front and above all exploring the possibility of livestock sector as an instrument of development, the strategies and approach of the livestock sector has been formed.

4.214 For fulfilling this, the components viz., enhancing the production of egg and milk are also included under the State food security project proposed to be implemented during Eleventh Five Year Plan, in association with local governments.

- enhancing and generating livelihoods in as sustainable a format as possible using livestock as an instrument for development.
- A participatory approach for the implementation of the Plan schemes so as to enable the State to mount well focused and cost effective campaigns and enhancing livelihoods of the livestock farmers in the State
- To make the State self sufficient in the production of Livestock products
- Ensuring the farmers with adequate supply of quality fodder and feed at low cost

Strategies:

- The XI Plan would essentially a participatory plan i.e., its focus is livelihood and livestock as an instrument for social and economic development .
- A comprehensive state food security project covering rice, milk and egg production would be implemented in association with local governments and other agencies.
- The Plan would attempt a reorientation of service delivery by the Dept. of Animal Husbandry to make them more people friendly, cost effective and outreach: Veterinary Doctors and para vets initiate a home delivery of services on a pilot basis

- Restructuring meat industry through an inclusive programme for streamlining the value chain predominantly in the private sector involving the stake holders and enhancing value and quality
- Streamlining of livestock extension support system
- Strengthening support systems like production of vaccines, farms and other support infrastructure
- Promotion of investment would be given thrust
- A mechanism for linkage with local governments would be introduced

Eleventh Plan target

4.215 The Eleventh plan envisages stepping up of milk production to 35 lakh tonnes, egg production to 2395 million numbers and meat production to 3.00 lakh tonnes by 2012.

4.216 The assessment of development during the previous years reveals that a major revival package is essential for the growth and development of the agriculture sector and allied sectors in the Eleventh Plan linked to higher investment and strategies to make agriculture attractive and profitable. The regionally differentiated strategies in combination with technology, low cost credit, marketing, risk management and institutional support would be required to revitalize the agricultural economy of the State.

4.217 As a prelude to this, a flagship project on State food security covering rice, pulses, milk and egg production is proposed to be launched during Eleventh Plan. The support services including input production would be strengthened. A convergence approach would be followed under the leadership of local governments for realizing the targets.

4.218 The objective of flagship scheme is to increase milk production by 70 percent from the base level and doubling of egg production in the Plan period with the support of local governments.

4.219 An integrated livestock production programme is envisaged for Eleventh five Year Plan as flagship programme by integrating AI programmes, herd book scheme, Special Livestock Breeding programme for cattle and fodder Production programmes. The AI facilities will be extended to goat and SLBP to buffaloes. As a part of it cattle health and fertility management programmes would be implemented for production enhancement.

4.220 With the aim of promoting cattle farming on large/medium scale it is proposed to form a Venture Assistance Fund as a new scheme during XI plan and it will be operational from 2008-09 onwards.

4.221 The State is having good potential for the development of meat. It is proposed to implement a major project for the development of meat industry covering modernisation of abattoirs, quality control, processing and marketing with appropriate backward linkages. Also, it is proposed to launch a major project for the development of poultry as a part of the State Food Security Project with a view to promote backyard poultry farming and make the State self reliant in egg production

Fisheries Development

4.222 Global production of fish and fishery products has more than doubled since 1970, reflecting an increase in capture and in particular aquaculture production. Alongside this trend there has been a shift in the composition of fisheries production away from industrialized countries towards developing countries. This is due to both a decline in the fish stocks available in the developed World from over fishing and to an increase in the fishing activities in the developing world.

4.223 Around 60 per cent of the major fish resources in the world are over utilised or fully utilised and these resources are in urgent need of conservation. FAO has concluded that 44 per cent of the stocks for which formal assessments are available are intensively or fully exploited, 16 per cent are over fished, and 6 per cent of the known stocks are in need of urgent management. Demersal high value species are over fished and that a reduction of at least 30 per cent of fishing effort was required to rebuild the resources.

Resource base

4.224 The state has all the requisite natural endowments for building a strong and vibrant fisheries economy in tune with the national strategy. They include a stretch of coastal belt extending over 590 km. and an extensive inland waterspread of around 4 lakh hectares. The exclusive economic zone (sea spread upto 200 metres) lying adjacent to Kerala coast is spread over 36000 square kilometres which is almost equivalent to the land area of the state.

4.225 The state has a total fresh water area of 158358 ha consisting of reservoirs (42890 ha), private ponds (21986 ha), irrigation tanks (2835 ha), Panchayat ponds (1847 ha) and 44 rivers having water spread area of 85,000 ha. The brackish water resources consist of 65213 ha of estuaries and backwaters and 12873 ha of prawn filtration fields. The polders of Kuttanad having a water spread of 35000 ha and 17,000 ha of kole lands of Thrissur are also very ideal for various aquaculture development activities.

4.226 The estimated fisher folk population of Kerala is 11.03 lakh, which include 8.46 lakh in the marine sector and 2.57 lakh in the inland sector. Out of this the number of active fishermen is estimated as 2.32 lakh (1.90 lakh in marine sector and 0.42 lakh in the inland sector). There are 222 fishing villages in the marine and 113 fishery villages in the inland sector, where fishing and relative activities provide livelihood to a vast majority of the population. Alappuzha district is in the first place in the number of fisher folk with a population of 1.84 lakh followed by Thiruvananthapuram(1.80 lakh). The district wise details of fisher folk population are given in Appendix-

Income from fisheries sub sector

4.227 The Gross State Domestic Product of the State has increased about 47% during the period from 1999-00 to 2005-06 and the share of fisheries sector has remained more or less stagnant in the period and about 5 per cent declined during 2005-06 (Quick) compared to 1999-00. Also the share of fisheries sector in the State Domestic product also declined from 2.24 to 1.44 per cent respectively in the same period (See Table-4.29)

Table 4.29**Contribution of Fisheries sector to Gross State Domestic Product (1999-00 Prices)**

Category	Period				
	1999-00	2001-02	2003-04	2004-05 (Provisional)	2005-06 (quick)
Gross State Domestic Product (Rs. Crores)	68125	74249	85954	92984	100434
Fishing (Rs. Crores)	1526	1547	1545	1536	1442
Share of fisheries sector in GSDP	2.24	2.08	1.80	1.65	1.44
Share of Primary sector in GSDP	22.27	20.46	17.57	16.93	15.70

Source: Directorate of Economics and Statistics

Marine fisheries Census

4.228 Marine fisheries Census 2005 was carried out by CMFRI in nine districts of Kerala viz., Trivandrum, Kollam, Alleppey, Ernakulam, Trichur, Malappuram, Kozhikode, Kannur and Kasaragod during April-June 2005. The salient features are summarized in Box No. 4.9

Box . 4.9**Salient Features of Marine Fisheries Census 2005**

- ❖ There were 222 marine fishing villages in Kerala. Trivandrum district has the maximum villages (42) and Kannur district has the minimum (11).
- ❖ The total number of fishermen households was 1,20,486 in which the maximum households were in Trivandrum district (28%) and the minimum in Kasargod district (4%).
- ❖ Marine fishermen population in Kerala was 6,02,234. Adult male constituted 35.5%, adult females 35.5% and children 29% of the population. Average population per village was 2,713 and the average family size was 5. Fishermen concentration was higher in Malappuram district and lower in Kollam district. Female to male ratio was 979 for 1,000 males.
- ❖ In Kerala 28.5% of the fishermen possessed primary level of education, 36.3% secondary level and 8% possessed above secondary level of education. 27.2% of the fishermen had no formal education.
- ❖ About 42% of the fisherfolk families were Christians, 31% Hindus and 27% Islam. More than 1.5% of the families belonged to either scheduled caste or scheduled tribe.
- ❖ Active fishermen constituted 23% of the marine fisherfolk population of which 88.5% were engaged in full time fishing, 7.5% part time and 4% occasional. Full time fishermen were higher in Trivandrum district.

- ❖ Nearly 12% of the fisherfolk earned their livelihood from allied activities like marketing, making/repairing nets, curing/processing, peeling, labour and other fishery related activities. Most of the males were engaged in the occupation such as labour (44%), making/repairing of net (15%) and marketing (14%). While female involvement was higher in marketing of fish (37%), peeling (22%) and making/repairing of nets (11%).
- ❖ 30% of the fisherfolk were having membership in co-operative societies out of which 66% were in fisheries co-operative societies. Co-operative membership was maximum in Trivandrum district.
- ❖ Trawlers (72%), ring seiners (8%) and gillnetters (7.8%) were the main crafts of the mechanized sector. There were 29,177 crafts in the fishery employed in marine fishing of which 5,504 were mechanized; 14,151 were motorized and the rest non-motorised.
- ❖ Kerala marine fisherfolk owned 19,173 crafts out of which 7% were mechanized 44% were motorized and the remaining 49% were non-motorized crafts. Number of families having shares in crafts was maximum in Kozhikode district.
- ❖ Number of gillnets in Kerala was given as number of pieces. 202,416 pieces of gillnets are owned by the fisherfolk.
- ❖ Important gears of Kerala were gillnets, hooks and lines, troll lines, drift nets, seines and trawl nets. Sharing pattern is more visible in seines, trawl nets and drift nets.
- ❖ Nearly 66% of the fisherfolk families involved in fishing possessed neither craft nor gear.
- ❖ Only 4.4% of the fisherfolk families was found to own some electronic gadgets/life saving equipments.
- ❖ In Kerala nearly 75% of the houses where marine fisherfolk families live were found to be pucca houses and the maximum was in Alleppey and Kannur districts.
- ❖ There were a total of 765 educational institutions in the fishing villages of Kerala with an average of 3.5 institutions per village.
- ❖ All the marine fishing villages were electrified and 99% were connected by road.
- ❖ There were 414 curing yards, 320 ice factories, 153 peeling sheds, 112 boat yards and 56 freezing plants in the fishing villages of Kerala.

Source: Marine Fisheries Census 2005, CMFRI

Species-wise Composition of Fish Landing

4.229 An increasing trend was noticed in the landings of shark, oil sardine, Bombay duck, ribbon fishes, carangide, seer fishes, tunas, penaeid prawns and cephalopods. Landings of petches and non penaeid prawns declined.

4.230 The Kerala Marine Fisheries Regulation Act was enacted with a view to enforce strict regulatory measures following the induction of more number of crafts and consequent increase in the level of unrestricted fishing. According to this Act, the inshore area coming within the

depth range of 50 meters has been demarcated for fishing by the traditional fishermen using country crafts and the area beyond the limit in the economic zones can be utilised by motorized boats and large vessels. As this restriction is not being strictly followed, monsoon trawling has been banned as a preventive measure. The ban on monsoon trawling has been in force from 1980 onwards. During 2006, the trawling ban period was extended up to August 15 (Total 62 days from June 15 to August 15) as per the order of the Hon'ble Supreme Court of India.

4.231 Although the fish catches from the Kerala coast include more than 300 different species, the commercially important number about forty only. The high value species among the fish catches are still few; prominent among them are seer fish, pomfret and prawn. Ribbonfishes are also now a target group. During 2005-06 the catch of Ribbon fish was 15679 tonnes. The quantity of these high value species in the total catch ultimately decides the income of the fishermen. Unfortunately the share of these high value varieties in the total marine fish catch has been remaining stagnant. The annual potential of prawn is estimated at 64482 tonnes while the average catch during 2004-05 was 53402 tonnes. The catch of oil sardine, the most important variety consumed mainly by the poorer sections of the society exceeded the potential in recent years. The catch of oil sardine during 2005-06 was 1.50 lakh tonnes. The species wise landings are shown in Appendix: 4.48

Fishing Crafts

4.232 There was enormous increase in the number of fishing crafts operating in Kerala during the last decade. According to Marine Fisheries Census 2005, the total number of crafts in operation is 29177 of which 5504 crafts are mechanized and 14151 crafts are motorized and the rest non-motorised. Out of the 5504 mechanised crafts 3982 are Trawlers and 428 are Gillnetters. The District wise details are given in Appendix-4.50

Trend in Production

4.233 Among the maritime status in India, Kerala occupies the foremost position in marine fish production, accounting for about 20% of the total landings. Marine capture fisheries have always dominated the total fish production, compared to Inland fisheries in Kerala. Fish production in the marine sector over the last 10 years presents more or less a stagnant trend with an average production of 5.88 lakh tonnes. The marine fishery resource of the state has almost attained the optimum level of production. In this context there is no scope for further increase in fish production for inshore marine capture fisheries. However, the total inland fish production has shown an increasing trend in Kerala. The inland fish production reached peak share of 13% of the total fish production of the state during 2000-01 and thereafter decline slightly. At the national level more than 50% of the total fish production is contributed by the inland sector.

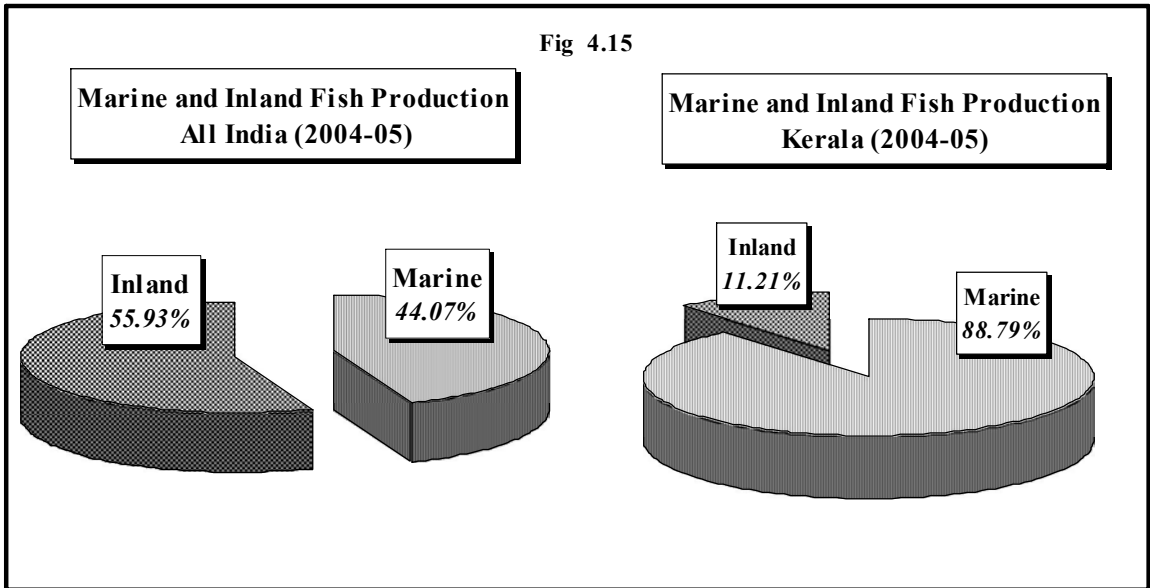
4.234 During 2004-05, India's total production was 63.04 lakh metric tonnes of which 27.78 lakh metric tonnes was from marine fisheries and 35.26 lakh metric tonnes from inland fisheries. The marine fish production in Kerala is stagnant and seems to have achieved a saturation level whereas the inland fish production showed signs of improvement from 1999-00 followed by slight decline. During 2005-06, marine production declined to 5.59 lakh tonnes from 6.02 lakh tonnes of 2004-05 and inland fish production increased slightly (Table- 4.30). In the inland sector 0.78 lakh tonnes of fish is produced and which accounts for 12.24 per cent of the total fish production of the state during 2005-06.

Table 4.30
Fish Production in Kerala during the last Five years

<i>(lakh tonnes)</i>			
Year	Marine	Inland	Total
2001-02	5.94	0.78	6.72
2002-03	6.03	0.75	6.78
2003-04	6.09	0.76	6.85
2004-05	6.02	0.76	6.78
2005-06	5.59	0.78	6.37

Source: Fisheries department

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Export

4.235 Export of marine products had set an ever time record of 1644.21 million US\$ during 2005-06. The total value of marine products export from the country was Rs. 7245.30 crores during 2005-06 and the quantity exported was 5.12 lakh tonnes indicating an increase of 9.05 per cent in rupee terms, 11.02 percent in volume and 11.21 per cent in US \$ realization compared to 2004-05. The average unit value realization was almost static at \$ 3.2/ kg.

4.236 European Union collectively emerged as the largest market for Indian marine products with a share of 29% in the total export earning, followed closely by USA (23%) and the Japan (16%). EU share has increased to 21 % from 25.52% in quantity. It has registered an export growth of 16.22% in quantity, 17.31% in rupee value and 19.39% in US\$ realization over the

previous year. USA became the second largest market in terms of value and it had a share of 11% in volume 22.63% in rupee value and 22.66% in US\$ realisation.

4.237 The marine products export from the state during 2005-06 was 97311 MT valued at Rs. 1258 crores constituting 19 per cent in terms of volume and 17 per cent in terms of value to Indian marine products export.

4.238 The major export item is frozen shrimp which constitutes 47.52 per cent in value term of total export from the State during 2005-06 while at national level the corresponding share is 58.26 per cent.

4.239 The State's share in all India exports has been declining in recent years. The share declined from 27 per cent in quantity terms in 1999-00 to 19 percent in 2005-06 and the share in value declined to 17 per cent from 22 per cent. Though the quantity exported during 2005-06 was increased by 11.37 per cent, the share of Kerala remains more or less same compared to that of previous year (Table - 4.31). European Union continues to be the major market for the marine products exported from Kerala with a share of 50.32 per cent in value during 2005-06 followed by Japan (11.76%) relegating USA to the third position (11.56%).

Table 4.31
Export of Marine Products from Kerala vis-a-vis

(Q: Quantity in Metric Tonnes V: Value in Rs. Crore)

Year		India	Kerala	Share of Kerala (%)
2000-01	Q	440473	88852	20
	V	6444	1046	16
2001-02	Q	424470	72756	17
	V	5957	951	16
2002-03	Q	467297	81393	17
	V	6881	1046	15
2003-04	Q	412017	76627	19
	V	6092	1099	18
2004-05	Q	461329	87378	19
	V	6647	1158	17
2005-06	Q	512164	97311	19
	V	7245	1258	17

Source: MPEDA

Shrimp farming

4.240 Shrimp farming is one of the fastest growing aquaculture sectors in many parts of the world. Rapid expansion of this sector generated income for many countries, but has been accompanied by rising concerns over environmental and social impacts. The International principles for responsible shrimp farming provide the basis upon which state holders can collaborate for a more sustainable development of shrimp farming. The International principles was developed during 2006 by the consortium on shrimp farming and the Environment, which consist of FAO, Network of Aquaculture centres in Asia-Pacific (NACA) United Nations Environmental Programme (UNEP), World Bank (WB) and the World Wild Life Fund (WWF). International Principles for Responsible shrimp Farming is given in Box No.4.10

Box No : 4.10

International Principles for Responsible Shrimp Farming

- Farm setting – locate shrimp farms according to national planning and legal frame works in environmentally suitable locations, making efficient use of land and water resources and in ways that conserve biodiversity, ecologically sensitive habitats and ecosystem functions, recognizing other land uses, and that other people and species depend upon these same ecosystem.
- Farm design – Design and construct shrimp farms in ways that minimise environmental damage.
- Water use – Minimise the impact of water use for shrimp farming on water resources.
- Brood stock and post larvae – where possible, use domesticated selected stocks of disease free and/or resistant shrimp brood stock and post-larvae to enhance biosecurity, reduce disease incidence and increase production whilst reducing the demand for wild stocks.
- Feed Management – utilise feeds and feed management practices that make efficient use of available feed resources, promote efficient shrimp growth, minimise production and discharge of wastes.
- Health Management – Health management plans should be adopted that aim to reduce stress, minimize the risks of disease affecting both the cultured and wild stocks, and increase food safety.
- Food Safety - Ensure food safety and the quality of shrimp products, whilst reducing the risks to ecosystems and human health from chemical use.
- Social Responsibility – Develop and operate farms in a socially responsible manner that benefits the farm, the local communities and the country, and that contributes effectively to rural development, and particularly poverty alleviation in coastal areas, without compromising the environment.

Source: International Principles for Responsible Shrimp Farming 2006, FAO, NACA, NNEP, WB, WWF

Tsunami

4.241 In order to rehabilitate and reconstruct Public and community based infrastructure and restore the livelihood of the affected population, Tsunami Emergency Assistance Project at a total cost of Rs. 245.46 crores was approved by Asian Development Bank. In the project Rs. 38.62 crores has been provided for fisheries sector, out of this Rs. 8.03 crores has been expended for livelihood restoration activities. During 2006-07, an amount of Rs. 13 crore has been set apart for the implementation of the Project. GOI Assisted Tsunami Rehabilitation programme (TRP) was on implementation with a total outlay of Rs. 26.82 crores, out of which Rs. 11.39 crore has been provided during 2006-07 under fisheries sector.

Major developmental Programmes

4.242 The major developmental programmes implemented during the Plan period include, inland fisheries development, development of fishing harbours and landing centres and programmes ensuring social and livelihood security of fishermen population. The developmental programmes undertaken in the marine sector include modernisation of country crafts, popularisation of new generation crafts and distribution of suitable components of fishing gear.

Outlay and expenditure for 2005-06

4.243 The outlay and expenditure for various schemes implemented in the fisheries sub sector are shown in Table-4.32. The total expenditure of the State sector schemes up to March 2006 is Rs. 2469.74 lakhs which accounts for 101 per cent of the original outlay of Rs. 2440.00 lakhs. The expenditure exceeds the original outlay due to sanction of Rs.556 lakh to Matsyafed for Integrated Fisheries Development Project by additional authorization. Under fisheries sector there are 10 partially aided central sector schemes having an outlay of Rs. 1610.50 lakhs and expenditure is Rs. 1387.90 lakh. The 100 per cent centrally sponsored scheme NCDC Assisted Integrated Fisheries Development Project having outlay of Rs. 400 lakhs is fully expended.

Table: 4.32
Outlay and Expenditure for 2005-06

(Rs. lakhs)

	BE	Expenditure
State Plan Schemes	2440.00	2469.74
Centrally Sponsored Schemes	1610.50	1387.90
NCDC Assisted Project	400.00	400.00
Total	4450.50	4257.64

1. Integrated Development of aquaculture in Kuttanand

4.244 The project envisages augmentation of fish/prawn production by introducing eco-friendly culture and ranching practices in greater Kuttanad region covering 675 ha. of waterlogged areas during 2005-06 with the participation of local bodies, utilising an amount of Rs. 60.00 lakhs. Area under culture during 2005-06 is 744 ha.

Rice –fish farming in Kerala

4.245 The scheme on rice-fish culture is implemented by ADAK in the State during Tenth Five Year Plan, in Kuttanand and Pokkali fields. In the Pokkali fields an area of 2500 ha. is targeted under shrimp farming during the Tenth Five Year Plan period and 3500 ha of Padasekharams in Greater Kuttanad area are identified for rotational farming of paddy and fish/prawn. Upto 30.9.2006 an area of 1441 ha is brought under Orunellum Oru meenum project and the scampi production is 500 tonnes and fish production is 570 tonnes. During 2005-06, the area under culture is 744 ha and scampi production is 95 lakh and fish produced is 2.51 lakh.

1. Integrated Development of Pokkali fields

4.246 An amount of Rs. 65 lakhs is utilised for the Integrated Development of Pokkali Fields for incurring shrimp production and fish culture. Area under culture is 1489 ha and during 2005-06 and 483 tones shrimp has produced.

3. Fishing Harbours and Landing Centres

4.247 Vizhinjam, Neendakara, Thankassery, Munambam, Puthiyappa, Mopla Bay and Chombal- have been completed and commissioned. The progress of work in respect of the ongoing Harbours and landing centres is given in Appendix.4.51 and Table 4.33. All the harbours are constructed with 50% Central assistance. The three projects Thankassery, Munambam and Neendakara, the central assistance have already been exhausted and the construction is in progress with State Government share. The revised estimates of most of the harbours are pending with Government of India.

4.248 Work on Muthalappozhy, Ponnani, Thottappally and Kayamkulam are progressing. The total revenue collected during 2004-05 and 2005-06 were Rs. 217.80 lakh and Rs. 229.40 lakh respectively. Neendakara contributed 45 per cent of the total revenue collected during 2005-06. (See Appendix 4.52)

Table 4.33
Fishing Harbours in Kerala

(Rs. lakhs)

Sl. No.	Name of Fishing Harbour	Total estimated cost (Rs. in Lakhs)		Year of starting	Year of completion/ Target	Expenditure upto March 2006
		Original	Revised			
1.	Vizhinjam	704.00	1583.00 *	1987	2004 II Stage	1538.81
2.	Muthalappozhi	1366.00	-	2000	2005	904.28
3.	Thankasseri	1980.50	4385.50 *	1991	Commissioned on 2001	4123.59
4.	Neendakara	585.00	622	1982	Commissioned on 1988	836.97
5.	Kayamkulam	624.60	1970.32	1994	2005	1280.84
6.	Munambam	1167.20	1952 *	1988	Commissioned on 2000	1792.94
7.	Puthiappa	527.00	962.50	1988	Commissioned on 1996	1161.29
8.	Chombal	556.00	975.00 *	1992	Commissioned on 1999	902.66
9.	Mopla Bay	564.00	816.00	1992	Commissioned on 1999	1070.50
10.	Ponnani	2759.40	-	2001	2008	712.82
11.	Thalai	1370.00	1970 *	-		59.48
12.	Thottappally	1458.30	-	2004	2009	204.09
13.	Koyilandi	1772.50				0.36

Source: Harbour Engineering Department

* Revised Estimates submitted to Government for sanction

4.249 There are 15 landing centres for traditional fishermen. Out of the fish landing centres for traditional fishermen, eight have been completed. The completed fish landing centres are Quilandy, Kattoor Pollathai, Vallikkunnu, Arthungal, Punnappa, Vellayil. Chalil Gopal Pettah and Moyilalikadappuram. Fish landing centre at Vizhinjam south has almost completed. Work at Kadapra has partially completed and construction of Groyne completed at Thikkodi. Two centres at Poovar in Thiruvananthapuram and Kanjanhad at Kasargod could not be commenced due to the resistance from local people and non availability of land. The proposed centre at Vizhinjam North has been abandoned due to local resistance and the one proposed at Quilon was dropped in view of the development of Thankassery Fishery Harbour.

4.250 The construction of fishing harbours and landing centres has to be done on a strict project mode with different methods of financing and participation, a prioritized action plan has to be prepared for the completion of all long pending infrastructure projects.

4. Social Security and livelihood support to fishermen Community

4.251 A number of programmes are under implementation for providing social security and livelihood support to the fishermen community. They include saving-cum-relief scheme, NFWF housing, Group insurance to fishermen etc. The major highlights are given in Appendix-

4.252 Under NFWF assisted housing scheme under the Model villages development Programme, 8729 houses were constructed spending Rs. 35.02 crores during Ninth Plan. During the first four years of Tenth Five year plan, 4945 houses were constructed spending Rs. 1977.87 lakhs. All active fishermen are covered under group accident insurance scheme. About 2.266 lakh fishermen were insured under the scheme. Assistance is provided to accidental death/missing of fishermen while fishing, permanent and total disability and partial disability.

4.253 The Kerala Fishermen Welfare Fund Board is the implementing agency for welfare and relief schemes to the fishermen in the state. The Board has 220592 registered contributing fisher folk and 50992 registered contributory allied workers. Besides there are 27979 old age pensioners and 3247 widow pensioners and 656 allied workers old age pensioners. Details are shown in Appendix. 4.54

4.254 The saving cum relief scheme is for providing assistance to fishermen during lean period by mobilizing their savings during the peak season. This is a 50% CSS and during 2005-06, 1.25 lakh beneficiaries were assisted and the total expenditure was Rs. 6.76 crores.

Eleventh Plan

Target for 11th Plan

- Marine Fish Production – 7.5 lakh tonnes
- Inland Fish Production - 1.5 lakh tonnes

Approach and Strategies during XIth Plan:

- It is proposed to optimize exploitation of the untapped oceanic and deep sea fishery resources during 11th plan.
- Sustainable exploitation would be given emphasis with conservation and management.
- Inland aquaculture would be promoted on a participatory mode.
- It is proposed to implement an integrated coastal area development programme with the support of local governments, GOI and financial institutions covering social infrastructure and livelihood security programme.
- Upgradation of quality assurance system
- Industrial fisheries would be promoted with due emphasis on upgradation of preprocessing facilities.
- Paddy-fish farming would be promoted in feasible areas.
- Social Safety nets would be introduced.
- Aquarian reforms would be implemented.
- It is proposed to strengthen the Matsyabhavans network in the State.
- Establishment of Aqua Technology Park comprising of Export Hub, Satellite farms, Homestead ponds, Private ponds to cater to the requirements of the Export oriented units.
- Comprehensive insurance coverage programmes need to be worked out giving coverage to life, house and fishing implements of fishermen.
- Model fishing villages would be set up in selected coastal villages.
- Reorganisation of fisheries Governance in the state would be done as a priority item
- Multiple agencies are working in the fisheries sector. Integration of agencies is proposed in the plan period.

Thrust areas for the Eleventh Five Year

- Development of inland fisheries and aquaculture through an integrated approach
- Conservation and management of fisheries resources
- Modernisation of fishing harbours and landing centres including infrastructure development
- Development of coastal infrastructure for the development of the sub sector
- Promotion of social and livelihood security including model village development schemes
- Promotion of income security of fisher folk through micro enterprises.
- Exploitation of deep sea, off shore and oceanic fishery resources.
- Production of quality fish seeds along with measures for seed certification, disease diagnosis and other measures for health management.
- Improvement in quality of products through Upgradation of facilities in processing and marketing

Co- operation

4.255 The Co-operative sector has been playing a distinct and significant role in the process of socio-economic development of the state with special focus on rural population and livelihood. Through sustained efforts, co-operatives have made impressive progress in various segments of Indian economy particularly in agriculture credit disbursement, fertilizer distribution, procurement and distribution of agricultural commodities, promotion of consumer activities, dairy, fisheries, handloom, coir etc. Attempts were made to develop the movement as a self reliant one by augmenting the resources through mobilization of savings in urban and rural areas.

4.256 The co-operative movement in Kerala has a solid foundation and impressive track record in terms of financial stability and sound infrastructure to generate adequate funds. The spread and growth of co-operatives in different sectors were nurtured under development plans with government initiative and government finance. Kerala has a wide network of co-operatives engaged in various promotional activities such as distribution of credit, marketing, agro processing, consumer activities, public health, education, insurance and infrastructure development. There are 12802 co-operatives under the control of RCS, of which 10770 are functional in the various promotional activities in the sector. The total number of co-operatives are classified into nine categories as shown in Table - 4.34

Table 4.34
Co-operatives under the control of Registrar of Co-operative Societies

Sl. No.	Type of Societies	Total No.	Functional No.
1	Credit Co-operatives	3148	2920
2	Marketing Co-operatives	531	275
3	Consumer Co-operatives	754	274
4	Processing Co-operatives	37	19
5	Housing Co-operatives	269	281
6	SC/ST Co-operatives	801	566
7	Health Societies	175	96
8	Women Co-operatives	889	688
9	Other Co-operatives (miscellaneous)	6098	5146
	Total	12802	10770

Source: Registrar of Cooperative Societies

4.257 With large expansion of co-operatives in almost all the sectors, signs of structural and performance weaknesses and regional imbalances have become apparent. The reasons for such weaknesses could be attributed to the large percentage of dormant membership, heavy dependence on government assistance, political interference, lack of professional management, overdues etc. Co-operative institutions also suffer from low resource base, high dependence on refinancing agencies, imbalances, poor business diversification, low recoveries, huge accumulated loss, lack of professionalism and skilled staff, weak management information system (MIS), poor internal checks and control systems etc. Concrete steps are necessary to revitalise the cooperatives to make them vibrant, democratic organisations with professional management with economic viability. In an increasingly competitive environment, cooperatives will cease to exist unless these can be ensured.

4.258 Several committees have examined the problems facing the co-operative credit structure in the recent past such as Capoor committee (1999), Vyas Committee (2001) and Vikhe Patil Committee (2001). However, the government of India, which is committed for reviving and

revitalizing the rural co-operative credit institutions, felt it necessary to commission a fresh review. Concerned with the need to strengthen rural co-operative credit intuitions, GOI constituted a Task Force in August 2004 under the Chairmanship of Prof. A Vaidyanathan to recommend an implementable action plan to revive them. The Task Force sought to bring down the interference of State Governments in credit co-operatives and recommended suitable amendments to State Co-operative Societies Acts and the B.R. Act 1949, to make them truly democratic, autonomous, vibrant, member driven, professionally managed and financially strong institutions. Based on this recommendations GOI approved a revised financial package for the revival of Short Term Credit Co-operatives (STCCS), at an estimated outlay of Rs. 13596 crore. Some of these suggestions, however, area not suitable to the structure of Cooperative institutions in the State.

4.259 The salient features of the Revival Package approved by Government of India is given in Box:4.11

Box. 4.11
Revival Package – Salient Features

Financial assistance of Rs. 13,596 crore shall be shared by GOI, State Govts and unit of the co-operative Credit structure. GOI will provide its share as grant to cover

- (i) accumulated losses relating to all business of PACS and agricultural credit business of DCCBs/SCBs and a portion of their losses arising out of non-agricultural credit business.
- (ii) 50% of non credit business of PACS and
- (iii) cost towards human resources development, special audit, computerization including software and implementation cost.

State Govts are required to bear

- (i) accumulated losses relating to a portion of non agricultural credit business of DCCB/SCB and 50% of non-credit business of PACS.
- (ii) Unpaid invoked guarantee and
- (iii) Other receivables from State Govts.

Source: Report of NABARD 2006

Support by NCDC

4.260 NCDC has emerged as a developmental and promotional financing institution for the Co-operative sector in the country. The strategy of the Corporation is to strengthen and develop co-operative institutions to enable them to serve their members and to maintain a sustained growth in their income.

4.261 As on March 2006 the cumulative disbursement of the Corporation was Rs. 941.29 crores. During 2005-06 the flow of fund from NCDC to Kerala was all time high, as the amount released was Rs. 190.99 crore against Rs. 109.24 crore during 2004-05 showing a growth of 74.84%. An amount of Rs. 50.00 crore was provided as Working Capital assistance, directly to the Kerala State Co-operative Agricultural and Rural Development Bank to meet short term micro finance requirement in Agriculture and allied sectors. Out of the total disbursement of Rs.

190.99 crores, Rs. 52.23 crore (27.35%) was for marketing and input distribution, Agro-processing Rs. 2.83 crore (1.48%) weaker sections Rs. 5.61 crores (2.94%) and ICDP Rs. 2.07 crore (1.08%). NCDC has effected debt swapping of loan outstanding with State Government having interest rate of more than 11.50% amounting to Rs.103.384 crores with fresh loans at prevailing rate of interest of 8.5% during 2005-06. Activity wise and year wise sanction and release of assistance from NCDC are furnished in Appendix 4.55 and 4.56. The major thrust areas financed by NCDC include agro-processing, agro-marketing, integrated co-operative development projects focusing on micro-level co-operatives, consumer co-operatives, coir, Handloom and promotion of information technology in the co-operative sector.

4.262 The Year-Wise amount released by NCDC from 1962-63 to 2005-06 with rate of interest is given in Table-4.35

Table 4.35
Year wise release of NCDC loans with interest rates.

Year	Release of fund	Interest rate(%)
1962-63 to 92-93	122.08	
1993-94 to 98-99	195.47	
1999-00	56.07	13.75
2000-01	69.04	13.75
2001-02	51.64	13-12.25
2002-03	50.18	11.50-10.5
2003-04	96-58	7-9
2004-05	109.24	8-8.5
2005-06	190.99	8.5
Total	941.29	

Primary Agricultural Credit Societies (PACS)

4.263 The Co-operative Credit structure in Kerala comprise of 1587 Primary Agricultural Credit Societies (PACS) and 46 affiliated Primary Co-operative Agricultural and Rural Development Banks supported by the Central and Apex Co-operative banks. As on March 2006, there were 1587 PACS out of which 1565 are functional, 22 are dormant and 26 are under liquidation. The 1565 PACS are functioning with a total membership of 2.72 crores, paid up share capital of Rs.785.98 crores and reserves of Rs. 1024 crores. Out of 1565 functional PACS, 828 societies were on loss and 721 were on profit.

4.264 The performance of the co-operatives during the year under report was encouraging. The total loan disbursed in 2005-06 was Rs. 14429 crores against that of Rs. 10628 crores in 2004-05. Compared to the last year, there was increase in the disbursement of all types of loans. Out of the total loan disbursement, major share (71%) was for short term, followed by medium term (24%) and long term (5%). In the case of loan disbursement, for agri purposes, though in real terms, the disbursement was higher than that in the previous year, a slight increase was noted in the percentage of short term (Agriculture) credit disbursement. Credit for non-agri purposes in all types has also increased substantially. Though the co-operatives are disbursing loan for non agricultural purposes for making good margin for their business, a good number of societies are working on loss.

4.265 The credit operations of the Primary Agricultural Credit Societies indicate that, during the year, the average membership has increased from 15970 to 17149, average deposits from Rs.771.88 lakhs to Rs. 968.66 lakhs, working capital to Rs.1418 lakhs, the average deposit per member to Rs. 5648 from Rs.4834. The increase in the average deposit per member and per society shows the strength of the movement during the year under report. The percentage of overdue to demand and overdue to outstanding stood at 38.45 per cent and 25.52 per cent respectively during the year 2005-06. Selected indicators and credit operations of PACS are given in Appendix - 4.57 and Appendix - 4.58.

One Time Settlement Scheme (OTS)

4.266 The revised One Time Settlement Scheme was implemented with effect from 27.2.2006 onwards, in the co-operative sector with a view to reducing the overdue position of the co-operative institutions and extend some relief to the loanees who could not repay the loan in time due to drought/flood and consequent loss of agricultural products. The scheme was implemented in all the credit co-operative institutions. The benefit so far covered 1.49 lakh people. The societies were able to collect Rs. 358.27 crore of overdue amount under the scheme and Rs. 52.44 crores were waived by the banks to the beneficiaries. The scheme has helped in reducing the overdues as well as NPAs of credit societies.

Self Help Groups linkages and PACS

4.267 In Kerala under Co-operative sector the SHG scheme was implemented through PACs. The district wise cumulative progress is given in Table – 4.36

Table – 4.36
Progress of Self Help Group Scheme as on 31.3.06

(Rs. in Lakhs)

District	No. of Societies	Groups	Members	Share Capital Mobilised	Deposits	Loans issued to groups	Repaid	Out Standing	Over dues
	3	4	5	6	7	8	9	10	11
Trivandrum	41	2225	44500	5.75	24.00	623.00	170.00	406.00	83.49
Kollam	64	1874	32944	100.96	83.39	917.28	457.97	459.21	29.91
Kottayam	41	1453	20968	94.32	53.61	405.79	NA	NA	NA
Pathanam Thitta	34	467	NA	2.26	26.38	393.85	289.51	104.34	214
Idukki	69	9937	NA	436.45	652.78	1146.38	624.82	521.56	2.92
Alappuzha	94	4925	72597	75.16	769.61	3754.47	1825.67	1928.79	900
Ernakulam	47	485	NA	4.09	65.70	2483.43	183.33	169.04	29.83
Thrissur	120	15587	NA	4.00	207.17	947.20	352.90	529.29	7.38
Palakkad	56	407	NA	10.75	24.01	128.72	62.68	1253.82	40.49
Malappuram	51	468	81138	1.41	21.97	209.84	17.18	96.35	35
Kozhikode	36	284	NA	9.74	48.15	120.69	57.33	153.44	4.61
Wayanad	26	5047	81132	95.25	384.39	727.98	381.45	444.57	2.07
Kannur	47	204	4952	6.12	32.61	875.65	502.20	353.80	76.94
Kasaragod	27	92	479	0.44	4.21	77.79	47.75	29.60	29.93
Total	753	43455	264423	846.70	2397.98	12812.07	4972.79	5514.91	339.74

4.268 Under this scheme 753 PACs were involved in the implementation of SHGs upto March 2006. Thrissur district formed maximum number of 15587 Groups by members through 120PACs followed by Alappuzha district. The performance of Kasaragod district was very poor. In the State 43455 Groups with a membership of more than 264423 were formed. Alappuzha district issued large amount of loan to the SHGs (3754.47 lakhs) through 94 PACs. The deposit is also the maximum of Rs.769.61 lakhs. In the case of over due 63% of the total loan is outstanding in Pathanamthitta District.

Deposit Mobilisation Campaign by Co-operative Societies

4.269 Deposit Mobilisation campaigns by co-operative credit institutions continued during the year under report also. The deposit mobilisation by the Co-operatives have shown an increasing trend over the years. During 2005-06, against the target of Rs.400.00 crore the co-operatives could mobilize Rs. 1539.55 crore. Year wise target and achievement is given in Table - 4.37

Table 4.37
Targets and Achievements of Deposit Mobilisation Programme of
Co-operatives in Kerala

(Rs. in Crores)

Year	Target	Achievement	Achievement (%)
2002	200.00	853.20	426.66
2003	400.00	909.61	226.00
2004	450.00	920.00	204.44
2005	400.00	1305.00	326.00
2006	400.00	1539.55	384.88

Performance of the Sector during the first four years of the Tenth Plan

4.270 The strategy adopted for the development of Co-operative sector during Xth Plan was expansion and diversification of commercial ventures in selected areas such as agro processing, marketing, storage and promotion of SHGs.

4.271 The outlay envisaged for the sector during 10th Plan was Rs. 100 crores. Out of this, Rs. 59 crores have been budgeted for the first four years. Against this, the expenditure incurred was Rs. 43.69 crores, ie. 74.05% of the budgeted outlay.

4.272 A sub sector wise financial achievement during the first four years of the Tenth Plan is given in Table 4.38

Table 4.38
Sub sector wise financial achievement during the first four years.

(Rs. Lakhs)

Sl.No	Sub sector	Financial outlay (2002-05)	Achievement (2002-05)	% of Expenditure to outlay.
1	Credit co-operatives	743	781.79	105.20
2	Processing co-operatives	920	855.40	92.98
3	Consumer co-operatives	450	370.08	82.24
4	Housing co-operatives	340	300.00	88.23
5	Research, Education & Training	200	191.23	95.62
6	Administrative Reforms	790.02	526.42	66.63
7	Modernisation	98	54.92	56.04
8.	Other co-operatives	208.98	215.64	103.18
9	Other schemes-			
	i).Expansion& diversification.	1200	183.30	15.27
	ii).Rehabilitation of weak but potential co-operatives	950	890.55	93.74
	Total	5900	4369.33	74.05

4.273 An analysis of the expenditure shows that the major share (20%) was incurred for the implementation of the two schemes viz., 'expansion & diversification of co-operatives and rehabilitation of weak but potential co-operatives. About 15% of the expenditure was for assisting processing co-operatives, 12.59% for credit co-operatives, 6% for administrative expenses, 8% for providing assistance to consumer co-operatives and 8% for assistance to Housing co-operatives. Besides the plan outlay, NCDC has released Rs.637.98 crores during the first four years of the Tenth Plan for the development of marketing, credit, consumer and industrial co-operatives in the State.

4.274 During 2005-06, three processing societies were assisted by way of share capital contribution. Financial assistance was availed from NCDC for promoting processing co-operatives. A Green Co-operative (Kannur), Chellanam Panchayat Service Co-operative Society (Ernakulam), Kumbalangi SC/ST Society (Ernakulam) were assisted by way of share capital contribution.

4.275 Grant-in-aid was provided to State Co-operatives for running co-operative Training Centre and implementing schemes relating to co-operative education, training, research and for conducting examinations. During 2005-06, an amount of Rs. 49.98 lakhs has been expended for imparting co-operative education. As part of e-governance, for computerizing and modernizing the co-operative department an amount of Rs. 2.00 lakhs has been spent. Share capital to the tune of Rs. 100 lakhs has been contributed to primary housing co-operatives for development of business.

4.276 A three tier system consisting of primary consumer co-operatives, district wholesale stores, and consumer federation is engaged in providing consumer services to the public. Besides the consumer stores, 1000 Neethi stores and 148 Neethi medical stores are functioning in the State. Of these, 20 medical stores are run by the Federation and the remaining stores are run by PACS. Neethi gas and foreign liquor retail outlets are also implemented by the Federation. But these schemes are at loss to the Federation. An amount of Rs. 68.82 lakhs has been expended for promoting consumer activities during 2004-05. During the year under report financial assistance in the form of subsidy and share was provided to nine societies, and loan to two societies.

Miscellaneous types of Co-operatives

4.277 Miscellaneous types of co-operatives has been organised in the state mainly for the purpose of generating employment opportunities to the unemployed youth and the weaker sections. Co-operative Hospital and Dispensaries, Education Co-operatives, Vanitha Co-operative Societies, Motor Transport, Autorikshaw and Taxi Drivers Co-operative Societies, Tailors Co-operative Societies, Washermen Co-operative Societies, Chethuthozhilali Co-operative Societies etc. are some of the co-operative societies which are organised for the purpose of employment generation. There are also Social Welfare Co-operative Societies, Cultural Co-operative Societies, Farming Co-operative Societies, Leprosy Patient Co-operative Societies, Matsya Thozhilali Co-operative Societies, Photographers Co-operative Societies, Tailors Co-operative Societies etc. Government extend financial assistance to these societies by way of share capital contribution, grant, loan and subsidy. During 2004-05 assistance was given to 60 societies.

Agricultural Marketing Co-operatives

4.278 An efficient Agricultural Marketing System is indispensable for the overall development of the economy. In Kerala, Agricultural economy is dominated by cash crops like Rubber, Coconut, Arecanut, Spices etc which are largely concentrated in small farm sector and marketing support for the products is highly essential. In a liberalized economy the challenges in the marketing front can be met by giving institutional support from marketing co-operatives at the State and national level.

4.279 The two tier system of co-operatives consisting of Marketing Federation and 313 functional primary marketing societies were engaged in the marketing of agricultural produce in the State. Assistance by way of subsidy, share capital and loan are provided for the development of marketing and processing activities. Apex institutions like CAMPCO, General Marketing Federation, Rubber Marketing Federation etc. are functioning for the marketing of the commodities like cocoa, arecanut, spices, rubber etc.

Kerala State Rubber Co-operative Limited (RUBCO)

4.280 A Hawaii chappal-manufacturing unit with a production capacity of 36 lakh pairs per year has been established with the financial assistance of NCDC. Besides conventional Hawaii Chappals, the unit is producing Ultra light weight Hawaii Chappals under the brand name of 'Rubco Rainbow' with the technical assistance of Hitech Setters, Malaysia. During the year 2005-06, the unit produced 11,14,003 pairs of Hawaii Chappal and marketed 11,26,485 pairs valued at Rs. 385.82 lakhs. A decreasing trend was shown in the production, sales and turn over during the last three years. Compared to last year 2004-05, there is a decline of 13% in production, 9% in the sales and 15% in value is recorded in the business of the Hawaii Chappal manufacturing unit during 2005-06.

4.281 During the year under report, cycle tyre and tube factory unit produced 439.87 MT cycle tyres and tubes and marketed 514.15 MT valued at Rs. 223.86 lakhs. The target for cycle tyres and tubes for the year 2005-06 is Rs. 13.75 crores. At present Rubco have 26 distributors for their product both in Kerala and neighbouring states. The average monthly sale of the product comes to Rs. 141.92 lakhs. During 2005-06 the unit produced 2060.80 MT mattress and marketed 2050.88 MT valued Rs. 23.71 crores. Details are given in Appendix – 4.59

4.282 Rubco Huat Woods (P) limited is a subsidiary unit of RUBCO engaged in the production of various kinds of furniture in technical collaboration with M/s. Long Huat Group Berhad of Malaysia, situated at Tellichery, Kannur District. During the year 2005-06 the Company produced rubber wood panels and furniture for Rs. 1646.43 lakhs and sales turn over during the year was Rs. 1584.44 lakhs. Apart from trading of Natural Rubber the Rubco have separate Latex Collection Division named 'RUF AAS' (RUBCO farmers Alliance Strategy) and collecting latex from farmers and disposing off domestically as value added products.

Kerala State Rubber Marketing Federation Limited (Rubber mark)

4.283 The federation was established in 1971, with 37 co-operative rubber marketing societies and Rubber Board and Government of Kerala as members. The activities of the Federation include marketing and export of natural rubber, distribution of fertilizers and agriculture inputs, and processing of natural rubber product etc. Out of the total quantity exported from India during 2005-06 was 73888 tonnes out of which 16161 tonnes (22% of total export) was from

this Institution. The total sales of rubber during the year under report was 40572 tonnes. Total sales turnover during 2005-06 was Rs.27266 lakhs. Details are given in Appendix – 4.59

The Kerala State Federation of SC/ST Development Co-operative Ltd

4.284 The Kerala State Federation of Scheduled Caste and Scheduled Tribe Development Co-operatives Limited is the Apex body of SC/ST Co-operatives of total 594 members, consisting of the state, 495 SC societies and 98 ST societies. It aimed at the over all development of socio-economic condition of SC/ST communities through its member societies with multifarious items of programmes and schemes for providing employment to the members and marketing their products eliminating middlemen, especially in the field of minor forest produce. It has four branches at Thiruvananthapuram, Thrissur, Kalpatta (Wayanad) and Kothamangalam. The main activities of the Federation is the collection of minor forest produce and its distribution. The Federation is running a petrol bunk of Indian Oil Corporation, honey-processing unit, 'Cheevka' processing units and an Ayurvedic medicine manufacturing unit at Ancherry in Thrissur District. Financial Assurances was provided to ST societies for the construction of MFP godowns and purchase of furniture by availing funds from Central Government. During 2005-06, the Federation provided assistance to the tune of Rs.94 lakhs to 3051 Co-operatives for the construction of minor forest produce godowns and purchase of furniture. The total sales turn over of the Federation during 2004-05 and 2005-06 were Rs. 12.69 crores and Rs. 12.44 crores respectively.

Kerala State Co-operative Housing Federation.

4.285 The Kerala State Co-operative Housing Federation is the apex institution of 207 Primary Housing Co-operatives in the state. It raises funds for lending programmes as share capital from Government and member societies, and borrowing from National Institutions like LIC, HUDCO, HDFC, NHC etc. The federation advances housing loans to the member societies. During 2005-06 the federation mobilised Rs.100.00 lakhs from Government, Rs.2500 lakh from Federal Bank, and Rs.4000.00 lakhs from Canara Bank. During 2005-06, an assistance to the tune of Rs. 7258.69 lakhs has been disbursed for the construction of 6511 houses.

Integrated Co-operative Development Project (ICDP)

4.286 Integrated Co-operative Development Project (ICDP) focuses on over all development of selected districts through co-operative efforts in the area of agriculture and allied sectors with the financial assistance of NCDC. ICDP covers all the districts in the state by providing financial assistance to PACS, PAMS, SC/ST co-operatives for infrastructural facilities such as godown, retail outlet, cash counters, iron safe, strong room, furniture etc.

4.287 The Project has successfully implemented in Wayanad, Palakkad, Kottayam, Idukki, Thrissur and Pathanamthitta, Malappuram, Kasaragod and Kannur districts. Scheme is under implementation in Kollam, Alappuzha, Ernakulam, Kozhikode and Thiruvananthapuram districts. NCDC has sanctioned second phase of the project in Wayanad district and the project will be commenced soon.

4.288 ICDPs in 14 districts availed Rs.160 crores as Block cost to strengthen the Primary marketing societies by way of creation of basic infrastructure/banking facilities, value addition projects, professional management of co-operatives, extensive computerization of co-operatives

etc with NCDC share of commitment of Rs.148.43 crores. During 05-06, NCDC has released Rs. 2.07 crores for implementation of ICDP in seven districts.

Co-operative Academy of Professional Education – CAPE

4.289 The prime objective of setting up of the Academy was to establish new institutions for professional education under Co-operative sector in the State. At present it manages a Co-operative Medical College and 5 Engineering Colleges.

Kerala State Co-operative Employees Welfare Board

4.290 Government of Kerala has constituted a welfare fund for the employees of co-operative societies including commission agents/salesman in the co-operative institutions. The main objective of the Welfare Board is to raise and administer funds for the welfare of the members of co-operative employees and to alleviate the distress of employees and their dependents. As on March 2006, an amount of Rs.27.00 crores was available under the welfare fund after the total disbursement of Rs. 8.55 crores for various welfare activities.

Kerala State Co-operative Employees Pension Board

4.291 Government of Kerala have constituted the Kerala State Co-operative Employees Pension Board for payment of pension to employees of Primary Co-operatives in the State coming under the administrative control of registrar of Co-operative Societies, including the members of societies of other departments such as Hantex, Coir, Fisheries, Khadi and Village industries. The total number of employees enrolled in the scheme at the end of March 2006 was 22351. Upto March 2006, the institution has collected an amount of Rs. 25.46 crore, out of which Rs. 16.69 crore was distributed as relief assistance to deserving members.

Kissan Credit Cards (KCC)

4.292 Kissan Credit Card scheme was introduced in 1998-99 as an innovative scheme for issuing short-term loan for seasonal agricultural operations and purchasing agricultural input for their production. The scheme has helped in augmenting ground level credit flow for agriculture. At the National level during 2005-06 Co-operative Banks, Commercial Banks and RRBS issued 25.98 lakh, 41.65 lakh and 12.49 lakh cards respectively. Of the 590.93 lakh cards issued by the banking system since the inception of the scheme, Co-operative banks accounted for the largest share (51%) followed by Commercial Banks (37%) and RRBs (12%). A major portion of crop loan disbursed by Co-operative Banks and RRBs is through KCC indicating its emergence as widely accepted mechanism for delivery of crop loans to farmers. A personal insurance package to KCC holders was combined in the union budget and to cover them against accidental death or permanent disability upto a maximum amount of Rs.50, 000/- and Rs.25,000/- respectively. The premium burden for this is shared by the card issuing institutions and KCC holders in the ratio of 2:1.

4.293 The Govt. of Kerala has enacted a legislation titled ‘The Kissan Kerala Pass Book Act 2005’. The Act provides for the issuance of Kissan Pass book to agriculturists which contain record of rights and liabilities of the agricultural holdings of farmers and enable them to access credit facilities based on noting in the pass book. The operational modalities of the Act are yet to be finalised.

4.294 Agency wise ,Year wise Kissan Credit Cards issued at the national level are given in the following Table – 4.39

Table 4.39
Agency – Wise, Yearwise Kissan Credit Cards Issued.

<i>(Lakhs Nos.)</i>				
Year	Co-operative Banks	RRBs	Commercial Banks	Total
2001-02	54.36	8.34	30.71	93.41
2002-03	45.79	9.64	27.00	82.43
2003-04	48.78	12.74	30.94	92.46
2004-05	35.56	17.29	43.95	96.80
2005-06	25.98	12.49	41.65	80.12
Total	304.12	68.78	218.03	590.93

4.295 The KCC scheme has since been established as a major source of crop loan, but the investment credit requirement of farmers remained out side the ambit of the scheme. Keeping this in view, NABARD enlarged the scope of the scheme to cover term loans for agriculture and allied activities and a reasonable component for consumption needs.

4.296 The PACS in the State have involved in promoting SHG scheme for increasing agricultural credit and production and there by employment. 43455 SHGs have been formed so far under 753 PACs. During 2005-06 an amount of Rs. 28.50 lakhs sanctioned as subsidy and Rs. 7 lakhs as share capital assistance to PACS.

4.297 District wise cumulative issue of KCC through PACs in Kerala as on 31.3.2006 is given below in Table – 4.40

Table 4.40
Progress on Kissan Credit Card issued through PACS as on 31-03-2006

<i>(Rs. In lakhs)</i>				
Sl. No	District	No. of Societies	No of cards issued	Loan Outstanding
1.	Thiruvananthapuram	92	133317	20154.00
2.	Kollam	124	22647	3393.20
3.	Alappuzha	91	23416	6018.78
4.	Pathanamthitta	58	9230	1462.45
5.	Kottayam	105	44934	9700.00
6.	Idukki	19	62091	7301.17
7.	Ernakulam	48	9770	2655.30
8.	Thrissur	110	75542	6587.00
9.	Palakkad	84	28525	3338.82
10.	Malappuram	98	19505	2420.83
11.	Kozhikode	101	38815	14381.34
12.	Wayanad	26	39934	4642.36
13.	Kannur	99	124546	13438.00
14.	Kasaragod	63	65525	7086.12
	Total	1118	693793	102579.37

Source: RCS

4.298 In the State as on March 2006, 19.92 lakh Kissan Credit Cards have been issued by all Banks since inception of the scheme. KCC has been introduced through PACS in the state 6.94 lakhs cards have been issued so far with an aggregate credit of Rs. 5712 crore. The contribution of commercial banks accounted for 51.48 per cent, Co-operative Banks 48.27 per cent and the Private sector Banks 2.23 per cent of the KCC issued in the State. To enlarge the coverage of KCC scheme it is proposed to take care of full crop production, consumption needs and working capital under allied activities so far. 6.94 lakh of KCC has been issued by PACS with an outstanding balance of Rs. 1025.79 crores through 1118 societies.

4.299 The Credit cards could be utilized effectively to channelize investment credit to the farm sector to promote capital formation. The flexi credit approach adopted by NABARD has to be popularized to address this issue.

Swarozgar Credit Card Scheme

4.300 The Swarozgar Credit Card Scheme was introduced by NABARD in 2003 to take care of investment and working capital requirements of small borrowers and by the end of March 2006, 97 RRBs, 48 Commercial Banks and 118 Co-operative Banks had introduced the scheme and issued 4.68 lakh cards involving credit limit of Rs.1943.19 crore.

4.301 NABARD introduced a pilot scheme during 2005-06 for supporting select RRBs and Cooperative Banks with one time grant assistance for promoting SCC scheme. The objective is to generate greater awareness about the scheme and cover maximum number of borrowers, educate the card holders to use the credit facility optimally and effectively as also to improve credit flow at the ground level.

4.302 Under this scheme KSCARDB provide timely credit for micro enterprise, small artisans, handloom weavers, service sectors etc., as block capital or working capital in the form of non-farm sector loans. The borrowers will be provided with a laminated credit card and pass book with a validity of 5 years and the maximum limit for individual is Rs.50,000/-. Repayment period for block capital is 5 years and for working capital 1 year from the date of drawal.

Co-operative Development Fund

4.303 NABARD had constituted Co-operative Development Fund (CDF) during 1992-93 with the objective of supporting co-operative credit institutions in under taking various developmental activities such as Human Resource Development (HRD), building up Management Information System (MIS), infrastructure creation, setting up of Business Development Department with technical personnel etc. The fund is augmented every year through contributions from NABARD surplus. Disbursement during the year 05-06 was Rs.5.63 crore including drawals pertaining to the sanctions in previous years. Cumulative sanctions and disbursement under CDF aggregates to Rs.70.80 crore and Rs.61.44 crore respectively, as on 31 March 2006. The support provided through the fund resulted in the increase in deposit mobilization in the primary societies, improved MIS and availability of trained manpower in co-operative banks contributing to over all efficiency of the structure.

4.304 In order to enable the Co-operative Banks to achieve the objective of doubling agriculture credit during 2004-07, a scheme for providing grants from CDF to Co-operative Banks has been introduced. The assistance range from Rs.1.00 lakh to Rs.5.00 lakh per institution depending

upon their size and nature of business. An amount of Rs.5.00 crore has been earmarked out of CDF for this purpose.

Agricultural Finance

4.305 The target set at the national level was Rs.1,41,000 crore for credit flow to agriculture by all agencies during 2005-06. Public Sector Banks (PSBs) were also advised to finance 50 lakh new farmers and issue 50 lakh fresh Kissan Credit Cards (KCCs) during the year. The progress in the implementation of the credit package as on 31 March 2006 indicates that the total disbursement by all agencies was at Rs.1,57,480 crore, exceeding the target by 12 per cent and registering a 26 percent growth over the previous year (Table – 4.41). Commercial banks, Co-operative banks and RRBs disbursed Rs.1,06,152 crore, Rs.37,252 crore and Rs.14,076 crore achieving 122.96 and 93 per cent of the targets, respectively. GLC flow from commercial banks, Co-operative banks and RRBs increased by 30, 19 and 13 per cent, respectively, over the previous year.

Table 4.41
Agency-wise Ground Level Credit Flow in India

Agency	2001-02	2002-03	2003-04	2004-05	2005-06
Co-operative Banks	23,524	23,636	26,875	31231	37252
Regional Rural Banks	4,854	6,070	7,581	12404	14076
Commercial Banks	33,587	39,774	52,441	81481	106152
Others	80	80	84	193	NA
Total	62,045	69,560	86,981	125309	157480

Source: Annual Report – NABARD

4.306 During 2005-06, 78.73 lakh new farmers were brought under the institutional fold, 80.12 lakh fresh KCCs were issued, 1,095 agri-clinics were financed, debt relief of Rs.2,884.91 crore and Rs.899.35 crore was provided to farmers in distress and in arrears, respectively, and an amount of Rs.609.55 crore to small/marginal farmers under one time settlement scheme was provided by banks. Banks also extended loans to the extent of Rs.31.41 crore to 8,282 farmers, to redeem their past debts availed from informal sources.

Priority Sector lending in Kerala

4.307 Consequent upon the announcement made in the RBI's Annual Policy statement for the year 2005-06, an Internal Working Group was set up in the RBI to examine the need for continuance of priority sector lending prescription, review the existing policy on priority sector lending, including the segments constituting the priority sector, targets and sub targets etc, and to recommend changes required in this regard. The draft technical paper was submitted in September 2005. The draft guidelines on lending to priority sector was published in November 2006. It was again placed in January 2007 for comments. The salient features of the guidelines are shown in Box No: 4.12

4.308 According to the draft guidelines, banks including foreign banks would be required to lend a substantially higher amount to the priority sector following the proposal to include off-balance sheet expenses in the base for calculating bank's priority sector lending obligations.

4.309 The major change suggested was in narrowing down the categories under Priority sector and to suggest linking of Adjusted Net Bank Credit (ANBC) instead of the present Net Bank Credit. Adjusted Net Bank credit include NBC plus investments made by banks in non-SLR bonds or credit equivalent out of off-Balance Sheet exposures which ever is higher as on March 31 of the previous year. Outstanding FCNR will no longer be deducted for computation of NBC for Priority Sector lending.

4.310 Under RIDF major change suggested was non-exclusion of Bank deposits placed with NABARD/SIDBI for calculating priority sector lending. The change was suggested in order to motivate banks for direct lending. This is a welcome addition and more credit flow in the agriculture sector could be expected in coming years.

Box . 4.12
Salient Features of the Draft guidelines on Priority Sector lending

- Only those sectors which impact large segments of population and the weaker section and which are employment intensive alone need to be included under priority sector. Accordingly the broad categories of Priority sector for all scheduled commercial banks will be as follows

Agriculture (Direct and indirect Finance)

- Direct finance to agriculture shall include short, medium and long term loans given to agriculture and allied activities directly to individual farmers, SHGs, or Joint Liability Groups of individual farmers without limit and to others such as Corporate, Partnership firms and institutions upto Rs. 20 lakhs for taking up agriculture and allied activities. Indirect finance to agriculture include loan in excess of Rs. 20 lakhs per borrower. Loans to food and agro based processing units upto Rs. 10 crores and loan to NBFCS for lending to individual farmers, finance to hire purchase schemes for agricultural marketing etc.
- Small business, other small business/Service enterprises.
- Micro credit, educational loan to individuals upto Rs. 10 lakh for studies in India and Rs. 20 lakh for studies abroad. Housing loans upto Rs. 15 lakh .
- The targets and sub targets under priority sector to be linked to Adjusted Net Bank Credit.
- Banks deposits placed with NABARD/SIDBI on account of non-achievement of priority sector lending targets would not be eligible for classification as indirect finance to agriculture/SSI
- Total priority sector advances to be 40 per cent of ANBC or credit equivalent amount of off-balance sheet exposure which is higher for domestic commercial banks and 32 per cent for foreign banks.
- Total agricultural advance to be at 18% of ANBC and of this, indirect lending in excess of 4.5% of ANBC will not be recorded for computing performance under 18% target.
- Advances to weaker sectors 10% of ANBC.

Source: RBI, 2007

4.311 Priority sector advances as a percentage of net advances which was showing a declining trend during the recent years showed a slight increase in 2003-04 and 2004-05. The priority sector advances which was 45.9 per cent in 2002 has declined to 43.9 per cent in 2003 and increased to 49.4 per cent in 2004 and reached to 51 per cent in 2004- 05 against a mandatory

norm of 40 per cent. The total priority sector advance disbursed during 2005-06 was Rs. 23303 crore against Rs. 18387 crore during 2004-05. The total bank advance outstanding was Rs.53638 crore out of which the priority sector advance outstanding was Rs.42341crore.

4.312 Agency-wise disbursement of the annual credit flow is given in Table -4.42. In the disbursal of total advances, commercial banks stood at the first place disbursing Rs. 14159 crore (61%), followed by Co-operative Banks (30%) and RRBs (8%). In the lending for agriculture also commercial banks dominated by disbursing Rs.4988 crore (54%) followed by Co-operative Banks with Rs.2873 crore (31%) and RRBs. Rs. 1290 (14%) crore.

Table 4.42
Agency-wise Annual Credit flow to Agriculture and total priority sector in Kerala
(Rs. in crores)

Sl. No	Agency	Priority Sector				Agriculture			
		2002-03	2003-04	2004-05	2005-06	2002-03	2003-04	2004-05	2005-06
1	Commercial Banks	6703	8847	11871	14159	1914	2579	3884	4988
2	RRBs	628	1108	1473	1797	408	755	1066	1290
3	Co-operatives including KSPCARD B	3138	3539	4975	7097	1192	1215	1904	2873
4	Kerala Financial Corporation	94	102	68	250	0	0	0.36	1.13
5	Grand total	10563	13596	18387	23303	3514	4549	6854	9152
6	Percentage increase to previous year	28%	29%	35%	26.74%	22.82%	29.44%	51%	35%

Source: State Level Banker's Committee

4.313 Under Annual Credit Plan 2005-06, the total advance to the priority sector was to the tune of Rs. 23303 crore, of which the share of agriculture (primary) was Rs.9152 crore (39%) secondary Rs. 2735 crore (12%) and tertiary Rs. 11416 crore (49%) (Table- 4.43). There is a healthy increase of 33.53% in the agricultural credit disbursements over that achieved during the last financial year. District wise analysis of flow of credit to priority sector reveals that out of total disbursement, Thiruvananthapuram advanced Rs. 2648 crores (11.3%) followed by Kollam Rs. 2554 crores (11%) Thrissur Rs. 2307 crores (9.9%) and Ernakulam Rs. 221 crores (9.5%). In the case of disbursement of agricultural credit Kozhikode district stands first with an achievement of 11% of the target, followed by Palakkad 10% and Thiruvananthapuram with 9%. Kannur, Kasaragod, Kollam districts have not achieved their targets.

Table 4.43
Flow of Credit to Priority Sector and Agriculture as a
Proportion of Credit and Deposits (in percentage)

Year	All Commercial Banks			
	Priority Sector Lending		Agriculture Credit	
	As a % of Total Credit	As a% of total Deposits	As a % of Total Credit	As a% of total Deposits
2001	46.37	19.83	14.32	6.13
2002	45.93	19.61	13.76	5.88
2003	43.94	19.98	12.99	5.90
2004	49.35	23.84	14.13	6.82
2005	51.11	25.6	14.7	9.6
2006	44.88	29.99	17.63	11.78

Source: State Level Banker's Committee

4.314 The proportion of total credit (Rs.51919 crore) to priority sector lending was 44.88% which was 51.11% in the previous year. Likewise the proportion of total deposit (Rs. 77655 crore) to priority sector has increased to 29.99% from 25.6% in previous year. In the case of Agriculture credit, the proportion of agriculture credit to total credit and total deposits has increased to 17.63% and 11.78% respectively.

4.315 The achievements of the Commercial banking sector of the State under total priority sector advances (53.83 %) and weaker section advances (11.75 %) are above the National goal of 40% and 10% respectively (Table – 4.44). But under agricultural credit the percentage credit to total credit is below the mandatory level.

Table 4.44
Targets and achievements under advances of commercial banks in Kerala
(Figures in percentage)

Sl. No.	Parameter	Targets	March 2004	March 2005	March 2006	June 2006
1.	Priority sector Advances to Total Credit	40	49.35	51.05	53.47	53.83
2.	Agriculture Advances to Total credit	18	14.13	14.68	15.91	16.04
3.	Weaker Section Advance To Total credit	10	10.83	11.79	12.40	11.75
4.	DRI Advance to Total Credit	1	0.04	0.01	0.01	0.2
5.	C.D. Ratio	60	48.31	59.01	66.84	67.32

Source: SLBC

4.316 All bank groups at the national level were able to achieve the overall target for priority sector lending by March 2006.

4.317 The Reserve Bank undertook several measures to improve credit delivery to the priority sector during 2005-06. More categories of advances were brought under priority sector lending like bank loans to storage units including cold storage units irrespective of location are to be treated as indirect agricultural finance under priority sector. Banks can advance loans to the

distressed urban poor for clearing their debt to non-institutional lenders agent appropriate collateral or group security units in the priority sector.

Credit flow to Agriculture

4.318 As part of doubling the flow of credit to agriculture sector within three years, the target set for disbursement of credit to agriculture in the State by the end of 2006-07 was at least Rs.9100 crore. which is twice the flow of credit (Rs.4549 cr) during 2003-04. During the fiscal year 2005-06, the credit disbursement to agriculture by the banks was Rs. 9152 crore against a target of Rs. 9100 crore registering an achievement of 100.57 per cent. However SLBC has fixed a higher target of Rs. 9595 crores during 2006-07. Quantum-wise details shows that the co-operatives have disbursed the highest of Rs. 2873 crore followed by National Banks including Commercial Banks (Rs. 4988 crore)

4.319 The major targets and achievements in the implementation on doubling the flow of credit to Agriculture in Kerala as on June 2006 are given in Box No. 4.13

Box No: 4.13		
Major Targets and achievements in the implementation of doubling the flow of credit to agriculture sector in Kerala		
Target	Achievement	
	2004-05	June 2006
1. 40% increase in flow of credit under special Agriculture Credit Plan		
2. Enhancing coverage of institutional credit through Kissan Credit Cards	During 04-05, 3,77,082 fresh credit cards were issued and an amount of Rs. 1290 crores was disbursed.	In the State 19.92 lakh KCC have been issued so far with an aggregate credit limit of Rs. 5712 crore.
3. The commercial banks should finance at least 100 new farmers by each rural/semi urban branch in a year.	Against a target of 2.81 lakh new farmers, 4.26 lakh farmers were financed disbursing an amount of Rs. 1732 crores through 2807 Rural/Semi urban branches for commercial banks achieving 152%. The co-operatives also financed 7498 new farmers disbursing Rs. 102.44 crores.	The target for financing new farmers during 2005-06 is 2.93 lakh. But upto June 06 1.58 lakh new farmers have been financed registering an achievement of about 54% of the target.
4. In every district on an average, all commercial banks put together will finance 10 agri-clinics during 04-05	9 Agri clinics and 14 Agri business centres were sanctioned against a target of 140 such centres	The Banks had financed 6 Agri business centres and 40 Agricultural clinics. The progress made by the Banks in financing Agri business and Agri clinics compared to the target of 140 was not satisfactory.
5. Loans to Tenant Farmers and oral Lessees.	The Banks have financed 3256 Tenant farmers and 2551 oral lessees.	The Banks have financed 9464 tenant farmers and 5691 oral lessees involving an amount of Rs. 31.80 crore and 16.46 crore respectively during the period.

6. Two to three investment projects for each rural/semi urban branches in the area of plantation and horticulture, fisheries, organic farming, agro-processing, livestock, micro irrigation, watershed management and village pond development.	The banks have disbursed Rs. 510.63 crores as investment credit to 73862 farmers.	The banks have disbursed Rs. 1386.93 crore as investment credit to 2.16 lakh farmers since the inception of the scheme.
7. Coverage of small and marginal farmers and weaker sections.	An amount of Rs. 1503 crores have been disbursed to 4.08 lakh new small and marginal farmers. Weaker section advances was 11.79% of the total advances against the mandatory norm of 10%.	An amount of Rs. 3692 crore was disbursed to 10.12 lakh small and marginal farmers and weaker sections since the implementation of the programme.

Source: Compiled from the Agenda notes circulated for SLBC meeting

4.320 The package introduced by GOI to double the flow of credit to agricultural credit over a period of three years was effective from 2004-05. The major findings of a study conducted in four states to assess the implementation of the package is given in Box No. 4.14.

Box. 4.14

Major findings of a Study on implementation of Credit Package

To assess field level implementation of the Farm Credit Package announced by GOI in June 2004, NABARD conducted a study in Warangal (AP), Dewas (MP) Angul (Orissa) and Sikar (Rajasthan) districts covering 18 PSBs, 9 branches of RRBs/DCCBs/PACs each and 4 ARDBs. During the study, 387 borrowers who had availed loans during 2004-05 were also contacted. The study revealed that

- Sustaining growth in credit flow to Agricultural sector was due to credit widening and deepening.
- Share of crop loan in the total credit flow for agricultural and allied activities was 81%.
- Upward revision in scales of finance and unit costs, increase in loan limits under KCC and introduction of loan products like comprehensive credit cards by PSBs facilitated enhanced credit flow.
- Against the annual report of 100 new farmers per branch, each branch of PSBs and RRBs on an average financed 323 and 310 farmers, respectively.
- 49 and 40% of the farmers financed by PSBs and RRBs respectively were new entrants to the banking systems.
- 30% of the farmers who were provided debt relief under the package were extended fresh finance and
- Coverage of small/marginal farmers was to the extent of 72, 64, 59 and 35% of the total number of farmers financed by RRBs, DCCB/PACs, PSBs and ARDBs respectively.

Source: NABARD Annual report 2005-06

4.321 During 2005-06, disbursements to agriculture by Public sector banks under Special agricultural credit plans aggregated Rs. 94,278 crore in the country against the target of Rs. 85,024 crore. The SACP mechanism has been made applicable to private sector banks from the year 2005-06. There has been increase in both the outreach and flow of credit to agriculture sector over the years. However some problems continued to affect the flow of credit to agriculture. This is due to decline in credit Deposit ratio (CD) from 49 per cent in 1995 to 43.7 per cent in 2004 and variation in proportion of medium/long term loans in direct finance to agriculture and allied sectors and prevalence of wide disparities in the flow of credit across regions.

4.322 In enhancing the coverage of institutional credit through Kissan Credit Card in Kerala, 19.92 lakh KCCs have been issued so far by the banking sector out of which Commercial Banks accounted for 10.26 lakhs and co-operative banks 9.66 lakh KCCs. The aggregate credit limit sanctioned under KCC is Rs. 5712 crore.

Micro Credit in Kerala

4.323 Generally performance under micro credit is linked with Self Help Group under SHG Bank linkage programme, From 2002-03 to 2005-06 the total SHGs formed is 38039. The cumulative number of Groups linked with Banks was 86988. The credit disbursed to SHGs through Banks is shown in the Table – 4.45

Table 4.45
Performance of Micro Credit through Banks

Year	SHGs formed (Nos.)	Linked with credit (Nos.)	Bank loan (Rs. Crore)	Refinance (Rs.Crore)
2002-03	6935	6253	30.49	11.27
2003-04	16955	12716	58.42	9.97
2004-05	9670	27081	126.65	20.92
2005-06	4479	26179	232.60	33.79
Total	38039	72229	448.16	75.95

Annual Report, NABARD, 2006

Credit flow to Agriculture in Kerala

4.324 The credit flow to agriculture sector during the last six years is given in Table 4.46. The share of investment credit to agricultural credit disbursement declined from 20 per cent during 2000-01 to 17 per cent during 2002-03 and slightly increased to 18.13% in 2005-06. Out of the total credit flow, 81.87 per cent was for production credit and 18.13 per cent for investment credit. The stagnant level of investment credit is a matter of concern.

Table 4.46
Flow of Credit to Agriculture Sector

(Rs. Crores)

Year	Production Credit	Investment Credit	Total
2000-01	2312 (80%)	596 (20%)	2908
2001-02	2311 (81%)	550 (19%)	2861
2002-03	2901(83%)	613 (17%)	3514
2003-04	3620 (80%)	929 (20%)	4549
2004-05	5672 (83%)	1182 (17%)	6854
2005-06	7493 (81.87)	1659 (18.13)	9152

Source: SLBC

4.325 In the agency-wise analysis, it is seen that the major portion of short term and medium term credit requirements in the state are met by the Co-operative banking sector consisting of the State Co operative Banks, District Co-operative banks and Primary Agriculture Credit Societies which covers 1/5th of the activities. The share of co-operatives in the disbursement was 88.24 per cent in production credit and 11.76 per cent in investment credit (Table-4.47). The share of RRBs in production credit and investment credit was 96.98 per cent and 3.02 per cent respectively.

Table 4.47
Agency wise flow of credit during 2005-06

(Rs. Crores)

Agency	Production Credit	Investment Credit	Total Credit	% Production Credit to total Credit	% Investment Credit to Total Credit	% share of Investment Credit in the State
Commercial banks	3707	1282	4989	74.30	25.70	54.51
Co-operative Banks	2535	338	2873	88.24	11.76	31.39
RRBs	1254	39	1290	96.98	3.02	14.10
Total	7493.00	1659.00	9152.00	81.87	18.13	100

Source: SLBC

Access to rural credit

4.326 Access to available credit is an important factor in the economic well being of a rural household. According to (RFA 2003) 41 per cent of rural households have a deposit account and only 21 per cent of rural households have access to credit from a formal source.

4.327 As part of enhancing the coverage of institutional credit through KCCs, 17.26 lakh Kissan credit Cards have been issued in the State since inception of the scheme. In issuing the Kissan Credit Cards the commercial banks accounted for 51.48 per cent State co-operative Bank accounted, a share of 48.27 per cent and Private banks 2.36 per cent. As per the agricultural Census 1995-96, the number of operational holdings in the State is estimated to be around 62.98 lakhs though all the land holdings in the state may not be eligible for KCC, there is a gap in the coverage, which needs to be bridged. Steps are necessary to enlarge the coverage under Kissan Credit Card scheme to eligible farmers. There should be a mechanism for identification of the farmers either by issue of suitable identify cards or issue of Pattas which would help to identify eligible farmers under KCC.

4.328 The tendency of the shift of the disbursement from farm to non-farm sector is increasingly reported due to less risks, lower transaction costs and better returns in the non-farm sector.

Performance of State Co-operative banks and District Co-operative banks

4.329 State Co-operative banks and District Co-operative banks channelise their own fund and fund of NABARD for disbursement. The total deposit of State Co-operative Bank in 2004-05, was Rs. 2864.04 crore against Rs.2407.34 crore in 2003-04, registering an increase of 0.19%. The total loans and advances stood at Rs. 1998.18 crore, the NPAs amounting 8.3 per cent of the total portfolio of the Bank, as against 8.3 per cent in the previous year. The interest spread has become nil during 2004-05. The operational expenses has increased to Rs. 27.51 crore in 2005-06 from Rs.12.67 crore in the previous year.

4.330 The operations of the SCB are shown in Appendix -17.12. During the year under report, the deposit position of the Bank had increased marginally compared to the last year. The Bank's deposit has increased to Rs.2864.04 crore from Rs.2467.34 crore recording an increase of 0.19 per cent in 2005-06. The borrowings from other institutions had again increased to Rs.424.58 crore from Rs.375.68 crore. The working capital position has increased to 21 per cent in 2005-06. The deployment of loan by the bank was not affected by the decline of deposits of the Bank. The total disbursement during 2005-06 was Rs. 1998.18 crore against that of Rs. 1392.30 crore in 2004-05 showing an increase of 45%. The credit disbursement was mainly for agriculture, marketing, cottage & small scale industries, consumer business, consumption purposes, housing etc. The net profit of the bank shows a fluctuating trend during the last few years. In 2005-06, the profit amount should not be recorded.

4.331 The Bank has been implementing SHGs Scheme through Kannur, Palakkad and Ernakulam District Co-operative Banks. The thrust of the programme is organising SHGs of agriculturists and agricultural workers under PACS and financing from their own fund by making use of group dynamism. The financing is done from the own funds of the Bank.

4.332 The working results of SCB shows a steep rise in borrowings, from Rs. 375.68 crore in 2004-05 to Rs. 424.58 crore. The purpose wise cumulative loan disbursed by the State Co-operative Bank is furnished in Appendix – 17.13. During 2005-06, out of total loans and advances of Rs. 1846.93 crore, Rs. 574.14 crore i.e. 31.1 per cent was for agriculture. The share of flow of credit to agriculture has doubled within the period.

4.333 During 2004-05 the total deposit of District Co-operative Banks had gone upto to Rs.8277.17 crore against that of Rs.6890.46 crore in the previous year the increase being 20%. The amount disbursed as loans and advances was Rs.6365.41 crore, which was 77 per cent of the total deposits. During 2005-06 Idukki, Malappuram, Kozhikod, Kannur and Kasaragod districts earned progressive net profit, where as the progressive net profit to Thiruvananthapuram, Kollam, Alappuzha, Pathanamthitta, Palakkad and Wayanad were very low. The cumulative loss of Kottayam and Thrissur were recorded as 25.21 crore and 5.88 crore respectively. The operational indicators of DCBS show that total Deposits and working capital is much higher in Ernakulam District, followed by Thiruvananthapuram, where as in the case of loans and advances and NPA, it is higher in Thiruvananthapuram. The indicators are given in Appendix -17.14

4.334 In view of persisting weaknesses in the co-operative credit structure, preparation of institution specific Development Actions plans by co-operative banks and entering into MOUs continued during the year with certain refinements. PACs were advised to prepare action plan for attaining viable and enter into MOUs with respective DCCBs. NABARD provide financial support through Co-operative Development fund with the objective of supporting developmental initiatives of co-operative credit institutions. During the year an amount of Rs. 5.63 crore was sanctioned and Rs. 6.07 crore was disbursed as on March 2006.

Long term credit:

4.335 A net work consisting of the Kerala State Co-operative Agricultural and Rural Development Bank at the Apex and 46 Primary Co-operative Agricultural and Rural Development Banks at Taluk Level is responsible for long term credit disbursement for rural development in the state. Various activities covered by KSCARDB's lending in scheme loan include Minor Irrigation, Plantation and Horticulture Agricultural machinery, Land Development, poultry, fisheries etc., where as under ordinary loan include construction of Wells/Tanks,

construction of Godowns/cattle, Barbed wire or stone fencing, Construction of drainage channels, loans for redemption of prior debts etc. The Bank raises funds through floatation of debentures issued on government guarantee; NHB, LIC, SBI and SBT etc., are the financial institutions which invest in the debentures floated by the KSCARDB. The total long term loan disbursed during 2005-06 by KSCARDB was Rs.430.7 crore against that of Rs.332.86 crore showing an increase of 29 per cent. In the purpose-wise disbursal, the major share of total disbursement is availed by Rural Housing (47%) followed by Agriculture (37%), non farm sector (16%). The share of disbursement of non-farm sector has declined considerably during 2005-06. The declining nature of Non-farm lending shows the urgency of disbursement in the agricultural sector. The details of loan disbursement is given in Appendix -17.15 and 17.16

4.336 The Non farm sector lending scheme intends to provide financial assistance to meet the credit needs of individual artisans, craftsmen, handicraftsmen and small entrepreneurs who undertake manufacturing and processing activities as approved by the Development commissions of SSI, Government of India and maximum loan eligible under is Rs.10.00 lakhs to be repaid within 10 years. Small Road and Water Transport operators scheme for public goods carriage and passenger vehicles/boats, Integrated Loan Scheme for new industrial ventures/modernization of existing SSI, Educational Loan for higher education in India and abroad as recognized by Central and State Government are also introduced under the long term loan disbursement scheme.

4.337 The measures taken by RBI to improve credit delivery to agriculture like enhanced limit of advances granted to dealers in drip irrigation/sprinkler irrigation system/agricultural machinery under Priority sector for agriculture, inclusion of loans to the Agri-clinics and Agribusiness centre under direct finance to agriculture under priority sector, widening the scope of Kissan Credit Cards are positive steps which need to be exploited in the State.

Package of Relief Measures for Debt stressed farmers of Kerala

4.338 Three districts namely Wayanad, Palakkad and Kasaragod have been included in the 'Relief Package for Debt Stressed Farmers announced by Union Government. The components of the above relief package, relating to agriculture credit are

- a. The entire interest on overdue loans as on July 1st 2006 will be waived in the above 3 affected districts and all farmers will have no past interest burden as on that date, so that they will immediately be eligible for fresh loans from the banking system.
- b. The overdue loans of the farmers as on July 1st, 2006 will be rescheduled over a period of 3-5 years with a one year moratorium.
- c. A credit flow of Rs. 1945.7 crores will be ensured in the above stressed districts of Kerala 2006-07.
- d. The burden of waiver of overdue interest is proposed to be shared equally by the State and Central Government.

4.339 As part of relief measures to the farmers, during 2005-06, 31413 loans comprising of 25024 of distressed farmers amounting to Rs.106.87 crores, 6389 farmers in arrears with Rs.29 crores were restructured, fresh loans of Rs.2.28 crores were disbursed to 392 farmers whose earlier debts were settled and 97 farmers were given loans to make them free from money

lenders. A total of 910 loans with liability of Rs.186.41 lakh were identified for write off in the state. Out of these only 26 loans with a liability of Rs.8.10 lakh have been written off by the banks as at August 2006. All other cases are pending for want of complete set of documents. The Monitoring Committees at district level through DLCC and at the State level through SLBC was constituted for monitoring and reviewing the relief measures of farmers. The total overdue interest identified in three districts by bank branches for waiver as on 29th December 2006 was amounted to Rs. 154.38 crores.

Refinance Support by NABARD

4.340 Investment credit facilitates capital formation in agriculture, which is necessary for raising the productivity of the existing resources and realising the long term growth potential. NABARD provides refinance for investment credit at concessional rates of interest, facilitates augmenting the flow of investment credit at the ground level through various policy initiatives/programmes.

4.341 At the national level, the refinance budget for deployment of investment credit was fixed at Rs.8,800 crore, comprising refinance portfolio of Rs.8500 crore and co-finance portfolio of Rs.300 crore. The total refinance disbursement during the year increased in the country aggregating to Rs.8622.37 crore in 2005-06 compared to Rs.8577.46 crore in 2004-05 registering a minute increment of 0.5%. Commercial Banks accounted for the highest share 46.7% in the total refinance disbursed and the share of Cooperative banks declined both in ST< disbursements. Considering the need for supplementing the resource of KSCARDB to enable them to provide adequate short term loans (production credit) at reasonable rates of interest to borrowers, availing term loans for agriculture and allied activities, a new line of short term refinance support was introduced by NABARD including Kerala State in December 2004 on a pilot basis.

4.342 The total refinance from NABARD was Rs.415 crore in 2005-06 as against Rs.448 crore in the previous year recording a slight decrease of 8 per cent. The agency wise analysis reveals that KSCARDB continued to avail the largest share (58%) followed by KSCB (21%), RRBs (16%) and commercial banks (5%). Agency-wise disbursement of refinance assistance by NABARD in Kerala is given in Appendix -17.17 and 17.18.

4.343 Refinancing of NABARD shows a decline compared to the previous year. The interest rate on refinance for investment credit providing to specific activities, regions and at the borrowers. It was revised during February 2006. In North Eastern region, interest rate is fixed as 6.5% irrespective of quantum of loan amount. Interest rate of 6.5 to 7% were charged for loan size upto Rs. 50,000/- and above Rs. 50,000/- respectively for farm and non-farm sectors.

4.344 The position of refinance by NABARD in the State and Country level is given in Table-4.48

Table 4.48
Refinance by NABARD 2005-06

Region	(Rs.crore)			
	KSCARDB	State Co-operative Bank	Commercial Bank	RRBs
Country	2082	1174	4028	1332
Kerala	240	89	19	69
%	11.53	7.58	0.47	5.18

Source: NABARD. Annual Report 2005-06.

4.345 The purpose-wise analysis of the refinance by NABARD reveals that as in the previous years, the major share of assistance was availed by the non-farm sector (68%), under farm sector, the refinance disbursement have shown a declining trend. , In the disbursement, the major share was for land development (7%), plantation and horticulture (4%). The amount of refinance for the sectors like fisheries, poultry , dairy, farm mechanisation which are very important in the rural economy of Kerala remained to be low compared to the previous year. There is an imperative need to work out strategies to motivate the client institutions to avail of more refinance under farm sector activities.

4.346 NABARD's non farm sector investments are mainly on processing, (fish processing) concrete works, mat making, furniture making, bricks manufacturing etc. Additional income and employment generation are expected from this lending.

4.347 NABARD has slightly increased the interest rate on refinance from 6.5 to 7 per cent depending on the loan size, activity and region. The revised rate on refinance for farm and non-farm sector is given in Table-4.49

Table 4.49
Interest Rates on Refinance for Farm and Non farm sector

(per cent)

Loan size	NER including Sikkim and A& N. Islands		Other Regions	
	Farm	Non-Farm sector	Non farm sector	Others
Up to Rs.50,000	6.5	6.50	6.5	6.5
Rs.50,000 to 2 lakhs.	6.50	7	7	7
Above 2 lakhs	6.50	7	7	7

Source: Annual Report NABARD

Rural Infrastructure Development Fund (RIDF)

4.348 The RIDF was set up in NABARD with contribution from the Commercial banks which were not able to fulfil the commitment of channelising at least 18 per cent of their total lending to agriculture. RIDF has been instrumental in strengthening the rural infrastructure in the State. The RID Fund started in 1995-96 with a corpus of Rs. 2000 crores has emerged as a popular and effective mechanism for financing rural infrastructure projects and its corpus from RIDF I to XI stands at Rs. 50000 crore. The corpus of RIDF XII increased to Rs.14,000 crore (including Rs.4000 crore exclusively for rural roads) during 2006-07. The corpus is Rs. 250 crore at state level during 2005-06. The quantum of loan is different for various sectors. From RIDF X onwards, it is 95 per cent for activities relating to agriculture including mini hydel, 85 per cent for social sectors and 80 per cent for rural connectivity. With the receipt of deposits of Rs. 6092.37 crore from Commercial banks during the year, the cumulative deposits under RIDF received upto 31st March 2006 stood at Rs. 28749.90 crore.. An amount of Rs. 1324.03 crore was received from State Governments by way of repayment of RIDF loans during 2005-06. Disbursements under RIDF tranche I, II & III were closed at the end of March 2003 and RIDF IV at the end of May 2005. For projects sanctioned under RIDF V to VIII, the implementation was extended to 31st March 2006 to enable the state government to complete the ongoing projects and avail reimbursement of expenditure incurred there against.

Assistance to Kerala

4.349 Kerala has been receiving assistance under RIDF for the last eleven years. The major projects for which refinance has been disbursed include watershed development projects, rural bridges, rural roads, reclamation of waterlogged area, inland navigation, tourism oriented roads and rural market yards. The scope of RIDF was widened in 1999-00 to include lending to Grama panchayats, Self help groups and Non-governmental organisations for implementing village level infrastructure projects, innovative projects such as information technology enabled services and new activities such as system improvement, mini hydel generation under power sector, construction of primary/secondary school buildings, primary health centres rain water harvesting structures etc. Among all, agriculture and allied sectors irrigation and power sector are given priority.

4.350 The cumulative sanction amount as on 31.1.07 was Rs. 1749.57 crore and the disbursement was Rs. 1011.84 crore (58 %) for the implementation of 2664 projects. Out of 2664 projects 1458 have been completed. The cumulative sanction and disbursement of projects as on 31.1.07 is given in Table-4.50. Purpose wise loan disbursement is given in Table-4.51. Upto 31.1.07, as part of rural infrastructure development, 827 roads by PWD, 243 watershed development projects and 32.7 bridges were completed in rural areas. Through the completion of two medium projects and completion of 632 minor irrigation projects 52647 ha of area has been reported to be brought under irrigation. The roads are expected to provide better transportation for marketing and distribution of agriculture/rural products and inputs. By completing 149 watersheds 33900ha. of land has been brought under soil and water conservation and through the completion of 438 road projects 1689 km road has been constructed and through the construction activities created 98488 man days of employment.

Table 4.50
Tranche wise Sanction & Disbursement under RIDF

(Rs. Crores)

RIDF	Kerala as on 31.1.07		India as on 3/06	
	Sanction	Disbursement	Sanction	Disbursement
I	95.93	86.26	1906.21	1760.87
II	86.91	73.13	2666.87	2397.95
III	89.29	73.88	2733.82	2453.5
IV	64.00	56.73	2903.32	2482.00
V	126.77	117.23	3477.16	3032.66
VI	175.12	156.72	4525.36	3850.83
VII	191.77	142.83	4657.64	3756.82
VIII	196.55	150.49	6009.36	4440.34
IX	93.50	25.76	5599.18	3387.48
X	234.90	73.89	6878.48	2967.81
XI	206.21	27.00	3033.30	807.08
XII	188.62	27.92		
Total	1749.57	1011.84	44390.71	31337.34

Table 4.51
Purpose wise loan sanctioned and disbursements under RIDF is given in table (I to XI)
(Rs. Crores)

Sl. No.	Purpose	No. of Projects	Sanctioned amount	Disbursed Amount
1.	Irrigation	954.00	268.40	196.98
2.	Soil and Water Conservation	249.00	105.71	62.63
3.	Drainage and Flood Protection	39.00	87.62	31.94
4.	Rural Roads PWD	819.00	546.97	312.31
5.	Rural Bridges	331.00	582.98	376.09
6.	Rural Market Yards	108.00	9.72	5.64
7.	Boat Jetties	4.00	.27	.02
8.	Inland Navigation	1	10	7.87
9.	Rural Drinking Water Supply	8.00	44.45	7.19
10.	Health	112	49.05	2.90
11.	Education	34	10.88	0.65
12.	Fish Harbour	2.00	19.58	3.44
13.	Animal Husbandry	2.00	12.82	4.87
14.	Public market	1.00	1.12	0.11
	Total	2664.00	1749.57	1011.84

CHAPTER 5

WATER RESOURCES

Water is a precious natural resource and its planning, development and management should be governed by national perspectives. Water has been a key issue on the domestic and international agenda for the last 30 years starting with the 1st International Conference on water in 1977. The development and management of Water resources of a region has to evolve together with that of land and biomass giving due weightage to the socio economic and environmental features. The United Nations General Assembly at its 58th session in December 2003 decided to proclaim 2005-2015 as the International Decade for Action “Water for Life” beginning with the World Water Day March 22, 2005. Coping with ‘Water Scarcity’ will be the guiding theme for World Water Day 2007 on 22 March. This years theme highlights the increasing significance of water scarcity world wide and the need for increased integration and co-operation to ensure sustainable, efficient and equitable management of scarce water resources, both at international and local levels.

5.2 Estimation of water demand and its implications on water quality and quantity is extremely important. Agriculture has the dominant demand and it will continue to predominate for a long time.

5.3 Integrated management of water resource assumes greater importance and should be based on the treatment of water as an integral part of the eco-system and as a natural resource whose quality and quantity determines the nature of its utilisation. Water use, in turn, has its impact on water quality and therefore utilisation of water has to be so managed as not to contribute to the deterioration of water quality. Sustainable management of water resources with due respect to ecological, economic and ethical sustainability requires a holistic and integrated approach involving engineering, socio-economic and environmental aspects. Traditional system of water management through ponds and small tanks should be integrated with canal irrigation.

5.4 There is good potential for water productivity gains in rainfed and irrigated areas. This will require a combination of agronomic, economic and social interventions including soil management and irrigation water management. In rainfed areas mitigation of dry spells with onfarm water harvesting or supplemented irrigation can potentially increase water productivity.

5.5 Despite the fact that productivity in irrigated areas has increased as compared to that of rainfed areas, the increase is still below the world standards and developing countries like China. This is coupled with sub-optimal water management including low irrigation efficiencies. There is scope for considerable improvement in productivity and consequent reduction in the demand for water. Applying the right quantity at the right time and using the right cultivation and irrigation practices can achieve conservation of water on the field. Against the backdrop of such a situation of imminent scarcity and inter-sectoral competition on physical and financial resources, the water resources management has to undergo a paradigm shift. Integrated management of resources and their use assumes special significance in the context of the predictions regarding ‘drought like situation’ in 2007.

5.6 Water sector has undergone basic changes in recent years due to perceived scarcity. While focus in the past was mainly on investment in physical structures, recent developments are associated to a great extent with improved management, conservation and institutional changes.

"Optimal sustainable development, maintenance of quality and efficient use of country's water resources to match the growing demands on the precious natural resource with active involvement of all stake holders in order to achieve accelerated, equitable economic development of the country" is the vision for integrated water resources development and management. The primary task now is to find ways to make the fixed capital more productive. It is necessary to invest more on better water management, complete incomplete irrigation projects, investment in non-command areas through the watershed development approach.

Water Resources in the Country

5.7 As per the latest assessment, out of the total precipitation, including snow fall of around 4000 billion cubic metre in the country the availability from surface water and replenishable ground water is put at 1869 billion cubic metre. Because of topographical and other constraints about 60% of this ie., 690 billion cubic metre from surface water and 432 billion cubic metre from ground water, can be put to beneficial use. The availability of water is highly uneven in both space and time. The per capita availability of water is declining progressively owing to increasing population. The national average per capita availability in India was 5200 m³ in 1951. It has fallen to 2200 m³ in 1991 and further to 1820 m³ in 2001 and with the projected population it may go down to 1340 and 1140 cubic meter by the year 2025 and 2050 respectively. The average availability is therefore likely to fall below the water stress level in the near future. The situation in certain parts of the country is likely to be critical and it is estimated that by the year 2050, 30% of the geographical area and 16% of population in the country will be under absolute water scarcity condition, with water availability of less than 500 cum. per year.

5.8 According to the international agencies, any basin having per capita availability less than 1700 cubic metre is categorised as water stressed and less than 1000 cubic metre as water scarce. According to these norms six river basins of the country have already fallen into water scarce category, and five more are likely to become water scarce in 2025 and by 2050. Only three or four basins would be water sufficient. Hence management of water becomes a challenge. As water could not be manufactured, conservation and management of water is the only way out for the growing demands. The per capita storage in the country is about 207 m³ which is far below the storage achieved in many of the countries such as Russia (6103 m³), Australia (4733 m³), Brazil (3145 m³), United States (1964 m³), Turkey (1739 m³), Spain (1410 m³), Mexico (1245 m³), China (1111 m³) and South Africa (753 m³). The country thus seems to be on the threshold of a grave water crisis in the none too distant future. In short, India is already on the verge of grave water crisis.

5.9 The fresh water availability of Kerala according to the available estimates is 77.35 billion cubic meters (BCM) including re-generated flow from ground water. Nearly 40 percent of available water resource is lost as run off. The utilisable resources as per the assessment is around 42 BCM whereas the requirement for water for various purposes like irrigation, domestic and saline water intrusion etc. is reckoned at 49.70 BCM. The total storage capacity created by the completed projects is 1478 million cubic meters and the projects under construction will contribute an additional storage of 332.75 million cubic metres. The ayacut (potential) envisaged in the completed projects is 2.398 lakh ha (net) and the area realised is 1.88 lakh ha. The envisaged ayacut of the ongoing projects in the tenth plan period is 1.17 lakh hectare (net). The potential realised in the completed projects is only 80 to 85 per cent of the potential envisaged on an average and the utilisation now is below 60 per cent.

Pricing of Water

5.10 The costs of providing irrigation water include a fixed cost of operation and maintenance and a variable cost, which depends on the quantity of water supplied. Irrigation water charges in most states are not even adequate to meet the O & M costs. In addition there is a capital cost of constructing a water project. The per hectare cost of creating irrigation potential in the major & medium irrigation sector has been increasing steadily from about Rs. 1500/- in the first plan to between Rs. 1,75,000 and Rs. 2,50,000. The establishment cost takes a large part of the meagre O & M allocation, leaving very little for works.

5.11 In Kerala, the water rates now collected are based on the estimates of 1974. The rates are very low compared to the costs of maintenance of major irrigation projects.

Rain water Harvesting

5.12 Kerala has two predominant rainy seasons caused by Southwest and Northeast Monsoon. On an average, the state receives 3000 mm of rains, of which 60 per cent is obtained during Southwest Monsoon, 25 per cent during the Northeast Monsoon and 15 per cent during summer months. The high variations in spatial and temporal rainfall add to the complexity of the problems associated with water management faced by the State. Though Kerala is the wettest state in the country and one of the wettest regions in the world, it may become a state of unquenchable thirst if adequate and urgent institutional and technological measures are not taken to address both the shortage and declining quality of water. Hence rainwater harvesting, one of the various technologies of water harvesting assumes importance in our state.

5.13 In order to promote rainwater harvesting, Government of India advised the State Governments to provide certain provision in building rules, pertaining to incorporation of rooftop rainwater harvesting arrangements in buildings. The Government of Kerala has amended the Kerala Municipality Building Rules, 1999 in 2004 to incorporate provision for rooftop rainwater harvesting. The government also launched a state-wide awareness building and rain-water harvesting in public buildings, institutions and households.

5.14 A special 'Rainwater Harvesting Cell' has been formed for statewide co-ordination of the campaign activities. The physical progress of the programme was encouraging. KRWSA has constructed 1864 rain water harvesting structures, 1797 small rain water harvesting structures 465 structures with 10,000 litres capacity and 55 big structures, organised 7 state level workshops, conducted 11 exhibitions, 47 seminars, organised 4 national seminars/workshops.

5.15 Budgetary support was provided to Ground water department and Soil and Water Conservation department for implementing schemes for rainwater harvesting. Several non-governmental agencies are also constructing rainwater harvesting structures in the state. During the year under report, GWD has constructed 74 structures for rain water harvesting

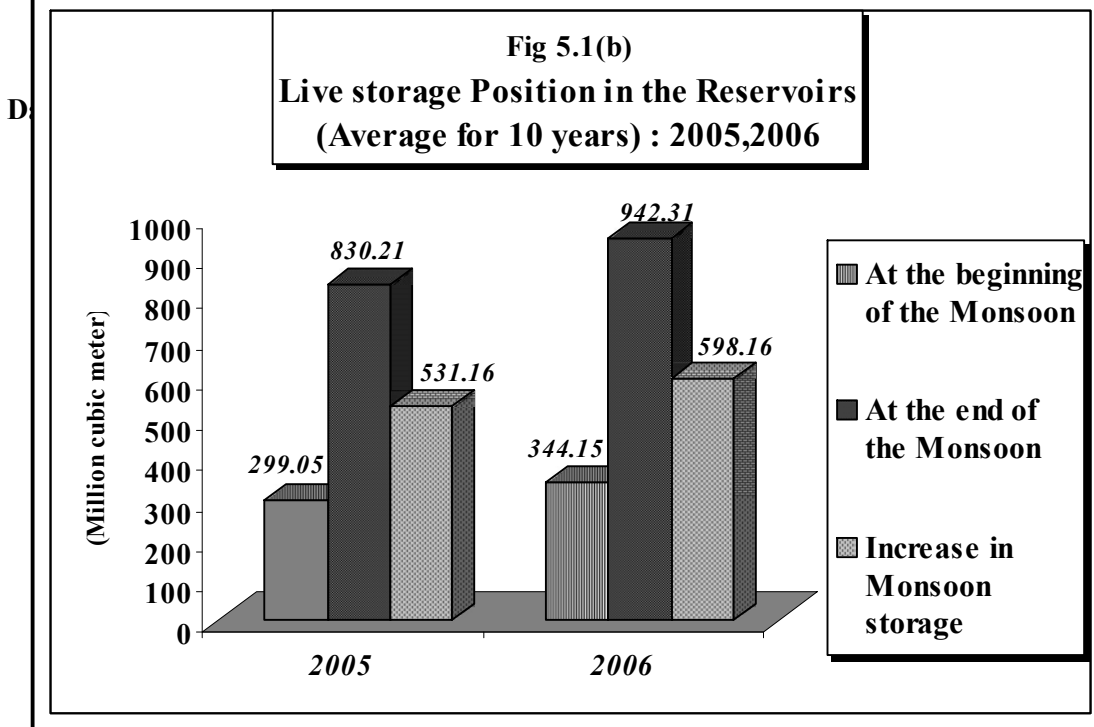
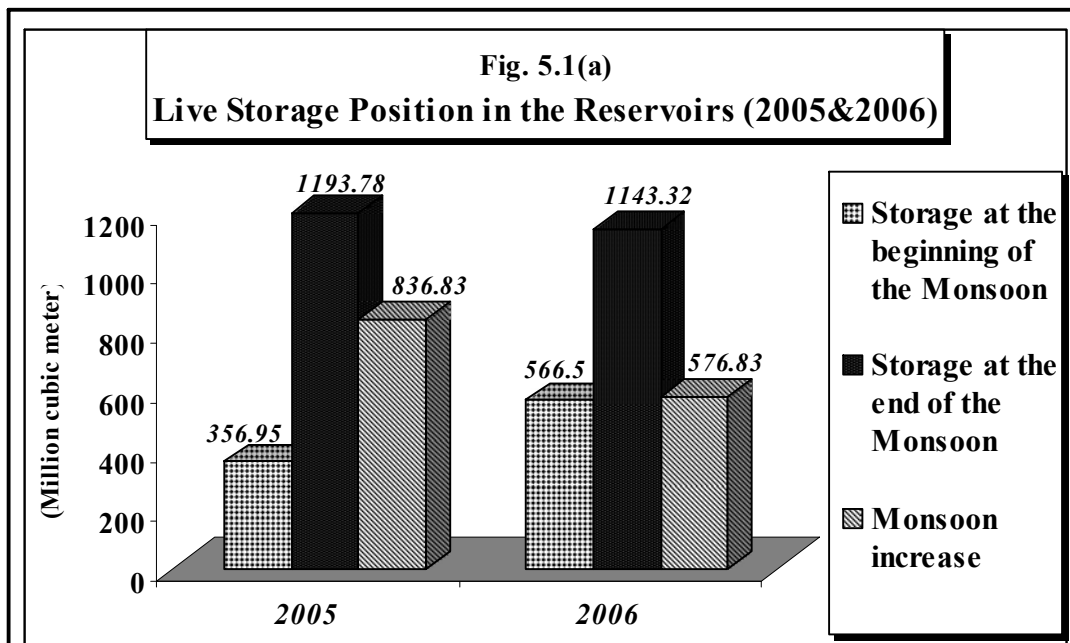
Live Storage Capacities of Irrigation Reservoirs

5.16 There are 18 dams intended for irrigation. Out of this, 13 have storages and 5 are barrages. The live storage position of the reservoirs during the beginning and end of the monsoon period during 2005 and 2006 is given in Table 5.1

Table 5.1
Live Storage Position in the Reservoirs

Sl. No	Item	2005 (Mm ³)	2006 (Mm ³)
1.	Storage at the beginning of the Monsoon	357	566
2.	Storage at the end of the Monsoon	1194	1143
3.	Monsoon increase	837	577
4.	Average for 10 years		
	(i) at the beginning of the monsoon	299	344
	(ii) at the end of the monsoon	830	948
	(iii) increase in monsoon storage	531	598

5.17 In the beginning of the Monsoon (during the current year) the total storage was 566 Mm³ and at the end of the monsoon the level of the storage was 1143 Mm³. This is against the level of storage of 357 Mm³ at the beginning of the Monsoon and 1194Mm³ at the end of the monsoon period during the previous year. The current year's storage of 1143 Mm³ is greater than the ten year average of 948 Mm³ on the date. The total designed storage (at FRL) of the reservoirs is 1487Mm³ whereas the total availability at the end of the Monsoon of 2006 is 1143 Mm³ against 1194 Mm³ at the end of the monsoon last year. The storage capacities of reservoirs are deteriorating due to silting in reservoirs. Sedimentation or silt removal need be done periodically for the proper upkeep of the reservoirs. The storage position at the beginning and at the end of the Monsoon during 2005 & 2006 are given in Fig.5.1 (a) and 5.1(b). The Live storage capacities of the Irrigation Reservoirs is given in Appendix 5.8.



5.18 Safety of the existing dams is one of the items emphasized in the National Water Policy. Almost all of the 18 dams in the State were completed in the 1950's and are constructed of masonry/earth or a combination of both. Excessive seepage/leakage, mal functioning of gates etc. caused distressed conditions as noticed by the State level Dam Safety Committee. Besides this, the storage capacity of the reservoir gets depleted due to excessive siltation. If these problems are not attended properly, it can cause downstream damages. Hence rehabilitation of the dams are

essential. As per the Dam Safety Act-2000 every State having a significant number of dams shall constitute a body called 'Dam Safety Organisation (DSO). Accordingly in Kerala also constituted a 'Dam Safety Organisation' for Monitoring the post and pre-monsoon inspections of dams and maintenance and surveillance and safety activities of the dams, Hydrological review to check the adequacy of design flood, preparation of emergency action plan, prioritization of dam for rehabilitation purposes, interaction with the Dam Safety Organisation of the Central Water Commission, conducting structural analysis, and checking the safety of dams once in 10 years.

5.19 During 2005-06, Dam Safety Organisation along with Dam Safety Committee inspected the dams in Neyyar, Malampuzha, Chimmomy, Vazhani, Kanjhirappuzha, Siruvani, Kallada and Peechi.

Investment in Irrigation

5.20 Irrigation development in Kerala is mainly centered on the development of surface water resources mainly on the development of major and medium irrigation projects. In each Plan, priority in allocation was given for the development of major and medium irrigation projects. Out of a cumulative expenditure of Rs. 3881.06 crores, Rs. 2740.13 crores (70%) is invested for major & medium irrigation. About 60 to 70 percent of the investment in each plan was made for this purpose. Rice is the major crop benefited through irrigation infrastructure. Even in the case of this crop, the incremental yield, which the irrigation support could bring, is not significant. With the fast changes taking place in the farm front of Kerala with notable reduction in the area under rice cultivation, even the distribution systems already developed for gravity irrigation to service rice cultivation now require realignment.

5.21 During the Tenth Plan period an outlay of Rs. 930 crore was set apart for the Irrigation sector which includes Rs. 600 crores for Major and Medium Irrigation, Rs. 205 crores for Minor Irrigation and Rs. 50 crores for Flood Control and Anti-sea Erosion works. This is against the outlay of Rs. 1028.00 crores and an expenditure of Rs. 1078.73 crores during the Ninth Plan period. In the allocation of resources during Tenth Plan a small reduction was noted in the overall outlay of the sector. The percentage share of Plan outlay during Tenth Plan was 3.88% against that of 6.38% in the Ninth Plan. The reduction was mainly due to the transfer of Minor irrigation schemes to the local bodies and reduction in number of major projects.

5.22 During the Plan period (2002-07) against the Plan outlay of Rs. 930 crores, an amount of Rs. 781.63 crores was budgeted and during the first four years expended Rs.702.8 crores. A major portion (73%) of the outlay on Water Resource Sector was budgeted for Major and Medium Irrigation Sector and the expenditure recorded for Major & Medium for the first four years was 76% of the total expenditure. Over and above the State plan outlay a substantial amount has been invested for Minor irrigation and Flood Management from the schemes of Local Self Governments. During the first 3 years of the Plan period, an amount of Rs.97.44 crores have been invested by the LSGs for minor irrigation and flood management. Also assistance to the tune of Rs. 50 crores from 11th FC Award and Rs. 175 crores from 12th FC Award has been sanctioned for the coastal zone management. Moreover an amount of Rs.20.27 crores have been invested for centrally sponsored schemes during the first four years of the Tenth Plan.

5.23 Public investment in irrigation has fallen significantly over successive Plan periods. This is largely due to resource constraints faced by governments both at the Centre and the States. At the All India level also, there is decline in the percentage of funding for irrigation. The percentage of funding which was 23 percent in the 5th Plan has declined to 20.85 per cent in the

sixth plan and further to 15.9 per cent in the Eighth and Ninth Plans. This has resulted in cost over run and time over run of the projects. In Kerala, the percentage outlay for the sector which was 6.38% in the Ninth Plan has decreased to 3.88% in the Tenth Plan. This has adversely affected the completion of the major projects thereby increasing the spill over costs of the ongoing projects. However, resources are not the only problem. Potential irrigation projects are located in area which are either more difficult or environmentally more sensitive which makes it difficult to implement irrigation projects. The Accelerated Irrigation Benefit Programme (AIBP) launched in 1996-97 for the expeditious completion of approved ongoing major and medium irrigation projects is a potentially important instrument for providing resources to state governments to complete ongoing irrigation schemes. Allocations under this programme have been massively increased. The state wise details of release from 1996-97 to 2005-06 is given in Appendix- 5.2.

5.24 Upto 2005-06, Government of India had sanctioned Rs.18157 crores to various states. The assistance sanctioned to Kerala was Rs.239.21 crores (1.32 %).

5.25 Central assistance is given under the programme in the form of loan and is provided to those projects which have investment clearance by Planning Commission. The pattern of assistance was on a 50:50 basis up to 1999-2000 and later it was revised in the ratio of 2:1 (Central and State). The pattern of assistance was modified from 01/04/2004. In the modified pattern the central share will be 70% loan and 30% grant for general category states and 10% loan and 90% grant for special category states for projects under Fast Track Programme. The pattern has again revised in 2006 and in the revised pattern the central government will provide 25% as grant and the loan component has to be raised by States.

5.26 In Kerala, Kallada and Muvattupuzha Projects were assisted under the AIBP and the assistance received so far is Rs. 32.51 crores and Rs.206.70 crores respectively. The assistance was availed based on individual selected components of public works identified under each project.

5.27 The target set for the realisation of additional irrigation potential during Tenth Plan was 1.40 lakh hectares (gross) comprising of 0.90 lakh hectares under major irrigation and 0.50 lakh hectares under minor irrigation. The cumulative target for the first 4 years was 1.25 lakh hectares, which includes 0.75 lakh hectares under major and 0.50 lakh hectares under minor irrigation. The actual achievement for the first four years aggregates to 0.83 lakh hectares. Overall performance of the Major and Medium Irrigation sector was not encouraging during the Tenth Plan period. Additional irrigation facility could be created only in Muvattupuzha Irrigation Project. The physical targets and achievements under Irrigation during the first four years of the Tenth Plan period is given in Table -5.2

Table 5.2
Physical Targets and Achievements under Irrigation during the Tenth Plan period (gross)
(000 ha)

Sl. No	Sector	Cumulative coverage up the end of 9 th Plan	Tenth Plan Target	2002-06 Target	Achievement 2002-06	Anticipated Achievement 2002-07
1	Major & Medium	225	90	75	50	60
2	Minor	207	50	50	33	48
Total		427	140	125	83	108.00

Review of Major Projects

5.28 As far as the Major irrigation sector is concerned, under the new initiative of 'Modernizing Government Programmes', as part of implementing the policy on long pending infrastructure projects, four projects viz., Karapuzha, Muvattupuzha, Banasurasagar and Idamalyar were identified as long pending projects and action has been initiated for the speedy completion. In Karapuzha project about 90% of the work is over. Completion of distributories are pending. Though Partial commissioning of the project was expected in March 06, only impounding of water in the reservoir could be done in 2006.

5.29 In Banasurasagar project, construction of main canal is completed and in the case of branch canals only the survey and investigation is progressing. In Muvattupuzha project works relating to dam and main canal have been completed. Major portion of the branches and distributories are pending completion.

5.30 In Idamalyar project, the progress of execution is very slow. Kallada project was completed. However, the reported irrigation potential realized was relatively low as compared to the potential created.

5.31 The work of the Thrithala Bridge-cum-regulator is completed. The progress of execution of Chamravattom project has started recently.

5.32 The overall performance of the major and medium irrigation sector during 2005-06 was not encouraging. The cumulative area brought under irrigation through major and medium irrigation projects is 2.48 lakh hectares. (gross). The details of the progress of implementation of ongoing projects as on 3/2006 are given in Table- 5.3.

Table 5.3
Project-wise Details of Ongoing Projects

(Rs. lakhs)

Sl. No.	Name of Project	Year of starting	Original estimate	Revised estimate	Year of revision	Cost escalation (%)	Expenditure upto March 2006	Target area to be irrigated (Ha)		Physical achievement as on 3/05 (Ha)	
								Net	Gross	Net	Gross
1	2	3	4	5	6	7	8	9	10	11	12
1	Muvattupuzha	1974	2086	67800	2004	3150	60717	17737	34737	13629	27529
2	Idamalyar	1981	1785	30711	2004	1626	20676	14394	29036	-	-
3	Kuriyarkutty-Karappara	1987	1036	19700	2004	1801	3803	17488	34976	-	-
4	Karapuzha	1979	760	25300	1999	3228	23181	5221	8721	-	-
5	Banasurasagar	1979	800	4906	1999	525	1541	2800	4740	-	-
6	Chamravattom	1985	1327	12000	1999	804	1323	3106	9659	-	-
7	Thrithala	1998	1900	2660	1999	40	3914	1303	3997	-	-

Source: Department of Water Resources

Irrigation Status

5.33 The source-wise and crop-wise area irrigated as on March 2006 is given in Table -5.4 and Table- 5.5

Table 5.4
Net Area Irrigated (Source wise)

(in Ha.)

Sl. No.	Source	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6
1	Government canals	101139	94859	101397	104669
2	Private canals	4272	5754	4729	4965
3	Tanks	66729	47856	43983	45062
4	Wells	117490	109360	108445	110000
5	Other sources	103541	123469	134802	135227
6	Total	393171	381298	393356	399923
7	Area irrigated more than once in a year		782892		918341
8	Gross irrigated area	447490	426765	455391	464765
9	Net area irrigated to net area Sown(%)	17.83	17.36	18	19
10	Gross irrigated area to gross cropped area (%)	14.77	14.35	15	15
11	Irrigated area under paddy to total irrigated area	41.16	40.00	40	38

Source: Directorate of Economics & Statistics

5.34 As per the assessment of the Directorate of Economics and Statistics the net irrigated area in the state as on 3/06, was 3.99 lakh ha. and the gross area irrigated is 4.65 lakh ha. Compared to the last year a slight increase of 1.50% is noted in the area irrigated in 2005-06. The net area irrigated during 2005-06 has increased to 3.99 lakh ha. from 3.93 lakh ha. in the previous year. Only 19 per cent of the net cropped area is irrigated. The major source of irrigation is wells, which contribute 28 per cent followed by government canals 26 per cent, tanks 11.27 per cent and private canals 1.24 per cent. In the source wise irrigation, the contribution of private wells predominates.

Table 5.5
Gross Area Irrigated (Crop-wise)

(in ha.)

Sl. No	Crops	2002-03	2003-04	2004-5	2005-06
1	2	5	6	7	8
1	Paddy	183703	169829	183601	174600
2	Tubers	1008	1020	2253	2958
3	Vegetables	9786	9657	14274	25075
4	Coconut	163550	159113	157768	158630
5	Arecanut	34205	32990	36858	35131
6	Nutmeg/clove	2948	2884	6285	6913
7	Other Spices and condiments	3212	3245	3403	3788
8	Banana	29209	28100	30265	33730
9	Betel leaves	990	947	891	850
10	Sugarcane	3426	3567	1630	2000
11	Others	15373	15413	18163	21070
Total		447490	426765	455398	464745

Source: Directorate of Economics & Statistics

5.35 Among the crops, paddy continued to be the major crop supported by irrigation. It accounted for about 38 per cent followed by coconut (34%) arecanut (8%) banana (7%) and vegetables (5%). Though rice is the major crop supported by irrigation, it could only support 59

per cent of the total area under the crop. Similarly irrigation could be provided to 17 per cent of the total area under coconut, 35 per cent of the area under arecanut and 54 per cent of the area under banana. Compared to last year the area irrigated under crops like arecanut, betel leaves, etc. have been decreased.

5.36 GOI had launched a new scheme Bharat Nirman Yojana to create additional irrigation facilities in the next four years. Under this programme, action is proposed for the areas of irrigation, roads, rural housing, rural water supply, rural electrification and rural communication connectivity.

5.37 Irrigation is one of the six components for development of rural infrastructure under Bharat Nirman. Under irrigation, it is proposed to create additional 10 million hectares of irrigation capacity by 2009 through major and medium irrigation projects (4.2 Mha), minor irrigation (2.8 Mha), enhancing utilisation of completed projects (2.0 Mha) and ground water development (1.Mha).

5.38 Kerala is also eligible for assistance under the programme. GOK had proposed schemes worth Rs. 1873 crores comprising of major irrigation Rs. 1453 crores for creating an additional area of 0.80 lakh ha, and minor irrigation costing Rs. 134 crores for bringing an additional area of 0.31 lakh hectare and modernisation and restoration costing Rs. 286.23 crores to create an additional area of 1.84 lakh hectares.

Local Water Resources

5.39 Local water resource development and management would be an important element of the strategy of meeting the water needs of the future particularly in water-scarce regions. There is a need to lay emphasis on local water planning, water harvesting at micro level and integrated water shed development. Lakes are the largest fresh water storages and from time immemorial serve human beings in non-raining season for all water needs. Due to excessive withdrawal of water and pollution very sustainability of lakes has become questionable. Safe water supply and environmental sanitation are vital for protecting the environment. Unless the facilities for the treatment of domestic sewage and industrial effluents are increased manifold the increasing pollution due to urbanisation will further deteriorate the quality of waterbodies. National Lake Conservation Programme needs to be strengthened to arrest further degradation of lakes. Enlarged programmes of lake and wetland conservation need to be initiated and streamlined.

5.40 In order to promote the development of local water resources, particularly tank irrigation, Government of India has introduced a scheme 'restoration of water bodies' (renovation of tanks/ponds) with 75% central assistance under Command Area Development Programme. Restoration of Tanks in Palakkad and Pathanamthitta were forwarded to GOI and sanction has been accorded for taking up the work for the renovation of Tanks in both the districts. An amount of Rs. 1.38 crores was sanctioned for Palakkad district and the implementation has started.

Minor Irrigation

5.41 Kerala has a wide network of rivers and rivulets and springs spread over the entire cropped area. Minor irrigation sector received considerable attention from Seventh Plan onwards and got a considerable boost during the Ninth Plan period consequent to the enhanced flow of funds from the grant in aid of the local bodies as well as on account of special support received from the external agencies like European Economic Community, Dutch Government and assistance under RIDF of NABARD. With the introduction of decentralised planning, all minor irrigation works (having cultivable command area up to 2000 ha.) were vested with the Panchayat Raj Institutions (PRIs). But by the enactment of the new Act 'Kerala Irrigation and Water

Management Act 2003' the definition of minor irrigation has been changed and works benefiting an area less than 15 ha. only come under the category of minor irrigation and are vested with PRIs. All other works having cultivable command area greater than 15 ha. have been taken over by the Water Resources Department as medium irrigation. The major works implemented under surface water are minor irrigation Class – I, II and Lift irrigation schemes. Construction of check dams, Vented cross bars, weirs, tanks etc are the various works executed under minor irrigation Class-I & II.

5.42 The minor irrigation sector has always been a thrust area for NABARD not only in terms of providing increased refinance but also by introducing various developmental initiatives and financial incentives. Assistance to the tune of Rs. 109.17 crores has been sanctioned for implementing 733 schemes under the rural infrastructural fund of NABARD through its various tranche from I–X. The amount disbursed so far (31.10.2005) aggregates to Rs. 77.61 crores. Out of the 733 schemes sanctioned 595 schemes were completed and 51890 ha. of area has been reported to be brought under irrigation.

5.43 An amount of Rs. 101.92 crores have been expended for implementing minor irrigation schemes during the X Plan period. Besides this, an amount of Rs. 97.44 crores have been budgeted for implementing minor irrigation schemes by local governments during the first three years of the Tenth Plan. The additional area brought by implementing irrigation schemes aggregates to 35000 hectares including ground water schemes.

5.44 During the year under review (2005-06) the Department has invested Rs.12.77 crores for implementing surface water minor irrigation schemes. The additional area reported to be brought under irrigation during 2005-06 was 3611ha.

Ground Water Development

5.45 The dynamic ground water resource (recharged annually by rainfall) of the country is 432 BCM. As much as 80per cent of India's population manage to get their own domestic water supply and three fourth of the irrigated area in the country is through private sources – mostly through ground water. India is the largest user of ground water (200 BCM) followed by the United States (100 BCM) and China (90 BCM). However ground water resources are either over exploited or are in the critical zone in certain pockets –Tamil Nadu, Haryana, Punjab, Gujarat and Rajasthan. According to the Central Ground Water Board, out of 7928 blocks/taluks/watersheds, 673 are over exploited where the level of development is more than the quantum that can be replenishable and 425 are dark/critical. The provision of free or subsidised power to agriculture sector in many states is one of the factors responsible for indiscriminate use of groundwater.

5.46 The National Water Policy, 2002 has advocated that groundwater recharge projects should be developed and implemented for improving both the quality and availability of ground water resources. The policy also advocated exploitation of ground water resources so as not to exceed recharge possibilities. The Ministry of Water Resources has already prepared and submitted, a part of the second green revolution project of the Ministry of Agriculture, a scheme for ground water development in 5.2 m. ha.(loan-cum-subsidy cost of Rs.15,310 crore) and another for artificial recharge of 3.9 BCM of water (at a cost of Rs.3,000 crore). Compared to 4,000 BCM rainfall/snowfall in the country and 1,869 BCM run off, recharge of this small quantity of groundwater will not adversely affect the existing hydrology of rivers and streams. The Ministry of Water Resources had also submitted a new state sector scheme costing Rs. 175 crore for artificial recharge in various parts of the country, which would serve as a demonstration exercise for various types of recharge structures.

5.47 The contribution of ground water in the total irrigation potential of the country has been estimated as 47 per cent. Although ground water is annually replenishable resource, its availability is non-uniform in space and time. Hence, precise estimation of ground water resource and irrigation potential is a pre-requisite for planning its development. The scientific assessment of the ground water resources of India has been made by the Central Ground Water Board in collaboration with concerned State Departments in 1997.

5.48 In Kerala, groundwater occurs under phreatic, semi-confined and confined conditions. The groundwater resources are largely concentrated in the sedimentary aquifers of the coastal regions. The groundwater resources are tapped mainly for drinking and irrigation purposes. The ground water potential of Kerala is very low as compared to that of many other States in the country. The state has a replenishable groundwater resource of 6841 million cubic meters. The net groundwater availability is 6229 million cubic meters. The gross groundwater draft is 2920 million cubic meters and the net groundwater available for future use is 3221 million cubic meters.

5.49 A district-wise analysis of ground water resources of Kerala shows that Palakkad has the higher potential for ground water recharge (12%) followed by Thrissur (11%), Ernakulam (9%), Kannur (8%), Kottayam (7%) and Alleppey (6.8%). Thiruvananthapuram has the lowest (4%) potential for ground water recharge. The stage of development of groundwater is the highest in Kasargod district (79%) and the lowest is in Wayanad (25%). The overall stage of development in the State is 47% which is greater than the national level. The ground water resources of Kerala as on 31.3.2004 is given in Appendix.5.4.

5.50 Monitoring and preservation of groundwater is an important aspect, which requires serious attention. Factors like over exploitation of groundwater, the deep infiltration of surface water from irrigated fields using chemical fertilizers and pesticides, infiltration of saline soils, effluents from industries affect the quality of ground water. The Central Ground Water Board monitors the ground water situation in Kerala state through a network of 615 observation wells and 241 piezometers. Water samples are collected in the pre monsoon period and maps showing ground water level, fluctuations are prepared to determine the long term water level trend, which helps delineating the areas of critical and overdeveloped nature. The State Ground Water Department is monitoring 440 piezometres and 303 observation dugwell stations across the state in different terrains under hydrology project. Monthly observed data for all the stations are analyzed and trend analysis reports were prepared. It is observed that 81 piezometres and 59 dug wells are showing falling trend when analyzed for pre monsoon and post monsoon seasons. This indicates that either overdraft or insufficient recharge is affecting these areas. These areas need special attention in the context of ground water recharge.

5.51 Artificial recharge and rainwater harvesting are the best-suited and cheapest methods to overcome this situation. A scheme for the construction of artificial recharge structures was introduced in the state with financial assistance from Government of India. Sub surface dams and dykes are the main structures built for the artificial recharge of ground water. The sub surface dams constructed at Odakkali in Ernakulam district, Alanallur, Bavaji nagar in Palakkad district, Sadanandapuram in Kollam district, Ayilam in Thiruvananthapuram district, Neezhur in Kottayam district showed a considerable rise of ground water levels in the upstream side of these sub surface dams and prevention of the decline of water table in the areas. Hydrogeologically suitable sites for sub-surface dams were located and works are in progress. For the rest of places detailed hydrogeological investigation are underway for the construction of suitable recharge structures. The sources of pollution have to be properly surveyed and identified. The Central Ground Water Board is carrying out artificial recharge studies in high water demand areas with critical stage of ground water development and the Board's Pollution Cell has undertaken studies to find out the ways and means to check the effect and spreading of pollution.

5.52 As per the latest groundwater estimation carried out by the Central Groundwater Board, Government of India and Groundwater Department, Government of Kerala based on Groundwater Estimation Committee norms, 15 blocks of the State fall under overexploited, critical and semi critical categories and 33 blocks show more than 70% development. Blocks were categorised based on the stage of development and long term trend of groundwater levels during pre and post Monsoon seasons.

5.53 The systematic approach to the management of ground water requires a sustainable legal framework. Government of India has also pointed out the necessity of legislation by the State Governments for the regulation of ground water exploitation. In this circumstance, in order to regulate the over exploitation of groundwater resources Government of Kerala have brought in a law The Kerala Ground Water (Control and Regulation) Act 2002 which envisages conservation of ground water and regulation and control of its use. The Act has to be implemented by an authority named 'State Ground Water Authority' consisting of 13 members and the Secretary (WRD) as the Chairman and Director, GWD as the Secretary.

5.54 The State Ground Water Department is the nodal agency assigned with the responsibility of ground water development and utilisation. The main activities of GWD is to locate potential ground water resources for construction of ground water structures like open wells, bore-wells, tube wells and artificial structures like subsurface dykes and check dams. Technical guidance were given to local bodies for siting and construction of drilled wells and for the implementation of rainwater harvesting.

5.55 During the period under report (2005-06), an amount of Rs. 17.71 crores has been invested for minor irrigation out of which the share of ground water development was Rs. 4.93 crores ie. about 28% of the investment under minor irrigation.

5.56 During 2005-06 the Department has imparted technical assistance to identify sites for 3590 open wells, and constructed 999 drilled wells. The additional area reported to be brought under irrigation was 539 ha. Training was imparted to 45 personnel and analysed 3443 water samples, prepared 5 Ground water prospect maps from satellite imagery of Kerala under Rajiv Gandhi National Drinking Water Mission and developed new methodology for the detection of Fluoride content in drinking water, with the assistance of CCCM of BARC, Hyderabad. Under Rajiv Gandhi National Drinking Water Mission scheme, 36 bore wells were drilled in the non-covered/partially covered habitats. The physical achievement during the year under report is given in Appendix- 5.5

National Hydrology Project

5.57 The Phase I of the National Hydrology Project has been continued during the period under report and the second phase also has been initiated.

5.58 The Hydrology Project Phase-II is a follow on project of Hydrology project and to be implemented with the assistance of World Bank. The project objectives are

- (i) to extend and promote the sustained and effective use of the HIS by all implementing agencies concerned with water resources planning and management
- (ii) Strengthening the capabilities of implementing agencies at state/central level in HIS data utilisation for efficient water resource planning and management.
- (iii) Awareness building and outreaches services about HIS use.

5.59 The project would cover 9 ongoing states of HP-I namely Andhra Pradesh, Gujarat, Maharashtra, Karnataka, Kerala, Madhya Pradaesh, Chattisgarh, Orissa, Tamil Nadu and 4 new states Himachal Pradesh, Goa, Pondicherry and Punjab and the Central institutes CWC, MOWR, CGWB, CWPRS, NIH,, IMD, CPCB and Bhakra-Beas Management Board (BBMB). Under HP-II it is proposed to enhance the current manual system of recording and reporting expenditures in the implementation by the Surface Water and Ground Water departments of two states by instituting a computerised Financial Management System.

5.60 The total cost of the project for the country as a whole is Rs. 631.83 million. The three project components namely institutional strengthening costs 36% vertical extension cost (44%) and horizontal extension costs (20%) of the total project cost. The project would be implemented over a period of six years from 2005-06 onwards.

5.61 The World Bank has approved the phase – II of the project in Kerala for a total cost of Rs.18.35 crores. The agreement for phase –II was executed in January 2006 and initiated implementation in April 2006.

Flood Management

5.62 India is prone to natural disasters. Due to its locational and geographical features, it is vulnerable to a number of natural hazards like cyclones, droughts, floods, earthquakes, fires, land slides & avalanches.

5.63 The reasons for the occurrence of the flood are not simple enough to comprehend in its true perspective. The short duration intense rainfall seems to create conditions leading to flood. The peculiar physiographic set up of Kerala with abrupt fall in slope from the Western Ghats to the midlands and the high rainfall pattern spread over two seasons and that too concentrated in a few days, are the major factors which make the state vulnerable to heavy floods of a recurring nature.

5.64 At the State level during the year under report, an amount of Rs 2.82 crores has been spent for protection of an area of 933 ha. of land from the ravages of flood. The cumulative area brought under flood control was 61242 ha. as on 3/2006.

Coastal Zone Management

5.65 Coastal erosion is affecting most of the coastal states. The situation in Kerala is also not different. Kerala has a long coastal stretch of 590 kms. and more than half of it is subjected to sea erosion. Unlike other parts in the country, Kerala seacoast is thickly populated and as a result the loss due to sea erosion is relatively very high.

5.66 Construction of sea walls continued to be the sole intervention for coastal zone protection. In the area of protection of seashore, modern technologies like geo textiles, polyethylene fabrics/sheets, nourishment of foreshore with biomaterials, etc. are emerging. During 2005-06 an amount of Rs.8.13 crores has been spent to construct 13.32 km. of new sea wall and for reformation works in 3.12 km. Out of the total coastal stretch of 590 kms, about 389.53 Kms has been protected by constructing new sea walls and reformed 116.66 Km. of old sea walls spending an amount of Rs. 286.18 crores upto 31.3.2006. The Eleventh Finance Commission has provided Rs.50.00 crores for anti sea erosion works for constructing 15.89 km of new seawall and reformation of 20.14 km. for the period 2000-05. Out of this, 12.70 km of new sea wall was constructed and reformed 28.63 km. of old sea walls as on 31.03.2005 spending

Rs.38.00 crores. The physical and financial achievement under flood management and coastal zone management during 2005-06 are given in Table 5.6

Table 5.6
Financial and Physical Progress of Flood Management and Coastal Zone
Management Programmes during 2005-06

(Rs. lakhs)

Sl. No.	Item	Financial Achievement	Physical Achievement	Cumulative Physical achievement as on 3/2006
1	Flood Management	282	933 ha.	61242 ha.
2	Anti-Sea Erosion Works	813		
	a) New sea-wall constructed		3.32 km.	389.53 km.
	b) Reformation of old & damaged sea-wall		3.12	116.66 km

Source: Water Resources Department

5.67 The Twelfth Finance Commission has awarded Rs.175 crores for the construction, maintenance and reformation of the sea walls. Kerala Coast is subject to severe erosion, which undermines the valuable coastal eco system and affects the lives of millions of people. Nearly 100 Kms. coastal zone, prone to severe sea erosion needs to be urgently protected on a long term basis. The amount allotted is for construction and reformation of sea walls for the protection of the coastal area and for establishing permanent bench marks in the coastal area and conducting pilot studies using new techniques. The target envisaged for the utilization of Twelfth Finance Commission Award is to construct new sea walls to a length of 47.77 Kms, 21 groynes and reformation of 63.10 Km. during 2005-10.

Command Area Development

5.68 The Command Area Development Programme was launched with the main objective of bridging the gap between the irrigation potential created and utilised and improving agricultural production and productivity in the irrigation commands. The programme was restructured in 2003-04 and renamed as Command Area Development and Water Management Programme.

5.69 The restructured programme retains the components of the existing scheme which have been found to be beneficial to the farmers, include a few new components considered necessary for correction of deficiencies in the irrigation system and delete those components which have lost their utility overtime.

5.70 Under the restructured Programme there is thrust on Participatory Irrigation Management (PIM) and, therefore, following features have been made mandatory for programme implementation.

- i) Central assistance to States has been linked to the enactment of PIM legislation. Till this is done, alternative arrangements have to be in place for formation and empowerment of Water Users' Associations (WUAs);
- ii) WUAs have to be in position before Project Components are taken up so that beneficiaries are involved in the implementing of Programme activities, since inception;

- iii) a minimum 10% beneficiary contribution has been made mandatory in the construction of field channels, reclamation of waterlogged areas and renovation of Minor Irrigation Tanks to ensure increased beneficiary participation and thereby improve the quality of works.

5.71 Central assistance for correction of system deficiencies upto distributaries of 150 Cusec capacity has been linked to formation of Distributaries Committees and handing over of the distributaries to such Committees for maintenance in future.

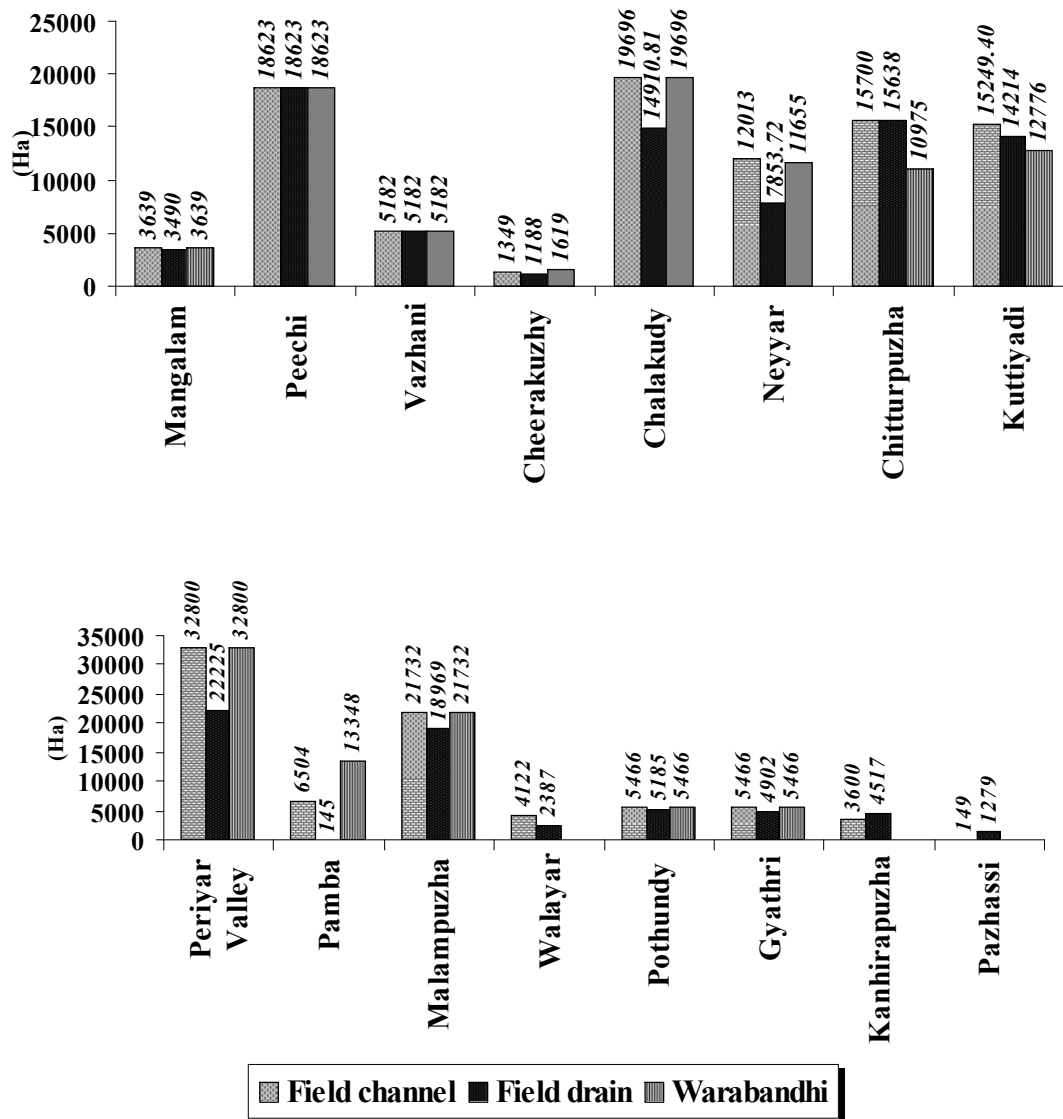
5.72 The main activities of Command Area Development Authority include construction of field channels, field drains, enforcement of warabandhi and reclamation of water logged areas. The Command Area Development (CAD) activities were carried out in the 16 completed irrigation projects, namely Malampuzha, Mangalam, Pothundy, Walayar, Cheerakuzhy, Vazhani, Peechi, Chalakudy, Neyyar, Gayathri, Pamba, Periyarvalley, Chithurpuzha, Kuttiyadi, Pazhassi and Kanhirapuzha with a total ayacut of 2.03 lakh ha.

5.73 Government of India had directed to restructure the CAD programme from the 3rd year of the Tenth Plan onwards in the ongoing four projects namely Pamba, Periyarvalley, Kanhirapuzha and Pazhassi. Detailed project reports for these projects for the restructured CADWM activities were approved by Government of India. Finalisation of the detailed project reports of Kallada and Muvattupuzha projects are nearing completion. As part of reform initiative in the new CADWM programme new components like renovation of tanks and system correction are included. Assistance was provided for the restoration of 10 tanks in Palakkad and 13 tanks in Pathanamthitta districts under the scheme Restoration of Water bodies.

5.74 The progress during 2005-06 was not encouraging. The achievement recorded during 2005-06, include construction of field channels in 1614 ha; drains to benefit 3275 ha. adaptive trials in 9 ha; 117 training programmes, bench mark and evaluation studies in 1741 ha. The work on reclamation of water logged areas were done in 258 ha and one evaluation report was also published. The major physical cumulative achievements are given in Appendix - The cumulative achievement of the main activities of CAD programmes of all projects are represented in Fig.5.2

5.75 Physical achievements of the existing CAD programme during 2005-06 are given in Appendix: 5.6

Fig 5.2
Major Physical Cumulative Achievements under CAD Programme
as on March 2005



Drinking Water Supply

Coverage

5.76 In Kerala 83.07 percent urban and 62.74 percent rural population have been covered by piped water supply as on 1-4-2006. The overall water supply coverage is 68.02 percent as against 67.52 percent as on 1-4-2005. The rural-urban coverage as on 1-4-2005 was 62.24 percent and 82.59 percent respectively. During 2005-06, 85 water supply schemes taken up under various

categories were commissioned. A total population of 9.01 lakhs have been benefited by these schemes. Out of this additional population covered is 1.60 lakhs and status level improvement is 7.41 lakhs. Of the additional population covered with protected water supply, 15705 (9.81%) are scheduled castes and 1825 (1.14%) are scheduled tribe population.

5.77 District-wise overall coverage of water supply varies from 91.16 percent in Ernakulam to 49.51 percent in Kozhikode. In rural coverage also Ernakulam stands top with 91.32 percent and Kozhikode is at the bottom with 35.42 percent. Urban coverage is highest in Kottayam district with 97.62 percent and lowest in Wayanad with 50.10 percent. District-wise population covered by piped water supply as on 1-4-06 is given in Appendix.5.9.

Habitation-wise Status of Water Supply Coverage

5.78 Habitations are mainly classified in to three namely Non-Covered (NC) Habitations, Partially Covered (PC) Habitations and Fully Covered (FC) Habitations. A fresh habitation survey has been conducted in 2003 based on 2001 census population and the number of rural habitations in Kerala increased to 12165 from 9776 in the previous survey in 1992. The increases in the number of habitations were due to ward bifurcation as per 2001 census. In the new survey a number of Fully Covered habitations and some Partially Covered habitations have slipped back to Non Covered status due to various reasons such as bifurcation of wards, drying up of sources, sources becoming quality affected, population increase etc. Habitation coverage status as on 1-4-2006 (No. of habitations based on 2003 survey) and as on 1-4-2005 (No. of the habitations based on 1992 survey) is given in Table 5.7

Table 5.7
Habitation Coverage Status of Water Supply

Category of Habitations	2004-05	2005-06
1	2	3
Fully Covered	2365	3793
Partially Covered	7398	8152
Non Covered	13 (not reachable)	220
Total	9776	12165

Source: Kerala Water Authority

5.79 In 8372 habitations the supply of water is less than the stipulated norm of 40 lpcd.

Water Supply Schemes in operation

5.80 Kerala Water Authority has 1940 water supply schemes in operation as on 1-4-06. It consists 65 urban and 1875 rural schemes. During 2005-06, 85 schemes have been commissioned. Out of this, 40 schemes are augmentation/improvement/extension to the existing schemes and 45 are independent schemes. District-wise details of water supply schemes in operation are given in Appendix-5.10.

Production and Distribution of water

5.81 The total quantity of water produced by KWA during 2005-06 is 1635 million litres per day (mld) and the quantity supplied is 1259 mld. Hence the unaccounted for water (ufw) is 376 mld, which is 23% of the quantity produced. Production and distribution of water by KWA from 2001-02 onwards is given in Table-5.8

Table 5.8
Production and Distribution of water

Year	Production (in mld)	Supply (in mld)	Leakage (%)
1	2	3	4
2001-02	1511.96	1164.21	23
2002-03	1551.58	1194.72	23
2003-04	1583.60	1219.37	23
2004-05	1617.13	1245.78	22.96
2005-06	1635.00	1259.00	23

Source: Kerala Water Authority

5.82 The cost of production of water is Rs. 7.39 per KL. The summary of cost of production of water is given in Table-5.9

Table 5.9
Summary of cost of production of water

Particulars	For the year 2005-06		
	1	2	3
		<u>mly</u>	<u>mld</u>
Quantity Produced		596,775	1635
Quantity Sold		459,535	1259
Direct Variable Cost		Total (Rs.in Crores)	Per KL (Rs)
Operators Salary		49.95	1.09
Power Charges			
Chemicals		108.00	2.35
		11.95	0.26
Total -Direct Variable Cost		169.90	3.70
Indirect overhead Cost			
Repairs & Maintenance		24.70	0.54
Administrative Overheads		78.11	1.70
Interest (excluding GOK Loan)		32.23	0.70
Depreciation		34.57	0.75
Total- Indirect overhead Cost		169.61	3.69
TOTAL		339.51	7.39

Source: Kerala Water Authority

Service Connections and Street Taps

5.83 KWA has 10.36 lakh service connections and 1.97 lakh street taps as on 1-4-2006. This is against 9.77 lakh service connections and 1.83 lakh street taps as on 1-4-2005. It shows that 0.59 lakh service connections and 0.14 lakh street taps were provided additionally during 2005-06. Out of the total service connections, 9.58 lakh (92.5%) are domestic and 0.77 lakh (7.4%) are non domestic. Out of the total street taps, 1.56 lakh (78.77%) are in rural areas. Category-wise service connections and street taps as on 1-4-2006 is given in Table-5.10 and District-wise details are given in Appendix 5.11.

Table 5.10
Service Connections and Street Taps by KWA as on 1-4-2006

Sl. No	Category	Number
1	2	3
1	Service Connections	
	i) Domestic	958337
	ii) Non-Domestic	77090
	iii) Industrial	891
	Total	1036318
2.	Street Taps	
	i) Rural	155559
	ii) Urban	41915
	III. Total	197474

Source: Kerala Water Authority

Water Tariff and Revenue

5.84 The existing Water Tariff rates in Kerala was fixed in 1999 and it is given in Appendix.5.12. Total revenue collected from water charges during 2005-06 is Rs. 166.57 crore as against Rs. 115.23 crore during 2004-05. Out of the total revenue collected during 2005-06, Rs. 106.04 crore (63.66%) was from service connections and Rs. 60.53 crore (36.34%) was from street taps. Similarly out of the total income form water charges, Rs. 86.81 crore (52.12%) was from Urban Schemes and Rs. 59.82 crore (35.91%) from Rural Comprehensive Schemes and Rs. 19.94 crore (11.97%) from Rural Single Panchayat Schemes. Details of income from water charges from 2001-02 onwards are given in Appendix.5.13

Arrears of Water Charge

5.85 As on 1-4-2006 dues from various category of consumers is Rs. 732.23 crore as against Rs. 746.85 crore during the previous year. Out of Rs. 732.23 crore Rs. 543.07 crore (74.17%) is from Local Governments. Table 5.11 shows arrears due form various category of consumers

Table 5.11
Arrears of Water Charges due from various category of consumers.
(Rs. crore)

Sl.No	Consumer Category	Amount	Percentage
1	2	3	4
1	Domestic	60.82	8.31
2	Non Domestic	103.64	14.15
3	Industrial	24.70	3.37
4	Panchayats	255.41	34.88
5	Municipality	153.95	21.03
6	Corporation	133.71	18.26
	Total	732.23	100

Source: Kerala Water Authority

Computerisation in Kerala Water Authority

5.86 Kerala Water Authority is implementing computerisation with the assistance of GOI. Twenty eight revenue units of KWA covering 60 percent of the total consumers at TVPM, Kollam, Kochi, Kozhikode Corporations and Alappuzha, Kottayam, Perumbavoor, North Paravoor, Thrippunithura, Aluva, Kalamassery, Palakkad and Kannur Municipalities were computerised and bi-monthly billing systems implemented. Spot billing system is implemented in TVPM and it is proposed to extend in other parts of Kerala in a phased manner. A centralised Web enabled billing and collection system is under development and is decided to be implemented in Thiruvananthapuram, connecting all the 8 revenue centres under PH Division, Thiruvananthapuram and Govt. Friends Centre. A master plan envisaging water supply schemes and sewerage schemes including project management has been approved and as per the master plan all the offices of KWA will be connected by a network. Action is being taken to implement the master plan with JBIC/GOI assistance.

Plan and Non-Plan Expenditure of KWA

5.87 Total expenditure of KWA during 2005-06 was Rs. 486.49 crore. Out of this Rs. 162.48 crore (33.4%) was under plan and Rs. 324.01 crore (66.6%) under non-plan. Under non-plan 37.27 percent is utilised for salary and establishment, 33.33% for power, 11.31 percent for operation and maintenance, 9.94 percent for payment of interest on loans and 5.90 percent for repayment of loans. Category-wise expenditure of KWA during 2005-06 is given in Table 5.12 and category-wise plan and non-plan expenditure of KWA for the last ten years is given in Appendix 5.15.

Table 5.12
Plan and Non-Plan Expenditure of
Kerala Water Authority –2005-06

Sl. No.	Category	Expenditure (Rs. in crores)
1	2	3
	A. Plan	
1	State Plan	54.60
2	ARP Schemes	66.68
3	LIC/HUDCO Aided Schemes	26.35
4	Others(AUWSP- Central share, PMGY and JBIC	14.86
	Sub Total	162.49
	B. Non- Plan	
1	Salary & Establishment	120.76
2	Power Charges	108.00
3	Operation and Maintenance	36.65
4	Repayment of Loans	19.07
5	Interest on Loans	32.23
6	Others	7.30
	Sub Total	324.01
	Grand Total	486.50

Source: Kerala Water Authority

Ongoing Water Supply Schemes

5.88 Considering the need for extending the coverage of protected water supply in the state in addition to state funded and centrally sponsored schemes, various schemes are being implemented by KWA with loan assistance from funding agencies also. Altogether 579 water supply schemes consisting of 527 rural and 51 urban schemes are under execution. District-wise and category –wise details of ongoing water supply schemes are given in Appendix.5.16.

Accelerated Rural Water Supply Programme

5.89 The works on 93 schemes sanctioned under Accelerated Rural Water Supply Programme are in progress-82 schemes with central fund and 11 schemes which have exceeded their estimated cost with state fund. These schemes are designed with a per capita demand of 40 lpcd and centrally sponsored schemes are implemented with 100% assistance from GOI.

Accelerated Urban Water Supply Programme

5.90 The Accelerated Urban Water Supply Programme (AUWSP) for Census Towns having population below 20000 is sponsored by Ministry of Urban Development, Government of India. The main objective is to provide safe and adequate water supply facilities to the population of the Census Towns in the country within a fixed time. The scheme will be funded on 50% grant basis by the central Government. The balance 50% will have to be provided by the state government including 5% beneficiary/local body contribution. Benefited community should be responsible for O&M of the assets created under the programme. So far 9 schemes were sanctioned under this programme and out of these one scheme has been completed. Works of other schemes are in progress.

Swajaldhara

5.91 Government of India launched community based, participatory, demand driven Water Supply Schemes viz, Swajaldhara for rural sector in the financial year 2002-03 by giving 90% of the project cost as Government aid and remaining 10% as beneficiary contribution. As per the direction from Government of India, a District Implementing Agency, the District Water and Sanitation Mission (DWSM) in each district was constituted with District Collector as Chairman and Executive Engineer, Kerala Water Authority, District head quarters division as Member Secretary for implementing the schemes, in the district level. Year-wise details of number of schemes sanctioned with estimate amount under this programme is given in Table 5.13.

Table.5.13
Year-wise details of Swajaldhara schemes

Year	No. Of Schemes	Estimate Amount (Rs. in lakhs)
1	2	3
2002-03	117	627.28
2003-04	78	559.04
2004-05	67	533.43
2005-06	106	868.11
Total	368	2587.86

Source: Kerala Water Authority

5.92 Of the 368 schemes sanctioned from 2002-03 to 2005-06, 32 schemes sanctioned in 2002-03 were dropped. Out of the remaining 336 schemes taken up 163 schemes have been completed and works of the remaining are in progress. The allotment for 2006-07 is Rs. 914 lakh.

JBIC Assisted Kerala Water Supply Project

5.93 A package of five water supply schemes was approved for loan assistance by the Overseas Economic Co-operation Fund (OECF) of Japan (now the Japan Bank for International Co-operation) in 1996. The objectives of the project are to augment and rehabilitate water supply systems of two urban regions namely Thiruvananthapuram and Kozhikode and to construct water supply systems for three rural regions namely, Meenad, Cherthala and Pattuvam including their adjoining villages. The largest ever Water Supply Project in the state when completed will ensure drinking water to a population of about 43 lakh in the benefited area spread over five districts. The total estimated cost of the project is Rs. 1787.45 crore. Out of it external assistance is Rs. 1519.38 crore and state share is Rs. 268.07 crore.

5.94 As per the loan agreement, the project was proposed to be commenced in 1997 and completed by 2003. However the appointment of consultants for implementation of the project, a mandatory pre-requisite as per the loan agreement, had been inordinately delayed and the project could not take off as per the proposal. The selection procedure for appointment of consultants started afresh in May 2002 and agreement has been executed with the selected consultants only on 4-8-03. The consultants commenced their work from 1/9/2003. As per the revised Terms of Reference the project implementation period had been reduced to four years from the original six years.

5.95 The works of the five water supply schemes under the project are covered in 23 contract packages of which 11 are under International Competitive Bidding (ICB) and 12 are Local Competitive Bidding (LCB). Number of category-wise contracts for each scheme is given in Table.5.14.

Table 5.14
Scheme-wise and Category wise number of contract packages of JBIC Project

Sl. No	Name of Scheme	Numer of ICB packages	Number of LCB packages	Total Number of packages
1	2	3	4	5
1	WS Improvement to Thiruvananthapuram city Region	2	3	5
2	WSS to Meenad & Adjoining villages	2	2	4
3	WSS to Cherthala & Adjoining Villages	2	2	4
4	WS Improvement to Kozhikode city region	3	3	6
5	WSS to Pattuvam & Adjoining Villages	2	2	4
	Total	11	12	23

Source: Kerala Water Authority

5.96 The 23 bids are covered in 5 packages as given in Table 5.15.

Table 5.15
Details of work packages of JBIC Assisted
Kerala Water Supply Project(KWSP)

Package No.	Category of Contract	No. and Description of contract
Package 1	ICB	,One bid for each scheme comprising Intake,Raw Water Main and Water Treatment Plant
Package 2	ICB	This package covers Transmission Mains.One bid each for 4 schemes and 2 for Kozhikode scheme.Considering the long transmission system of Kozhikode scheme, this package is proposed in 2 bids
Package 3	LCB	One bid for each scheme; covers Distribution System
Package 4	LCB	One bid for each scheme ; covers Service Reservoirs
Package 5	LCB	One bid each for Thiruvananthapuram and Kozhikode schemes only and is for rehabilitation of existing schemes

Source: Kerala Water Authority

5.97 Fifteen out of the 23 contracts are already awarded. Five contracts in package 4 has been approved by the Empowered Committee and concurrence of the JBIC is awaited for awarding the works to the contractors. Contracts in Package 5 are to be tendered. Status of Award of Contracts as on 27-12- 2006 is given in Table-5.16

Table 5.16
Status of Award of Contracts of KWSP

Name of Package	Name of Scheme	Date of Agreement
1	2	3
Package I	Thiruvananthapuram	12/10/2006
	Meenad	13/10/2006
	Cherthala	13/10/2006
	Pattuvam	13/10/2006
	Thiruvananthapuram	31/3/2006
	Meenad	31/3/2006
	Cherthala	9/10/2006
Package II	Kozhikode 2A	31-03-2006
	Kozhikode 2B	31-03-2006
	Pattuvam	31-03-2006
Package III	Thiruvananthapuram	3-10-2006
	Meenad	30-09-2006
	Chethala	9-10-2006
	Kozhikode	30-9-2006
	Pattuvam	30-9-2006

Source: Kerala Water Authority

Kerala Rural Water Supply and Environmental Sanitation Project (Jalanidhi)

5.98 The World Bank loan assisted Kerala Rural Water Supply and Sanitation Project (Jalanidhi) was conceived in mid 1999 . Project Implementation Plan was prepared and project appraised in mid 2000. The agreement with the World Bank was signed on 4th January 2001. The government has also created an autonomous institution 'Kerala Rural Water Supply and Sanitation Agency (KRWSA) to implement this project. The project is expected to cover three lakh households, benefiting a population of over 15 lakh in the selected Grama Panchayaths. The project has been designed as a demand responsive project, with a community driven development approach in implementation. The project integrates water supply with sanitation, health promotion, environment management and ground water recharge measures.

5.99 The overall development objective of the project is to improve the quality of rural water supply and environmental sanitation. The specific development objectives of the project are : (a) demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralised service delivery model on a pilot basis (b) build the state's capacity in improved sector management in order to scale up the new model state wide.

5.100 The Jalanidhi project was originally proposed to be implemented in about 80-100 Grama Panchayaths in four districts of Kerala (Thrissur, Palakkad, Malappuram and Kozhikode), at an estimated cost of Rs. 451.40 crore, over a period of six years from 2001.

5.101 During the Mid Term Review of the project in 2003, it was found that the project was achieving its target at a lower cost. Hence the estimates were revised and also decided to scale up the project to other districts. As per the revised plan, by the end of 2006, 92 Grama Panchayaths spread over Thrissur, Palakkad, Malappuram and Kozhikode and 18 Grama Panchayaths spread over the remaining 9 districts, ie, 2 Grama Panchayaths from each district, excluding Alappuzha were to be covered under this project. Besides 2 Grama Panchayaths of Kollam district were selected to implement Tsunami rehabilitation water supply project. Thus Jalanidhi Project is covering 112 Grama Panchayaths. The revised estimate of Jalanidhi Project is Rs. 381.5 crores including Rs. 60 crore for scaling up the activities across the state and Rs. 60 crore for Tsunami rehabilitation project. The project period has been extended up to December 2007 for implementing the Tsunami rehabilitation project. The pattern of funding of the project is given in Table 5.17

Table 5.17
Pattern of funding of Jalanidhi project

Stake Holder	Percentage	Amount (Rs.in crores)
1	2	3
World Bank	72	274.74
Government of Kerala	7	26.70
Grama Panchayaths	7	26.70
Beneficiary Groups	14	53.36
Total	100	381.50

Source: Kerala Rural Water Supply and Sanitation Agency (KRWSA)

5.102 There are 3960 active Beneficiary Groups in the 3674 water supply schemes taken up as on 30/9/2006. More than 12 lakh people are being benefited through these beneficiary groups. 54 percent of the total Jalanidhi membership is from BPL families and 16% from SC/ST households.

Activity-wise present status of Implementation

Water supply

5.103 As on 30-9-06, 2598 water supply schemes managed by 2702 beneficiary groups have been completed through Jalanidhi Project. All these schemes are being operated and maintained by the beneficiary communities. Another 1076 schemes are at different stages of implementation. Fifteen river based large Water Supply Schemes have been taken up so far, of which 2 schemes are fully and one partially commissioned. 8 schemes are in the implementation phase and 4 schemes are in the planning phase.

Tsunami Rehabilitation Project

5.104 Out of the two projects proposed in Tsunami rehabilitation areas of Kollam and Alappuzha districts, only one scheme for Chavara and Panmana Panchayaths has been taken up. The estimated cost of the scheme is Rs. 28 crores. It is expected that the scheme could be completed by December 2007.

Sanitation

5.105 In order to ensure the quality of drinking water focus is given for the prevention of biological contamination by construction of sanitary latrines and conversion of unsanitary latrines to sanitary latrines. 63267 new sanitary latrines have been constructed so far against the target of 40000 and conversion of 23224 unsanitary latrines to sanitary latrines have been done against the target of 8000. A total of 83967 environment sanitation structures like compost pit, soak pit and vermi composting units have been already constructed against the target of 26667. The project also assigns equal weightage to build up community awareness on sanitation and hygiene and its relation to water.

Ground Water Recharge

5.106 This project is designed in keeping with the change in Government perspective on a holistic approach to water resource management. Thus source recharge measures have been built in to the project design. GWR activities have been done in 758 BGs that are amenable for point recharge. Comprehensive GWR activities have been planned with the aim to implement GWR activities in the project panchayaths identified as 'difficult areas' which show a drop in ground water levels and face acute drought during peak summer.

5.107 Physical achievements in major component up to 1-4-2006 are given in Table 5.18.

Table 5.18
Physical Target and Achievement as on 1/4/2006

Sl. No	Name of the Component	Unit	Target	Achievement	percentage of achievement
1	2	3	4	5	6
1	W.S.Ss commissioned	Nos	2083	2000	96%
2	Latrines (New)	Nos	33333	58731	176%
3	Latrines (Conversion of unsanitary Latrine)	Nos	6667	20948	314%
4	Environment Management Works (Soak pits + compost pits)	Nos	22222	72693	327%
5	Drainage	Kms	148	43.94	29.7%
6	Ground Water Recharge Schemes	Nos	468	563	120%
7	Rain Water Harvesting Structures-Small Scale units. Large DemoUnits, special proposals	Nos	782	704	90%

Source: Kerala Rural Water Supply and Sanitation Agency

5.108 Actual expenditure for the project as on 30-9-2006 including all stakeholders contribution is Rs. 277.43 crores. Year-wise expenditure are given in Table-5.19

Table 5.19
Year-wise Expenditure for Jalanidhi Project

Year	Expenditure (Rs. in crores)
1	2
2000-01	3.25
2001-02	9.15
2002-03	12.98
2003-04	57.99
2004-05	67.68
2005-06	78.55
2006-07	47.83
up to 30-9-2006	
Total	277.43

Source: Kerala Rural Water Supply and Sanitation Agency

5.109 Beneficiary contribution collected as on 30-9-2006 for the project is Rs. 47.87 crores and contribution from Grama Panchayats is Rs. 25 crores. Budget provision for the project up to

2006-07 is Rs. 357.83 crores. Year-wise details of budget provision and actual release are given in Table 5.20.

Table 5.20
Year –wise Budget Provision and Actual Release
for Jalanidhi Project

Year	Budget Provision (Rs. in crores)	Actual release (Rs. in crores)
1	2	3
2000-01	8.50	8.50
2001-02	5.00	5.00
2002-03	40.00	40.00
2003-04	40.00	40.00
2004-05	90.00	76.50
2005-06	60.00	60.00
2006-07- up to 30-9-2006	114.33	nil
Total	357.83	230.00

Source: Kerala Rural Water Supply and Sanitation Agency

Rain Water Harvesting Campaign

5.110 Government of Kerala launched a statewide campaign for promotion of Rain Water Harvesting (RWH) in June, 2004. Kerala Rural Water Supply and Sanitation Agency- KRWSA was appointed as the nodal agency for State-level co-ordination of the programme. In connection with this, the KRWSA formed a special RWH cell for statewide co-ordination of the campaign activities. Action has been initiated for establishing a separate unit named 'Rain Centre' with all demonstrative units of Rain Water Harvesting/Ground Water recharge including a meteorological station at the state capital. The campaign was initially for one year but was given extension up to June 2007.

Aims and Objectives

- To sensitize the stakeholders on the urgency and seriousness of the water scarcity
- To disseminate the existing good practice in rain water harvesting and locally adaptable sustainable technologies in RWH by demonstrating these practices and adopting the same in public building/institutions of high seasonal demand.
- Awareness generation on the vitality of RWH and GWR and prepare ground for large-scale adoption of RWH/GWR measures in the state.
- To equip the people/institutions/agencies with appropriate low cost technologies for rain water harvesting.
- To encourage individuals/communities/agencies in drought prone areas to take up RWH as a sustainable solution to their drinking water needs.

5.111 Expenditure for RWH campaign as on 31-10-06 is Rs. 242 lakhs. Item-wise details are given in Table-5.21

Table 5.21
Expenditure of the Rainwater Harvesting Campaign as on 31/10/2006

<u>Sl. No</u>	Items	Amount	Expenditure	Balance
1	2	3	4	5
A	WB share			
1	IEC	1,00,00,000	48,48,781	51,51,219
2	Training	63,54,780	49,25,911	14,28,869
3	Rain Centre	13,34,000	11,11,023	2,22,977
	Total	1,76,88,780	1,08,85,715	68,03,065
B	GOK share			
1	Demo 14 x 500000	70,00,000	63,00,000	7,00,000
2	Construction 490 x 120000	58,80,000	58,80,000	0
3	Capacity building	7,65,220	5,92,929	1,72,291
4	Rain Centre	6,66,000	5,46,762	1,19,238
	Total	1,43,11,220	1,33,19,691	9,91,529
	Grand Total	3,20,00,000	2,42,05,406	77,94,594

Source: KRWSA

CHAPTER 6

ENVIRONMENT

Development activities carry with it the seeds of environmental damage, assisted and abetted by both needs and greed of man. Activities such as manufacturing, processing, transportation and consumption not only deplete the stock of natural resources but also add stress to the environmental system by accumulating the stock of wastes. The productivity of the economic system, however, depends on the supply and quality of natural and environmental resources. While water, soil, air, forest and fisheries resources are productive assets, the pollution of water, air, atmosphere and noise are the by-products of economic development, particularly industrialisation and urbanisation. Environmental degradation often tending to become irreversible impose damage costs on the economy resulting in output and human losses, loss of labour productivity from ill- health and loss of crop output. The level of environmental problems of a State varies with the stages of development, current production technologies and the environmental policies implemented.

6.2 Conventionally, the environmental pollution problems are solved by introducing environmental management techniques such as control of pollution at source, providing of sewage treatment facilities etc. In greater context the environmental aspects are to be inducted into each of the developmental activities at the planning stage itself and are to be well co-ordinated and balanced. For all developmental activities, a crucial input is land and depending on the activity a specific land use is decided. The environmentally related land uses are trade and commerce, housing construction, transport facilities (road, rail and water), utilities (water - surface and ground etc.), refuse/hazardous waste disposal facilities, wastewater installations, quarrying and mining, power generation, forestry, inland and coastal fisheries, recreation and tourism etc. These land uses are likely to have some impact on the environment. The best use of the land needs to be assessed in terms of not only the economic aspects but also the environmental aspects and the land uses are accordingly to be allocated so that the natural environment and ecological balance is not disturbed. Key priorities in the coming years for the conservation of environment should include enhancing urban environmental conditions including air quality, access to safe drinking water, sanitation, waste management and improving governance of natural resources with a focus on biodiversity conservation.

National Environment Policy

6.3 The National Environment Policy(NEP) approved by the Union Cabinet on 18 th May, 2006 seeks to extend the coverage and fill in the gaps that still exist in the present National Policies for environmental management contained in various acts in light of present knowledge and accumulated experience. The NEP is intended to be a statement of India's commitment to making positive contribution to international efforts in environmental conservation and is envisaged to mainstream environmental concerns in all the developmental activities in the country. The brief summary of the strategies and actions suggested in the NEP report is given in Box 6.1

Box 6.1
National Environment Policy-2006

On identified themes ,action plans would need to be prepared by the concerned agencies at all levels of Govt- Central,State/UT and local. The outlines of actions to be taken in various strategic themes are given below

- Regulatory reforms- The present legislative frame work will be revisited to develop synergies among relevant statutes and to develop an integrated environment management system. The specific actions envisaged under reforms include institutionalize a holistic and integrated approach, identify areas for new legislation, reviewing the body of existing regulation, taking steps to adopt techniques for environmental assessment of sectoral policies and ensuring accountability of concerned sections of Govt. in undertaking necessary legislative changes in a defined time-frame.
- Process related reforms- The existing procedures for getting clearances and approvals for development projects will be reviewed to avoid undue delay. Use of IT based tools will be promoted to ensure faster decision making with greater transparency and access to information . To realize decentralization state level agencies may be given greater responsibilities of environmental regulation and management. A judicious mix of civil and criminal processes and sanctions will be employed in the legal regime for enforcement, through a review of existing legislation.
- Substantive Reforms – The Environmental Impact Assessment (EIA) will continue to be principal methodology for appraising and reviewing new projects, but there should be more devolution of powers to state/UT level.

Actions to be taken on various aspects of environmental conservation is given below.

Project appraisal and review-Potential for chemical accidents of relevant project to be assessed
Projects involving large scale diversion of prime agricultural land would require environmental appraisal. The diversion of dense natural forests should be restricted and diverted area must not be cleared until actual construction starts. Provisions for environmental restorations after decommissioning of industries should be ensured.

Coastal Ecosystem-Revisit CRZ notification to make coastal environment regulation more holistic. The integrated Coastal Zone Management (ICZM) need to be comprehensive and prepared on strong scientific basis

Living Micro Organisms(LMO)-The regulatory processes for LMO should be reviewed taking into account ecological, health and economic concerns

Environmentally Sensitive Zones-Identify and give legal status to Environmentally Sensitive Zones in the country and formulate area development plans for these zones.

Land degradation-To reduce the menace of land degradation, R&D for adoption of sustainable land use practices would be supported and reclamation of waste land and degraded forest land through multi stakeholder partnerships would be promoted.

Desert ecosystem conservation-Intensive water and moisture conservation and enhancing green cover using local species to conserve desert ecosystem of the country will be initiated.

Wild life conservation-Protected Area Network in the country will be expanded for wild life conservation. For conservation of endangered species outside protected areas programmes for conservation will be formulated and implemented.

Forest conservation-The present forest and tree cover of 23% will be enhanced to 33 % by 2012 by means of multi stakeholder participation and Joint Forest Management System throughout the country. Bamboo and similar species will be de-notified as forest species under the Forest Conservation Act. The traditional rights of forest dwelling tribes would be legally recognized considering the provisions of Panchayats Act. ,1996.

Biodiversity Conservation-Measures for protecting biodiversity hotspots will be strengthened . Ex-situ conservation of genetic resources in designated gene banks will be enhanced and an internationally recognized system of legally enforceable IPR will be adopted.

Water Conservation-Mandating installation of water saving closets and taps in buildings by legal measures will be considered. Efficient water use techniques such as sprinkler and drip irrigation will be promoted. Water harvesting in new constructions in urban areas as well as design techniques for road surfaces and infrastructure would be mandated. Impacts of the policy of electricity tariff and pricing of diesel on ground water table would be reviewed.

Wetland Conservation-For wetland conservation, a legally enforceable mechanism for identified wetlands would be set up, a national inventory of such wetlands would be developed and eco-tourism strategies would be formulated.

Mountain Ecosystem- Adopt suitable land use planning and watershed management for the fragile mountain ecosystem. Adopt best practice norms in these areas to minimize damages to sensitive ecosystem

Mangrove conservation-Mainstream sustainable management of mangroves into forest sector regulatory regimes.

Pollution abatement -To abate water pollution, public-private partnership models of effluent and sewage treatment plants will be piloted and R&D in developing low cost technologies for sewage treatment will be promoted. To abate soil pollution, local bodies will be strengthened for segregation, recycling and reuse of municipal solid wastes and reuse and environmentally benign disposal of plastic wastes. To abate noise pollution, noise emission norms and ambient noise standards for various activities and different environments will be formulated. In setting standards especially for air quality, potential impacts in designated heritage sites to be taken into account.

Climate change – In response to climate change, adherence to the principle of common but differentiated responsibilities and capabilities of different countries in respect of both mitigation of Green House Gas (GHG) and adaptation measures will be focused. Indian industry will be encouraged to participate in the Clean Development Mechanism. Research in glaciology to evaluate the impacts of climate change on glaciers and river flows will be promoted.

Environmental standards ,management systems certification and clean technologies-Permanent machinery comprising experts to review notified ambient and emission standards will be set up. Industry associations will be encouraged for adopting ISO 14000 and purchase preference for ISO 14000 goods & services for Government procurement will be encouraged.

Environmental awareness and partnership building- A strategy for strengthening the environmental content in the curricula of formal education and for enhancing environmental awareness among the general public would be adopted. On line public access to monitoring information and archival data would be enhanced

Source : Ministry of Environment & Forests, 2006

World Environment Day

6.4 World Environment Day, celebrated each year on 5 June, through which the United Nations stimulates world wide awareness of the environment and enhances political attention and action. The world Environment Day theme selected for 2006 was deserts and desertification.

6.5 The theme for World Environment Day 2007 is “The environmental impact on polar regions” and the slogan for the day is “Melting Ice- a Hot Topic?”. Norway will be hosting the World Environment Day 2007. The agenda is to give a human face to environmental issues, empower people to become active agents of sustainable and equitable development, promote an understanding that communities are pivotal to changing attitudes towards environmental issues, and advocate partnership which will ensure nations and peoples enjoy a safer and more prosperous future. World Environment Day is a People’s event with colourful activities such as street rallies, bicycle parades, green concerts, essays and poster competitions in schools, tree planting as well as recycling and clean up campaign.

Coastal Pollution

6.6 The major activities that are responsible for coastal pollution in India are discharge and dispersal of untreated domestic and industrial wastes, discharge of coolant waters, harbor activities such as dredging, cargo handling, dumping of ship wastes, spilling of cargo chemicals, oil transport, fishing activities etc. Domestic wastes are discharged mostly in untreated conditions due to lack of treatment facilities in most of the cities and towns. The state wise generation of waste water and treatment along the coastal states are shown in Table-6.1 Compared to waste water generation, the treatment facility available is quite low in Kerala.

Table 6.1
State & Union Territory-wise Wastewater Generation, Treatment and Disposal in Cities and Towns along the Coast

State	No. of Cities/Towns	Wastewater Generated (MLD)	Treatment Facility Available (MLD)	Untreated Waste water Disposed (MLD)
Andhra Pradesh	8	203.90	0.00	203.90
Goa	3	17.00	38.50	0.00
Gujarat	13	329.06	76.00	253.06
Karnataka	3	72.00	27.50	4.60
Kerala	19	326.45	27.50	298.95
Maharashtra	2508.6	126.00	2382.64	
Orissa	4	114.90	0.00	114.90
Tamil Nadu	12	488.02	226.01	262.02
West Bengal	6	1466.0	0.00	1466.08
Andaman & Nicobar Islands	1	6.00	0.00	6.00
Pondicherry	2	28.94	0.00	28.94
Total	77	5560.90	521.51	5060.68

Source: MOEF 2005

6.7 Land use changes, waste disposal, coastal erosion, tourism industry, coastal engineering activities and sand-mining are exerting pressure on the marine and coastal environment, according to the State of the Environment Report, Kerala.

Wet land Conservation

6.8 The total wetland area of the country is about 4.1 million hectares. In Kerala state there are 32 natural and 2121 man made wet lands. The notified wet lands in the country are shown in the Appendix 6.1 Conservation of wetlands was initiated in 1987 in India with the objective of assessment of wet land resources, identification of wetlands of national importance, promotion of R&D activities and formulation and implementation of Management Action Plans (MAP) of the identified wetlands.

6.9 India is a signatory of the Ramsar Convention, which calls for the conservation of the ecosystems while ensuring benefits to the local communities. Wet lands of International importance identified from India under Ramsar Convention is given in Table - 6.2 The real cause appears to be the complexities of implementation of the 'total protection' approach to wetlands, which is the standard norm for terrestrial protected areas. The National Committee on Wetlands and State Committees have a major role to play to protect wetlands in association with line departments, NGOs and PRIs, with appropriate co-ordination mechanism. Under National Wetland Conservation Programme the wetlands identified from Kerala are Ashtamudi, Sasthamkotta, Kottuli, Kadalundi and Vembanad Kol (Source: Ministry of Environment & Forests, Annual Report 2006)

Table 6.2
Wetlands of International Importance- Ramsar Convention

Sl.No	Wet land	State
1.	Ashtamudi Wetland	Kerala
2	Bhitarkanika Mangroves	Orissa
3	Bhoj Wetland	MadhyaPradesh
4	Chilka Lake	Orissa
5	Deepor Beel	Assam
6	East Calcutta Wetlands	West Bengal
7	Harike Lake	Punjab
8	Kanjli	Punjab
9	Keoladeo National Park	Rajasthan
10	Kolleru Lake	Andhra Pradesh
11	Loktak Lake	Manipur
12	Point Calimere Wildlife and Bird Sanctuary	Tamil Nadu
13	Pong Dam Lake	Himachal Pradesh
14	Ropar	Punjab
15	Sambhar Lake	Rajasthan
16	Sasthamkotta Lake	Kerala
17	Tsomoriri	Jammu & Kashmir
18	Vembanad-Kol Wetland	Kerala
19	Wular Lake	Jammu & Kashmir
20	Upper Ganga	Uttar Pradesh
21	Surinsar-Mansar	Jammu & Kashmir
22	Hokera (Hokersar)	Jammu & Kashmir
23	Rudrasagar	Tripura
24	Renuka	Himachal Pradesh
25	Chandertal	Himachal Pradesh

Source: Ministry of Environment & Forests, Annual Report 2006

6.10 A state level steering committee has also been constituted for the wet land conservation.. Even though MAPs have been prepared, the implementation is quite slow and the state could not even get the full sanctioned amount from Government of India. The Kerala State Council for Science Technology and Environment has taken up projects for Wetland Management in the state of Kerala. Accordingly, a wetland conservation and management programme is being executed

for the Sasthamcotta and Ashtamudi wetland system. A management action plan was formulated and implementation of the same was being done by the District Collector, Kollam.

6.11 State has to prepare action plans for wetland project implementation. Immediate steps should be taken to protect them by changing their legal status to that of a protected category. Participatory methods are to be adopted with the involvement of PRIs, NGOs and local communities in the co-management of wetlands. The need for a proper management of existing wetlands should be a priority of the state.

Bio - diversity Conservation

6.12 The developing countries in the tropical and sub-tropical regions are richer, in terms of bio-diversity, but now worst affected with bio diversity loss. India, one of the 12 mega – diversity countries of the world is in the forefront of the global bio-diversity crisis. India stands seventh in the World as far as the number of species contributed to agriculture and animal husbandry is concerned. The Convention on Biological Diversity, the adoption of TRIPS, and an increasing trend towards privatisation of agricultural research have necessitated a new and complex policy environment for bio-diversity conservation.

6.13 Kerala represents an epitome of the bio-diversity profile of the Western Ghats in India. The state contains 95 per cent of the flowering plants and 90 per cent of the vertebrate fauna of the Western Ghats. One of the challenges of bio-diversity conservation is to locate areas of high concentration of endemic species so that critical endemic plant site can get priority for conservation. Nearly 23 per cent of the total endemic flora species are in Kerala. Out of the 1272 such species, 102 species occur exclusively in Kerala. There are 3 hotspots of endemic centres in Kerala – Agasthyamala, Anamalai High Ranges and Silent Valley – Wayanad. The details are given in Appendix: 6.3 The species biodiversity of important spices of Western Ghat area have been studied by IISR. Salient findings of the study are given in Box. No: 6.2

Box . 6.2

Biodiversity of Spices in Western Ghat

- Black pepper- The piper species occurring in Western Ghats are *P. argyrophyllum* Miq, *P. attenuatum* Buch-Ham, *P. barberi* Gamble, *P. betle* Linn, *P. galeatum* (Miq) CDC, *P. hymenophyllum* Miq, *P. hapnium* Ham, *P. hookeri* Miq, *P. longum* Linn, *P. mullesua* Ham, *P. nigrum* Linn, *P. pseudonigrum* Velayudhan, *P. schmidtii* Hook f, *P. silentvalleyensis* Ravindran & Asokan, *P. sugandhi* Ravindran, Babu & Naik, *P. trichostachyon* CDC, *P. wightii* Miq. Cultivar diversity is one of the principal components of diversity in black pepper. The cultivars are evolved directly from the wild *P. nigrum*.
- Cardamom - Ecosystem diversity and species diversity are limited in cardamom. *E. cardamomum* is the only species being used as spice in India. Cardamom occurs in its natural state only in the tropical evergreen forest of Western Ghats. IISR-CRS, Appaangala is maintaining 428 accessions, ICRI, Myladumpara is having 612 accessions, CRS, Pampadumpara is maintaining 87 accessions, RRS, Mudigere is having 243 accessions and HRS, Yercaud is maintaining 35 accessions of the crop.
- Ginger- Most of the ginger cultivars are mainly identified by their place of cultivation/collection. Many of these endemic races are facing extinction. The *ex-situ* gene bank of ginger at IISR has 756 accessions and consists of 616 cultivars, 92 accessions of related taxa and 48 exotic collections.
- Turmeric- Species diversity, morphotype diversity and varietal diversity are characteristics of this species. Curcuma species found to be occurring in Western Ghats are *C. albiflora*, *C. amada*, *C. aromatica*, *C. decipiens*, *C. longa*, *C. Montana*, *C. neilgherrensis*, *C. oligantha*, *C. pseudomontana*, *C. zedoaria*, *C. sylvatica*, *C. aurantiaca*, *C. ecalcarata*, *C. harita*, *C. raktakanta*, *C. kudagensis*, *C. thalakovariensis*, *C. malabarica*, *C. karnatakensis*, *C. kannanorensis*, *C. vamana*, *C. lutea*, *C. coriacea*, *C. nilamburensis*

Source :IISR, Kerala Environment Congress 2006

6.14 Besides the plant and animal species, other classes of organisms also exhibit great range of diversity in the Western Ghat area. An extensive survey on plant pathogenic fungi in Western Ghat area was conducted and the study revealed a rich flora of pathogenic fungi harbouring the plants in different forest ecosystems of the region. A total of 4101 fungal isolates were obtained from diseases specimens collected and processed from 237 selected study sites. The fungal isolates fall under 99 fungal genera and 226 *sp.* The results also revealed that exotic host species are more vulnerable to the indigenous fungal pathogens and monoculture plantations serve as reservoir of inoculum of different phyto- pathogenic fungi (Source : *Ministry Of Environment and Forests 2006*).

6.15 Since Kerala has the highest population density, it is prudent on the part of the local institutions/ panchayats to ensure conservation and management of protected areas with the active participation of people right at the grass root level. The preparation of biodiversity registers at Panchayat level needs to be given top priority. The Biodiversity registers prepared by some of the Panchayats on pilot basis could be popularised for adoption by more local governments in the State.

Biodiversity Register

6.16 People's Biodiversity Register (PBR) seeks to document the knowledge of occurrence, practices of propagation, sustainable harvests and conservation, as well as economic uses of biodiversity resources that resides with India's local communities. People's biodiversity Register is expected to serve (a) as a tool to document, monitor and provide information for sustainable management of local biodiversity resources; (b) as a tool to promote biodiversity- friendly development in the emerging process of decentralized management of natural resources; (c) as a tool to establish claims of individuals and local communities over knowledge of uses of biodiversity resources and to bring to them an equitable share of benefits flowing from the use of such knowledge and such resources; (d) as a tool for teaching environment and biology, and finally (e) as a tool to perpetuate and promote the development of practical ecological knowledge of local communities and of traditional "slow" sciences such as Ayurveda and Unani medicine.

6.17 The People's Biodiversity Register is a programme of organising information available in the domain of slow science on the status, uses and management of the living resources. The objectives of the programme would thus embrace the creation of decentralized countrywide databases on biodiversity status of population of medicinal plants, fruit trees and fresh water fishes, harvests from natural populations, changes in agricultural practices and discharge of industrial effluents affecting biodiversity resources, ongoing involvement of individuals /local communities in sustainable use and conservation of biodiversity resources. It also covers the local knowledge which is widely shared and fully disclosed to the public (eg. drought-resistance of a certain cultivar, methods of preservation of food or use of certain plants in treating human or livestock diseases) and the partly disclosed local information (eg: a claim that a particular medicine woman knows of a cure for asthma).

6.18 The programme would also attempt to validate the information thus recorded, create a network of decentralized databases, ultimately linking them to a consolidated national data base which would give full credit to the origin of information at the level of an individual, a community or a village panchayat and feed pertinent information such as volume of trade and prices of medicinal plants back to the local communities. (Source : *FRLHT and Centre for Environmental Studies –IISc*)

6.19 The Central Biological Diversity Act 2002 mandates the establishment of a National Biodiversity Authority, State Biodiversity Boards and Biodiversity Management Committees at the local level. Kerala is one of the first States to constitute a board. The setting up of BMCs is aimed at enabling local and tribal communities to have a say in managing biological resources.

6.33 The primary role of the committee is to prepare the People's Biodiversity Register (PBR) that lists plant and animal resources and the traditional knowledge systems associated with them. The register will also contain data on local and tribal healers. The committees are authorised to regulate harvests of biodiversity resources within their jurisdiction and to charge collection fees for this purpose. They will have at their disposal "Local Biodiversity Funds" into which such income, as well as other grants will be deposited. The Kerala Sastra Sahitya Parishad completed the preparation of such registers in all the 85 gram panchayats in Ernakulam district during 1998- 99.

Land Degradation

6.20 It is estimated that on an average, annual rate of soil loss is at 16.35 tonnes/ha. The ICAR has initiated the preparation of soil erosion maps of different states using the Universal Soil loss equation. Soil nutrient mining results in serious soil health and ecological problems, which needs urgent attention. Municipal water, sledge, pesticides, industrial water etc. need to be used with utmost care to avoid the possibility of soil pollution through heavy metals.

6.21 Land degradation in the State varies in nature and magnitude. The main causes of land degradation are deforestation, ignorance of soil conservation practices, extension of cultivation to marginal lands, improper crop rotation, imbalanced fertiliser use, surface irrigation ironically designed to increase land productivity, rapid growth in population, paucity of land, economic pressures and poverty. Around 9.5 lakh ha is prone to moderate to severe soil erosion in the state. The degraded land in the state is shown in Table-6.3

Table 6.3
Land Degradation in Kerala

Sl.No.	Category	Area (Lakh Ha)
1	Soil erosion – Moderate to severe	9.52
2	Control water logging and salinity	0.76
3	Degraded forest	1.98
4	Semi stream bank erosion	1.00
5	Land slides	1.00
6	Sea erosion	0.50
7	Total	14.76

6.22 The siltation rate of reservoirs in India has been estimated to be much higher than the values assumed at the time of designing. The results of sedimentation surveys in some of the reservoirs in the state showed that the reduction in capacity of various reservoirs ranged from 4.18 per cent in Pamba to 30.9 percent in Anayirankal reservoir.

Water Quality

6.23 Water quality has been steadily degraded by a combination of factors, including saline intrusion, sewage and industrial effluents, and urban and agricultural run off. Biochemical Oxygen Demand (BOD) in Asian rivers is 1.4 times the World average and 1.5 times OECD levels. Dirty water and poor sanitation causes more than 500,000 infant deaths a year in the Asia-pacific region.

6.24 High fluoride concentration in ground water beyond the permissible limit of 1.5 ppm has come to stay as a major issue affecting a large segment of rural population to the tune of 25 million spread over more than 200 districts in 17 states in the country. The population at risk is estimated at around 66 million, Hand pump attached defluoridisation and iron removal plants have failed due to inappropriate technology, unsuited to community perception and community involvement.

6.25 The presence of fluoride in ground water in concentrations above permissible limits is reported in certain pockets of Attappady and Chittoor area of Palakkad and Alappuzha districts. Earlier study conducted in the area in 1985-88 also showed fluoride concentration in the range of 0.32 to 2.62 mg/l in deep tube wells which indicate stable presence of fluoride in ground water. The studies conducted by State Ground water department also confirmed the presence of high fluoride in Ground water. Apart from regular monitoring, minimisation of fluoride by mixing low fluoride water with high fluoride water from water supply wells, use of PVC pipes, to avoid corrosion and technologies developed by NEERI etc. could be followed in the region. The legal framework for regulatory withdrawals of ground water is now in place. The frequency of monitoring and number of monitoring stations also are not representative and adequate.

6.26 Water in various stretches of rivers like Periyar, Chaliyar and Bharathapuzha are polluted with various contaminants of domestic, agricultural and industrial origin. While colour and relatively high BOD are the reported problems in Chaliyar, traces of mineral oil and organic chlorine Pesticides and salinity on the stream side are the problems of Bharathapuzha.

6.27 Water quality of major rivers of Kerala has been studied by Central Pollution Control Board and salient findings are given in Box No : 6.3.

Box : 6.3
Water Quality of Kerala Rivers

- Karamana river : Deterioration has been detected in Karamana river and the over flow from sewage pumping stations and raw sewage from some dwellings near Killiyar, T.S Kanal and other canals are found to be the causes of deterioration. The value of BOD and faecal coliform in the river were 8.6 mg/l and 1600 MPN/100ml.
- Chalakkudi river : Due to indiscriminate use , water quality has deteriorated considerably. Industrial activities in the river basin have significant impact on quality of water in the downstream. The high incidence of coliform was due to tourist activity at Athirappilly.
- Periyar : Water quality survey by KSPCB revealed that high levels of faecal contamination is noticed in river upto Aluva. The pH of the river water is found to be very low in lower reaches of Udyogamandal industrial area indicating the impact of industrial waste disposal on pollution. Excessive sand mining from the river is also affecting water quality.
- Moovattupuzha : High level of Coliform found in river water is due to open defaecation , cattle bathing etc.
- Pampa : Survey by KSPCB revealed that solid waste and sewage generated at Pampa city during festival season causes severe pollution of Pampa river.
- Kallada : The maximum value of BOD and total Coliform observed were 1.8 mg/l and 4900 MPN/100 ml.
- Chaliyar : The Kozhikkode city lies in this river basin and is an important land mark of major industrial activities. River Chaliyar has enriched dissolved oxygen (DO) levels. The lowest value noticed was 4.9 mg/l
- Bharathapuzha : Industrial activity is higher on upper reaches of the river . The Palakkad area of the basin is fast industrializing . There is practically no flow in the river during summer months. The river turns into sewer for disposal of waste water from townships and rural communities.

Source : CPCB 1999

6.28 The Central Pollution Control Board has been monitoring water quality in collaboration with State Pollution Control Boards at 784 locations in various states and UTs. Water quality monitoring results indicate that organic and bacterial contamination still continue to be critical sources of pollution in Indian aquatic resources. The unsystematic use of fertilisers coupled with improper waste management have affected the ground water quality in many parts of the country. Also recorded high concentration of heavy metals, fluoride and nitrates at different locations around the country. Over the last decade industrial waste and municipal waste have emerged as the leading causes of pollution of surface and ground water.

6.29 Under the National River Action Plan, certain major rivers with high or intermediate levels of pollution were identified by the CPCB. Pampa Action Plan is also included under the project. Survey conducted by KSPCB revealed that solid waste and sewage generated at Pampa city during festival season causes severe pollution of Pampa river. However the implementation of the action plan is very slow. In order to focus on urban lakes, the National Lake Conservation Plan was also initiated.

Ambient noise levels in Major Cities of Kerala

6.30 Ambient air quality standards in respect of noise is given in Table- 6.4

Table 6.4

Area Code	Category of Area /Zone	Limit in dB(A) Leq.	
		Day time*	Night time**
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Source : KSPCB

* Between 6.00 am and 10.00 pm

** Between 10.00 pm and 6.00 am

Industrial effluents

6.31 A number of industries situated on the banks of rivers and backwaters discharge their effluents into the wet land system. These effluents contain a large number of toxic ingredients such as acids, alkalies, heavy metals, suspended solids and a number of other chemicals. Among various industrial pollutants, heavy metals require special considerations due to their non degradable nature. Analysis of particulate metal content indicates high concentration of Zinc, Cromium etc due to industrial pollution in Kochi backwaters. Details of industries in Periyar river basin is shown in the Appendix 6.6 Highest concentration of heavy metals in sediments was observed during pre monsoon. Chromium content was higher in Ashtamudi and Vembanad and mercury content was high in Vembanad.

6.32 A recent study showed that pollution is concentrated among a few industrial sub sectors and that a sector's contribution to pollution is often disproportionate to its contribution to industrial output. Petroleum refineries, textiles, pulp and paper and industrial chemicals produce 27 per cent of the industrial output in the country, but contributes 87 per cent of sulphur emissions and 70 per cent of nitrogen emission from the industrial sector. Likewise, iron and steel and non-metallic mineral products, produce about 16 per cent of the industrial output, but account for 55 per cent of the particulate emission.

6.33 Environmental concerns have assumed significance in the recent years. Commensurate with industrial expansion, a strong regulatory mechanism is required to ensure minimum environmental standards. Pollution control efforts in 17 high polluting industries in various states is shown in Table 6.4. Out of the total 2301 large and medium industrial units identified in the 17 categories of highly polluting industries in the country, 1927 industrial units have installed the requisite pollution control equipments, 235 units have closed down and the remaining 139 units have yet to install the necessary pollution control facilities . Legal action has been taken against all defaulting industrial units. In Kerala out of 43 units , 6 are closed and 37 are having adequate facilities to comply with the standards

Air Pollution

6.34 The air in most of our cities is dangerously polluted. Average levels of suspended particulate matter in the four metropolitan cities (Mumbai, Delhi, Chennai and Kolkata) is over 360 micrograms per cubic metre, while the World Health Organisation has stipulated a safety level of 150 mg/ cubic metre. Pollutants in India's urban areas include oxides of nitrogen (NO₂), sulphur (SO₂) and carbon (CO and CO₂) and suspended particulate matter (soot and dust). In addition, there is a range of toxic and carcinogenic substances such as benzene, Polycyclic Aromatic Hydrocarbons (PAH), ozone, lead, etc. The main sources of these pollutants are vehicular exhaust and industrial activity (energy sector, refinery and petrochemicals, iron and steel industry and others). Delhi, Mumbai and Kolkata are among the 15 most polluted cities in the world.

6.35 The major causes of increasing air pollution are increasing energy demand and consumption, the use of poor quality fuels such as coal with high sulphur content, inefficient methods of energy production and use, increasing number of vehicles, traffic congestion, poor automobile and road conditions, use of leaded fuel, resulting in emission of sulphur dioxide, nitrogen oxides, suspended particulate matter, lead, carbon monoxide. Forest fires also contribute to the air pollution.

Table 6.5
State wise Summary Status in 17 Categories of highly polluting Industries, 2004-05

Sl. No.	State/Uts	Total No. of Units	Status (No. of Units)		
			Closed	Compliant	Defaulters
1.	Andhra Pradesh	26	29	240	0
2.	Assam	16	03	12	01
4	Bihar	46	19	27	00
5	Chandigarh	25	02	21	02
6	Goa	08	00	08	00
7	Gujarat	283	10	273	00
8	Haryana	107	24	69	14
9	Himachal Pradesh	11	00	11	00
10	Jammu & Kashmir	10	03	07	00
11	Jharkand	21	03	16	02
12	Karnataka	116	14	102	00
13	Kerala	43	6	37	00
14	Madhya Pradesh	78	15	61	02
15	Maharashtra	392	26	356	10
17	Meghalaya	01	0	01	0
20	Orissa	51	2	42	7
21	Punjab	102	17	58	27
22	Rajasthan	108	08	96	04
23	Sikkim	01	00	01	00
24	Tamil Nadu	216	02	187	27
25	Tripura	05	00	05	00
27	Chandigarh	01	1	0	00
29	Delhi	05	01	04	0
31	Pondicherry	08	01	07	00

32	Uttaranchal	38	2	20	16
33	Uttar Pradesh	263	27	232	04
34	West Bengal	77	20	34	23
	Total	2301	235	1927	139

Source: Ministry of Environment and Forests, 2004-05

Ambient Air Quality

6.36 Monitoring of ambient air quality is considered to be a vital component in the Environmental Impact Assessment. The Central Pollution control Board has established a national Ambient Air Quality Monitoring Net work (NAMPA) in collaboration with the State Pollution Control Boards, comprising of 290 stations in 92 cities/towns, to collect, compile and disseminate information on air quality.

6.37 The Kerala State Pollution Control Board (KSPCB) monitors the ambient air quality at 11 stations in the state. The KSPCB also has 2 mobile sampling units. The relative air quality situations at four major locations in the state are given in Table-6.6.

Table 6.6
Air Quality Levels in Selected Locations in Kerala, 2005

Pollution Standards	Annual Mean Concentration Range (μ g/m ³)							
	SO ₂		NO ₂		SPM*		RSPM**	
	I	R	I	R	I	R	I	R
Low (L)	0-40	0-30	0-40	0-30	0-190	0-70	0-60	0-30
Moderate (M)	40-80	30-60	40-80	30-60	180-360	70-140	60-120	30-60
High (H)	80-120	60-90	80-120	60-90	360-540	140-210	120-180	60-90
Critical (C)	>120	>90	>120	>90	>540	>210	>180	>90
Kochi	L	L	L	L	L	M	M	H
Kottayam	L	L	L	L	-	-	L	H
Kozhikode	L	L	L	L	L	M	L	M
Thiruvananthapuram	L	L	L	L	-	-	H	C
Palakkad	L	-	L	-	M	-	L	-

Source : CPCB

* Suspended Particulate Matter

**Respirable Suspended Particulate Matter

6.38 The Ministry of Environment and Forest, Government of India has identified Kochi as one of the areas with very high pollution potential.

Vehicular Pollution

6.39 Traffic planning and management assume importance in reducing vehicle pollution. Greater promotion of and use of alternative fuels, cleaner technologies such as CNG, LPG, curbing fuel adulteration, fiscal incentives for pollution prevention and control measures, appropriate monitoring of industries, strengthening of emission standards, replacement of two stroke engines, awareness programmes, appropriate design of green belt etc. are needed. An

effective environment management plan should be devised covering regulation, capacity building, environment strategy by involving NGOs, PRIs, line departments and private sector.

Pesticide pollution and residues

6.40 The use of pesticides has been coming down in the country in recent times owing to the promotion of integrated pest management practices and the ban on persistent organo-chlorin pesticides. The total pesticide consumption in the country was around 80,000 tonnes in the Nineties and this has come down to less than 46,000 tonnes in 2004-05.

6.41 In tune with national pattern, the pesticide consumption in Kerala shows a declining trend in recent years but the intensity of use (quantity per hectare) shows an increase. In contrast to the national pattern, the fungicide use in Kerala is much higher compared to insecticides which could be attributed to higher proportion of trees and plantation crops in the state. The salient findings of the study conducted by SANDEE & Kerala Agricultural University on pesticide consumption and usage patterns in Kuttanad tract are given in Box No: 6.4

Box : 6.4

Pesticide consumption in Kuttanad

- ❑ Pesticides in rice farming – Kuttanad area has high dependence on chemical inputs and concomitant ecological problems are of severe nature. Among plant protection chemicals widely used in the area 19 are insecticides, 4 fungicides and 3 are weedicides. Majority of these are of systemic action and twelve of them belong to organo-phosphorus group.
- ❑ Unscientific practices - The concentration of the spray fluid is much above the recommended levels in all chemicals. The study showed 40% of spraying was made to protect the crop against BPH, 17% against rice bug and 16% to control leaf folder.
- ❑ Health effects- In 71% of spray events the applicators reported some form of health impairments, skin irritation and allied problems. Majority of respondents were aware of the potential health hazards due to exposure and the need for personal protective gadgets.
- ❑ Health Cost – The mean expected health cost due to pesticide exposure is Rs. 26/event of pesticide application or 16 % of the average daily earnings of the applicator. If the concentration of the spray fluid with most toxic chemicals used is reduced by 25% health costs gets reduced by 42%.

Policy suggestions in the study –

- 1) A registry should be developed at the Krishi Bhavan level to monitor the health status of the applicators and to cover them with prophylactic measures.
- 2) Training support to be given to pesticide applicators on safe handling of pesticides.
- 3) Subsidised supply of protective gears and awareness creation programmes through media should be taken up.
- 4) The human health cost involving agricultural workers over a longer time frame should be worked out and medical insurance schemes may be provided for field workers handling pesticides.
- 5) Supply of pesticides to the farmers should be regulated judiciously.
- 6) Proper recording and reporting of poisoning cases should be done.
- 7) Waiting periods of pesticides should be enforced and multiple farming/cropping system models to be developed to reduce the pesticide load on environment.

Source : SANDEE & KAU ,2006

6.42 High levels of pesticide residues - well above the maximum residue limit - had been found in the vegetable samples tested in Kerala. Vegetables such as bitter gourd, cowpea and okra (lady's finger) especially had high levels of pesticide residues. (Source : All India Net Work Project on Pesticide Residues 2006)

6.43 Pure drinking water is a luxury in India today. Most water sources are contaminated; water borne diseases such as diarrhoea, dysentery, typhoid, jaundice and gastroenteritis are common. Even the municipal water supply is not free of contaminants like pesticides, and heavy metals. People either boil water to drink it or install purifiers. Of late, they have also turned to bottled water available in the open market: this water is perceived as safe. Given human dependence on water, we cannot afford to be careless about the kind and quality of water, that we drink. Bottled Water has become a necessity in people's lives due to the poor quality of municipal water supply. Results of the study conducted by Centre for Environmental Studies indicated pesticide contamination in bottled water. Results of the study is given in Box No: 6.5

Box : 6.5
Pesticide Contamination in Bottled Water

- HCH was detected in 91 per cent of mineral water samples, in 32 samples out of 34 analysed. The highest concentration of g-HCH (0.0045 mg/l) was detected was 45 times higher than the 0.0001mg/l limit for individual pesticide in Directive 80/778/EEC
- DDT was detected in 70.6 per cent of the samples analysed for pesticide residues. The highest concentration detected was 37 times higher than the 0.0001mg/l limit for individual pesticide in Directive 80/778/EEC
- Metabolites of DDT (DDE and DDD) were also detected in the bottled water samples analysed
- Among the 8 organophosphorus pesticides, malathion and chlorpyrifos were commonly present in different brands analysed
- Dimethoate was detected in only one sample out of 34 . Its concentration was 0.0013 mg/l, 13 times higher than the 0.0001mg/l limit for individual pesticide in Directive 80/778/EEC
- Phosphamidon was detected in 6 per cent of the samples analysed. Maximum concentration found was 0.0012 mg/l .which is 12 times higher than the Directive 80/778/EEC limit for individual pesticides
- Chlorpyrifos was detected in 82.4 per cent of the samples analysed. The highest concentration was 0.037 mg/l, which is 370 times higher than the 0.0001mg/l limit for individual pesticide in Directive 80/778/EEC
- Malathion was detected in 85.3 per cent of the samples. The highest concentration detected was 0.0400 mg/l which is 400 times higher than the 0.0001mg/l limit for individual pesticide in Directive 80/778/EEC

Source : Centre for Science and Environment 2003

Green House Gas Emission

6.44 The global atmospheric CO₂ concentration is 379 ppm, methane concentration is 1774 ppb and nitrous oxide concentration is 319 ppb in 2005. The Per capita emission of Carbon dioxide is little more than half the world average in Asia. In 1990, China and Japan became the first and second largest Carbon dioxide emitters in Asia which is 15 per cent of the level in OECD countries. The per capita carbon dioxide emission in various countries is shown in Table-6.8. Carbon dioxide emission largely a by product of energy production and use account for the largest share of greenhouse gases which are associated with global warming. Kyoto protocol marks the first international attempt to place legally binding limits on green house gas emissions from developed countries. In addition to carbon dioxide, the primary green house gas emissions from developed countries. In addition to carbon dioxide, the primary green house gas, the

protocol focuses on five other green house gases are targeted for reduction. Developed countries are the major contributors of green house gas emissions. The average per capita emission of carbon dioxide in India is 1.2 MT, while it is 20.2 MT in USA in 2002 as per the World Development Indicators 2006.

6.45 The emission of methane and nitrous oxide and total global warming potential of agricultural soils of different states in the country have been estimated and is given in Table- 6.7

Table 6.7
Global Warming Potential of Agricultural Soils in Different States

State /Union territory	Methane (Gg)	Nitrous oxide (Gg)	Global warming potential (Gg CO ₂)
Andhra Pradesh	528.7	9.5	14049
Delhi	0.2	0.10	35
Karnataka	67.0	4.35	2756
Kerala	11.8	0.71	469
Tamil Nadu	404.4	4.36	9845
West Bengal	447.7	3.38	10448
Total (all states in India)	2902.7	79.91	85729

Source: Curr. Sci. 2004

6.46 The Intergovernmental Panel on Climate Change of the United Nation has predicted a temperature rise of 1.1-6.4° C by the end of this century with a probable 2-4.5° C when range of CO₂ doubles from pre-industrial levels. The sea level rise over the periods may range from 18-59 cm(Source : UN IPCC Report, 2007) . Action Plan is needed on mitigation and control of air pollution and GHG emission in urban cities through reducing traffic congestion, proper land use planning and switching over to cleaner fuels like CNG. Development of institutional, technical and human capabilities to monitor air pollution and GHG emission and promotion of public awareness of air pollution are needed.

Disaster Management

6.47 Disaster risk arises when hydro meteorological, geological and other hazards interact with physical, social, economic and environmental vulnerabilities. Events of hydro meteorological origin constitute majority of disasters. Despite the growing understanding and acceptance of the importance of disaster risk reduction and increased disaster response capacities, disasters and in particular the management and reduction of work continue to pose a global challenge.

6.48 The changes in land use pattern has accentuated the natural calamities and land degradation in the state. The high land areas of the state which was covered by luxuriant natural vegetation a few decades ago has been converted to plantations recently. An overall assessment of the area in terms of vegetation cover shows that highest incidence of land slides are seen in degraded natural vegetation of the upper slope areas. Land slide occurrences in various land use classes in parts of Kottayam and Idukki Dstricts are given in Table - 6.8

Table 6.8
Land slide occurrences in various Land use classes in the study area

Sl.No	Category	Area	No.of slides	LS/sq.Km	LS %/sq.Km
1.	Forest –degraded	22.54	48	2.13	43.40
2.	Forest –open	24.04	0	0.00	0.00
3.	Forest- plantation	13.04	0	0.00	0.00
4.	Rock	10.90	10	0.92	18.70
5	Rock+Natural Veg.+ grass	23.78	21	0.88	18.00
6.	Grassland	76.92	3	0.04	0.79
7.	Mixed+seasonal cultivation	70.50	7	0.10	2.02
8.	Rubber	438.79	90	0.21	4.18
9.	Coffee	2.69	1	0.37	7.58
10	Cardamom	3.83	1	0.26	5.32
11	Tea	68.97	0	0.00	0.00
	Total	756.00	181	4.91	99.99

Source : Kerala Environment Congress 2006

6.49 The States have to formulate State Disaster Management Policies with the broad objectives to minimise the loss of lives and social, private and community assets and contribute to sustainable development. The tsunami of December 26, 2004 was one of the worst disasters in history. In the tsunami, lagoons salt marshes, wide river mouths, estuaries etc. have reportedly enabled to reduce damage to urban landscapes by absorbing/retaining sea water that flooded inland areas. The tsunami incident warrants a re-look at the coastal zone management plans, legal framework, livelihood security of people in the coastal area, and sustainable environmental management of the State.

Environmental Sanitation

6.50 The quantity of sewage from cities in India is increasing significantly. Of this, only 10% are treated. The remaining untreated sewage from the urban areas finds its way into water bodies, making the water contaminated and unfit to drink or even to use for bathing and at the same time adversely affecting the ecosystem. The lack of adequate sanitation facilities has also led to severe health and environmental impact due to the presence of unhygienic conditions.

Sanitation Coverage

6.51 Kerala has the largest coverage of individual household latrines in India. Out of the 65.95 lakh households in the State 57.17 lakh (86 per cent) have sanitary latrine facilities.

6.52 Though the sanitation coverage is relatively high, there is general lack of awareness on the potential health risks from unhygienic latrine, (which is estimated to account for over 60 per cent of the total household latrines) when located close to unprotected open dug well drinking water sources as well as open defecations by children.

6.53 Analysis of sanitation coverage data for the country from various sources shows that despite the acceleration of coverage under the Eighth Plan, less than 20% of all rural households have a toilet. However there has been increase in coverage from around 10 per cent in 1990. At the same time, between 75 to 81 per cent of all urban households in India have toilets, an increase from the 1990 figures of around 64 per cent. National Family Health Survey data on toilet facilities shows that the proportion of households having access to toilet facilities in larger and more populated states was much lower than the national average. These include Andhra

Pradesh, Bihar, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. Among the smaller states only Himachal Pradesh followed this pattern.

6.54 Though the urban coverage (92 per cent) is higher than the coverage for rural areas (81.3 per cent), the decadal rate of coverage is higher in the latter case. In absolute numbers 9.93 lakh households in the rural areas and 1.32 lakh households in the urban areas still do not have individual household sanitary latrine (Table 6.9.) There is a possibility that the present data on households with sanitary latrines may include those households with the type of latrines which are unhygienic and unacceptable on health grounds. The number of latrines constructed using of unsafe sanitation technologies is a major issue in Kerala.

Table 6.9
Type of Latrine within the House

Type	Total	%	Rural	%	Urban	%
Pit latrine	815221	12.4	631664	12.8	183557	11.1
Water Closet	4299445	65.2	3063983	62.0	1235462	74.8
Other latrine	426102	6.5	324374	6.6	101728	6.2
No latrine	1054438	16.0	922529	18.7	131909	8.0
Total	6595206	100.0	4942550	100.0	1652656	100.0

Source: Census of India, 2001

Community Perceptions and Local Government Initiatives

6.55 Sanitation is one of the subjects that has been transferred to the local governments at the cutting edge level, as part of the decentralization process. This has paved the way for improving the level of community participation in sanitation related services.

6.56 In the Ninth Plan about 300 Grama Panchayats gave top priority to sanitation and 50 of them achieved the goal of more than 95 per cent coverage of the household sanitary latrines. During the Ninth Plan about 5.71 lakhs household sanitary latrines were constructed under decentralized plan which is much more than the total achievement in the past 15 years through different governmental programmes. During the first four years of the Tenth Five Year Plan, another 3.20 lakh was constructed (Table 6.10).

Table 6.10
No. of Household Latrines constructed by Local Governments during Xth Plan

Year	GP	SCP	TSP	EFC	Total
2002-03	56468	8946	1609	9335	76439
2003-04	130525	21883	2262	20019	174689
2004-05	43546	11167	1009	13205	68927
2005-06	76453	9716	394	-	86563

Source : State Planning Board

Abbreviations : GP : General Plan, SCP : Special Component Plan
TSP: Tribal Sub Plan, EFC: Eleventh Finance Commission

Total Sanitation Campaign (TSC)

6.57 TSC has the objective of generating felt demand for sanitation facilities through IEC, accelerating sanitation coverage propagating cost effective and appropriate technologies in sanitation, reducing incidence of water and sanitation related diseases and improving the general quality of life in rural areas. Strategies of TSC are Project mode of implementation, Community led, people centred approach, Demand Responsive Approach, Alternate Delivery Mechanism, Scaling down of subsidy, Menu of technologies to meet customer preferences, and Intensive IEC. Upto 2004-05, 3.48 lakh individual household latrines were constructed and the total achievement under TSC became 3.50 lakh latrines.

School Sanitation

6.58 Conceptually school sanitation recognizes the potentialities of the child as a change agent more respective to new ideas. The present status of schools with sanitation and drinking water facilities is given in Table -6.11 The TSC and Sarva Siksha Abhiyan (S.S.A) have provision for construction of school toilet. Apart from this, hygiene education is also an integral component of school sanitation for which school health clubs are formed.

Table 6.11
District wise Details of Government Schools having Drinking Water/latrines/urinal
Facilities in Kerala 2005-06

Sl. No.	District	No. of Govt. Schools				No. of Schools having							
		LP	UP	HS	Total	Drinking Water				Urinals/Latrines			
						L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	
1.	Thiruvananthapuram	299	98	119	516	295	98	109	502	266	91	109	466
2.	Kollam	268	62	76	406	226	55	74	355	219	59	76	354
3.	Pathanamthitta	168	42	48	258	162	40	48	250	160	42	48	250
4.	Alappuzha	192	67	58	317	192	67	54	313	191	67	56	314
5.	Kottayam	169	67	60	296	164	66	60	290	159	63	60	282
6.	Idukki	85	40	56	181	66	34	56	156	73	37	56	166
7.	Ernakulam	181	91	87	359	180	90	82	352	181	89	83	353
8.	Thrissur	115	55	80	250	107	53	80	240	108	55	72	235
9.	Palakkad	194	63	61	318	173	59	61	293	176	63	61	300
10.	Malappuram	350	113	82	545	317	106	78	501	314	104	82	500
11.	Kozhikode	181	74	69	324	161	71	69	301	169	72	69	310
12.	Wayanad	91	34	40	165	78	32	37	147	90	34	40	164
13.	Kannur	114	76	83	273	103	70	83	256	102	73	83	258
14.	Kasaragod	141	72	77	290	141	72	77	290	141	72	77	290
	Total	2548	954	996	4498	2365	913	968	4246 (94.39 %)	2349	921	972	4242 (94.3 0%)

Source: Directorate of Public Instructions, Thiruvananthapuram

Solid Waste Management

6.59 In the light of the Supreme Court Judgment, Government of India had notified comprehensive rules for Municipal Solid Waste Management. As per Supreme Court directive local governments having a population above one million are required to set up waste processing

and disposal facilities before 31/12/2003 as part of implementing solid waste management system in urban areas.

6.60 Urban solid waste is presently being disposed of unscientifically by dumping it in disposal yards. Such operation of open dumping results in unpleasant odour and air pollution; generation of leachate polluting ground water and surface water; and fly and mosquito breeding. In order to find a lasting solution to the problem of solid waste management, government launched the Clean Kerala Programme in 2003 for which it has set up the Clean Kerala Mission. The Mission has the responsibility of capacity building of local governments in the preparation and implementation of solid waste management plan. The objective of “Clean Kerala” is to strengthen the managerial capacity and responsibility of the community and local governments in planning, implementation and maintenance of solid waste management facilities and services and to help local governments establish socially acceptable, operationally sustainable and financially viable Solid Waste Management facilities and services. During 2005-06, Integrated solid waste management system was extended to 12 Municipalities and 16 Grama Panchayats

6.61 As on 31.3.05, all the Urban Local Bodies (ULB) in the State have been sensitized on a Municipal Solid Waste (Management & Handling) rules 2002. Accordingly, all of them have started taking action on this and 49 ULBs possess land for solid waste management.

6.62 It is estimated that only about 50% of the 2500 tonnes of waste generated per day is collected for disposal. Every day a quantity of about 1200 tonnes of waste is left to decompose on road margins, drains, canals, water bodies and open space. Percentage distribution of households by arrangement for removal of garbage is detailed in Table-6.12

Table 6.12
Removal of garbage

Sl.No.	Arrangement for Removal of Garbage	Rural	Urban
1	By Residents	94	89
2	By Local Bodies	0	2
3	Private Arrangement of Residents	1	6
4	Other Arrangement	5	3
	All	100	100

Source: Report on Drinking Water, Sanitation, housing and Consumer expenditure in Kerala, 2003

Bio Medical Waste

6.63 About 85% waste generated in hospitals is general waste and can be handled as other solid wastes. The remaining 15% constitutes infectious and toxic wastes. (Table 6.13) More often than not, the general wastes in hospitals and bio medical wastes are allowed to mix thereby rendering the general waste also toxic and hazardous.

Table 6.13
Type of Waste (%)

1	Infections Waste	10
2	Toxic Waste	5
3.	General Waste	85

Source: State Pollution Control Board

6.64 Minimum required facilities to be installed in a hospital for biomedical waste treatment include one Incinerator, one Autoclave and one Shredder. According to a rough cost estimate each hospital may have to make a capital investment of Rs.10 lakhs for acquiring these facilities.

Therefore, installation of Common Treatment Facility for a given consortium of hospitals appears to be a more viable option. In a 5,000 bedded hospital, 7.5 MT of waste is generated per day. Out of this 1.25 MT would be bio-medical waste. The estimated capital cost for establishing a common treatment facility for bio medical waste generated from 5,000 hospital beds comes to Rs. 50 lakh. The annual O&M cost will come to Rs. 30 lakhs.

Hazardous Waste Generation

6.65 There are 323 hazardous waste recycling units in the country, of which 303 units are indigenous raw material while 20 depend on imported recyclable wastes. In Kerala 151 units are identified as hazardous waste generating units with a production of incinerable wastes of 5069 tonnes per annum, recyclable waste of 84932 tonnes per annum and disposable waste of 690014 tonnes per annum and making the total waste generation to 780015 tonnes per annum.

6.66 Improper storage, handling, transportation, treatment and disposal of hazardous waste results in adverse impacts on ecosystems and the human environment. Heavy metals and certain organic compounds are phytotoxic and at relatively low levels can adversely affect soil productivity for extended periods. The Government of India has promulgated the Hazardous waste (Management and Handling) Rules in 1989 under the aegis of EPACT of 1986. The Rules provides for the control of generation, collection, treatment, transport, import, storage and disposal of listed wastes.

Safe Handling of Drinking Water

6.67 There is always a possibility of drinking water getting polluted at collection, transport or storage points. Observations show repeated hand contact with drinking water during collection, transportation, storage, serving and consumption, and this is an active route of contamination.

6.68 Generally people consider the water they use for drinking and cooking as clean and safe. For a vast majority of people safe water is that which “looks clean”. “Tastes good” was considered an attribute of safe water by 20% “Water free from germs” is considered safe only by 30% of the respondents. Households get drinking water from various sources as noted in Table 6.14.

6.69 The practice of cleaning and covering the vessels used for water storage has a direct bearing on health. For cleaning, people use water (5%) and ash and water (18%). Covering of vessel is a common practice (79%)

Table 6.14
Percentage Distribution of Households by Primary Source of Drinking Water

Primary Sources	Kerala		India	
	Rural	Urban	Rural	Urban
1. Tap	12	33	19	70
2. Open Well	85	66	26	7
3. Tuber Well/Hand Pump	2	1	50	21
4. Other Sources	1	0	5	2
All	100	100	100	100

Source: Report on drinking water, Sanitation, housing and consumer expenditure in Kerala 2003.

6.70 Massive extension in supply of safe drinking water cannot make an appreciable impact on the health of the poor people without improved hygiene behaviour. This can be overcome only with hygiene awareness promotion based on location specific water handling practices, including the need for keeping the water source neat and clean.

6.71 The local governments have a key role in this regard. They can seek support of PHCs and Kerala Water Authority, and Kerala Rural Water Supply Agency in the Jananidhi Project areas.

Clean Kerala Mission

6.72 The Clean Kerala Mission has been functioning in Kerala since 2003. They are implementing various appreciable solid waste management schemes in the State producing good results. Almost all the Urban Local Bodies have formulated specific plan of action for Waste disposal. Rural Local Self governments have also recently started similar programmes. If the tempo of activities are moving on a positive direction with the co-operation and help of all LSGs, NGOs and Government departments, it is hoped that the concept of "Clean Kerala" will become a truth in Kerala by 2010.

State Environment Policy

6.73 Institutions involved with environmental governance and protection are to be strengthened in the state. More co ordination with implementing agencies as well as linkage with local governments would go a long way in achieving the desired results. For achieving this goal, the Govt. of Kerala has formed a separate Department of Environment in February 2006. Environmental activities being implemented through various departments/agencies have been brought under this department as a part of functional Co-ordination.

6.74 State environmental action plan needs to be prepared in a time bound manner for implementation in collaboration with LSGs, NGOs and Private sector. The initiative to prepare the State of Environment report would help in developing the action plan.

6.75 Even though environmental education is included as part of school curriculum, more topics related to the State have to be included. Environmental education has also to be made a compulsory topic in teacher training programmes. Environmental journalism is also needs strengthening to be given much focus in media coverage.

6.76 The Environmental Information System Network (ENVIS) is a notable example of the collection, collation and dissemination of environmental data and information. The initiative of the State council for Science technology and Environment to establish an ENVIS centre is a step in the right direction.

6.77 Regular publication of environmental indicators such as water and air quality levels and environmental information bulletins are essential for building a sustainable environmental framework.

6.78 A major set of challenges arise from emerging biodiversity loss. Preparation of People's bio diversity registers and documentation of indigenous traditional knowledge should be given top priority.

6.79 Environmentally sensitive zones requiring special conservation efforts in the state to be identified and legal status has to be given for conservation. Area development plans prepared on a scientific basis with adequate participation by the local communities and LSGs will help in sustainable conservation.

6.80 Protection of areas of high endemism of genetic resources to be strengthened. State has to prepare an environment policy on the backdrop of the national policy, considering the wider ramifications of the sub sector.

6.81 District Environmental atlas needs to be prepared in a phased manner.

6.82 State Government has prepared a draft Environmental Policy for the protection of environment in the State. The implementation of the Policy will go a long way in achieving the goal.

Soil And Water Conservation

6.83 For the last three decades NGOs and development agencies have implemented watershed management projects with the aim of increasing agricultural productivity and reducing poverty. Many of the watershed management projects throughout the world have not taken into account land use capability. They have centred on activities mostly at plot level and do not add upto transformation at catchment level. Additionally they have been top down and have not accommodated the interests of resource users. In order to make a meaningful difference, local people have to be directly involved, trusted and enabled their knowledge appreciated and their skills used.

6.84 A number of schemes on rainwater harvesting and watershed management are implemented by various Ministries with different guidelines, like NWDPR, Hariyali, WGDP, River valley projects etc. There are many issues of inter Ministerial Coordination, commonality of approach, provision of support services, which need to be resolved to give a greater thrust to water harvesting and conservation.

6.85 The projects under RIDF I and RIDF II and RIDF III were completed. Under RIDF IV & V, there were no schemes for soil conservation department. The department is now implementing RIDF VI, VII & VIII, IX and X schemes. Under RIDF VI, 20 projects were sanctioned with an outlay of Rs. 1021.87 lakhs and 40 watersheds were sanctioned under RIDF VII with an outlay of Rs. 1779.32 lakhs covering an area of 13694 ha. Similarly under RIDF VIII, 12 schemes were sanctioned with a financial outlay of Rs. 647.40 lakhs for covering an area of 5175 ha. Under RIDF IX, 7 projects were sanctioned with an outlay of Rs. 403.47 lakhs for covering an area of 2859 hectares. 51 projects having a project cost of Rs. 2973.5 lakhs were sanctioned under RIDF X for covering an area of 28537 hectares. During the year 2005-06 an area of 9845 ha. was brought under various soil and water conservation measures expending an amount of Rs. 1200 lakhs. Details regarding RIDF projects are given in Table-6.15

Table 6.15
RIDF assisted Soil and Water Conservation Programmes

RIDF Phase	Period	No. of Watershed			Project cost (Rs. lakhs)	Project Area (Ha)	Cumulative Achievement	
		Sanctioned	dropped	Completed/ ongoing			Physical (Ha)	Financial (Rs. lakhs)
RIDF I	1995-97	40	3	37	1013.20	5902	5718	996.09
RIDF II	1996-99	32	6	26	1292.99	8725	7859	1087.45
RIDF III	1998-02	40	3	37	2161.50	13423	10890	1845.07
RIDF VI	2000-03	20	-	20	1021.87	6220	4627.5	845.53
RIDF VII	2002-04	40	-	40	1779.32	13694	9647	1593.6
RIDF VIII	2002-05	12	-	12	647.40	5175	3000	455.05
RIDF IX	2004-06	8	-	-	403.47	2859	1473	199.72
RIDF X	2004-07	51	-	-	2973.75	28537	8700	1205.13

6.86 Other important state sector schemes implemented during 2005-06 were the protection of catchment of reservoirs of water supply schemes and stabilisation of land slide areas. Sedimentation of reservoirs is a serious problem posing a threat to the life of the reservoir and its storage capacity. Sedimentation is caused due to soil erosion and improper land use in the catchment area. With a view to reduce siltation of the reservoirs of water supply schemes, various soil conservation measures are taken up in the catchment of reservoirs of Aruvikkara and Sasthamcotta. During 2005-06, soil and water conservation measures were implemented at a cost of Rs.12 lakhs covering an area of 64 ha in Aruvikkara and Sasthamcottah.

6.87 Stabilization of land slide areas scheme is being taken up by the state considering the frequent landslide occurring in different districts of the State. Under this project, Rs. 15 lakh has been utilised for taking up scientific soil conservation measures in 151 ha. area affected by landslide in the State.

6.88 Under the National Watershed Development Project for Rainfed Areas (NWDPR), 30 watersheds have been identified in the State during Tenth Plan period with an effective area of 72032 ha. The District Watershed Committee and Watershed Development Team were constituted and Project Implementing Agencies and Nodal Agencies were identified in all districts. During 2005-06 an amount of Rs.705.38 lakhs was expended under the project for treating an area of 12400 ha.

6.89 An integrated watershed management approach is being adopted Kabini River valley project. Total catchment area of Kabini is 1.635 lakh ha of which 1.05 lakh ha needs soil and water conservation measures. An amount of Rs.937.15 lakh has been spent upto 3/2006 for covering an area of 9060 ha. During the year 2005-06 an area of 2619 ha has been treated under the project expending an amount of Rs. 297.41 lakhs(Table.6.16). At present works are being implemented in 7 watersheds which has been classified under high priority by the All India Soil and Land use Survey. Though the implementation of the project has been beneficial to the Scheduled Tribe and Scheduled Caste families in Wayanad district, the progress of the project by and large was slow.

Table 6.16
Achievement of Soil and Water Conservation Programmes
during 2005-06

Name of Scheme	Achievement	
	Financial (Rs. lakhs)	Physical (ha.)
State Plan		
i) RIDF	1200.00	9845
ii) Other State Plan schemes	44.89	215
Centrally Sponsored Scheme		
i) NWDPRRA	705.38	12400
ii) River valley project – Kabini	297.41	2619
Total	1990.17	21210.3

6.90 The major schemes implemented under Western Ghats Development programme (WGDP) include forestry, village and small scale industries, horticulture, soil conservation, minor irrigation, dairy development, agriculture etc. The expenditure during the Ninth Plan was Rs.6112.70 lakhs of which 21 percent was for Soil Conservation, 23 percent for forestry schemes and 18 percent for minor irrigation works. During 2005-06, Rs.11.51 crores has been spent and out of this Rs. 8.11 crores has been utilised for 88 watershed in the State. Physical and financial achievements of WGDP for Natural Resource Management for 2005-06 are shown in Appendix-6.15

6.91 Many states have taken up development of degraded areas under the watershed approach on a mission mode. The new paradigm of 'watershed plus' recognises the need to involve the community as a necessary condition for the sustainability of watershed programmes. The programme seeks to ensure convergence of all other programmes that promote economic activities and generate increased employment opportunities. Conscious efforts to promote non farm employment and increased land access for the land less as well as promotion of Self Help Groups form a part of the new approach. The success of the programme, to a great extent, depends on the involvement of PRIs and local people in planning and implementation of watershed programmes and the extent of securing the participation of the local community to take care of resource management. A detailed guideline covering the technical aspects also needs to be put in place as recommended by the Inter Ministry Task force.

6.92 In Kerala retention ponds are traditional water conservation structures used for drinking, domestic and irrigation purposes. These ponds also act as an infiltration basin or recharge basin which enhances ground water recharge. In most of the micro water sheds, there is one village pond which is under control of local self Government. During monsoon, the side banks of these ponds erode and ponds get silted up. The same silt from the pond is subsequently used to restore the side banks but is often eroded before vegetation can establish. An experiment was done with coir geotextiles (natural coir fibre) for slope protection and to provide an alternate cost effective option to reduce soil erosion, increase vegetation growth and soil moisture availability in Amachal watershed in Trivandrum District. in Western Ghat area. Salient results of the experiment are given in Box No. 6.6

Box : 6.6**Effect of Coir Geotextiles for Soil Conservation**

- Treatment with geotextile in combination with grass *Axonopus compressus* is an effective ecohydrological measure to protect steep slopes from erosion.
- The coir geotextile with grass was most effective to prevent erosion, to retain moisture and nutrients and to facilitate grass growth.
- The degradation of natural fibre over time did not result in any loss of effectiveness, but contributed to the natural fertility of the soil after the vegetative cover was well established and geotextiles was no longer needed for bank stability.
- The relative cheapness of material and potential for producing and laying the matting with local labour makes the use of coir geotextiles a very attractive option for sustainable development.

Source : Hydrology and Earth System Sciences 2006

The National Rainfed Area Authority

6.93 The dry land and rainfed areas constitute nearly 60% of the net sown area of the country. Agriculture in these areas is currently challenged with umpteen issues which is also home to the poorest section of our population. Considering the importance of rainfed areas in Indian Agriculture, Govt. of India has established a National Rainfed Area Authority (NRAA) in November 2006. The NRAA is an advisory, policy making and monitoring body charged with a role of examining guidelines in various existing schemes and in the formation of new schemes including all externally aide projects in the rainfed areas. The authority is intended to support upgradation and management of dry land and rainfed agriculture in the country. The authority is also supposed to converge the various schemes being operated by different ministries in the area of watershed development. The NRAA has a two-tier structure of a Governing Board and Executive Committee which have representatives from Ministry of Agriculture, Rural Development, Water Resources, Environment & Forests, Planning Commission, Panchayati Raj and NABARD besides farmer representatives and eminent experts in related areas. The mandates of the authority include evolving common guidelines for all schemes under different ministries and preparing perspective plan outlining national strategy for holistic development of rainfed areas. In the state perspective, the authority is supposed to identify rainfed areas in different states which need priority attention and prepare watershed development programmes for integrated natural resource management in consultation with states. The gaps in input supply, credit availability and dissemination of appropriate technology relevant to rainfed areas will be identified by the authority. The evaluation of completed watersheds and concurrent evaluation of

on going watershed programmes in different states will be performed by the authority(*Source: Ministry of Agriculture & Co-operation, 2006*)

Forestry and Wild Life

Forest Cover

6.94 Recent estimates on global forest cover by FAO indicate that between 1990 and 2000, the annual loss of natural forests in the tropics, where most of the deforestation is occurring was 15.2 million ha. Although this figure was slightly lower than the 15.5 million ha recorded for the period 1980-1990, the rate of deforestation is almost constant.

6.95 The forest cover in the country according to 1999 assessment was 637293 sq.km. while the 2001 assessment showed an increase of 6 per cent. Among the states highest net increase of 5237 sq. km. was observed in Kerala. Forest cover assessed in 2001 consists of all lands with more than one ha having tree canopy density of more than 10 per cent interpreted from satellite data, irrespective of tree species. Even though higher tree covers were reported in 2001, direct comparison with 1999 assessment would be invalid since 1:50000 scale digital interpretations were adopted in 2001 while 1: 250,000 visual interpretations in 1999. Technical factors as well as changes in the ground have contributed to the changes. The forest cover of the state as per the 2001 assessment of FSI was 15560 sq.km. (dense forest 11772 sq.km. and open forest 3788 sq.km).

6.96 The forest covers 28.98 per cent of Geographical area in Kerala and the strategies for the development of forests envisages maintenance of environmental stability through preservation and reduction of degradation of forest, conservation of Bio-diversity, increasing productivity of forests and developing Participatory Forest Management and technology improvement.

6.97 Kerala ranks 14th among all the States/Union Territories in respect of percentage of geographical area under forest cover. Madhya Pradesh with 77265 sq.km. has the maximum area under forest cover followed by Arunachal Pradesh (68045 Sq.km.) and Chattisgarh (56448 sq.km). Kerala ranks 19th among all the states /UTs when the proportion of recorded forest area to its geographical area is considered.

6.98 The estimated Forest area (provisional) in Kerala is 11244.6641 sq.km.. This includes 9216.349 sq.km. of reserve forests, 217.189 sq.kms. of proposed reserves and 1838.125 sq.km. of vested forests. Out of the total 11244.6641 sq. kms., the effective forest area in Kerala is only 9400 sq.kms. Division wise details of forest cover are given in Appendix - 6.16.

6.99 In Kerala forests fall in two bio-geographic zones of Western Ghats and the West Coast, and are rich in bio-diversity and vital for environmental protection and considered to be a repository of rare and endangered flora and fauna. The forest area in Kerala (11244.664 sq.km.) is higher than the national average of 19.5%.

Natural Forest

6.100 The spatial distribution of forests in the State is very uneven, with high forest concentration in the high land of the Western Ghats, supplemented by a few forest areas in the midlands. There are considerable variations in forest type, the predominant three broad types being tropical moist deciduous forests from the plains to 750 MSL, tropical wet evergreen forests in the mountain ranges of the Ghats, and tropical semi-evergreen forests between these two types.

These three types together cover most of the natural forest area (79 per cent). The coverage of the plantation forestry is to the extent of 19.30 per cent of the total area. The forests in Kerala are better stocked than forests in most other parts of India. The types of forests in Kerala are given in Table 6.17

Table 6.17
Types of Forests in Kerala

Sl. No.	Forest Type	Area (Sq.km.)	% of Total area
1	Tropical Wet Evergreen and semi evergreen Forests	3299	35.10
2	Tropical Moist Deciduous Forests	4100	43.62
3	Tropical Dry Deciduous Forests	100	1.06
4	Mountain Sub Tropical Temperate shoals	70	0.74
5	Plantation	1814	19.30
6	Grass land	17	0.18
	Total	9400	100

Source: Department of Forest

6.101 Forest plantation constitutes the major source of raw materials to the forest based industries. The total area covered by forest plantation of various species is about 2.03 lakh ha. Teak is the major species planted 69124.72 ha (34.05 %) followed by Eucalyptus 13246.81 ha (6.53 %). Of the total forest plantations, the area covered by hard wood species is 73729.47 ha (36.4%), Softwood species is 26326.60 ha (13%), Bamboo and reeds is 6125.23 ha (3.02%), Plantation crops is 1190.41 ha (0.59%) and mixed plantation is 95155.54 ha (46.98%). (See Appendix – 6.17)

6.102 Major forest produce includes timber, reeds, bamboo and firewood. The quantity of timber produced in 2005-06 was 52128.472 cum. The number of bamboos and reeds produced was 372.76 lakhs. These are species which can be promoted under farm forestry with people's participation. The trend in production of forest produces from 1997-98 onwards is shown in Appendix 6.18

6.103 The Ministry of Environment and Forests has constituted the National Forest Commission on 7.2.2003 for a period of two years to review the working of Forests and Wildlife sector covering existing policy and legal framework, current status of forest administration, policy option for sustainable forest and wildlife management, biodiversity conservation, and establishing partnership and interface between forestry management and local communities including tribals. The Commission has submitted the report during 2006. The Major recommendations of the National Forest Commission are summarized in Box No. 6.7

Box : 6.7**Major Recommendations of the National Forest Commission**

- Bamboo, including ringal and cane must be included in minor forest produce and excluded from tree under Forest Act.
- Indigenous Knowledge of the Forest Communities and their intellectual property rights in this regard need to be safeguarded.
- Felling regulations on private lands may be restricted to 'High Restricted Tree Species'.
- No land ceiling shall be imposed on land under plantation of forest tree.
- As regard saw milling regulations/rules assess the demand and supply of wood, working capacity of the saw mills and the number of licenses should be based on the legal and ecologically sustainable timber supply and the working capacity of the saw mills.
- The provision of a sustainable supply of fuel be undertaken by a newly created Fuel wood Mission.
- Programmes should be undertaken to conserve, manage, scientifically harvest and sustainably utilise medicinal plants found in forest areas.
- Sale of fuelwood by individuals must be stopped. It would be entrusted to Forest Department, JFM institution/GramVan.
- The assistance of appropriate non-government organisations and Gram Sabhas/Panchayats etc. should be taken in the afforestation activity.
- Tree planting in open areas along railway lines, canals and roads with adequate funding for planting and maintenances.
- Management plans need to be prepared for tracts holding substantial natural vegetation.
- Special emphasis should be given on water conservation and water harvesting.
- Fires extending over 20 Km² of forest and grasslands should be declared as a disaster by the concerned State Government.
- Environmental impact assessments that are mandated for every developmental projects of a certain size must be carried out scientifically.
- Management plans for coastal and shelter belt plantations.
- Mangroves should be officially classified as forests and mangroves found anywhere should be placed under the control of SFDs.
- A National Wetland Conservation Act should be framed.
- Inclusion of all types of wetlands in the land use classification.
- A national wetland Biodiversity Register should be started.
- A Forest Commission Fund should be created to ensure adequate financial resources for forest and wildlife management through levy of a cess on sale of forest produce.
- Each protected area should have a comprehensive management plan, which needs to be followed and revised periodically.
- Resorts set up for wildlife and ecotourism must undertake to ensure that at least 60% of their staff and 40% of their salary expenses go to local residents and must be rigorously enforced in tribal areas.
- Plantation forestry must be on degraded forest area.
- The focus of agro forestry must filter down to the tahsil/block levels. All restrictions on the harvest of trees, transport and sale of timber etc. must be removed.
- Import of timber and import duty thereupon should be regulated to keep agro forestry remunerative to the farmers.
- Currently, industries pay a 2% cess on water, which goes to the concerned Pollution Control Boards. At least half of the 2% cess should go to the concerned SFDs or, more appropriately, the cess be enhanced to 4% with half going to SFDs.
- Allocation to the forestry sector must be increased and must not be less than 2.5% of the total plan outlay. Also 20% funds of all the Rural Development Programmes should be incurred on forestry and watershed operations.

Source: Ministry of Environment and Forest, GOI

Timber Market

6.104 Although Kerala was a net exporter of hardwood timber, presently about 50% of its wood requirement in cities are met from import. It is estimated that the volume of timber import to the state is to the tune of Rs. 500 crores per annum. Forests of the state contribute to only 5% of the timber requirements of the state. Balance 95% is met from private lands as well as from import. There is hardly any scope for increasing the supply of timber from the forests, as a major objective of current forest policy is ecological conservation rather than commercial production of wood. The only feasible way to attain self-dependency in wood requirements is by producing more wood in the private lands.

6.105 The National Forestry Action Plan projects the annual requirement of timber for household sector in the country at 66.6 million cubic meters (cum) in the year 2006 and the total timber requirement at 81.8 million cubic meters. Against the demand, production from forests has been estimated at 29 million m³ in 2006. The homestead mixed gardens is a basic agro ecosystem in Kerala. A wide spectrum of trees and shrubs, more than 127 species, are reported in the Kerala homestead gardens. Most of these species are under exploited. Available micro level studies indicate that standing stock of commercial timber from the Kerala homesteads is between 6.6 and 50.8 m³ per hectare. Bio diversity of Kerala homestead gardens has declined drastically due to commercialization. In order to conserve and improve on-farm genetic diversity and to enhance timber productivity from the traditional land use systems, concerted efforts are necessary especially for evolving technology packages on tree management and production and distribution of quality planting materials.

6.106 Farm forestry does not adequately figure in the local plans of the panchayats. Dearth of adequate planting materials of the desired species is a major constraint for popularising the activity in rural areas. Panchayats can render the required support for organising nurseries with people's participation. Planting of trees in homesteads and public places could be promoted by the Grama panchayats by involving farmers and NGOs. However sustainability has to be ensured through participatory management.

Trees outside Forests

6.107 The World has billions of trees that are not included in the Forest Resource Assessment 2000 definition of forest and other wooded land. Trees outside Forest (TOF) include trees in cities, on farms, along roads, and in many other locations. Trees outside the forest are an important source of non-wood forest products. In Kerala a study estimated that out of the total annual production of 14.6 million cubic meters of wood in the state, about 83 per cent was from homesteads, 10 per cent from estates and seven per cent from forests (quoted by FAO)

Participatory Forest Management (PFM)

6.108 Joint Forest Management was introduced in India with the proclamation of National Forest Policy 1988. However, through a resolution in 1990, the scheme was actually introduced in all the states in India. In Kerala it is known as Participatory Forest Management. Under the scheme, the forest dependant communities are given rights to collect lops and of branches, non-timber forest produces etc.

6.109 Joint Forest Management (JFM) programme was pursued vigorously as the result of the National Forest Policy 1988, and the Joint Forest Management resolution in 1990 has now been adopted in all 28 states. Around 84632 JFM Committees have been formed and 17.33 million ha.

forest area have been brought under JFM programme. About 85.28 lakhs families are involved in JFM programme in various states all over the country. In Kerala 323 PFM Committees have been formed and 1.71 lakhs ha. forest area has been brought under PFM. About 41000 families including 3828 SC's and 11371 ST's are involved in PFM programme in various forest divisions of Kerala. The execution, monitoring and evaluation of the micro plans are vested with the Vanasamrakshana samithies. Upto March 2006 about 368 VSS has been registered.

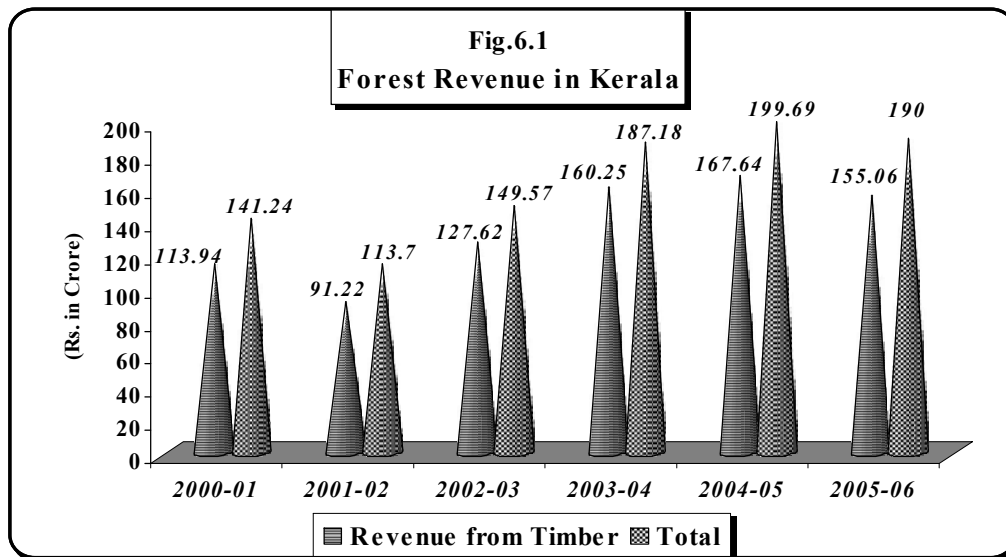
6.110 Government of Kerala constituted the FDA's in each forest division in 2002-03, with a view to guiding the activities of the VSS. So far 47 Forest Development Agencies (FDA's) have been constituted in the state.

National Afforestation Programme

6.111 The total outlay for National Afforestation Programme in the plan period is Rs. 47.65 crores and later it is revised to Rs. 31.40 crore. The amount released to State upto March 2006 was Rs. 10.55 crores and the expenditure reported was Rs. 6.05 crore. The project is being implemented by 24 Forest Development Agencies through Participatory Forest Management (PFM) mode with the active participation of stake holders forming Vana Samrakshana Samathies (VSSs).

Forest Revenue

6.112 The Revenue from the forestry sector by way of sale of timber and other forest products comes to Rs. 190 crores in 2005-06 as against Rs. 199.67 crores in 2004-05. Major portion of the forest revenue is from timber (Fig. 6.1). During 2005-06, Rs. 155.06 crore was the revenue from timber, which account for 81.61 per cent of the total forest revenue. The State Government have modified the policy of supplying raw materials at subsidised rates from 1999-00 onwards and completely abolished the subsidy with effect from 30.09.20-04. The increase in revenue attained through this measure is of the order of Rs. 10.00 crore per annum.



Wild life and Biosphere Reserve

6.113 By 2005, India has 90 National parks and 501 Wild life Sanctuaries covering an area of 1,56,934 sq.km. (roughly 22 per cent of the forest area and five per cent of the land area of the country). The 90 National Parks in the country cover an area of 36,882 sq.km. which constitute 5% of the forest area. The total area of 501 sanctuaries is 120,052 sq.km. which constitute 17 per cent of the forest area. Of these, 28 have been declared tiger reserve, spread over 37,761 sq.km. in 17 states. These reserves constitute roughly 5.6 per cent of the recorded forest area and over one per cent of the country's geographical area. The total tiger population recorded in 2001-02 census is 3642, but over half of these tiger live outside tiger reserves. The tiger population in periyar trigger reserve is estimated as 36 during 2001-02. The Periyar Wild life sanctuary was constituted in 1950 and was brought under project Tiger in 1978 as Periyar Tiger Reserve. The Periyar Tiger Reserve also falls in the Periyar Elephant Reserve. The types of forest include evergreen forests, grass land and moist deciduous forests. The total extend is 777 sq.km. Consisting of core (350 sq.km), buffer (377 sq.km) and tourism (50 sq.km) zones. The animal found in the reserve are elephants, leopard, tiger, lion tailed macaque, nilgiri marten etc. in addition to the 45 species of reptiles. The Ministry of Environment and Forest has set up a Task Force to review the management of tiger reserves and the key recommendations of the Task Force are given in the Box No. 6.8

BOX : 6.8

Key recommendations of the Tiger Task Force

- Reinvigorate the institutions of governance
- Strengthen efforts geared towards protection of the tiger, checking poaching, convicting wild life criminals and breaking the international trade net work.
- Expand the inviolate spaces for the tiger by minimising human presser in these areas
- Repair the relationships with the people who share the tiger's habitat by building strategies for coexistence.
- Regenerate the forest habitats in the fringes of the tiger's protective enclaves by investing in forest, water and grassland economies of the people.

Report of the Tiger Task Force, Government of India

National Zoo Policy

6.114 Striving to enact legally enforceable standards and norms of upkeep and management of animals in Zoo, Central Zoo authority has been supporting the conservation of endangered species. The National Zoo Policy aims at giving proper direction and thrust to the management of Zoos by mustering cooperation and participation. The National Zoo Policy is summarized in Box No. 6.9

Box : 6.9
National Zoo Policy

- No new Zoo shall be set up unless a sustained supply of resources including finance and technical support is ensured.
- Zoos shall prepare a long term master plan for development to ensure optimum utilization of the land, water, energy and finance.
- Every Zoo shall maintain a healthy, hygienic and natural environment.
- Zoos shall give priority to endangered species in their collection and breeding plans.
- Zoos shall regulate the number of animals of various species in their collections
- Every Zoo shall endeavor to avoid keeping single animal of nonviable set ratios of any species .
- Zoos shall avoid keeping surplus animals of prolifically breeding species

Source: National Zoo Policy, Central Zoo Authority, GOI

6.115 The Western Ghats represent one of the World's 18 hot spots of biodiversity as per Norman Meyer's classification (now the number of hot spots is raised to 34). There are more than 4500 species of flowering plants found in Kerala. The records of KFRI indicates that there are 145 species of mammals of which 14 species are endemic to Western Ghats, 169 species of fresh water species, 93 species of amphibians of which 40 species are endemic and 486 species of birds of which 16 are endemic to Western Ghats, in addition to innumerable micro-flora and fauna.

6.116 The area covered by five National Parks, fourteen Wild life sanctuaries coming under the category of protected areas in Kerala works out to 2346.28 sq.kms. It is about 21 per cent of the total area under forest and 6 per cent of the total geographical area, which is higher than the national average of 5 per cent. Details are given in Appendix-6.19. Protected area are managed now as showcases of bio diversity with predominance for large animals in habitat management, Participatory Management based on the principles of eco-development has been initiated and this strategy has resulted in the co-operation of the neighborhood communities and forest dependent communities. During the year 2005-06, an amount of Rs. 1488 lakhs was earmarked under various schemes for protected areas management including bio diversity conservation. Out of which Rs. 1261.93 lakhs were utilised under various schemes.

6.117 Biosphere Reserves are terrestrial and coastal ecosystems which are internationally recognised within the framework of UNESCO's Man and Biosphere programme. In the country, 13 Reserves have been set up and in 2001, UNESCO approved designating the Sunderban (West Bengal) and Gulf of Mannar Reserves. As a result three Biosphere Reserves from India are now included in the International Net Work, the third being Nilgiri (Kerala, Karnataka and Tamil Nadu) which was designated earlier. Agasthyamala Hills in Kerala comprising of an area of 1701 sq.km, has been designated as 13th Biosphere Reserve in 2001. Detailed action plans will facilitate attraction of additional funding for these sites for long term conservation and sustainable utilisation of resources.

6.118 The first National Wildlife Action Plan of 1983 has been revised and the new wild life Action Plan (2002-2016) has been adopted at the national level. The plan outlines the strategies, action points and priority projects for conservation of wild fauna and flora in the country. A systematic management of Protected Area is most important from ecological, environmental and

socio economic point of view. The implementation of Management Action Plans prepared under the Kerala forestry Project is of special priority.

General Forestry

6.119 In General Forestry, survey and demarcation of forest boundaries is one of the major activities. The activities of boundary protection during 2005-06 include construction of 7811 cairns and maintenance of 1107 cairns. Fire protection is another important activity and during the period 2213.37 km fire lines were created. Other activities are maintenance of plantation 17397 ha, construction of new buildings (15 nos), maintenance of forest roads 8.35 Kms, and 1605 ha. of plantation of various species were raised during 2005-06. Under 'Hardwood' species 73.60 ha of hardwood species was also raised during the year 2005-06.

6.120 The outlay and expenditure for various schemes implemented in the Forestry sub sector is shown in Table 6.18

Table 6.18
Outlay and Expenditure of 2005-06

	<i>(Rs. Lakh)</i>	
Plan	Budgeted outlay	Expenditure
State sector Schemes	4084.00	3247.66
Centrally sponsored Schemes	1625.00	791.22
Total	5709.00	4038.88

6.121 The expenditure reported for various schemes implemented during the period include forest protection with an expenditure of Rs. 10.44 crore, regeneration of denuded forest with Rs. 2.92 crores, strengthening bio-diversity conservation and management of protected area with Rs. 5.68 crores, strengthening of infrastructure facilities with Rs. 2.38 crores, improving productivity of Plantation with 3.99 crores.

6.122 The World Bank aided Kerala Forestry Project was commenced in March 1998 and the project were completed on 31.12.2003. The total outlay of the project was Rs. 182.39 crore, out of which Rs. 152 crore was IDA assistance, Rs. 29 crore GOK assistance and Rs. 1.39 crore is of beneficiary contribution. During 2005-06, a provision of Rs. 280 lakh was set apart for continuing the activities under the project including Forest Management Information system and expended an amount of Rs. 249.50 lakhs. Upto 31.3.2006, the cumulative expenditure incurred for the project was in the tune of Rs. 170.01 crores.

Management of Non-Wood Forest Produce

6.123 The NWFP harvested in Kerala is dominated by reeds and bamboos, but the forests are also rich in canes as well as forest fruits, seeds, leaves, roots and other produce collected as medicinal plants mainly used for preparing ayurvedic medicine as well as for edibles, spices and fiber products. The quantities of bamboo and reed annually harvested are at a level of 40-50 thousand tonnes of bamboo and 80-100 thousand tonnes of reeds.

6.124 The NWFPs including medicinal plants is being given a major thrust because of their importance around the world. The productivity and management of NWFPs are to be improved through sustainable and scientific management by adopting improved methods of harvesting processing, value addition and marketing.

6.125 In addition to the protection and conservation measures taken by the department, these activities are to be strengthened by executing the same through actual consumer groups themselves. For this purpose Vana Samrakshana Samithies (VSS) were formed. The collection of NWFPs is entrusted with these user groups and they undertake collection.

6.126 During the year 2005-06, Rs.170 lakhs has been earmarked for management of medicinal plants and the expenditure was 127.98. In addition to State Plan support, some specific projects are being supported by the National Medicinal Plants Board.

Compensatory Afforestation Scheme

6.127 The Compensatory afforestation project was sanctioned at an estimated cost of Rs.113.00 crores to be implemented within a period of 10 years starting from 1993-94. The objective of the scheme is the afforestation of 57,180 ha. of forestland in lieu of 28588 ha. lost by way of encroachment prior to 01.07.1977 which is a pre-condition for obtaining Government of India clearance for issuing patta to the encroached land. During 2005-06 an area of 3557 ha, were afforested under the scheme and an amount of Rs. 401 lakh was spent. About 56511 ha. of degraded forest have been treated so far under the project.

Kerala Forest Development Corporation

6.128 KFDC is a public sector undertaking with shares owned by Government of India and Government of Kerala. The jurisdiction of the Corporation covers forest areas situated in 7 revenue districts and 10 territorial forest divisions. The total area of 10717 ha. (8006.86 ha of tree plantations and 2710.13ha. cash crops) is under 6 divisions and 23 sub units and tree crops like Eucalyptus, Acacia, Teak, Albizia, Manjium etc. and cash crops like Cardamom, Coffee, Tea, Pepper etc. are cultivated.

6.129 The activities undertaken during 2005-06 include raising of 308.87 ha. pulpwood plantations. KFDC entered into an agreement with M/s. Hindustan Newsprint Limited for the supply of pulpwood during 2005-06 at subsidised rates and supplied 2525 tonnes. Eco-Tourism activities being carried out at Gavi and Munnar Divisions make a profit of Rs. 10.60 lakhs during the year.

Sanjeevanivanam (National Medicinal Plants Board Assisted Scheme)

6.130 This is a scheme implemented for the creation of awareness among the stake holders through appropriate extension activities including training, extension, marketing and documentation sanctioned by the NMPB for Rs. 25 lakhs for 3 years starting from 2002-03. The awareness and training programmes for stake holders have been conducted on promotion and cultivation of medicinal plants. During 2005-06, 65 ha. of medicinal plants area was treated in Wayanad, Kannur and Kasaragod Districts by utilizing Rs. 8.26 lakh.

Project Elephant

6.131 The scheme is for protection of elephants and their habitat and corridors. The elephants in the forests are protected from poaching and their habitats are improved with fire protection and planting fodder species. For the benefit of public electric fences and elephant proof trenches are created and compensation is paid for the damages caused to their person and property. Public awareness programmes are conducted and mahouts are trained for better handling the elephants in

captivity. The activities are executed as per the specific work programme approved by the Government of India.

Eleventh Plan

Targets

- Achieve the forest tree cover of 33.3 per cent by the end of the plan period

Approach and Strategies

- Preserve the natural forest including biodiversity hot-spots.
- Extension of participatory approach in forest management
- Acquisition of areas for providing corridors to migrant fauna and biodiversity conservation.
- Survey and demarcation of forest boundaries.
- Protection of Sandalwood
- Fire monitoring using Satellite Imagery in association with NRSA
- Full utilization of forest management information system
- Encourage homestead and agro forestry practices.
- Provide employment opportunities to forest dependent communities
- Development of Non-wood Forest produce.

The thrust areas of the forestry sector

- Management of natural forests
- Promotion of participatory forest management
- Promotion of medicinal plants conservation and development
- Conservation of mangroves
- Promotion of participatory habitat forestry through village panchayats
- Biodiversity conservation including conservation of birds
- Application of Forest Management Information system and GIS for forest management

CHAPTER 7

ENERGY DEVELOPMENT

Introduction

Energy is an integral part of economic development in India and the energy sector remains the most powerful element of infrastructure essential for delivering expected levels of GDP growth. The Energy Security, broadly understood, connotes the capacity of a nation to satisfy the energy needs of current and future generations. Since independence, India's Primary fuel was coal. It has been used for most of our electricity generation. Owing to the decline in hydro development and prevailing power deficits, coal-fired thermal power units are often used for meeting peak loads. 10 nuclear power plants accounted for 2.5-2.7 % of total utility generation. The poor performance of existing generating units in the country has been a principal cause of power shortage and unreliable quality of power supply. The average Plant Load Factor (PLF) of thermal Power stations in India is less than 60%, but varies considerably across regions. Installed Power Generation Capacity in India is shown in Table 7.1.

Table 7.1
Installed Power Generation Capacity (MW) as on 31-05-2006

Sl. No.	Region	Hydro	Thermal				Nuclear	R.E.S. @	Total
			Coal	Gas	Diesel	Total			
1	Northern	11061.88	17592.50	3213.19	14.99	20820.68	1180.00	694.59	33757.15
2	Western	6681.33	20941.50	5080.72	17.48	26039.70	1300.00	1098.83	35119.86
3	Southern*	10967.71	15962.50	3449.30	939.32	20351.12	880.00	4233.49	36432.32
4	Eastern	2496.53	13662.38	190.00	17.20	13869.58	0.00	111.67	16477.78
5	N. Eastern	1113.07	330.00	771.50	142.74	1244.24	0.00	46.86	2404.17
6	Island	5.25	0.00	0.00	70.02	70.02	0.00	5.42	80.69
7	All India	32325.77	68488.88	12704.71	1201.75	82395.34	3360.00	6190.86	124271.97

Source: Ministry of Power

Captive Generating capacity connected to the Grid (MW) = 14636

@ Renewable Energy sources (RES) includes Small Hydro Projects (SHP), Biomass Gas (BG), Biomass Power (BP), Urban & Industrial waste Power (U&I); and Wind Energy

* Nellore Thermal Power station (Coal) 1x30 MW in Andhra Pradesh has been deleted due to ageing

Kerala Scenario

7.2 Power development in the State has been mainly dependent on its hydro-potential. The Government of Kerala is encouraging Private Sector participation in augmenting power supply. The government has also given a thrust to develop hydro power through small and medium projects. Some of the new important thermal projects include the Brahmapuram Diesel Power Project, the Kozhikode Diesel Power Project at Nallalam and Power Project of NTPC at Kayamkulam. Apart from these the State has 24 hydel units and one wind power unit. While majority of the hydel units have a capacity in the range 10 to 75 MW. The Growth of Power System in Kerala for the year 2004, 2005 and 2006 is given in Table 7.2.

Table 7.2
Growth of Power system in Kerala

Particulars/Year	2004	2005	2006 (up to 31-08-2006)
Installed capacity MV	2617	2641	2649.24
Annual sales MU	9384	10270	5896
Per Capita Consumption KWh	400	427*	444#
EHT lines –Circuit KM	9924	10178	10248
Sub Stations (Nos)	251	269**	272
HT lines- Ctkm	33618	34680	35152
LT lines – Ctkm	207711	215152	217784
Distribution Transformers (Nos)	36415	38193	38843
Revenue from sale of power (Rs. crores)	3158.87	3590.11	1560

Source: KSEB

*Population based on 2001 Census

** includes 1 No 400 KV Pallippuram sub station of Power Grid Corporation of India Limited

Estimated value based on present consumption pattern

Generation

7.3 Kerala Power System has an installed capacity of 3565.66 MW consisting of 30 power generating stations- 24 hydel, five thermal and one wind. Out of this, KSEB owns 22 hydel, one wind and two thermal stations. Of the existing capacity of 3565.66 MW, 1842.6 MW is from KSEB's hydel plants, 33 MW from Hydel Captive Power Plants, 234.6 MW from KSEB's thermal plants, 177.44 MW from thermal plants of IPPs, 359.58 MW from Kayamkulam thermal station of NTPC, 2.03MW from KSEB's Wind Project and 916.41 MW share from the central generating stations.

7.4 Source wise installed capacity details is shown in Table 7.3

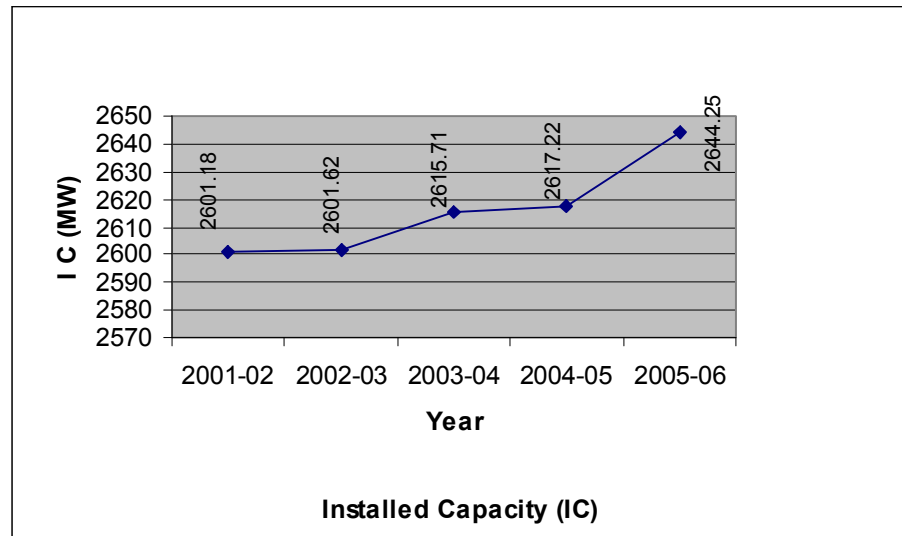
Table 7.3
Existing Installed capacity as on 31-8-2006

Sl. No.	Source	Installed Capacity (MW)
I	KSEB	
1	Hydel	1842.60
2	Thermal	234.60
3	Wind	2.03
II	Private	
1	Hydel	33.00
2	Thermal	177.44
III	NTPC Kayamkualm	359.58
IV	Share from Central generating station	916.41
	Total	3565.66

Source: KSEB

7.5 Growth of Installed Capacity in Kerala from 2001-02 to 2005-06 is shown in figure 7.1

Fig. 7.1



7.6 Kerala State electricity Board (KSEB) has taken effective steps to increase the installed capacity of the power system. Malankara Hydro-Electric Project (10.50 MW) and Lower Meenmutty (3.5 MW) were commissioned in March, 2006. RMU works of Unit 6 of Sabarigiri was completed and re-commissioned, resulting in capacity increased by 10 MW and Unit 2 of Neriamangalam resulting in capacity increased from 15 MW to 18 MW. Many of the schemes initiated by KSEB, such as Azhutha Diversion scheme (57 MU), Kuttiar Diversion scheme (37 MU), Kuttiar Tailrace Scheme (3.75MW), Kuttiadi Additional Extension Scheme (100 MW) and Neriamangalam Extension Scheme (25 MW) are progressing. However, the board has failed to come up with an effective strategy of small hydro development.

7.7 During the year 2005-06 KSEB was benefited by the bountiful monsoon, which enabled to generate more hydel power and could manage the power supply with more hydropower. It also helped to earn substantial revenue by utilizing the advantageous features of the Availability Based Tariff (ABT) by generating more power during peak hours availing higher tariff under Unscheduled Interchange (UI) and also could sell excess power to the traders in the Central Public Sector. The maximum inflow of 9218 MU was recorded during the water year Jun 2005 to May 2006.

7.8 Details of share from Central Sector Power Stations are listed in Table 7.4

Table 7.4
Share from Central Sector Power stations

Sl. No.	Name of stations	Installed Capacity (MW)	Kerala share (MW)
1	Ramagundam STPs State I & II	2100	306.61
2	MAPs	340	18.00
3	Kaiga	440	38.00
4	NLCTPS II Stage I	630	63.00
5	Stage 11	840	90.00
6	NLCTPS.1.Expansion	420	58.80
7	Talchar STPs 11	2000	280.00
8	Ramagundam Stage III	500	62.00
	Total	7270	916.41

Source: KSEB

7.9 The Tenth Plan Target and Achievement of Power generation are depicted in Table 7.5.

Table 7.5
Target and Achievements of the Generation Project in the Tenth Plan

Sl. No.	Generation	Target	Unit	Achievement	Unit	% of Achievement
1	KSEB Capacity Addition	378.35	MW	26.6	MW	7
2	IPP/CPP Capacity Addition (hydro)	223	MW	0	MW	0
3	IPP/CPP Capacity Additional (Thermal)	600	MW	0	MW	0

Source : KSEB

7.10 While analyzing the Table 5 it reveals that KSEB has failed to achieve the installed capacity against the targetted level in the Tenth Plan Period. The target for generation was to install new hydel projects to be implemented by KSEB of 378.35 MW, other hydro projects of 223 MW by IPPs/CPPs and thermal capacity from IPP of 600 MW totalling upto 1201.35 MW. Out of this , only 26.6 MW of hydel capacity has been added by KSEB in the Tenth Plan Period. No further addition to capacity is expected in the end of Tenth Plan Period.

7.11 Status of 10th Plan Generation Projects is shown in Table 7.6

Table 7.6
Details of Generation Projects in Tenth Plan

Sl. No.	Name	Capacity (MW)	Generation (MU)	Present Status
1	Athirappally	163	233	Construction not started
2	Chembukkadavu I & II	6.45	15.6	Commissioned
3	Kuttiadi Additional Extension	100	0	On going
4	Kuttiadi Augmentation	0	223	Completed
5	Kuttiadi Tailrace	3.75	15	On going
6	Kuttiar Diversion	0	37	On going
7	Lower Meenumutti	3.5	10.14	Commissioned
8	Malankara	10.5	65.00	Commissioned
9	Neriamangalam Extension	25	58	On going
10	Pallivasal Extension	60	132	Construction not Started
11	Urumi I & II	6.15	16	Commissioned
12	Vadakkepuzha Diversion	0	12	Completed
13	Vazhikkadavu Diversion	0	24	Completed
	Total	378.35	840.74	

Source:KSEB

7.12 Details of ongoing projects and projects in the pipe line are given in Table 7.7

Table 7.7
Ongoing Projects and Projects in the Pipeline

Sl. No	Nature	Name of the project	Installed Capacity MW	Energy Potential MU
I	Ongoing Schemes			
1		Kuttiadi Additional Extension	100.00	240.00
2		Kuttiadi Tail Race	3.75	15.00
3		Neriamangalam Extension	25.00	58.27
II	Diversion Schemes			
1		Azhutha		57.00
2		Kuttiyar		37.00
III	Projects in pipeline			
1		Athirapilly	163.00	386.00
2		Pallivasal Extension	60.00	164.87
3		Sengulam Augmentation		85.00
4		Sengulam Tail Race	3.60	12.57
5		Chathankottunada II	6.00	14.76
6		Poozhithodu	4.80	10.97
7		Vilangad	7.50	22.63
8		Thottiyar	40.00	99.00
9		Mankulam	40.00	82.00
10		Pasukkadavu	2.00	5.80
11		Maniyar Tail Race	4.00	16.73
12		Perumthenaruvi	6.00	25.77

Source: KSEB

Power Purchase and Generation

7.13 KSEB has been scheduling the generation and power purchase strictly on the basis of merit order of cost of energy. By this way, in 2005-06, KSEB was able to limit the power purchase from the costly sources such as NTPC – Kayamkulam to 0.46 MU and BSES, Kochi to 36.78 MU, which had an average variable cost of more than Rs. 4 per unit. KSEB has achieved savings in fixed cost of NTPC-Kayamkulam by selling the KSEB share to NVVN at a comfort charge of 46 paise per unit. The Board saved approximately Rs. 0.32 crore during 2005-06 on this ground. By optimally utilizing the available hydel resources and availing full allocation of cheaper Coal based Power from CGS, KSEB was able to sell about 780 MU through traders and earned about Rs. 300 crores.

Box 7.1
Power Purchase Agreement with District Panchayat Palakkad

The Kerala State Electricity Board signed an agreement with the Palakkad district panchayat for purchasing power from the first of a series of mini –hydro electric projects being set up in the State under the aegis of the Local Self-Governments. This mini –hydroelectric project is planned at Meenvallam in Karimba grama panchayat in Palakkad district, across a stream Thuppanad. The project will have an installed capacity of 3MW, with the potential to generate 84 lakh units of electricity a year. As per the power purchase agreement ,the KSEB will purchase electricity at Rs.2.50 a unit from this project for the first five years. The rate is Rs.2.12 a unit for the subsequent 20 years. The district panchayat plans to complete the project in 18 months.

Source: The Hindu-24-1-2007

Utilisation of Power from hydel

7.14 Kerala has utilised [or is development] 69% of hydel potential as against the All India figure of about 30%. Though potential shows another 1070 MW remains to be tapped in Kerala for the immediate future, taking into account the costs and the scale of displacement, the immediately realisable figure for the Eleventh Plan is 477.65 MW.

7.15 The hydel capacity in Kerala has been utilised well above the national average. Hydel Capacity Potential analysis can be seen in Table7.8. Further tapping of hydro potential however would require

- 1) Settling interstate and environmental disputes
- 2) Coming up with a strategy on tapping small hydro in a big way

Table 7.8
Hydel Capacity Potential and Developed

	Assessed Capacity (MW)	Developed (MW)	Under Development (MW)	Developed + under development (MW)	(Developed + under Development Assessed Capacity (%))	To be developed (MW)
Kerala	3,514	1837.6	606.4	2444.0	69.55	1070
All India	148701	29822	13636	43458	29.2	105243

Source: KSEB

7.16 The ratio of the hydro-thermal mix in Kerala from 2002-03 to 2005-06 is shown in Table7.9.

Table 7.9
Hydro-Thermal Mix in Kerala from 2002-03 to 2005-06

Years	Hydel (MU)	Thermal (MU) + Import (MU)	Total (MU)	Hydel (%)	Thermal (%)
2002-03	4819	7932	12751	39	61
2003-04	3910	8545	12455	31	69
2004-05	6134	6314	12448	49	51
2005-06	7539	5866	13405	56	44

Source: KSEB

7.17 During 2005-06, net availability of energy was 10905.70 MU against 9384.40 MU in the 2004-05. Now Kerala does not purchase power from the NTPC Kayamkulam owing to the exorbitant price.

7.18 The details of energy availability in the State is shown in Table 7.10.

Table 7.10
Energy availability in the State during 2004-05 & 2005-06

Sl. No.	Source	2004-05	2005-06
1	Generation(MU)		
a	Hydel	6077.21	7449.88
b	Thermal	297.60	148.99
c	Wind	2.25	1.91
	Total (1)	6377.06	7600.78
2	Purchase (MU)		
a	NTPC Kayankulam	54.25	0.46
b	NTPC Ramagundam	2346.94	2675.40
c	Neyveli Lignite Corporation	1449.84	1466.79
d	Western Region	0.00	0.00
e	Madras Atomic Power Project	76.11	97.65
f	Eastern Region	214.15	280.57
g	Maniyar (Captive)	34.69	41.98
h	Kaiga	340.47	333.28
I	BSES	110.06	36.78
j	Kuthungal (Captive)	36.11	49.43
k	KPCL Kasargode	15.52	7.49
l	PTC Power		
m	UI Units	346.16	-759.10
n	GEL	0.00	0.00
o	Talcher Stage II	1437.29	2561.18
	Total (2)	6461.59	6791.91
	Total (1) +(2)	12838.65	14392.69

4a	Less Bilateral Exchange	0.00	0.00
b	Less Loss in MU	3335.37	3349.16
c	Auxiliary Consumption(MU)	48.08	46.42
d	Supply to captive	70.80	91.41
	Total (4)	3454.25	3486.99
5	Net Availability (MU) (3-4)	9384.40	10905.70

Source: KSEB

Tariff

7.19 Tariff rates vary according to the category of consumers. Domestic and irrigation & dewatering consumers enjoying low rate of tariff. They pay an average tariff of 171 paise/ unit and 99 paise/ unit respectively in 2005-06. Similarly, the overall average tariff rate has slightly diminished at 309 paise/ unit in 2005-06 against 311 paise/ unit in the previous year, on the other hand, realization from commercial category of consumers remains at an optimum level compared with other category of consumers. Average realization also declined from 329 paise/ unit in 2004-05 to 326 paise in 2005-06. Details of average Tariff structure and average realization from sale of power are given Appendix 7.4 and 7.5.

Transmission

7.20 Strengthening transmission network is an important aspect to evacuate the power. It remains the fact that the present transmission system is quite inadequate to match the requirement of the power envisaged to come from KSEB's own generation station and other sources out side KSEB. Works of sub stations - 220 KV (4 nos) 110 KV (13 nos), 66 KV (4 nos.) and 33 KV (39 nos.) and its connected lines are to be completed as spill over work from the tenth plan. Many 66 kv substations are still to be brought under real time SCADA.

7.21 The Tenth Plan targets and achievements in Transmission Sector is depicted in Table 7.11

Table 7.11
Targets and Achievements of transmission infrastructure during the Tenth Plan

Sl. No.	Item	Target	Unit	Achievements	Unit	% of Achievements
1	220 kv Substations	12	Nos	3	Nos	25
2	110 kv Substations	72	Nos	26	Nos	36
3	66 kv Substations	15	Nos	9	Nos	60
4	33 kv Substations	118	Nos	43	Nos	36

Source: KSEB

7.22 The overall transmission facilities in Kerala upto 31-8-2006 is also given in Table 7.12.

Table 7.12
Transmission Facilities in Kerala upto 31-8-2006

Capacity	Substations (Nos)	Lines (ckm)
400 kv	2 (1 PGCIL)	260
220 kv	14	2656
110 kv	109	3852
66 kv	96	2994
33 kv	51	695

Source: KSEB

7.23 On analyzing the table it reveals that the transmission facilities made by the Board is not touch up to the mark and power evacuation facilities are to be strengthened further even in the eleventh plan period. The present transmission infrastructure system is inadequate to meet the growing needs of various categories of consumers in the State. During 2005-06, Board was able to construct only meager no. of substations ie, five numbers of 110 KV, four 66 KV and 10 nos. 33 KV and its connected lines - 256.02 ctkm of EHT lines and 1054.2 ctkms of H.T lines were added. During 2005-06, T & D loss was reduced to 24.59 % from 26.22 % in the previous year, in line with the target of reducing the loss by about 2 % every year.

Distribution

7.24 About 25.3 million population live in isolated houses of villages in Kerala. Because of this peculiar habitation pattern more low tension lines are to be drawn to supply electricity to rural households. It leads to adverse HT:LT line ratio, which is at present 1:6.25 against the norms of 1:1. has to reduce to atleast 1:3.

7.25 During the Tenth Plan Period, KSEB could not achieve targeted distribution infrastructure facility. The details are given in Table 7.13.

Table 7.13
Tenth Plan Targets and Achievements in distribution infrastructure

Sl. No	Item	Target	Unit	Achievements	Unit	% of Achievements
1	11 KV lines	9500	KM	4468	KM	47
2	Distribution - Transformer	10000	No	6332	No	63
3	LT lines	27500	KM	24678	KM	90
4	Connections	20	lakh	20.69	lakh	103

Source:KSEB

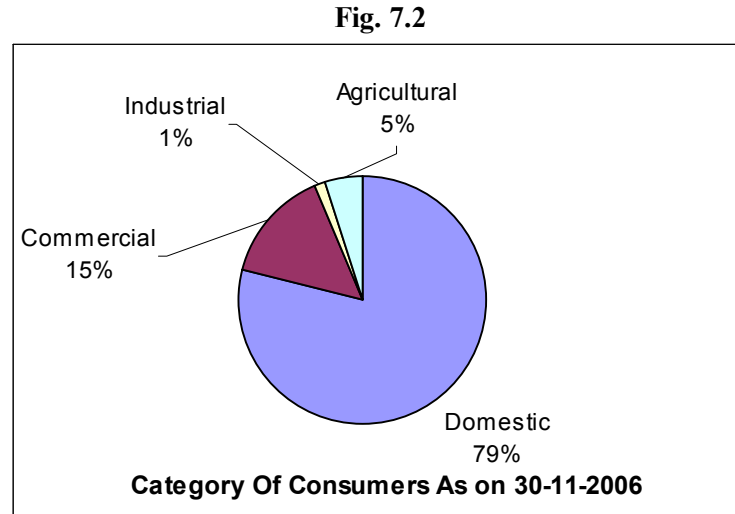
7.26 Present position of the distribution network as on 30-11-2006 is shown in Table 7.14

Table 7.14
Distribution network of the KSEB

Sl.No.	Particulars	Position as on 30-11-2006
1	Consumers	
	a) Domestic	67,51,506
	b) Commercial	12,44,469
	c) Industrial	1,25,180
	d) Agriculture	4,27,525
	Total	8548680
2	11 KV lines (ctkms)	35,891
3	LT lines (ctkms)	2,18,065
4	Distribution Transformers (Nos)	38,875
5	Street lights (in lakhs)	9.84

Source: KSEB

7.27 Category wise Consumers as on 30-11-2006 is reflected in figure 7.2



Developmental Programmes

7.28 Different developmental works are being carried out by the board for strengthening the transmission and distribution network in the State. The Pertinent Programmes are MPLADs, SDF for MLA's. Kerala Development Plan, Accelerated Power Development and Reforms Programme (APDRP) and Rajiv Gandhi Grameen Vidyuthikaran Yojana (RGGVY).

7.29 There is a need to arrive an integrated strategy for overcoming the constraints in rural electrification and ensuring that electrification of SC/ST, BPL households can be completed on a time bound basis.

7.30 Under MPLADS and SDF for MLA's in distribution sector, the total number of works carried out under these schemes upto 31-8-2006 was 751 and 2121 respectively and 5586 works were carried out in 2005-06 and 2103 works were completed upto 31-8-2006 under Kerala Development Plan.

Accelerated Power Development and Reforms Programme (APDRP)

7.31 Ministry of Power, Government of India, has accorded sanction for the implementation of APDRP Scheme in the State with a total outlay of Rs. 863.62 Crores. Of this, the Circle scheme covering the three districts of Pathanamthitta, Malappuram and Kasargode districts have been completed on 31-3-2006 with the total expenditure of Rs. 143.11 crores and the town schemes covering all the municipalities and city corporations are in progress.

7.32 So far an amount of Rs. 230.55 crores was released by Government of India to KSEB through Government of Kerala.

7.33 In addition to this, an amount of Rs. 39.36 crores was received from Government of Kerala during March 2006 as loan for execution of APDRP. An amount of Rs.156.40 crores was received from M/S.REC Ltd as counterpart fund. The financial status of APDRP is given in Table 7.15.

Table 7.15
The status of APDRP funding as on 31-12-2006

							<i>Rs. Crores</i>
Name of Scheme	Date of sanction	Scheme Amount	Amount Released from GoK to GoK	Amount Received from GoK by KSEB	Counterpart Funding received	Total Amount Received by KSEB	Total Amount Spent by KSEB
Circle Scheme (3 Circles)	26.08.2002	148.24	161.22	269.91 (inclusive of advance loan received from Govt Of Kerala)	72.00	426.31	143.11
Town Scheme (7 Towns)	27.11.2002	160.72			55.07		129.97
New Town Scheme (26 Towns)	01.10.2004	123.91	15.49		29.33		68.04
New Town Scheme (13 Towns)	04.04.2005	57.18	53.84				18.37
New City Scheme (3 Cities)	04.04.2005	373.57					2.12
Total		863.62	230.55	269.91	156.40	426.31	361.61

Source:KSEB

Incentive grant under APDRP

7.34 Government of India has released an amount of Rs. 20 crores as incentive grant to the Government of Kerala under APDRP for Annual Plan 2006-07.

Rajiv Gandhi Grameen Vidyuthikaran Yojana (RGGVY)

7.35 On 4th April 2005 Government of India has launched a premier initiative " Rajiv Gandhi Grameen Vidyuthikaran Yojana' (RGGVY), for attainment of the goal of the National Common Minimum Programme (NCMP) for providing access of electricity to all households with in five years. As per the norms, turnkey tenders had been invited, no agency turned up with the bids, then turnkey-re tenders were invited and the firms quoted bids @ 75 to 85% above the estimated rate, which is definitely not affordable. In this context, the Government of India have accorded sanction to execute the work of RGGVY through NTPC. As per the agreement between Government of Kerala and Government of India, four party agreement will have to be signed among NTPC, REC, Government of Kerala and KSEB. The total allotment of Kerala is Rs. 438 crores. Of which, an amount of Rs. 221 crores to be released shortly as first instalment for Kasargod, Wayanad, Kannur, Kozhikode, Malappuram and Palakkad districts.

New Electricity Policy (NEP)

7.36 The NEP is notified by the Government of India which is one of the key instruments for providing policy to the electricity regulatory commissions in discharge of their functions and to the Central Electricity Authority for preparation of the National Electricity Plan. The object of the policy is the speedy development of power sector, access supply of electricity to all areas and protecting interest of the consumers.

7.37 In compliance with section 63 of the Electricity Act, 2003 Central Government has notified on 19 January 2005 the guidelines for procurement of power by Distribution Licensees through competitive bidding.

7.38 Provision in the Electricity Act, 2003 such as open access to the transmission and distribution network, recognition of Power trading as a distinct activity, the liberal definition of a captive generation plant and provision for supply in rural areas are expected to introduce and encourage competition in the Power Sector. In this context, KSEB has to unbundle its Generation, Transmission and Distribution sector. Ministry of Power, Government of India have extended the time for another six months to trifurcate the Board. .

7.39 The Electricity Act, 2003 stipulates promotion of electricity from renewable sources of energy. The current renewable energy potential in Kerala is 1715MW/4508MU. At present KSEB is utilizing 84.125MW/302.75MU of energy from conventional sources of energy from own stations (including hydel stations), which comes to about 4.7 percent of energy consumed by KSEB system.

7.40 Consumer grievance redressal forum was set up in 3 regions for speedy redressal of grievances of consumers.

7.41 Steps are being taken to publish the "Citizen Charter" in KSEB to make awareness to the public and in enabling better service.

Power Sector Reforms

7.42 KSEB has taken several steps towards the power sector reforms for the previous years. The details of reforms implemented by the KSEB are given below:

- The number of service connections provided has been substantially increased :
No. of service connections given during 2002-03, 2003-04, 2004-05 and 2005-06 are 2.73 lakhs, 2.97 lakhs, 4.19 lakhs and 4.27 lakhs respectively. All the 15 lakhs households will be electrified by 2007 by effecting service connection to five lakhs per year.
- Completed the energy audit to reduce system losses by metering of all 11 KV and above feeders.
- KSEB started reducing the loss by 2% every year. T & D loss was brought down to 24.59 % in 2005-06 from 32.15% in 2001-02.
- Completed 100% Metering of all consumers
- MIS cell started functioning with Head Quarters at Trivandrum and two Regional Office formed at Ernakulam & Kozhikode.
- Action for reducing expenditure and increasing revenue collection is expedited.
- Out of 603 sections, 184 sections were computerized
- Under Town schemes, completed works in all 54 sections.
- Under circle schemes, completed works in all 88 sections
- Anti Power Theft (APT) activities are intensified and reorganized APT wing. Anti Power theft ordinance promulgated by Government of Kerala.
- SERC has started functioning on 29.11.2002. Orders by SERC on ARR and ERC for 2003-04, 2004-05 and 2005-06 were issued. ERC notified supply code on 2.3.2005 and approved estimated rates for distribution works. ARR for 2006-07 was filed on 30-11.2005. Kerala State Grid Code, Regulations and Tariff rebate for domestic and commercial consumers were issued on 30.3.2006, 21.1.2006 and 5.1.2006.

- Introduced ABT in southern Region with effect from 1.1.2003 and Kerala is strictly following grid regulations.
- Securitization of dues to CPSUs upto 30.9.2001 has been completed.
- Suggestions of KSEB on constitution of District Level Committee for Resource Planning monitoring of distribution reforms and rural electrification have been furnished to Government.
- Government of Kerala has issued captive power policy on small hydro projects in January 2003 and revised on 17.5.2006 incorporating provisions of Electricity Act, 2003.

Issues confronting the power sector

7.43 A major issue facing KSEB is the cost of power. One of the reasons that KSEB has been able to meet its supply obligations and yet not raise the cost of power unduly has been large hydel reserve from which it has met 50% of its energy requirements. The variable cost per unit from hydel is only Re 0.03, while from non- liquid fuel power stations is of the order of Rs. 2-3.

7.44 State has to face the directive under the Electricity Act 2003 of unbundling the State Electricity Boards. If this directive is implemented in Kerala, the gains of improvements of the functioning of KSEB that we have seen in the last Plan could get frittered away in trying to set up three or more new entities and their relationship.

7.45 Kerala is the thrust in the mid 90's to go in for liquid fuel in the power sector. As a result of Govt of India Policy , a number of projects were set up using liquid fuel, two of which are in Kerala: Kayamkulam project of 359.58 MW of NTPC and 165 MW project of BSES in Kochi. The cost of naphtha, the fuel for both these plants at current international price of naphtha makes these the highest cost plants in the state.

Financial Performance of the Board

7.46 For the last few years, KSEB is being managed without significant financial support from the state exchequer, except the funding of few centrally sponsored projects routed through state government. The revenue gap could be brought down from Rs. 342.76 crores as on 31-3-2005 to Rs. 144.58 crores on 31-3-2006. Further the capital liability could also be brought down from Rs 4541.32 crores as on 31-3-2005 to Rs 3647.52 crores from 31-3-2006.

Table 7.16
Revenue and Capital Expenditure of KSEB for the year
2004-05 and 2006

<i>(Rs. Crore)</i>		
A) Revenue Expenditure	2004-05	2005-06
a. Salary	440.61	494.26
b. Pension	374.03	379.31
c. Power Purchase	1517.42	1662.34
d. Interest & Finance Charges	598.40	613.97
e. Fuel	92.49	56.81
f. O&M	74.69	93.86
g. Administrative Expenditure	102.94	58.57
Total	3200.58	3359.12
B. Capital Expenditure		
a. Generation	52.38	70.31

b. Transmission	208.05	228.03
c. Distribution	156.07	199.67
d. System Improvement	0.00	0.00
e. Survey & Investigation	1.39	0.75
f. Renovation & Modernisation	34.39	24.90
g. Research & Development	0.00	0.00
h. Revamping & Seismic Work	0.00	0.00
I. Civil Fabrication Works & Others	0.00	26.17
Total	452.28	549.83

Source: KSEB

7.47 KSEB has filed the petition of Aggregate Revenue Requirement (ARR) for the year 2006-07 before the KSERC. During 2006-07, KSEB is expecting the revenue gap is Rs. 302.78 crores. KSERC has analysed the petition in detail and reducing the expenditure like interest and finance charges, depreciation, employee cost, repair and maintenance and other Expenses. Finally KSERC has ordered an amount of Rs.(-)184.63 crores as the revenue gap 2006-07. Details of Revenue Requirement for KSEB is given in Table 7.17

Table 7.17
Summary of Aggregate Revenue Requirement (ARR) (2006-07)

Item	2004	2005-06			2006-07	
	(Actual)	KSEB (ARR)	KSERC (Order)	KSEB (Revised)	KSEB (ARR)	KSERC (Order)
Generation of Power	81.13	55.86	55.86	48.88	43.09	43.09
Purchase of Power	1463.03	1492.77	1427.31	1512.12	1646.02	1646.02
Interest & Finance Charges	605.59	617.68	583.60	566.48	529.76	513.64
Depreciation	374.77	430.35	235.65	392.65	424.32	247.43
Employee Cost	789.64	939.43	845.89	868.82	882.20	823.45
Repair & Maintenance	74.49	89.09	85.25	89.09	96.50	90.00
Administration & General Expenses	95.01	98.27	90.70	99.48	108.85	105.00
Other Expenses	117.54	144.20	50.00	151.52	146.75	91.78
Gross Expenditure (A)	3601.20	3867.65	3374.26	3729.04	3877.49	3560.41
Less: Expenses Capitalized	42.88	158.95	138.77	40.68	43.90	43.90
Less: Interest Capitalized	62.04	99.15	85.59	54.97	53.50	53.50
Net Expenditure (B)	3496.28	3609.55	3149.90	3633.39	3780.09	3463.01
Statutory Surplus (C)	103.49	217.42	217.42	217.42	217.42	217.42
ARR (D) = (B) + (C)	3599.77	3826.97	3367.32	3850.81	3997.51	3680.43
Less Non-Tariff Income	339.65	259.03	269.54	293.28	301.31	290.51
Less: Revenue from Tariff						
(a) With in the State	2917.36	3075.69	3046.47	3146.35	3393.42	3574.55
(b) Outside the State				101.68		
Total Income	3257.01	3334.72	3316.01	3541.31	3694.73	3865.06
Revenue Gap	342.76	492.25	51.31	309.50	302.78	-184.63

Source: KSEB

Swapping of Loans

7.48 The KSEB, by taking advantage of the prevailing interest rates in the financial market has swapped the high cost outstanding loans by borrowing fresh loans at low interest rates. So far, KSEB has swapped Rs.1701.01 crores of loans, saving an interest liability of Rs.228.82 crores

payable during the rest of the repayment period of the loans and an annual savings of Rs.38.03 crores. The details of the swapping done are given in Table.7.18

Table No. 7.18
Swapping of Loans

Year	Item	Amount	Before Swapping		After Swapping		Premium Paid	Net Savings	Annual Net Savings
			Interest %	Amount	Interest %	Amount			
2003-04	Non SLR Bond VI	300.00	15.25	187.58	7.50	54.74		132.84	26.57
	REC Ist Stage	649.43	13-15	278.95	10.50	226.89	20.21	31.85	3.98
	REC IInd Stage	118.97	13.00	39.97	10.00	29.36	2.96	7.65	0.85
	L I C	187.41	14.00	102.98	11.00	80.91	7.80	14.27	1.10
	PFC Ist Stage	100.00	15-17	67.26	8.50-10	49.98	8.55	8.73	0.97
	PFC IInd Stage	18.13	13.5-15	7.21	8.50	5.74	0.94	0.53	0.08
	Loan taken for KDPP	125.00	13.75	48.35	11.25	25.47		22.88	2.29
	Total	1498.94		732.30		473.09	40.46	218.75	35.84
2004-05	Non SLR Bond IX - Call Option	6.48	13.25	2.22	6.50	1.09		1.13	0.37
	REC-Short Term Loan	48.77	9.75	3.23	6.50	1.71	0.42	1.10	1.10
	Total	55.25		5.45		2.80	0.42	2.23	1.47
2005-06	Non SLR Bond IX - Call Option	1.63	13.75	0.22	6.20	0.10		0.12	0.12
	LIC	145.19	11.00	68.01	9.00	55.64	4.65	7.72	0.60
	Total	146.82		68.23		55.74	4.65	7.84	0.72
	Grand Total	1701.01		805.98		531.63	45.53	228.82	38.03

Source:KSEB

Non Conventional Energy Programme

7.49 Kerala is blessed with abundant renewable sources that could be utilized in multiple forms to provide adequate energy and essential modern amenities to the rural population of Kerala. Most of these are also significant as potential sources to support and strengthen the existing power grid or to reduce our dependence on the fast depleting fossil fuels. There is significant potential in the state to meet the basic energy requirements of the rural people in an economically efficient manner through the non conventional sources of energy, in view of the environmental impacts, high cost and transmission losses of the large conventional power projects. The major Non Conventional Energy Sources relevant to Kerala are Solar Energy, Bio Energy, Wind Energy, Small Hydro Power and Wave Energy.

7.50 ANERT, an autonomous body under the control of Power Department, Government of Kerala is entrusted with various activities in this area. ANERT acts as the nodal agency of Ministry of Non Conventional Energy Sources (MNES) in implementing their schemes.

7.51 The major sources of funds for the functioning of the organization is the state funds and project specific financial support from the MNES as well as other organizations like Kerala State Council for Science, Technology and Environment (KSCSTE) and Department of Science and Technology (DST) Government of India.

7.52 The total renewable energy potential in Kerala is 4,200 MW comprising of Wind Energy (850 MW), Bio Mass (50 MW), Small Hydro (1000 MW) and Solar Photovoltaic (2,300 MW).

Solar Thermal Energy Programme

7.53 Solar Thermal Energy programme (STEP) envisages the promotion of use of solar heat energy to meet the various thermal energy needs. The most popular Solar Thermal Devices are Solar Water Heating Systems (SWHS), Solar Cookers, Solar Dryers, Solar Stills, etc. These devices will be of assistance to save considerable amount of fuel and electricity used for heating in the State. The primary objective of this year's Solar Thermal Energy Programme is popularization of Solar Air Heaters for drying, Solar Concentrating Cookers, Steam Generators and Solar Water Heaters for individual family and community applications. The major activities completed so far under this programme are Domestic Solar Water Heating Systems – 145000 lpd, Institutional Solar Water Heating Systems – 196700 lpd and Solar Cookers 500 numbers.

Solar Photovoltaic Energy Programme (SPV)

7.54 Solar Photovoltaic Technology helps to directly convert sunlight into electricity SPV systems are an option for meeting electrical energy needs of remote areas where grid energy has not yet reached. Provision of Solar Lanterns to SC/ST/BPL with financial assistance @ Rs. 3,500 per Lantern, provision of incentives to users of Solar PV modules of 10 W to 70 W @ Rs. 100 per Watt, financial incentives for users of solar home power pack of capacities 150 Watt and 300 Watt, financial incentives to fishermen using solar power pack for fishing @ Rs.8,000 per power pack with additional assistance from Fisheries Department, Matsyafed, provision for Solar Photovoltaic TV power packs with financial incentives @ Rs. 40,000 per system for community purpose, installation of 3 solar photovoltaic power plants of individual capacity KW for community purpose, supply of SPV demonstration package for schools and collages are the programmes being implemented. Major achievements made so far under this programme are given below :

Solar lanterns	100,200 nos
Street lights	250 nos
Home Lighting Systems	18,888 nos
Street Lighting Systems	865 nos
Stand alone SPV power plants	11 nos (40 kWp)
Grid Interactive PV power plant	25 kWp
Solar TV Power pack	150 nos

Wind Energy Programme

7.55 Wind Power has emerged as the most promising source among all other renewable energy sources for power generation in Kerala and is a viable and cost effective option for grid connected power generation. Wind Energy Studies has been one of the major activities of ANERT since 1988. Studies conducted by ANERT revealed that the state has vast wind energy potential suitable for direct mechanical application as well as electricity generation, Based on these studies 16 locations were identified as suitable for establishing wind electricity generation farms which altogether has a potential of contribution about 600MW of power to the state's power grid.

Table 7.19
Details of Potential Sites for Wind Power Generation in Kerala

Sl.No.	Station	District	Annual Wind Power Density (W/sq.m)
1	Ramkalmedu	Idukki	534
2	Sakkulathumedu	Idukki	533
3	Parampukettimedu	Idukki	525
4	Kailasamedu	Idukki	300
5	Panchalimedu	Idukki	285
6	Kulathumedu	Idukki	239
7	Senapathi	Idukki	233
8	Pullikanam	Idukki	187
9	Kuttikanam	Idukki	181
10	Kolahalamedu	Idukki	174
11	Nallasingam	Palakkad	377
12	Kanjikode	Palakkad	249
13	Kottathara	Palakkad	243
14	Kotamala	Palakkad	187
15	Tholanur	Palakkad	157
16	Ponmudi	Thiruvananthapuram	220

7.56 The achievements in this sector so far is only 2.025 MW capacity Wind Farm installed by KSEB at Kanjikode, Palakkad District. 26 nos of Wind Monitoring Stations and 137 nos of Wind Mill Pumps have been established so far. Activities are already initiated for establishing a Demonstration Wind Farm (4 MW) at Ramakamedu, Idukki jointly by ANERT and KSEB and for promoting establishment of Wind Farms in Private Sector. Already, private entrepreneurs have submitted proposal to establish Wind Farms at Agaly and Ramakalmedu totalling to 35 MW capacity. ANERT has carried out field inspection of this sites for issuing technical sanction.

Bio Energy Programme

7.57 The total potential of the Bio Energy Sector is estimated to be about 300 MW in the state. The State Agricultural Department and Khadi Village Industries Centre (KVIC) are providing subsidy for the implementation of domestic biogas plants. The Bio mass based electricity generation potential of the state is estimated as 57 MW. Preparation of Detailed Feasibility Reports (DFR) and Detailed Project Reports (DPR) for the waste to Energy Programmes of various corporations, municipalities and towns is one of the major programmes planned for the year 2006 to be executed with MNES assistance. Conducting Biomass Resource Estimation Studies are also given priority this year along with performance and monitoring of old and new biogas plants and biomass gasifiers installed by ANERT. Installation of Biogas Plants for electricity generation of capacity 15 cu.m and above taken up by Local Self Government Institutions (LSGI) would be given subsidy @ 50% of the total cost of installation. Financial incentives @ Rs 3,000/cu.m and Rs. 5,000/cu.m would be made available for installation of Biogas Plants for Thermal application and Electricity generation respectively. Financial incentives @ 50% of the total cost would be provided for installations of portable and medium type biomass gasifiers. Installation of two numbers of biogas gasifier 200 KW and establishment of 530 cu.m of biogas plants have been completed so far.

Micro Hydel Programme

7.58 The State of Kerala is blessed with abundant scope for utilization of Micro Hydel Power, which is truly environment friendly and economical. Small Hydel Power, especially in the micro and mini range, could be effectively developed to meet the energy requirements of remote habitations of the State as most of these promising sites are in the remote rural areas of the hilly region. These sites are ideal for small stand-alone power projects providing electric power to the village, there by improving their living conditions.

Improved Chulha Programme

7.59 This Programme envisages the installation of improved chulhas with the aim of fuel wood conservation, elimination/reduction of smoke and reduction of drudgery of women and children from firewood smoke in the kitchens. Improved chulhas save about 50% of the fuel wood as compared to the traditional chulhas. Installation of smokeless improved chulhas for general/BPL/SC/ST category of beneficiaries, installation of efficient smokeless community chulhas in schools, anganvadies, government and government aided institutions, registered societies etc. are the programmes being implemented. 791,689 nos. of Chulhas have been installed so far.

Integrated Rural Energy Programme

7.60 The Integrated Rural Energy programme (IREP) in Kerala is being implemented with MNES assistance with an objective of promoting various activities in the rural areas for ensuring the energy security by enhanced utilization of renewable energy sources. One of the major activities under this programme is the implementation of MNES assisted/sponsored programmes like SPV water pumping, Rural/Cluster of village electrification, Hybrid aero generators, Solar cooker, Wind mills, Renewable Energy Park, Waste to energy projects etc. Subsidy from ANERT @ 40% of MNES' financial assistance is also envisaged for these programmes

Small Hydro Power

7.61 The total small hydro power potential of the state is estimated as about 1000MW and the achievement so far is less than 100 MW. Details of SHP projects in Kerala is given in the following Table.7.20

Table 7. 20
Existing SHP Projects in Kerala

Sl. No.	Project	Installed Capacity (MW)
1	Kallada	15
2	Peppara	3
3	Madupetti	2
4	Malampuzha	2.5
5	Urumi-I	3.75
6	Urumi-II	2.4
7	Chempukadavu-I	2.7
8	Chempukadavu-II	3.75
9	Malankara	10.5
10	Lower Meenmutti	3.5
Projects in Private Sector (CPP)		
11	Maniyar	12
12	Kuthungal	21
Projects under LSGI		
13	Mankulam (stand alone)	0.11
	Total	82.21

Energy Conservation

7.62 The Energy Management Centre is promoting SHP developments in the state. The UNIDO opened its first Regional Centre for SHP in EMC for catering to the needs of the state and also for the South Asian Countries. The first off-grid SHP project was implemented in Mankulam Panchayat. This panchayat is the only local body in Kerala, which generates, transmits and distributes electricity to the people.

7.63 As part of the Energy Small Grants programme, EMC completed the installation of Information Technology(IT)- based energy management systems in traditional rice milling industries in India and Sri-Lanka, which resulted in reducing the operating energy costs and thereby contributing to reduction in green house gas emissions, improving productivity and enhancing the profitability and viability of the traditional small and medium industry sector.

7.64 EMC conducted energy efficiency improvement studies in the following units.

1. Crumb Rubber Unit & Centrifuged Latex Unit of the Meenachil Rubber Marketing & Producing Co-operative Society Ltd., Pala
2. Reserve Bank of India, Trivandrum
3. Kerala Tourism Development Corporation
4. Agreenco Crumb Rubber Unit, Mannarkkad, Palakkad
5. Kasargode Latex Factory

7.65 The EMC organized and conducted different training programmes jointly with other departments namely RIAB, Directorate of VHS, KSEB, Electrical Inspectorate and Energy Conservation Society. Energy Clinic is a unique programme of EMC in energy conservation

activities, which provides valuable information to the rural population in energy conservation, energy efficient equipments, right methods of energy use to reduce wastage etc.

7.66 The small hydro power development cell of the Power Department, Government of Kerala, for allotment of SHP projects is functioning in EMC. The EMC SHP team conducted field visit and topographical survey of three projects namely Palchuram (3.5 MW), Alamparathodu (3.0 MW), Mukkuttuthode (3.0 MW).

7.67 Techno-Economic Feasibility Report (TEFR) of Palchuram project was over and its final draft report was handed over to the firm. The Draft TEFR of the Alamparathode project is over. The data collection and detailed designing of the project features were being carried out for the third project which is presently at the final stage.

7.68 EMC already has prepared four detailed project reports during 2005-06.

Box. 7.2

Mankulam Project Gets Global Recognition

The Mankulam Mini Hydel Project in Idukki, one of the first to be implemented under the management of a Gramma Panchayat, has gained International recognition with a mention about the project in the latest UN Energy report. This is a project jointly implemented by the United Nations Industrial Development Organization, Regional Centre for Small Hydro Power and the Mankulam Gramma Panchayat. It aims at renewable energy for productive use.

Source: The Hindu 14-8-2006

7.69 Small Hydro Promotion Cell (SHPC)

- Out of 30 Projects advertised in the first phase 11 Numbers of SHP schemes were allotted to CPP/IPP.
- Consultancy assignment for ANERT for the development of wind energy farm at Ramakkalmedu & Pushpakandam including the preparation of RFQ & RFP was successfully completed.
- Malankara Plantations Ltd was allotted the 400kW Parappanthodu mini hydro scheme by the Government under the captive category.
- Revised proposal to the Government by the allottee for the Attle SHP scheme was studied and repot submitted to Government.
- The revised guidelines for (i) the development of small hydro power (>100kW to 25MW) and (ii) micro hydro schemes (<100kW) were prepared and the same is under the consideration of the Government.
- SHPC have now initiated a consultancy assignment for KINFRA for the development of Wind farm under the captive category for the requirement of power for KINFRA's industrial parks.

Total Energy Security Mission

7.70 The Programme aims at converging various initiatives of local governments with those of agencies promoting rural electrification and non-conventional energy in the state and with the new initiatives in rural electrification and in energy sector launched as a part of the Common Minimum Programme by the Government of India.

7.71 The status of household electrification in Kerala is surprisingly poor and Kerala ranks 11th in the 2001 census below Gujarat, Karnataka and Tamilnadu. The 59th round of survey by the NSSO and BPL survey also reveals serious issues of inequity and spatial imbalance in coverage of rural electrification. The percentage of un-electrification houses among the BPL families varies from 24% to 50%. As much as 70% of the ST colonies are still un-electrified. In order to achieve the targets of the Common Minimum Programme for achieving a percapita consumption of one unit per day in all households by 2012.

7.72 There is the need for a mission mode programme to promote in a focussed and time bound manner small hydro, biomass based energy generation, as well as for tapping available resources in wind and solar along with strengthening rural electrification initiatives. The focus shall be on working through local governments to achieve these objectives by 2010. The activities of the Clean Kerala Mission, the Sanitation Mission and initiatives in tourism for clean tourist sites etc. shall be integrated. Watershed management and Joint Forest Management initiatives shall be linked with biomass generation through innovative neighborhood based community organisation forms. End-use based demand side management measures, energy audits and regulatory mechanisms for promoting new and renewable energy sources shall be also accorded top priority.

Enforcement of Standards and Statutes

7.73 The Electrical Inspectorate enforces the statutes and standards of all electrical installations in the states. The main duties and functions of the departments are the following .

- To ensure standard and quality of electrical installations and thereby ensure safety and efficiency in the generation, transmission, distribution and use of electricity.
- To give prior approval for electrification of Extra High Tension installations, multistoried buildings and cinema theatres, installation of X-rays, Lifts, Neon-signs and generators.
- To conduct periodical inspection of all electrical installations except those supplied at low voltage as prescribed by the Government.
- To investigate electrical accidents and submit reports to the Government enumerating the causes and suggestions to avoid recurrence.

7.74 The Meter Testing and Standards Laboratory under the control of Electrical Inspectorate, tests and certifies the specifications and quality of electrical equipment, materials and gadgets as per the standards prescribed by the Bureau of Indian Standards (BIS). The Meter Testing Standards Laboratory has been accredited to the National Accreditation Board of Laboratories (NABL). The Chief Electrical Inspector is the Appropriate Authority to implement the provisions of Household Electrical Appliance (Quality Control) Order, 1981. Quality of Electrical Wire cables, Appliances and Accessories are ensured by conducting the relevant tests prescribed by the BIS.

7.75 Kerala State Electricity Licensing Board give licenses to Electrical Contractors, Supervisors and Wiremen. The receipt and expenditure of the Electrical Inspectorate during 2005-06 are Rs. 3151.88 lakhs and Rs. 673.4 lakhs of the expenditure of Rs. 673.4 lakhs, Rs. 607.55 lakhs is the non plan expenditure.

Kerala State Electricity Regulatory Commission

7.76 Kerala State Electricity regulatory commission was constituted on 14th November, 2002 under the provision of Electricity Regulatory Commission Act, 1998 and came into effect from 10th June.

7.77 During 2005-06 the Commission received 11 petitions from the different organizations including the petitions related to the ARR & ERC of the KSEB and other licensees for the year 2006-07 and disposed 14 petitions including 3 petitions received during 2004-05.

7.78 Orders issued by the Commissions during 2005-06 are the following

- Order on Power purchase agreement between KSEB and Cochin Special Economic Zone.
- Order on KSEB's request for reducing time slot from 30 minutes to 15 minutes for TOD metering for HT and EHT consumers with modifications.
- Orders on the petition filed by Cochin Port Trust, Techno Park, TATA Tea Limited, Rubber Park India (P) Ltd. on ARR & ERC for the year 2005-06.
- Order on extension of agreement up to 31.07.2005 for sale of power from NTPC's, RGCCPP, Kayamkulam through NVVN.
- Order on appeals/representations received from R.F. Exports and others regarding tariff category change.
- Order on petition of Cochin Special Economic Zone as the Petitioner and KSEB, Thiruvananthapuram as the respondent.
- Order on clearness of pending connection and collection of service connection charges by KSEB.
- Order on terms and conditions of supply of Cochin Special Economic Zone (CSEZ) and Technopark.
- Order on fixing of Wheeling charges and granting Open Access.

7.79 Regulations issued by the Commission during 2005-06

- Supply Code First Amendment, 2005
- Procedure for filing Appeal before the Appellate Authority Regulations, 2005
- Terms and conditions for open Access Regulations, 2005
- Conditions of Licensee for State Transmission Utility Regulations, 2005
- State Grid Code
- Conditions of Licensee for Existing Distribution Licensee Regulations, 2006
- Terms and Conditions of Tariff for retail sale of Electricity Regulations, 2006
- Licensing Regulations, 2006

CHAPTER 8

INDUSTRY AND MINING

Kerala remains an industrially backward State as compared to other States of India, even on the eve of completion of the 10th five-year Plan. The State had laid greater emphasis on the traditional and small-scale industries in the early years of five-year Plans, in view of the special features and problems of the State and also the possibility of providing greater employment opportunities to the masses. But the traditional sector is struggling hard even for its existence, in spite of the concerted efforts for its development through various programmes. Alongside, due attention was bestowed on medium and large industries also. The establishment of a large number of PSUs also could not achieve the desired level of development on the industrial front. To overcome the slackness in the industrial sector, a major shift in emphasis was made especially from the Ninth plan onwards. The role of Government has been changed from a provider to a facilitator for industrial investment. Since then, a number of schemes have been evolved and implemented with a view to attracting more and more private investment to the State. These include providing state-of-the-art infrastructure facilities and creating a conducive atmosphere for industrial investment. At the same time efforts at maintaining the tempo of investment in the traditional sector have continued with the aim of bringing about its technology upgradation, diversification and modernization.

Industrial Growth

8.2 Even though negative industrial growth was recorded in 2001- 02 at constant and current prices, there was a revival in 2002-03 and 2003-04. A negative growth at constant prices was experienced again in 2004-05, but this was reverse in 2005-06. The average growth rate for the period 1999-2000 to 2005-06 is 1.54. And for the period 2003-04 onwards the average growth rate is 2.29 % which is much lower than national average of around 10%. Growth of manufacturing sector (GSDP) of Kerala from 2000 - 01 to 2005-06, both at constant and current prices are given in Table 8.1 and Figure 8.1.

Table 8.1
Growth of Manufacturing Sector in Kerala (GSDP)
Base Year 1999-2000 *(Rs. lakh)*

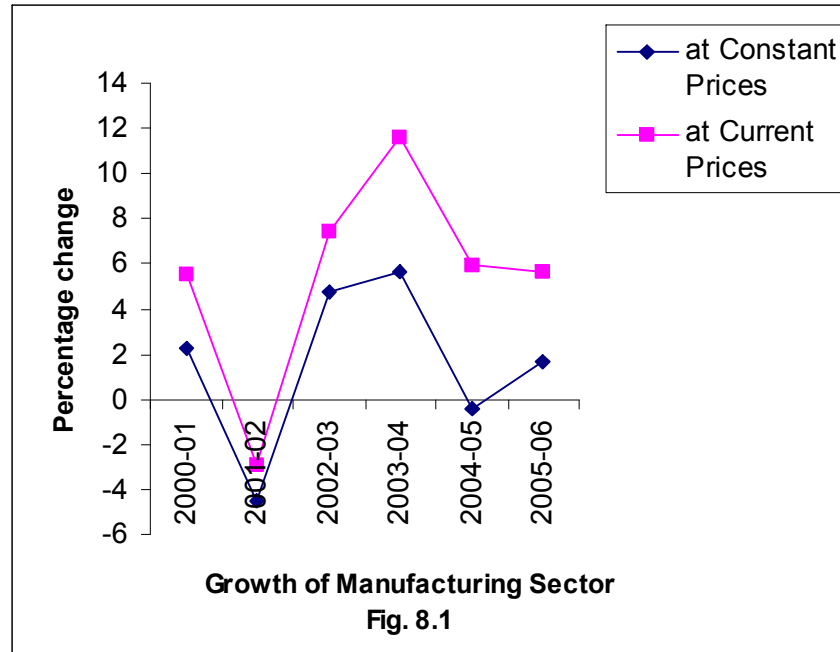
Year	Actual		Percentage changes over years	
	Constant Prices	Current Prices	at Constant Prices	at Current Prices
1999-2000	666673	666673	-	-
2000-01	681491	703530	2.22	5.53
2001-02	650861	683061	-4.55	-2.91
2002-03	681425	733902	4.7	7.44
2003-04	720030	819054	5.66	11.60
2004-05(p)	716881	868067	-0.44	5.98
2005-06(Q)	728836	917035	1.67	5.64

Source: Economics & Statistics Department, Thiruvananthapuram

P = Provisional Q = Quick Estimate

8.3 Even though an atmosphere of investor friendly state was created, the industrial growth rate is much lower than the national average rate. It is clear that the effort at marketing Kerala has an attractive destination for investment has failed to elicit the required response by way of output and

employment growth in the industrial sector of the state's economy. We need to formulate an alternative and comprehensive industrial policy.



Index of Industrial Production

8.4 Even though the general index of industrial production in the State continuously showed a declining trend from 2001-02 to 2004-05, it shows a marginal increase from 261.31 to 266.66 in 2005-06. Negative growth was recorded for the products such as food products, wood and wood products, and machinery and equipment. All other items showed positive growth. The index of industrial production for the period from 2003-04 to 2005-06 is given in Appendix 8.1

Foreign Direct Investment (FDI)

8.5 From January 1999 to December 2005, an amount of Rs.1217 crore in 184 projects has been approved for Kerala as FDI, which constitutes only 1.26 percent of the total FDI approved in India. Maharashtra ranked first in the FDI list with Rs.21969 crore in 2629 projects followed by Delhi, Tamilnadu, Karnataka, and Gujarat and Kerala is in the twelfth rank in getting FDI. During the current year, Kerala attracted only seven companies where as 1280 foreign companies have started their operation in Delhi by investing Rs.28, 000 crore.

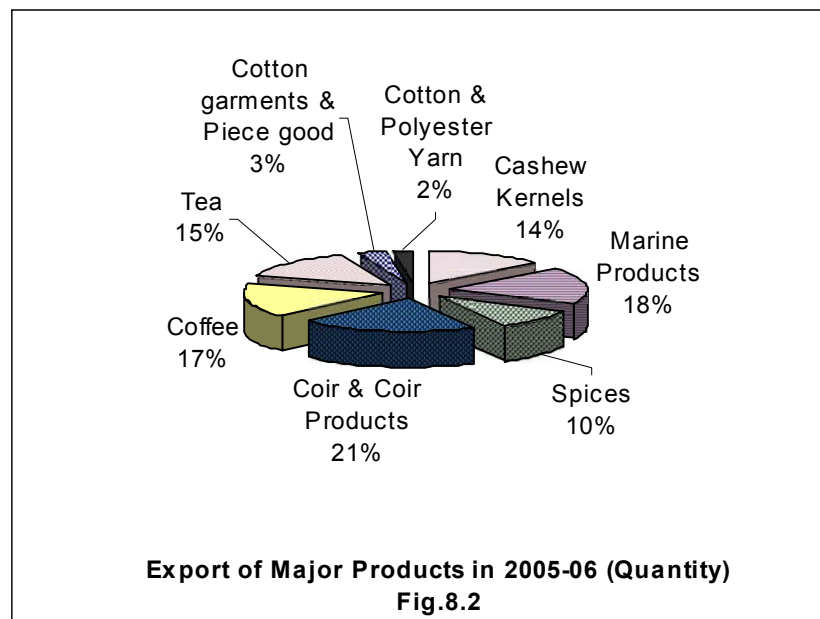
Industrial Export

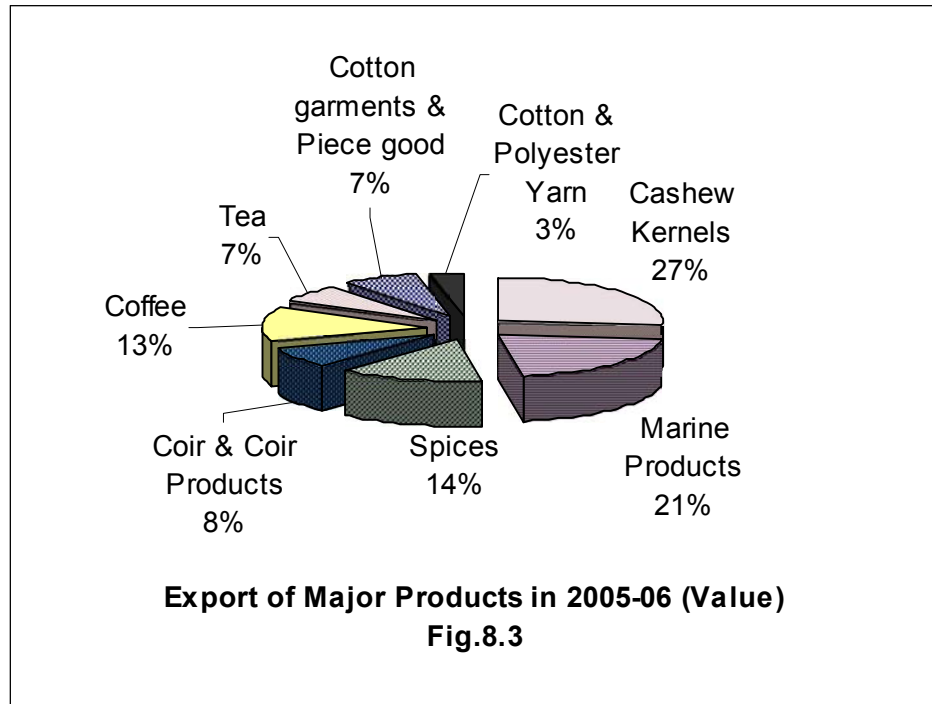
8.6 Performance in industrial exports of all major products has been recording a positive growth year by year except for coffee, cotton- garments and piece goods. Export of tea increased by 12 per cent from Rs.370 crore to Rs.415 crore, software by 12 per cent from Rs.650 crore in 2004-05 to Rs.726 crore in 2005-06. Details of major commodities exported from Kerala for the last four years are given in Table 8.2.

Table 8.2
Industrial Exports from Kerala

Sl No	Item	2002-03		2003-04		2004-05		2005-06	
		Qty. (MT)	Value (Rs. crore)	Qty. (MT)	Value (Rs. crore)	Qty. (MT)	Value (Rs. crore)	Qty. (MT)	Value (Rs. crore)
	Food Processing								
1	Marine Products	77851	995	87508	1205	87378	1158	95737	1240
2	Spices	55750	620	49386	660	49655	779	54342	862
3	Coffee	126900	735	132247	865	99933	842	88258	765
4	Tea	53071	351	73802	518	57966	370	79274	415
5	Fresh fruits & Vegetables	-	189	-	250	-	395	-	420
	Traditional Industries								
6	Cashew Kernels	66859	1217	67821	1192	79950	1716	74376	1623
7	Coir & Coir Products	76850	321	87091	357	105794	405	108822	473
	Textiles								
8	Cotton garments & Piece good	21198	498	17660	433	18792	458	17762	437
9	Cotton & Polyester Yarn	12520	205	12379	182	14340	201	12 268	195
	Electronics & Software								
10	Electronics & Computer Software	-	283	-	480	-	650	-	726
11	Others	-	2727	-	2948	-	3498	-	3928

Source: Kerexil, Thiruvananthapuram





8.7 Export statistics for the year 2005-06 shows that out of the total Indian exports, Kerala's share in coir is 93 per cent, cashew kernels 65 per cent, spices 38 per cent, coffee 55 per cent, tea 26 per cent and marine products 17 per cent. All these products totally constitute 35 per cent of the Indian exports of the above items. Details of major commodities exported from India and Kerala during 2005-06 are given in Table 8.3.

Table 8.3
Major Commodities exported from India & Kerala during 2005-06

(Qty in MT and Value in Crore)

Sl No.	Commodities	Quantity		Value		Percentage of Kerala	
		India	Kerala	India	Kerala	Qty	Value
1	Cashew kernels	114143	74376	2515	1623	65	65
2	Marine Products	512164	95737	7245	1240	19	17
3	Spices	320527	54342	2295	862	17	38
4	Coir & Coir Products	136027	108822	508	473	80	93
5	Coffee	155219	88258	1392	765	57	55
6	Tea	151519	74274	1590	415	49	26

Source: Kerexil, Thiruvananthapuram

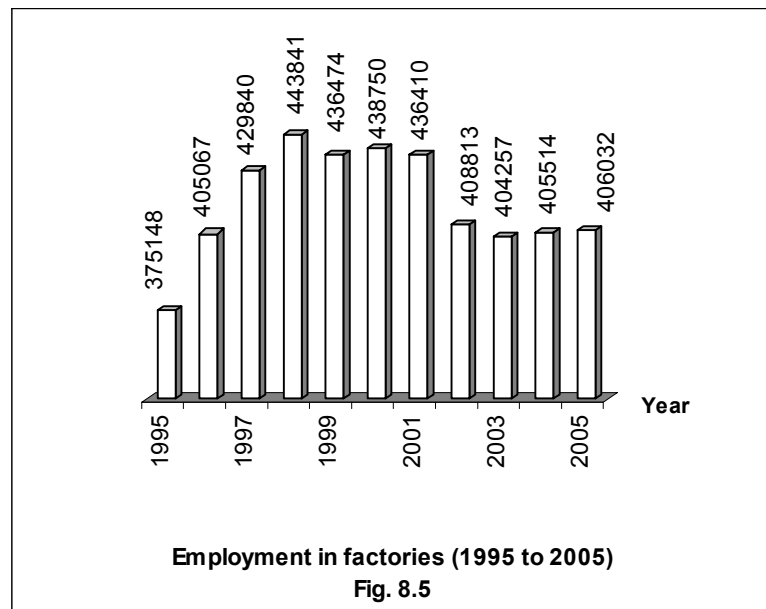
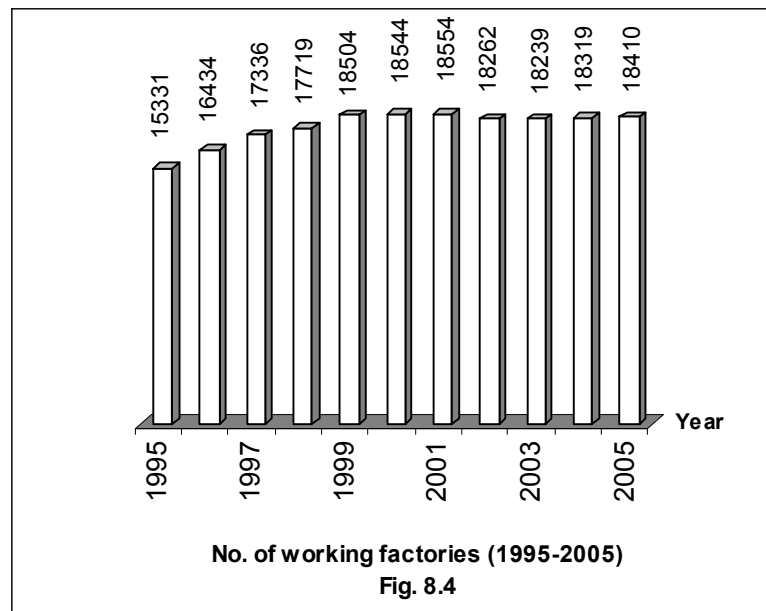
Industrial Disputes

8.8 Even though the number of industrial disputes pending was lower in 2004-05 compared to 2003-04, it slightly increased to 2749 in 2005-06. Number of disputes that led to strike during 2005-06 decreased significantly but the number of workers affected due to strike has increased surprisingly. But the number of workers affected due to lockout has diminished drastically. Mandays lost due to

strike and lockout increased by 136 per cent during 2005-06. This was due to seven-days' strike in coir factories and nine-days' strike in plantation sector. Details of industrial disputes handled, settled etc are given in Appendix 8.5.

Working Factories and Employment

8.9 There was no change in the number of public working factories but the number of private factories increased from 17790 in 2004 to 17881 in 2005 showing only a marginal increase of 0.5 per cent. A marginal increase was also recorded in the employment in working factories and that too was in private factory (518). Of the total 406032 workers, 311665 are in private and 94367 in public factories. Growth of working factories and employment during the period from 1995 to 2005 are given in Appendix 8.2 and Figures 8.4 and 8.5.



8.10 In the district wise distribution of factories marginal increase was recorded in nine districts and it remained the same in Pathanamthitta, Idukki, Kottayam, Thrissur, and Wayanad Districts. The number of working factories is the highest in Ernakulam as in previous years, followed by Thrissur, Kollam and Palakkad. The number of working factories is the least in Wayanad district followed by Kasargod and Idukki. The district-wise details of working factories and employment for the period from 1995 to 2005 are given in Appendices 8.3 and 8.4.

Joint Stock Companies

8.11 As on 31st March 2006, the total number of Joint Stock Companies in Kerala was 15510, of which 14062 are private limited and 1448 are public limited. During 2005-06, 1261 Joint Stock Companies are newly registered in the State and eight companies are transferred from other states. Ten companies are newly transferred to other states from Kerala and a total of 404 companies are wound up/ dissolved/ struck off/ amalgamated resulting in a net addition of 855 companies only during 2005-06. No Government company is registered during 2005-06 in the State, but two Government Companies namely Kerala Inland Fisheries Development Corporation and Keltron Power Devices Limited are wound up and hence the total number of Government companies is 109 with 58 in private limited and 51 in public limited. Details of Joint Stock Companies working in Kerala are given in Appendix 8.19.

Central Sector Investment

8.12 The central sector investment in the State as on March 2005 is Rs. 16828 crore which accounts for 2.59 per cent of total investment as against 2.56 per cent during 2003-04. Even though the percentage increase in the total investment in the country is by 8.79 per cent, the investment in the State indicates a marginal increase of 0.03 per cent only and Kerala stands in 15th position among Indian States. But this increase is due to the increased investments of Indian Oil Corporation, Hindustan Petroleum Corporation, BSNL etc, which are not in the category of manufacturing units. Hence this will not, in any way, change the growth of manufacturing industry in the State. Maharashtra, Uttar Pradesh, Andhra Pradesh, and Tamil Nadu are the top ranking States as regards to central investment. In the central sector PSUs in Kerala, 42000 people are working which accounts for only 2.48 per cent of total employment in all the CPSUs. It was 2.55 per cent in the year 2003-04, and shows a diminishing trend year by year. In the case of employment, Maharashtra, West Bengal, Tamil Nadu, Madhya Pradesh, and Andhra Pradesh are the top ranking states providing higher employment in CPSUs. Details of central sector investment in Kerala and other States are given in Appendices 8.6 and 8.7.

State Level Public Sector Enterprises

8.13 Out of 1071 State Level Public Enterprises in India, Kerala has 113 PSUs with a total stock of capital of Rs. 17781 crore employing 1,11,384 persons, in which only 90 PSUs are functional. Of these 63 are manufacturing units and are classified under chemical, engineering, electrical equipment, textiles, electronics, ceramics, infrastructure, and agro and wood based sectors. In connection with the revival of PSUs under the Industries Department steps are being taken by Government to restructure and revive the SLPEs by a comprehensive policy initiative through upgradation of technology, performance contract agreement, inter PSU tie ups, capacity building and efficient corporate governance. The performance of SLPEs under the Industries Department is given in Table 8.4.

Table 8.4
Performance of PSUs under Industries Department

(Rs. lakh)

Sl. No.	Company	2004-05		2005-06 (Provisional)	
		Turnover	Profit/Loss	Turnover	Profit/Loss
Profit Making Units					
1	The Kerala Minerals and Metals Ltd.	32496.46	3,842.96	28,665.01	2,782.87
2	Kerala State Industrial Development Corporation	2,325.00	1,329.00	2,325.51	1,329.36
3	Malabar Cements Ltd	16,985.87	-271.06	20,394.00	400.00
4	Travancore-Cochin Chemicals Ltd	10,569.77	-829.24	12,603.00	445.00
5	Kerala Textile Corporation Ltd	3,658.06	-325.10	3,876.45	351.47
6	Steel and Industrial Foregings	2,798.00	131.00	3,438.00	316.26
7	Transformers and Electricals Kerala Ltd.	10,021.51	199.26	10,904.56	204.69
8	Kerala Clays & Ceramic Products Ltd.	416.56	115.40	441.72	83.83
9	Travancore Sugars & Chemicals Ltd.	713.44	14.10	656.10	50.48
10	Forest Industries (Travancore) Ltd.	541.28	32.17	727.00	45.00
11.	Kerala Hi-Tech Industries Ltd	1,382.93	1.39	1,609.14	39.44
12.	Handicrafts Development Corporation(Kerala) Ltd.	707.94	-4.19	1,122.00	4.48
13	KELPALM	10.03	-41.94	5.47	4.22
Total		82,626.85	4,193.75	86,767.96	6,057.10
Loss Incurring Units					
1	The Metal Industries	145.84	-28.65	145.41	-9.71
2	Kerala Garments Ltd.	203.29	-56.31	29.10	10.00
3	Foam Matting (India) Ltd.	647.78	23.76	477.98	20.00
4	Kerala Artisans Dev. Corpn. Ltd.	222.19	-1.33	152.22	-27.50
5	The Malappuram Co-operative Spinning Mills Ltd.	2,055.73	-194.74	2,039.39	-36.06
6	Keltron Magnetic Ltd.	325.50	-36.54	353.45	-45.72
7	Keltron Resistors Ltd.	152.61	-61.84	152.00	-51.70
8	Steel Complex Ltd.	1,122.32	-67.66	435.26	-56.67
9	Keltron Electro Ceramics Ltd.	445.84	-29.02	333.76	-66.69
10	Alleppey Co-operative Spinning Mills	595.45	-103.35	-471.00	-68.70
11	The Kerala Ceramics Ltd.	593.30	-157.66	296.11	-102.29
12	Kerala Electrical & Allied Engineering Company Ltd.	5,611.95	-357.46	5,956.92	-112.55
13	CAPEX	2,058.83	-423.74	1,524.14	-115.00
14	Kerala Automobiles Ltd.	4,819.92	53.03	3,742.68	-133.55
15	Travancore Titanium Products Ltd.	13,825.13	153.23	12,729.03	-151.01
16	Sitaram Textiles Ltd.	783.78	-272.80	642.96	-152.21
17	Autokast Ltd.	1,330.68	-321.71	1,390.31	-156.53
18	Keltron Component Complex Ltd.	2,467.17	-403.68	2,460.92	-163.04
19	Kerala Small Industries Development Corporation Ltd.	8,010.58	-65.68	5,288.65	-173.86

20	United Electrical Industries Ltd.	743.40	-285.35	496.85	-202.65
21	The Trichur Co-operative Spinning Mills Ltd.	1,344.00	-276.00	1,217.00	-214.00
22	Keltron Crystals Ltd	98.92	-239.03	116.79	-228.31
23	The Cannannore Co-op. Spinning Mills Ltd.	798.94	-430.08	1,050.17	-311.51
24	The Quilon Co-operative Spinning Mills Ltd.	839.63	-369.81	691.59	-368.76
25	The Travancore Cements Ltd.	2,818.00	-265.00	2,116.00	-395.00
26	Traco Cable Company Ltd.	4,401.99	-717.68	3,678.08	-415.29
27	HANTEX	1,586.22	-326.11	962.00	-471.16
28	Steel Industrials Kerala Ltd.	1,590.09	-628.43	1,075.93	-485.68
29	Kerala State Handloom Development Corporation Ltd.	1,747.43	-417.89	1,119.40	-503.42
30	Kerala State Cashew Development Corporation Ltd.	6,582.43	-297.16	9,100.89	-3,968.17
31	Kerala State Electronic Development Corporation Ltd.	9,734.06	-4,619.39	10,930.97	-4,201.00
	Total	77,703.00	-11,224.08	71,176.96	-13,417.74
	Grand Total	160,329.85	-7,030.33	157,944.92	-7,360.64

Source: RIAB, Thiruvananthapuram.

8.14 Only 13 SLPEs of the Industries Department made profit and others incurred loss during 2005-06. Malabar Cements, Travancore - Cochin Chemicals Limited, Kerala State Textile Corporation, Handicrafts Development Corporation and Kelpalm have made profits during 2005-06 as against making loss during 2004-05. The total profit from these 13 SLPEs is also higher than that of the previous year.

8.15 The following companies are non-operational.

- Astral Watches Limited
- Keltron Counters Limited
- Keltron Power Devices Limited.
- Keltron Rectifiers
- Kerala Construction Components Limited.
- Kerala Soaps & Oils Limited
- Kerala Special Refractories Limited
- Kerala State Detergents & Chemicals Limited.
- Sidkel Television Limited.
- The Chalakkudy Refractories Limited
- The Co-operative Sugars Limited, Chittur.
- The Mannam Sugar Mills Co-operative Limited.
- The Metropolitan Engineering Company Limited.
- Travancore Plywood Industries Limited.
- Trivandrum Spinning Mills.

8.16 Many SLPEs had availed term loans as well as working capital loan from banks and had failed to service the same promptly. This has resulted in classification of these accounts by banks as NPAs and bank operations have been stalled in certain cases. Due to this, there is dearth of capital support from the financial institution/banks.

8.17 As part of restructuring activities, Government have constituted a committee to explore the possibilities of inter PSU tie-ups on marketing of products among themselves. For sourcing orders for PSUs, a committee is also constituted to follow up the efforts taken so far. Action is also being initiated by Government for sourcing technology and investment by Indian Railways in Autokast Limited and Steel Industrials Kerala Limited.

Box 8.1
Major Reasons for Non-Performance of PSUs

- Lack of commercial orientation.
- Improper selection of CEOs
- High cost of operations
- Excess manpower, improper person- task fit and high liabilities including statutory dues.
- Conflicting objectives which is often advocated by organized trade unions that prevail in the decision making process.
- No change in lines of business and attitudes while macro economic conditions change.
- Poor standards in corporate governance.
- Unworkable revival packages with thrust on huge long term open ended commitments from the Government.
- High cost of closure of unviable units (around Rs.5 lakh per employee is required for VRS)
- Policy constraints to implement good corporate governance principles.

Box 8.2
Options for Restructuring

- Restructure profit making and potentially viable unit within the public sector.
- Government investment as matching contribution in profitable units and social enterprises.
- Merger of SLPEs having the same line of activity
- Introduction of management contracts/ leasing.
- Professionalisation of Boards and adoption of globally acclaimed corporate governance principles.
- Investment by a strategic partner from Central Government/public/financial institutions in diversification and expansion of potentially viable units.
- Closure of unviable divisions / PSUs.
- Use of assets of closed units and unused land for State's developmental activities after settling encumbrance issues.

Table 8.5
List of Major Units that have Availed Financial Assistance from Government

(Rs. lakh)

Sl. No.	Companies	Financial Assistance during 1997-2006	Manpower (as on 31-03-05)	Accumulated Losses (as on 31-03-05)
1	Kerala State Electronics Development Corporation Limited	11357.27	1,493	44,255.95
2	The Kerala State Cashew Development Corporation Limited	9087.00	14,203	34,761.64
3	Kerala Electrical and Allied Engineering Company Limited	3898.00	1,040	7,163.99
4	Transformers And Electricals Kerala Limited	2308.84	1,119	5,013.38
5	Kerala State Textile Corporation Limited	1838.04	874	4,664.99
6	Autokast Limited	1640.71	342	12,733.26
7	Steel Complex Limited	1487.00	221	5,027.03
8	Sitaram Textiles Limited	1165.69	260	3,849.14
9	Steel Industrials Kerala Limited	970.85	316	4,673.99
10	Kerala Hitech Industries Limited	756.00	236	1,616.83
11	Keltron Component Complex Limited	730.00	314	706.13
12	The Travancore – Cochin Chemical Limited	694.00	813	1,384.53
13	The Kerala Ceramics Limited	654.29	232	2,490.62
14	Traco Cable Company Limited	521.00	625	3,052.79
15	The Travancore Sugars & Chemicals Limited	473.82	118	530.95
16	United Electrical Industries Limited	331.28	146	116.38
17	Kerala State Handloom Development Corporation Limited	325.00	403	2,503.53
18	Kerala Garments Limited	260.43	118	717.24
19	Kerala State Bamboo Corporation Limited	180.00	249	729.76
20	The Metal Industries Limited	165.39	97	227.37
21	The Kerala State Coir Corporation Limited	150.00	194	1,008.19
22	The Travancore Cements Limited	126.00	575	480.00
23	Kerala Artisans Development Corporation Limited	120.20	26	213.39
24	Keltron Crystals Limited	96.00	59	1,702.87
25	Kerala Small Industries Development Corporation Limited	50.00	525	3,182.63
26	Handicrafts Development Corporation of Kerala Limited	44.00	163	777.16
27	Kerala State Palmyrah Products Development	35.00	17	41.95
28	Keltron Resistors Limited	24.49	47	248.18

Source: RLAB, Thiruvananthapuram

Small Scale Industry (SSI)

8.18 The Small Scale Industrial Sector is one of the most dynamic and vibrant sectors in the Indian Economy in terms of employment generation. The sector contributes the maximum production for both domestic and export markets. This sector contributes to 40 per cent of industrial production and 35 per cent of direct export. The sector produces a variety of products ranging from traditional to hi-tech. Industrial units with an investment in plant and machinery less than Rs. One crore falls under SSI category with some exemptions like pharma, hand tools, hosiery and stationery item where the limit is Rs.5.00 crore. Even though the quantity of production is very large, the quality of products, productivity, energy consumption and environmental effects etc. have always been a concern in the sector.

8.19 The 3rd All India Census of small-scale industries was conducted during 2002-03 with reference year 2001-02, covering all the registered units as on 31.3.2001. The census revealed that out of the total registered units, only 146988 units are actually working and others are found closed as on 31.3.2001. They created an investment of Rs.4943 crore and provided employment to 540260 persons. During 2005-06, 5626 units with an investment of Rs.211.69 crore providing employment to 28128 persons were registered. By the end of March 2006, the actual number of working SSI units increased to 193302 from 187676 with an investment of Rs.5914 crore and employment of 710508 persons. It is estimated that the average investment per SSI unit decreased from Rs.4.02 lakh in 2004-05 to Rs.3.76 lakh in 2005-06. The average investment per worker decreased from Rs.0.88 lakh in 2004-05 to Rs.0.75 lakh in 2005-06. The details of district wise working SSI units during 2005-06 is given in Appendix 8.20 and the details of district wise working SSI units, investment, employment and value of production as on 31.3.2006 is given in Table 8.6.

Table 8.6
District-wise Details of Working Small Scale Industrial Units Registered in Kerala as on 31st March 2006

District	Number of SSI units promoted by					Total Investment (Rs lakh)	Value of goods and services produced (Rs lakh)	Employment provided (No)
	SC	ST	Women	Others	Total			
1	2	3	4	5	6	7	8	
Thiruvananthapuram	781	159	5182	15387	21509	49136.94	100266.86	83062
Kollam	964	55	4245	10503	15767	33384.81	64296.77	70617
Pathanamthitta	482	37	2531	6060	9110	15715.49	18243.28	23252
Alapuzha	387	79	4049	13231	17746	49432.78	104273.89	69262
Kottayam	381	170	5212	13958	19721	60689.26	102357.51	56833
Idukki	315	154	1618	2891	4978	21373.56	24019.69	15520
Ernakulam	375	157	4529	19353	24414	104133.76	376335.01	102843
Thrissur	898	88	3896	17188	22070	70950.05	118518.60	82717
Palakkad	1142	105	2524	10661	14432	48176.55	63906.90	45787
Malappuram	355	76	1339	8244	10014	34077.66	64538.02	33712
Kozhikode	429	75	2293	13091	15888	55229.82	95240.04	57771
Wayanad	45	114	949	1740	2848	7251.29	7822.58	9876
Kannur	134	57	1340	8296	9827	28621.51	57659.97	35368
Kasaragod	117	86	788	3987	4978	13266.17	20549.18	23888
Total	6805	1412	40495	144590	193302	591439.65	1218028.30	710508

Source: Directorate of Industries and Commerce

8.20 Of the total number of 193302 SSI units, 6805 units have been started by Scheduled Caste entrepreneurs, 1412 units by Scheduled Tribes and 40495 units by women entrepreneurs. An analysis of the total number of units reveals that Ernakulam District with 12.63 per cent of the total, Trichur with 11.42 percent of the total and Thiruvananthapuram with 11.13 per cent of the total account for more than one third of the total number of units registered in the State. With regard to capital investment, Ernakulam District comes first followed by Thrissur and Kottayam which altogether accounting for 41.19 per cent of the total investment.

Prathyasa

8.21 Government of Kerala has drawn up an investment promotion programme, named as Kerala Local Industry Promotion Programme (KLIPP) under the banner name of PRATHYASA through District Industries Centres. The objective of the scheme is to facilitate the setting up of 25000 units in the small-scale sector generating 1,00,000 employment during 2005-06. By the end of March 2006, about 17000 enterprises have been started under the programme generating employment to 54750 persons.

Cluster Development

8.22 Sector specific clusters of industrial units are being promoted with the assistance of financial institutions and skill development facilitated through common facility centres and training institutions. Government have trained eighty officials from the Department to enable them to fulfill the role of cluster development agents. Government have short listed a few thrust sectors where intensive cluster development will be focused during the initial phase.

8.23 The cluster consortia are setting up ventures such as common facility centres, raw material bank etc with the financial assistance of banks. Sixty clusters have been identified and 32 clusters have been developed and approved under the Cluster Development Programme. Details of developed clusters are given in Table 8.7.

Table 8.7
Developed Clusters

Name of District	Name of Clusters
Thiruvananthapuram	M/S. Travancore Cane & Bamboo Company (P) Ltd. Chirayinkil M/s. Sreechitra Wooden Crafts & Carvings Development Society, Neyyatinkara Kerala Handloom Silk Consortium (P) Ltd, Balaramapuram
Kollam	M/s Wood Empire Consortium (P) Ltd. Ayur M/s Travancore Apparels Consortium (P) Ltd. M/s Kairali Cashew Processors and Exporters Consortium Pvt. Ltd.
Pathanamthitta	M/s. Adoor General Engg. Consortium (P) Ltd.
Alappuzha	M/s, Venice Coir Consortium (P) Ltd, Mararikulam South M/s Vasthra Garment Cluster Pvt. Ltd.
Kottayam	Natural Rubber & Fibre Products Manufactures Consortium (P) Ltd. M/s. Kottayam Leather Goods & Wears Consortium (P) Ltd. M/S. Omax Food (P) Ltd., Pala M/s. Vinayaka Coir Consortium, Vaikom M/s Holy Apparel Exports (P) Ltd.

Ernakulam	M/S. Perumbavoor Plywood Manufactures Consortium (P) Ltd. Aluva Plastic Consortium (P) Ltd., Perumbavoor M/s. Kalady Rice Millers Consortium (P) Ltd., Kalady M/s. Mahila Apparels (P) Ltd., Mini Indl. Estate, Angamaly M/s. Cochin Footwear Consortium (P) Ltd., Perumbavoor M/s Ernakulam General Engg. Cluster M/s Paravur Iron & Steel Cluster. M/s Kerala Industries Consortium Pvt. Ltd.
Thrissur	M/s. Thrissur Diamond Co. Ltd., Mundur. M/s. Terra Tile Consortium (P) Ltd.
Palakkad	M/s Shoranur Agricultural Implements Consortium (P) Ltd.
Malappuram	M/s Malabar Rubber Consortium (P) Ltd., Manjeri M/s. Edavanna Timber & Furniture Consortium (P) Ltd. M/s. Valunanad Wood Consortium (P) Ltd. Perinthalmanna
Kozhikode	M/s. Kozhikode Halva Consortium (P) Ltd. M/s Kadathanad Steel Engg. Consortium (P) Ltd. Vatakara. M/s. Anil Basu Gold Consortium (P) Ltd. Koyilandy., Kozhikode
Kannur	M/s Kannur Coir Mattress Associates (P) Ltd. IDP, Andoor.

Source: Directorate of Industries and Commerce

8.24 Government proposes to address the problem of units outside the clusters also while promoting cluster development.

Self-Employment Programme under Prime Minister's Rozgar Yojana (PMRY)

8.25 The PMRY programme has achieved a very good performance during 2005-06. As against the target of 28000 persons for assistance under self-employment programme 29457 persons were sanctioned assistance during 2005-06. The number of disbursement of loan also witnessed highest performance during 2005-06 recording the highest percentage of disbursement (84.34) against target since inception of the scheme. An amount of Rs.112.25 crore has been disbursed in 2005-06 as against the disbursement of Rs. 98.00 crore during 2004-05 by registering an increase of 14.54 per cent. Details of performance under PMRY in 2005-06 are given in Appendix 8.23.

Industrial Co-operatives

8.26 Out of the total number of 1101 Industrial Co-operative Societies, 21 new societies were registered during 2005-06 as against 12 societies during 2004-05. Of the total number of registered societies, 181 are SCs, 57 are STs, 437 are women and 426 societies are general. Regarding the number of societies, Thiruvananthapuram district stands first, followed by Kollam and Alappuzha. Details of Industrial Co-operative Societies in Kerala as on 30.6.2006 are given in Appendix 8.24. Government intends to strengthen the co-operatives by restructuring and promoting managerial and technical input.

Bank Credit to SSI Sector

8.27 The outstanding bank credit to various sectors at the end of March 2006 was Rs.51919 crore as against Rs.40948 crore in the previous year. The flow of credit to SSI sector showed a considerable increase in absolute terms from Rs.3128 crore in 2005 to Rs.3708 crore in 2006. But the percentage share of SSI sector in the total bank credit decreased from 7.64 per cent to 6.12 per cent during the same period. The status of flow of credit to various sectors is given in Appendix 8.25.

Food Processing

8.28 Government has given special thrust to promotion of food processing industry due to the enormous potential of the sector for development. KINFRA is the State nodal agency to the Ministry of Food Processing Industries (MOFPI), Govt. of India administering all the schemes of the Ministry in the State. It has set up an Agency for the Development of Food Processing Industries in Kerala (ADFIK), an organization exclusively to focus on promotion of food processing industries in the State.

8.29 ADFIK undertakes complete activities on behalf of KINFRA for all the functions related to the nodal agency for MOFPI. Out of 35 projects recommended to MOFPI for financial assistance to the tune of Rs.1199.49 lakh, about 18 projects have been sanctioned during 2005-06 for an amount of Rs 437.33 lakh. The projects sanctioned by the Ministry include setting up of food processing units, expansion as well as modernization of food processing units, setting up infrastructure for imparting food processing based educational courses, entrepreneurial development programmes and quality management systems.

8.30 KINFRA has established quality control laboratory at KINFRA Parks in Kakkancherry and Mazhuvannoor. During the year under report the cold storage at Mazhuvannur has been completed. Besides, KINFRA has set up a Food Business Incubation Centre at KINFRA Food Park, Kakkancherry.

KINFRA Food Parks

8.31 ADFIK is involved in promoting the KINFRA food parks. With the objective of boosting industrial growth, KINFRA has been promoting the concept of Theme Parks, which have been set up for the exclusive growth and development of chosen and specified industrial sectors. Food Processing Parks, Apparel Park, Film and Video Park, Herbal and Ayurveda Parks are some examples of the theme parks already implemented by KINFRA. Two Food Processing Parks had already been set up by KINFRA, one at Kakkancherry near Kozhikode and the other at Mazhuvannur near Ernakulam. A third Food Park at Adoor is under implementation at present.

8.32 Food parks offer a host of sector specific common facilities like quality control laboratories, water treatment plant, effluent treatment plant, cold storage, food business incubation centre etc. which provide incentive for entrepreneurs to establish food processing units.

Table 8.8
Details of Food Processing Units in KINFRA Parks during 2005-06

Sl. No.	Name of Park	Total area acquired (acres)	No. of units	Area allotted (acres)	Investment (Rs. Lakh)	Employment (Nos)
1	Small Industries Park, Thumba, TVPM	40	2	1.1355	167	24
2	Kinfra Small Industries Park, Mazhuvannur, EKM.	65	10	15.055	1784.95	316
3	Food Processing Park, Kakkanchery, Malappuram.	60	4	1.459	336.5	67
4	Small Industries Park, Seethangoli, Kasargod	60	1	0.25	12.5	18
5	Small Industries Park, Wayanad	50	1	0.2	12	7

Source: KINFRA, Tvpm

Table 8.9
Details of Food Processing Units in KINFRA Parks as on March 2006

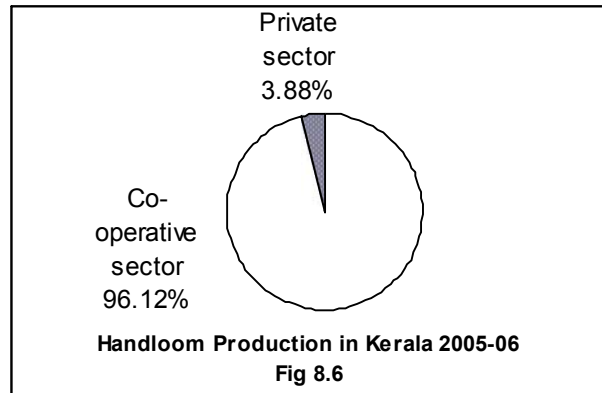
Sl. No.	Name of Park	Total area acquired (acres)	Area allotted (acres)	No. of units	Investment (Rs. Lakh)	Employment (No)
1	Small Industries Park, Thumba, TVPM	40	3.9	10	608.75	101
2	Kinfra Small Industries Park, Mazhuvannur	65	31.85	33	3636.58	667
3	Food Processing Park, Kakkancherry, Malappuram	60	9.67	14	1843.10	233
4	Small Industries Park, Koratty, Thrissur	20	9.70	5	1237.09	230
5	Small Industries Park, Wayanad	50	0.60	2	62	16
6	KINFRA Small Industries Park, Kasaragod	60	3.95	4	981.5	225

Source: KINFRA, TvpM

Handloom Industry

8.33 The handloom sector in Kerala employs about 1.75 lakh people and this industry stands second to the coir industry in providing employment among the traditional industries of the State. The handloom industry in the State is concentrated in Thiruvananthapuram and Kannur districts and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod districts. The industry is dominated by the co-operative sector with 94 per cent of looms. The remaining six per cent of handloom units are owned by industrial entrepreneurs. The co-operative sector consists of factory type and cottage type societies. By the end of March 2006, there were 758 PHWCS consisting of 155 factory type societies. The district-wise details of handloom societies in the State are given in Appendix 8.26.

8.34 Of the total number of 50255 looms in the State, the share of Kannur District is around 11000. There are 73 registered co-operative weavers' societies and 79 private handloom units in Kannur and they are largely engaged in the production of export variety items. The major varieties produced in the handloom sector of the State are dhothies, furnishing material, grey sari and lungi. Estimates show that the production of these items comes to 67 per cent of the total production. About 54 per cent of the major items are produced in southern region followed by the North (32 per cent) and Central (14 per cent) regions. The overall production of cloth in Kerala shows a marginal increase of 0.08 million metres from 62.30 million metres in 2004-05 to 62.38 million metres in 2005-06. Of the total production, 96.12 per cent is contributed by the co-operative sector and the balance of 3.88 per cent is by the units in the private sector.



8.35 Under SGSY scheme of Government of India, special projects for the social and economic development of Handloom Weavers by forming self-help groups of weavers have been submitted for assistance. Two projects, “THANIMA”, at a cost of Rs.14.64 crore for Thiruvananthapuram District and KRITHIKA at a cost of Rs.11.08 crore for Kannur district have been approved.

8.36 Under Deen Dayal Hathkargha Protsahan Yojana (DDHPY), cluster development approach was taken as a component for the development of handloom industry. Twelve clusters comprising 295 societies have been established in the State. Out of the 385 project proposals sent to Government of India, 295 were sanctioned and an amount of Rs.696.84 lakh was released so far.

8.37 Procurement and marketing of handloom fabric in the State are being undertaken by two state level organisations namely Hantex and Hanveev. Hantex, set up in 1961 is the apex organisation of handloom co-operatives responsible for the supply of raw materials for the primary weaver’s societies and for the marketing of their products. Hantex has 152 sales depots, two weaving factories, two garment units and one cloth processing unit and has four regional offices. The number of primary societies registered under Hantex during 2005-06 is only three enhancing the total number to 466. The value of yarn purchased is Rs.6.56 crore and value of cloth procured is Rs.6.99 crore during 2005-06 as against Rs.8.82 crore and Rs.8.75 crore respectively during the previous year. About 80 per cent of the goods produced by the societies are marketed through Hantex and about 20 per cent are through own retail shops. The working results of Hantex are furnished in Appendix 8.28.

8.38 The Kerala State Handloom Development Corporation (Hanveev), set up in 1968, is another agency to assist the handloom industry outside the co-operative sector. The Corporation acts as a link between the weavers and consumers and helps to eliminate the middlemen. The weavers are supplied necessary raw materials at reasonable price and arrangements for marketing these products are also made. The Corporation has three regional offices, one each at Thiruvananthapuram, Ernakulam and Kannur, and 33 production centres called clusters. It has 75 showrooms and one processing centre (pre-loom and post-loom) at Kannur. At present, there are 6500 registered weavers under the Corporation. The loss of the Corporation has shown an increasing trend during the past few years. The accumulated loss increased to Rs.3008.44 lakh by the end of March 2006. The quantum of production, value of production, sales turn over and accumulated loss for the past six years are shown in Table 8.10.

Table 8.10
Performance of Hanveev from 2000-01 to 2005-06

Year	Production		Sales Turnover (Rs. Lakh)	Accumulated Loss (Rs. Lakh)
	Quantity (lakh meters)	Value (Rs. Lakh)		
2000-01	19.11	797.00	2032.22	785.48
2001-02	8.48	354.00	1688.00	992.65
2002-03	8.20	335.00	990.00	1441.29
2003-04	12.30	515.74	1640.85	2085.64
2004-05	15.93	772.51	1603.84	2503.53
2005-06(p)	16.88	696.05	1491.50	3008.44

Source: Hanveev
(p): provisional

8.39 Kerala Garments Ltd., incorporated in 1974 is a fully owned subsidiary of Hanveev. The main activities of the company are stitching and sale of readymade garments. The Company produced 34000 pieces of readymade garments valued at Rs.24 lakh during 2005-06 against the production of 35000 garments valued at Rs.25 lakh in the previous year. It realized stitching charges around Rs.22 lakh and sold ready-made garments worth Rs.7.11 lakh. The loss of the company during the year under report was Rs.28.59 lakh compared to Rs.63.26 lakh in 2004-05.

Handicrafts

8.40 The handicrafts sector occupies an important place in the economy in terms of employment generation, GDP growth and conservation and fostering tradition and culture. The major handicrafts of Kerala are ivory carving, bell metal casting, screw-pine and mat weaving, bamboo and reed weaving, cane work, coconut shell carving and straw picture making. The various agencies engaged for the promotion of handicrafts industry are the Kerala State Handicrafts Apex Co-operative Society Ltd., Artisans Development Corporation, Handicrafts Development Corporation and Bamboo Development Corporation.

8.41 The Kerala State Handicrafts Apex Co-operative Society (Surabhi) started in 1964 with the objective of uplifting the standard of living of handicraft artisans by marketing their products and implementing various welfare schemes with the assistance from State and Central Government. This apex society has 103 primary co-operative societies, which market their products through 16 sales showrooms, 12 in Kerala State itself and four outside the State. In order to popularise Kerala crafts the apex society conducted 15 exhibitions in different districts/ centers. During 2005-06, the apex society purchased goods worth Rs.190 lakh and achieved sales of Rs. 271 lakh.

8.42 The Kerala Artisans Development Corporation (KADCO) was set up in 1981 by Government of Kerala with a view to provide a package of assistance to the artisans belonging to carpentry, blacksmithy, goldsmithy, bronze, copper and pottery trades etc. The main activities of the Corporation include assistance to artisans for establishing production units, promoting marketing of products and providing employment opportunities directly and indirectly through schemes of trade fairs and marketing centres. The loss of the Corporation during 2005-06 was Rs.5.36 lakh as against Rs.14.07 lakh in 2004-05. The accumulated loss at the end of March 2006 was Rs.218.76 lakh. KADCO has been nominated as one of the State channelising agencies for the implementation of schemes financed by the National Backward Classes Finance and Development Corporation (NBCFDC). Under this scheme, loans worth Rs.25 lakh have been disbursed to 40 artisans during

2005-06. The Corporation is also conducting exhibition-cum-sales of finished products produced by artisans throughout the State. This is helpful to sell artisan's product directly to the public without any middlemen. Every year Corporation is organising exhibitions on behalf of State and Central Government.

8.43 For promoting the sales of artisans products in the State and also for undertaking work orders from Central Government, State Government and PSUs, marketing centres had been set up at Kollam and Ernakulam. The Corporation is giving loan up to Rs.25000 to each skilled artisan for getting employment abroad and during 2005-06 about 13 persons got benefit under this scheme.

8.44 The Handicrafts Development Corporation was set up in 1968 with SMSM Institute as a central emporium and other three State emporia at Coimbatore, Madras and New Delhi. It has now 18 emporia all over the country. The Corporation buys handicrafts products directly from craftsmen offering fair prices and sells through its emporia. The sales turnover of the Corporation increased to Rs.1064.73 lakh in 2005-06 from Rs.947.10 lakh in 2004-05 recording an increase of 12 percent. The accumulated loss of the Corporation at the end of March 2006 was Rs.838.18 lakh.

8.45 The Corporation is also acting as the channelising agency for the NBCFDC for disbursement of loan to needy artisans for production, raw material purchase etc. Under this scheme Rs.146.69 lakh have been disbursed to 372 artisans so far.

Bamboo Industry

8.46 The Bamboo industry in Kerala provides livelihood to about one-lakh workers mostly belonging to the tribes and other weaker sections of the society, majority of which are women. The Kerala State Bamboo Corporation was established in 1971 by Government to ensure availability of raw materials to about three lakh workers belonging to socially and economically backward sector depending on traditional reed based industries without the interference of intermediaries. At present the major activities of the Corporation include collection of reeds from forests, distribution of reeds to the registered mat weavers and sale to other traditional workers, procurement of bamboo mats and production and sale of bamboo ply. Corporation has at present 15 reed distribution centres, nine reed collection centres and 93 mat procurement centres. The Corporation produces about 300 lakh sq. ft bamboo mats and about 50 lakh sq. ft bamboo ply boards every year. The sales turnover of the Corporation decreased to Rs.921.28 lakh in 2005-06 from Rs.968.44 lakh in 2004-05. The loss of the Corporation during 2005-06 was Rs.195.91 lakh as against Rs.283.70 lakh in 2004-05 enhancing the cumulative loss to Rs.925.67 lakh.

8.47 The formation of a multi disciplinary and multi departmental State Bamboo Mission in November 2003 is a major initiative for the development of bamboo sector in Kerala. As the first phase of bamboo plantation programme, Kerala Forest Research Institute, which has a supply stock of 37000 seedlings of various species of bamboo, supplied the seedlings free of cost to 10 panchayaths in Wayanad, Palakkad and Ernakulam for planting. KFRI provides the technical knowhow on planting and maintenance of Bamboo seedlings. In the second phase of this programme that commenced in July 2005, seedlings were distributed to bamboo clusters developed under the cluster development programmes of Industries Department. Three Districts namely, Kollam, Pathanamthitta and Alappuzha were covered in this phase. Uravu, an NGO in Wayanad was identified as one of the training centres for conducting skill upgradation training programmes for artisans and craftsmen and about 560 artisans were given training by 2005. A training programme on bamboo shoot processing was organized at KFRI. Kerala Bamboo Fest 2005 was organized at Ernakulam by Kerala State Bamboo Mission in association with KFRI and all related agencies in the State.

Coir Industry

8.48 Coir Industry in Kerala is a major traditional industry, generating employment to more than 3.75 lakh workers, of which 76 per cent are women. Though intensive effort were taken to boost the sector, it still remains as a sick traditional industry due to the competition from products such as natural as well as synthetic fibres, both in domestic and international markets. Problems like non-professionalized management system in the co-operative sector, reluctance to adopt mechanization, shortage of husk due to attack of mandari disease, unhygienic surroundings and conditions in work area of traditional setting and beating operations have resulted in the reduction of fibre production and an unprecedented increase in the price of fibre in the State. The non-commissioning of eleven defibering mills out of 56 defibering units already sanctioned by the Government in the Co-operative sector under the ICDP programme for mechanised fibre production, unsatisfactory working of the majority of commissioned units and the scarcity of husk have once again deteriorated the situation. Revival of those DF Mills and opening of more such units in private sector are essential so as to ensure continuous availability of fibre. In case of Market Development Assistance, which was introduced in lieu of the rebate system by Government of India has not helped either Coirfed or other PCSs, because of the conditions and limitations stipulated for the utilisation of MDA by Government of India. An amount of Rs.300 lakh was paid as MDA during 2005-06. As part of the Government effort to revive the existing defibering units in the co-operative sector and opening new units in the private sector, Coir Department is offering 50 per cent subsidy on their capital investment limited to Rs.10 lakh per unit. As a result 61 applicants from private sector have been given registration by the department for setting up defibering units and 11 of them have started the units. Others are in the process of setting up of the units.

8.49 Out of 801 registered coir co-operative societies, 438 are now working and only 30 are making profit. A good number of co-operative societies and PSUs working in the industry are on crisis due to inability to produce new designs and more value added items as per the changing taste of the consumers. Lack of R & D activities and innovative marketing are the other reasons for their poor performance. Details of various types of co-operative societies and their activities during 2005-06 are given in Appendix 8.31 and 8.32. And district wise details of coir co-operatives are given in Appendix 8.33

8.50 To help small-scale producers in coir sector, a scheme called Common Facility Service Centre is being implemented. An amount Rs.20 lakh was expended for it during 2005-06. An amount of Rs.425 lakh was sanctioned for various welfare schemes of coir workers during 2005-06. And an amount of Rs.22.70 lakh was also spent on Geo-textiles Development Programme so as to have a multi-deciplinery, geo-textiles engineering applications in the State.

8.51 A total expenditure of Rs.18.08 crore was made for various plan schemes in coir sector during the year under review. Among the items of export, handloom mat, tufted mat, coir pith, powerloom mat, rubberised coir and coir fibre have showed an increase and curled coir, handloom mattings, powerloom mattings have recorded a decrease. The export of coir and coir products from India during the year 2005-06 was 136026.97 tones valued at Rs.50844.75 lakh as against 122926.78 tones valued at Rs.47340.27 lakh in 2004-05. USA is the largest importer of coir products from India, followed by Germany, UK, France, Netherlands, Italy and European Countries. Item-wise details of export of coir and coir products from India during 2004-05 and 2005-06 are given in Appendix 8.34.

8.52 COIRFED is the Apex Federation of Primary Co-operative Societies, which are engaged in the manufacture of coir fibre, coir yarn and other coir products. Their entire output is marketed by the Coirfed, while the other coir products are marketed by concerned societies themselves. The

turnover of Coirfed during 2005-06 was Rs.11.25 crore. The annual sales turn over of Foam Mattings (India) Ltd and Kerala State Coir Corporation were Rs.516.32 lakh and Rs.340.93 lakh respectively during 2005-06.

8.53 Action has also been initiated for setting up a National Coir Research and Management Institute (NCRMI) in order to strengthen the R & D activities in the coir sector with a view to enable the coir industry to produce more value added and new design products, and to sustain an upper hand in the domestic and international markets. An amount of Rs.75 lakh was provided to NCRMI for undertaking various research projects on coir sector. Creation of a database on physio-chemical and structural characteristics of coir fibre, development of appropriate technology of spinning jute-coconut fibre blended yarn and production of diversified jute-coconut fibre in rural sector, production of ayurvedic coir using coconut fibre dyed with ayurvedic herbal dyes through eco- friendly process, development of process for the extraction of fibre from tender coconut husk by RRL, Thiruvananthapuram etc are the major R&D projects undertaken by the NCRMI.

Khadi and Village Industries

8.54 Khadi and Village Industries Board carries out its activities through co-operative societies, registered institutions and departmental units by availing financial assistance from the State Government, Khadi Commission and Nationalized Banks.

8.55 During 2005-06, under Rural Employment Generation Programme of Government of India, Khadi Board has disbursed an amount of Rs.856.46 lakh to 656 units as margin money grant by creating employment opportunities to 16167 persons. A total investment of Rs.3307.18 lakh was made for these units during the period. Financial assistance was also given for conducting workshops, exhibitions and other schemes for the publicity and propaganda of this programme. State level exhibition exclusively for the Rural Employment Generation Programme (REGP) units has been organised at Kozhikode from 23-12.2005 to 3-02-2006. Three district level exhibitions at Alappuzha, Palakkad and Malappuram and two awareness camps were arranged during the period under review.

8.56 Products worth Rs.159.72 crore were produced through the aided units of the Khadi and Village Industries Board and products worth Rs.186.39 crore were sold. Employment has been provided to 158594 persons. Details of production, sales, employment and wages paid are given in Appendix 8.37.

8.57 The State Government have sanctioned production incentive @ 10 Ps. per hank produced by spinners and @ 40 Ps per hank used for weaving by weavers. Incentive has been disbursed to 8988 Khadi workers and steps were taken to replace 20 looms, repair 50 looms and install 128 looms and for count conversion in 40 looms during the period under review. Khadi Board has taken steps to produce 200^s yarn so as to manufacture the export quality khadi clothes through the introduction of 150 charkas. Training in weaving has also been imparted to 134 persons. During 2005-06, steps were also taken to establish honey-processing units at Neriamangalam in Ernakulam District and at Balussery in Kozhikode district. A project to establish bee boxes in 12 Departmental Production Centres of the Board has been initiated at Thiruvananthapuram so that the artisans working in these production centres will get additional earnings. One centre, viz, Chempanamcode, has been identified as collection centre for the honey produced in these centres. An amount of Rs.25 lakh has been sanctioned to Kottayam project for the establishment of ready-made garment making unit and sanctioned Rs.10 lakh for establishing a paper carry bag units at Kizhakkambalam in Ernakulam district. The Board has also installed machinery for the notebook-manufacturing unit at Venjaramoodu (Trivandrum district) and disbursed Rs.10 lakh to Kozhikode project for starting a studio pottery unit at Muchukunnu. Khadi Board has imparted training for simplification of

Kuppadom weaving and weaving of sateen based fabrics to 12 artisans under Kozhikode project and five artisans under Thiruvananthapuram project for which an amount of Rs.1, 12,800/- was sanctioned by the Khadi and Village Industries Commission. Production of Kuppadom dhoties has been started under Thiruvananthapuram and Palakkad Projects.

8.58 Under 'Khadi Karigar Jan Shree Bhima Yojana', the insurance scheme for Khadi artisans, 4252 persons working in the Khadi Production Centres of the Department were enrolled as members. During 2005-06, 537 artisans working in the aided units of the Board received educational benefits to their children.

8.59 The Board has 218 sales outlets for products of Khadi and Village Industries goods and sold goods worth of Rs.1052.61 lakh during 2005-06. District wise details of the same are given in Appendix 8.38.

Sericulture

8.60 Sericulture is an agro-based industry promoted as a subsidiary occupation in Kerala. State Sericulture Co-operative Federation (SERIFED) is the nodal agency for promoting sericulture activities. A cluster based development, active involvement of local self-government and member societies and emphasis on post cocoon technology sector are the three components of sericulture development strategy during the 10th plan.

8.61 Under cluster based approach for development of sericulture, 125 Grama Panchayats covering 40 clusters were selected for the integrated development of the activity. The cocoon production was 92.08 MT in 2005-06 against 77.61 MT in 2004-05. During the year 2005-06, more than 36 MTs of cocoon were marketed through the newly opened cocoon market at Palakkad by which there was a cash inflow of around Rs.75 lakh from Karnataka and Tamil Nadu and also attracted the reelers of the above States. Moreover, an amount of Rs.39.86 lakh was disbursed as subsidy to the eligible farmers and an amount of Rs.5.84 lakh was sanctioned to kissan nursery farmers for the production of mulberry sapling during the period under review.

8.62 Performance under sericulture with regard to mulberry plantation, number of farmers covered, DFLs distributed and raw silk yarn produced is given in Table 8.11.

Table 8.11
Status of Sericulture

Year	Production in acre (cum)	No. of farmers (cum)	DFLs Distributed (Nos)	Cocoon Production (Kg)	Raw Silk Production (Kg)
2002-03	1414	2366	98369	33229	2602
2003-04	1981	3216	154125	59113	4041
2004-05	2435	3975	185025	77620	4112
2005-06	2800	4521	210055	92084	3761

Source: Serifed

8.63 The district-wise physical achievements during 2004-05 and 2005-06 are given in Appendix 8.39.

Cashew Industry

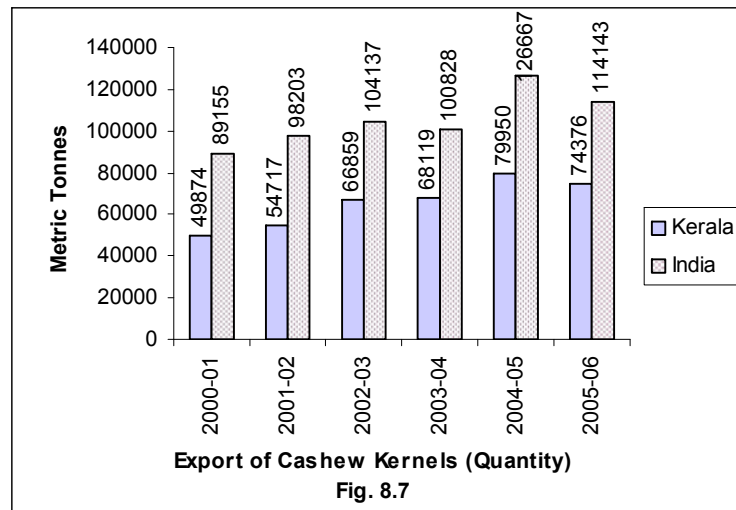
8.64 The total export of cashew kernels from India during 2005-06 was 114143 MT, valued at Rs.2514.86 crore by showing a decrease of 9.89 per cent in quantity and 7.17 per cent in value in comparison with the export of 126667 MT cashew kernels valued at Rs.2709.24 crore during 2004-05. The export of this item from Kerala during 2005-06 was 74376 MT worth Rs.1623 crore. It shows that the share of Kerala is at 65 per cent in terms of quantity and value. Details of export of cashew kernels from Kerala and India from 2000-01 to 2005-06 are given in Table 8.12.

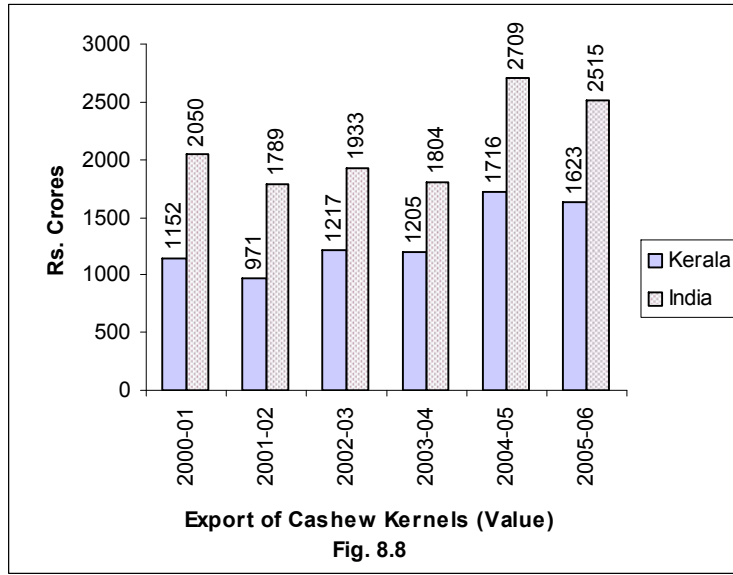
Table 8.12
Export of Cashew Kernels from Kerala and India from 2000-01 to 2005-06
(Quantity: MT, Value: Rs. Crore)

Year	Kerala		India		Share of Kerala (per cent)	
	Quantity	Value	Quantity	Value	Quantity	Value
2000-01	49874	1152	89155	2050	56	56
2001-02	54717	971	98203	1789	56	54
2002-03	66859	1217	104137	1933	64	63
2003-04	68119	1205	100828	1804	68	67
2004-05	79950	1716	126667	2709	63	63
2005-06	74376	1623	114143	2515	65	65

Source: Cashew Export Promotion Council, Kochi.

8.65 Growth of cashew export from Kerala and India (Quantity and Value) are given in Figures 8.7 and 8.8





8.66 The Kerala State Cashew Development Corporation (KSCDC) and Cashew Workers Apex Cooperative Society (CAPEX) are the two State agencies engaged in the cashew processing sector in Kerala. KSCDC owns 30 cashew factories spread out in the District of Thiruvananthapuram, Kollam, Alappuzha, Thrissur and Kannur. In KSCDC there are about 15000 workers and majority of them are women. KSCDC exports cashew kernels and cashew shell liquid. Raw nuts are mainly imported to supplement the local availability. During 2005-06 the Corporation provided employment for 230 days as against 67 days in 2004-05. The sales turn over and loss of the Corporation during the year under review was Rs.9100.89 lakh and Rs.3968.17 lakh respectively. The cumulative loss of the Corporation as on 31.3.2006 is Rs.474.23 crore.

8.67 The sales turnover, working days in factories and loss of the corporation during the last five years is given in Table 8.13.

Table 8.13
Performance of Cashew Development Corporation

Period	working days in factories	Turnover (Rs. lakh)	Loss (Rs. lakh)
2001-02	23	5083.69	2995.24
2002-03	nil	164.61	3033.54
2003-04 (pro)	17	1222.31	1782.30
2004-05	67	3587.13	297.16
2005-2006	230	9100.89	3968.17

Source: KSCDC

8.68 CAPEX is the apex society of cashew workers primary societies with headquarters at Kollam. The Society owns 10 factories and could provide employment for 144 days during 2005-06 as against 175 days in 2004-05. There are about 4000 workers and 225 staff under this apex society. CAPEX

incurred a loss of Rs.115 lakh in 2005-06 while it was Rs.520 lakh in 2004-05 and cumulative loss reached to Rs.4815 lakh by the end of March 2006.

Beedi Industry

8.69 The Kerala Dinesh Beedi Workers Central Co-operative Society with its 18 primary societies is the only agency in the State to promote beedi industry in the organized sector. During 2005-06, raw materials worth Rs.4.99 crore were procured and 148.92 crores of beedi worth Rs.14.89 crore were produced. The society provided employment to 13000 workers during 2005-06. The sales turn over in 2005-06 was of the order of Rs.40.23 crore while the net profit of the society was Rs.59 lakh. The society has embarked upon product diversification programme and Dinesh Foods and umbrella are now in the market in Kerala.

Industrial Promotion

8.70 Promotional institutions /schemes and public sector manufacturing units are the major components of programmes under medium and large industries. This includes programmes of KFC, KSIDC, Kinfra , Kerexil and State investment subsidy. Government of Kerala assists the industrial units by providing financial assistance, infrastructure and training/consultancy services. Important agencies/departments engaged in the industrial promotion in the State are

- Kerala Financial Corporation (KFC)
- Kerala State Industrial Development Corporation (KSIDC)
- Small Industries Development Bank of India (SIDBI)
- Kerala Industrial Infrastructure Development Corporation (KINFRA)
- Directorate of Industries and Commerce (DIC)
- Kerala Small Industries Development Corporation (SIDCO)
- Small Industries Service Institute (SISI)
- Kerala Industrial and Technical Consultancy Organisation (KITCO)
- Center for Management Development (CMD)

Industrial Financing

Kerala Financial Corporation (KFC)

8.71 Kerala Financial Corporation is providing term loan assistance up to a maximum of Rs. 500 lakh per unit for Corporate Sector and Rs. 200 lakh for others to develop and promote small and medium scale industrial units in the State. For the SSI segment, KFC sanctioned an amount of Rs. 3601 lakh for 174 projects, which is less than that of the previous year. For non-SSI segment they sanctioned an amount of Rs. 8512 lakh for 194 project by recording a growth of 21 per cent and hence the total sanction was at a higher level than in the previous year. KFC disbursed a total amount of Rs. 7852 lakh during 2005-06 compared to Rs. 8548 lakh in 2004-05. The total disbursement of the Corporation shows a diminishing trend year by year. The environment in the State in which the Corporation operates remained highly competitive with many scheduled Commercial Banks chasing limited demand. In accordance with its strategy, focus of the Corporation was more on addressing the weakness than on business development.

8.72 Capital to Risk Assets Ratio (CRAR) improved from 16.96 per cent to 18.88 per cent as on 31.3.06 on account of the capital contribution by the State Government and transfer of profits earned to reserves. This is well above the benchmark prescribed (nine per cent). The Corporation continued its thrust on lending to the SME segment under the SME Fund Scheme. Eligible projects are being assisted at the interests in the range of 10.5 per cent to 11.5 per cent based on rating assigned. A rebate of one per cent is allowed for prompt repayment. The Corporation continued its focus on extending liberal OTS to realize value and also to provide relief to loanees. The total recovery was Rs. 213.89 crore during 2005-06. The Corporation redeemed SLR bonds of Rs. 31.11 crore during 2005-06 and an amount of Rs. 1.77 crore was given to the State Government as commission for guarantees extended for outstanding SLR bonds and fixed deposits. Performance of KFC is outlined in Table 8.14.

Table 8.14
Performance of KFC

Sl. No.	Item	(Rs. lakh)	
		2004-05	2005-06
1	Sanctioned amount (gross)	10981	12113
2	Disbursed amount	8548	7852
3	Recovery	24468	21389
4	Total Income	9504	9060
5	Total Expenditure	9451	7922
6	Operating Profit	53	1138
7	Net Profit/Loss	(-) 230	177
8	Capital to Risk Assets Ratio	16.96	18.88
9	Current recovery (per cent)	29.09	36.89
10	Debt Equity Ratio	5:1	5:1
11	Net worth to capital employed	16.63	17.72

Source: KFC, Thiruvananthapuram

Kerala State Industrial Development Corporation (KSIDC)

8.73 KSIDC now assumed the primary role of a promotional agency of the State Government rather than that of a financing institution, thereby catalyzing the development of physical and social infrastructure required for the growth of the State. During 2005-06, KSIDC assisted 18 projects with a total investment of Rs. 248 crore which provided employment to 1543 persons. They sanctioned financial assistance to 29 projects with an estimated investment of Rs. 546 crore which can provide direct employment to 2166 persons. As on March 2006, 32 projects with an aggregate cost of Rs. 497 crore are under implementation.

8.74 In view of the vast group of units producing Ayurvedic and herbal products in Kerala, KSIDC in association with Kinfra and Ayurvedic Manufactures have formed an Ayurvedic Product Cluster under the name "Confederation for Ayurvedic Renaissance-Keralam Pvt. Ltd (CARE-Keralam)". KSIDC is implementing the project for establishing a common treatment, storage and disposal facility at Ambalamughal in 50 acres of land owned by FACT. In line with the market needs, they propose to develop a SEZ for garments and apparels at the Industrial Growth Centre, Alappuzha.

Small Industries Development Bank of India (SIDBI)

8.75 SIDBI extends financial assistance to small and medium industries sector through direct assistance by way of its Direct Credit Scheme, Technology Development and Modernisation Fund

(TDMF) Scheme, Marketing Scheme, Technology Upgradation Fund (TUF) Scheme, Integrated Infrastructure Development (IID) Scheme and Credit Linked Capital Subsidy Scheme etc. and indirect assistance by way of refinance to primary lending institutions namely KFC, KSIDC and Commercial Banks.

8.76 SIDBI, Kochi sanctioned Rs. 521.71 crore recording an increase of 136 percent over the previous year and disbursed Rs.478.55 crore under its various schemes of assistance during the financial year 2005-06 to small scale sector including services in the State. Kerala's share corresponded to 5.26 percent of the total disbursement compared to 2.29 percent in the previous year. Of the total amount disbursed Rs. 228.56 lakh was spent under micro credit scheme.

8.77 Development and support services are provided by SIDBI by acting as the nodal agency for channelising assistance. SIDBI is also extending Credit Linked Capital Subsidy Scheme for technology upgradation of the small-scale industrial units in specified products / sub sectors for providing capital subsidy for induction of proven technologies. Ministry of SSI, GOI have so far identified 46 products / sub sectors eligible under the scheme.

8.78 SIDBI has been implementing Rural Industries Programme (RIP), a comprehensive programme for promotion of micro enterprises in the rural areas of Kerala since 2003-04. To begin with, Malappuram and Wayanad districts were identified for the programme and was extended to Thrissur and Palakkad district of Kerala during 2004-05. The total number of units grounded under the programme in Malappuram, Wayanad, Thrissur and Palakkad district during 2005-06 was 216, 378, 293 and 426 respectively. During the financial year 2005-06, SIDBI has disbursed Rs. 12.34 lakh towards performance fee to APITCO Limited Hyderabad, which is the implementing agency of the programme.

8.79 Under Credit Guarantee Trust for Small Industries (CGTSI), a joint initiative of Ministry of Small-Scale Industry, Government of India and SIDBI, collateral free credit facility is being extended by commercial banks to various small-scale units in the country. As on 31st March 2006, twenty banks operating in Kerala had extended and covered loan assistance of Rs.97 crore to 7675 units constituting 9.50 percent of the all India average in terms of number of units.

Industrial Infrastructure

Kerala Industrial Infrastructure Development Corporation (KINFRA)

8.80 Kinfra, the premier industrial infrastructure development agency of the State has been following a conscious effort towards developing industrial infrastructure in the State specifically aimed at economic development by setting up industrial parks/township/zones etc which provide all facilities required for entrepreneurs for starting industries in the thrust areas.

8.81 Following are the major activities of Kinfra during 2005-06.

- Construction of an animation building with 1,00,000-sq. ft. to provide studio space for animation companies.
- Expansion of Kinfra International Apparel Park, Thiruvananthapuram under the Apparel Parks for Exports Scheme (APES) of Ministry of Textiles, Government of India.
- Development of an Agro Food Business Incubation Centre in the Kinfra Food Processing Park at Kakkancherry.
- Development of a Biotechnology Park in 50 acres of land at Kalamassery with private sector participation that will have a Technology Incubation Centre, Pilot Plant, and other facilities in built up modules in addition to the basic infrastructure facilities.

- Establishment of a Biotechnology Incubation Centre (BTIC) in the Biotechnology Park, Kochi, which would house common equipment and instrument facilities like green house & hardening facilities, tissue culture facilities, analytical and quality control laboratories, extraction facilities for plant- based value added materials and bio informatics and patent facilitation centre.
- Development of an Integrated Infrastructure Development Centre & Food Processing Park in 85 acres of land at Enadimanagalam in Adoor with financial assistance of Government of India for developing specific infrastructure facilities.
- Setting up of a Textile Centre in 126 acres of land at Taliparambu with financial assistance under the Textile Centre Infrastructure Development (TCID) scheme of Government of India, with the objective of improving the infrastructure facilities in the field of manufacturing and modernizing the processing technology.

Table 8.15
Industry-wise Export Performance of Units in CSEZ 2001-02 to 2005-2006

(Rs. lakh)

Sectors	No. of Exporting units as on 31.10.2006	2001-02	2002-03	2003-04	2004-05	2005-06
Electronic Hardware	09	11343.00	13016.75	17938.33	29770.55	32794.06
Electronic Software	18	1284.03	1076.14	1067.37	1078.83	1388.23
Garments	03	3359.99	1024.57	1464.63	2073.57	5535.58
Gem & Jewellery	07	0.00	0.00	1848.94	2641.40	2587.35
Plastic & Rubber Products	10	1851.73	2776.22	3566.11	2817.77	2864.48
Engineering	11	1082.71	2496.92	2619.39	3706.47	5752.17
Food & Agro	09	1279.25	4965.74	6679.76	5490.83	6561.95
Others	21	7690.33	5841.15	5234.29	16133.16	12116.44
Total	88	27891.04	31197.49	40418.82	63712.58	69600.87

Source: CSEZ, Kochi

8.82 A total of 105 units have commenced production and are functioning in the various industrial parks of Kinfra. An investment of Rs. 196.05 crore has been realized so far with an employment generation of 3530. A total of 54 new units have commenced construction works in the Kinfra parks with an anticipated investment of Rs. 111.01 crore and employment to 3925 persons.

Box 8.3

Completed parks of KINFRA under IIDC Scheme of Govt. of India

Kinfra has set up seven Small Industries Parks under Integrated Infrastructure Development Centre (IIDC) scheme of Ministry of Small-scale Industries, Government of India. These are at Thumba, Mazhuvannur, Thalassery, Kalpatta, Seethangoli, Koratty, and IIDC at Kakkancherry.

Industrial Growth Centre (IGC)

8.83 Industrial Growth Centre is a joint industrial infrastructure development project of Government of India and Government of Kerala aimed at the development of industrially backward districts of the State. In Kerala, there are four IGCs located at Kannur, Kozhikode, Malappuram and Alappuzha being implemented by KSIDC. A total area of 1108.80 acres of land has been acquired for these IGCs of which 90 acres have already been allocated to industrialists. Three units in Kannur and two units each in Alappuzha and Malappuram IGCs are working now with an investment of Rs. 4723 lakh providing employment to 587 persons. Even though Rs.73 crore has already been spent on developing these IGCs more infrastructure facilities are yet to be completed to commission the IGC projects in full swing.

Industrial Estates

8.84 Directorate of Industries and Commerce (DIC) provides infrastructure facilities for small scale sector by acquiring land and developing it into development area /plots with facilities like developed land, road, water supply, electricity etc. At present there are 40 DAs/DPs under the Industries Department having a total area of 2728.34 acres and allotable area of 2267.986 acres. An area of 2215.93 acres has been allotted which accounts for 97 percent of the allotable area. As regards the land acquired / land allotted for DA /DP, Ernakulam District occupies the first position followed by Palakkad. Ernakulam District ranks the top position in having the largest number of SSI units in DA/DP and Development Area Edayar holds the first position with 318 SSI units. The total number of SSI units in DAs/DPs in the State is 2083 of which 1755 units are working and 328 units are closed ones. DA Kanjikode is the biggest one in the State having 512.66 acres of allotted land with the largest number of working units (264). Besides 84 Mini Industrial Estates are existing in all districts except Wayanad under the Industries Department with 656 working SSI units employing 3063 persons. The details of DA/DP and Mini Industrial Estates under Industries Department are given in Appendices 8.48 and 8.49.

8.85 The Small Industries Development Corporation (SIDCO) runs 17 major industrial estates through out the State except Pathanamthitta, Idukki and Wayanad districts with 573 working units, employing 2720 persons. Thirty-six mini industrial estates are also possessed by SIDCO in all districts. Details are given in Appendices 8.50 and 8.51.

Human Resource Development

Small Industries Service Institute (SISI)

8.86 Small Industries Service Institute (SISI), Thrissur is a promotional and developmental agency under the Small Industries Development Organisation, providing technical consultancy for the overall development of small –scale industries in the State of Kerala and Union Territory of Lakshadweep. The Institute renders techno-economic and managerial assistance to both prospective and existing entrepreneurs in areas like selection of product, location, machinery, lay-out, raw materials, product process, managerial and marketing consultancy and training. During 2005-06, the Institute conducted training programmes in innovative areas like fashion designing, studio pottery, sari designing, computer aided manufacturing etc. The Institute set up a Technology Resource Centre to provide technology-related information to existing and new entrepreneurs using Internet.

8.87 The Institute conducts short-term management development programmes with a view to inculcate management knowledge among small-scale industrialists and employees. The Institute

conducts motivation campaigns and entrepreneurship development programmes in specified areas so as to motivate and equip young people to set up their own enterprises.

8.88 The Institute also extends assistance to units in acquiring ISO – 9000 certification, assists traditional clusters in cluster development activities, prepares study reports/project profiles having potential scope for development for the benefit of existing and prospective entrepreneurs, organizes various seminars on WTO, IPR, Geographical Indication, assistance in export field, mentoring services to the units and other promotional programmes for the development of SSIs in the State. The Institute also maintains close liaison with the State, Industries Department, Small Industry Associations and other promotional agencies in the developmental activities for SSI undertaken in the State.

Box 8.4	
Major Programmes of SISI 2005-06	
Training Programmes conducted(Nos.)	: 46
Persons Trained (Nos.)	: 1489
No. of Entrepreneurs Assisted	: 4026

8.89 SISI plays a catalytic role in the promotion of industrial clusters in the State of Kerala. This Institute interacted with clusters and organised a number of training programmes and seminars etc for the benefit of the cluster members. During 2005-06, the Institute has taken up the development of gold ornaments cluster at Thrissur. To involve all the gold artisans of Thrissur under the cluster development programme, five consortia were formed in different areas of Thrissur for different purposes. The consortia taken up activities like wholesale marketing, common raw material bank, CFSC, common testing centers etc. Interactions were held with the following clusters and SISI is playing an active role in promoting them.

1. Coir Cluster, Alappuzha
2. Rice Mill Cluster, Kalady
3. Plastic Cluster, Aluva
4. Plywood Cluster, Perumbavoor
5. Tiles Cluster, Thrissur
6. Engineering Industries Cluster, Thalassery
7. Handloom Silk Cluster, Balaramapuram
8. Rubber Cluster, Kottayam

Kerala Industrial and Technical Consultancy Organization (KITCO)

8.90 Kerala Industrial and Technical Consultancy Organization caters to the consultancy needs of entrepreneurs in the small and medium industries in the State. During the year under review, KITCO earned a total revenue of Rs.598.32 lakh as against Rs.438.67 lakh during 2004-05. The company achieved a growth rate of 36 per cent during 2005-06 as against 20.85 per cent during the previous year. The company involved in a variety of activities rendering consultancy services in different fields, but mainly in the fields of detailed engineering and human resources development. The other activities include preparation of detailed project reports, valuation of assets, energy audit, industrial

and infrastructure projects. Major assignments completed by KITCO during 2005-06 are given in Box 8.5.

Box 8.5	
Major Assignments of KITCO during 2005-06	
Detailed Project Reports	13
Market Survey	2
Asset Valuation	8
Human Resource Development Programme	90
Energy Conservation	6
Industrial Projects	37
Infrastructure Projects	10
Tourism Projects	7

Centre for Management Development

8.91 The Centre for Management Development is carrying out their activities on a project basis with necessary funding from client institutions/organisations. The major activities undertaken by CMD during 2005-06 are given in Box 8.6.

Box 8.6	
Major Activities of CMD	
<ul style="list-style-type: none"> ▪ Planning for Sustainable and Integrated Development. ▪ Study on staffing issues of Local Self-Government. ▪ District level monitoring of all programmes of the Ministry of Rural Development. ▪ Concurrent monitoring of Rashtriya Sam Vikas Yojana (RSVY) projects in Palakkad and Wayanad districts. ▪ Preparation of Kerala State Development Report. ▪ District level monitoring of Total Sanitation Campaign (TSC) and Swajaldhara Projects in Tamil Nadu, Pondicherry and Dadra & Nagar Haveli. ▪ Rapid Evaluation of Sector Reform Projects (SRP). ▪ Impact assessment study in Virudhunagar and Dharmapuri districts of Tamilnadu. ▪ Impact assessment /evaluation study of the scheme “ Central Fodder Development Organisation ▪ Perspective Plan under National Food for Work Programme (NFFWP) for the districts of Tiruvannamalai, Villupuram and Cuddalore in Tamil Nadu. ▪ Study on viability of the proposed chapter of Kerala Institute of Tourism and Travel Studies (KITSS) at Alappuzha. ▪ Revamping vocational training in Kerala. ▪ Review of Public Enterprises in Kerala 2004-05. ▪ Micro Enterprises Development Programmes (MEDP) – 34 programmes. ▪ EDPs on food processing industry at Thiruvananthapuram, Ernakulam, Thrisur, Palakkad and Kozhikode. 	

Kerala State Industrial Enterprises (KSIE)

8.92 During 2005-06 KSIE handled 14990 MT of import cargo and 24166 MT of export cargo through its two cargo terminals attached to Thiruvananthapuram and Kozhikode International Airports. The Company completed a major expansion project at its cargo terminal at Shanghumughom for improving the facilities mainly for export at a cost of Rs. 5 crores and another expansion project at Kozhikode Air Cargo Terminal is also taken up of which 50 percent of the cost is financed by Government of India under ASIDE scheme.

Special Economic Zone (SEZ)

8.93 Kerala is having one existing Special Economic Zone (SEZ) at Cochin. But after the SEZ Act followed by SEZ Rules came from Government of India, along with other states, Kerala has also experienced a rapid increase in number of proposed and approved SEZs. Eleven new SEZs have been approved and two have been approved in principle. In nine out of 11 approved SEZs, state and central government agencies are the developers. In principle, two SEZs have been approved for development by a) Smart City Infrastructure Private Limited and b) Sutherland Global Services Private Limited.

8.94 Apart from these SEZ, Techno Park is planning to have two more SEZs of total area of 240 hectares. For this, they have started land acquisition. KSIDC is planning to have four SEZs consists of total land of 2200 hectares. Also they have planned to convert three of the existing industrial growth centres at Kozhikode, Kannur and Malappuram a sector specific SEZ.

8.95 The prevalent trend in state government agencies is of taking private companies as co-developer of SEZs. The state government agencies are primarily acquiring or arranging land and leasing it out to the private developers on rent basis. For instances, Technopark has already leased out 50, 36, 26, and 5.26 acres of land to Infosys, US Technology, TCS and IBS respectively. They are planning to follow the same model for their two newly planned SEZ also. Similarly, KINFRA has provided land to TCG Urban Infrastructure Holdings Ltd. and Sutherland Global Services Private Ltd. on a long lease basis. This trend needs to be changed. If the companies are taking land for building their own factory they may be given land on a long-term lease. In this mechanism, the government is losing income on two accounts – the present land value and two, future capital gain. If the SEZs are built to allocate space to various producers, then participation of private developers should be restricted. Government agency can get into joint ventures, in case of a financial crunch, with private developers by having majority share. Among the 11 formally approved SEZs, six are on IT/ITES based SEZ and one each in the area of food processing, biotechnology and electronics industries. Two of the SEZs are port based. While the Vallarpadam SEZ consists mainly of the Container Transshipment Terminal and related infrastructure, the Puthuvypeen SEZ will comprise of LNG Terminal, Single Buoy Mooring (SBM), Bunkering Terminal, Free Trade Warehousing and certain other processing / Re-packaging industries that includes textiles, gems & jewellery, petroleum products, chemical, engineering goods, agricultural products, marine products, electronic goods etc.

Table 8.16
Newly Approved Special Economic Zones in Kerala

Name of the Developer	No. of SEZ	Area (hector)
Cochin Port Trust (GOI)	2	448
Infopark (GOK)	1	37
KINFRA (GOK)	4	46.24
Technopark (GOK)	2	46.55
Private	2	40.76
Total	11	618.55
In Principle Approved SEZs in Kerala		
Smart City Infrastructure Private Limited	1	404
Sutherland Global Services Private Limited	1	25

Source: KSIDC, KINFRA & Technopark

8.96 Out of 11 proposed SEZs, three SEZs consist of little more than 850 hectares of land and it constitutes around 85 per cent of the total land required for the SEZs in Kerala. Cochin Port Trust is developing another two big SEZs projects. It requires 448 hectares of land. To fulfil their requirement, Cochin Port Trust is attempting to acquire 160 hectares of land through KITCO. This land consists of shrimp farm and paddy fields.

8.97 KINFRA without taking the help of private developers is developing three SEZs and the land they are using is non-agricultural. Also, the land they have given to the private developers are already acquired land for establishing industrial estate by KINFRA. Similarly Technopark land that they have given to private developer are also already acquired land for establishing industrial estate by Technopark. So, at present, in Kerala, the use of agricultural land for developing SEZs are not in large quantity. But as Kerala is a land secure state, we need to take a cautious approach in further increase in number of SEZs as it will put pressure on agriculturists to convert their land into SEZ land. If the land is acquired from agriculturists to develop SEZs the compensation package should consist of these three elements – In acquisition of agricultural land farmer loses three kinds of income - a) employment b) present market value of the land and c) the opportunity of capital gains in future. So the farmers need to be compensated on all these three counts by providing alternative employment, the price of the land at the market rate and some equity on the project that has been developed in that land respectively.

8.98 From the experience of the existing SEZ in the state or on modern industrial parks developed by KINFRA, up to 70 per cent of land can be used for allotment to industrial units. The rest of the area is needed for common facilities and basic infrastructure facilities.

8.99 Increasingly, all the state infrastructure development agencies are planning for SEZs, instead of industrial estate. This gives an indication that thrust of industrialization will be shifted towards SEZ. To establish a unit in SEZ will be costly for the small and medium enterprises in comparison to setting up outside SEZ. More than 95 per cent of SMEs in India is having total asset of less than 2 lakhs, most of the SMEs will not be able to set up units in SEZ. If they set up units, outside SEZ they will lose the fiscal incentives that are available to the units in SEZs. So investment from State Government's already scarce funds into SEZs will take away resources that are otherwise available to the development of small and medium size enterprises. If the private developers develop the SEZs,

the exclusion of SMEs will be more. As a result, the emphasis on industrialisation based upon SEZ will create great disparities between small entrepreneurs and bigger entrepreneurs.

8.100 In SEZs the state government will lose revenue on two accounts – 1) on exemption from stamp duties and registration charges within SEZs and 2) VAT applicable to domestic producers who is selling their product in SEZs.

Mining

8.101 Kerala occupies a unique position in the mineral map of India. The soil of Kerala is endowed with a number of deposits of good quality china clay and beach sands containing a variety of valuable minerals. Heavy mineral sands and china clay contribute more than 90 per cent of the total value of mineral production in the State.

8.102 The heavy mineral sand deposits in Kerala contain a collection of ilmenite, rutile, leucozene, monozite, zircon and sillimanite. Kerala possesses one of the world class deposits of mineral sands in the coastal tracts between Neendakara and Kayamkulam. This tract contains concentration of heavy minerals as high as 96 per cent and is estimated to contain 127 million tones of heavy minerals from the total reserve of raw sand of the order of 1400 million tones. In the northern portion beyond Kayamkulam Pozhi extending upto Thottappally in Alappuzha district, the total reserve of heavy minerals estimated is of the order of 17 million tones from the raw sand of 242 million tones.

8.103 Gold occurs in Kerala both as primary and placer deposits. The known occurrences are mainly in Wayanad-Nilambur regions. Detailed exploration for primary gold has indicated reserves at Maruda in Nilambur at 0.55 million tones of grade 4 g/ton of gold. Investigations by Geological Survey of India have revealed occurrence of primary gold in Attapady Valley, Palakkad district.

8.104 The largest bauxite deposit is in Nileswaram with a reserve of 5.32 million tones of grade around 45 per cent Al_2O_3 and SiO_2 less than five per cent.

8.105 China Clay or Kaolin (internationally known as white clay) is one of the most sophisticated industrial minerals. It has a wide variety of industrial applications such as ceramics, refractories, paper coating, insecticides, cement, paint, textiles, fertilizers and so on. The two major kaolinitic clay belts identified by the department of Mining and Geology are the southern clay belt from Thiruvananthapuram to Kundara in Kollam district and the northern clay belt from Kannapuram – Madayi, Cheruthazham in Kannur district to Nileswaram – Manjeswaram in Kasargod district. A total reserve of 172 million tones of china clay has been estimated in the State.

8.106 The coastal tract between Alappuzha and Aroor in Alappuzha district contains extensive deposits of silica sand. The recently discovered lignite is the only fuel mineral in the State. A wide range of gemstones has been identified in Thiruvananthapuram and Kollam districts.

8.107 Tile and brick clays are classified as minor minerals. Tile manufacturing units are concentrated mainly in the Feroke area of Kozhikode district, Trissur- Aluva area of Trissur and Ernakulam districts, Chathannur of Kollam district and Amaravila of Thiruvananthapuram district. There are about 400 tile factories and about 5000 brick kilns spread over Kerala to manufacture tile and bricks.

8.108 There are over six lakh workers directly involved in quarrying/mining activities in Kerala. China clay is a major resource of the State contributing an annual value of production of the order of Rs.300 crore, which is approximately 35 per cent of total value of production of all minerals

excluding atomic minerals. The paper coating clay from Thiruvananthapuram District has excellent export potential. There are 25 working china clay mines in the State, of which 17 clay mines are in Thiruvananthapuram, four in Kollam, two each in Kannur and in Kasargod districts. Our State contributes 58 per cent of the total annual production of processed clay in the country.

8.109 The total revenue received by the Mining and Geology Department is Rs.23.60 crore during 2005-06. District wise details on the revenue received are given in Table 8.17. The total amount realized by way of services rendered to gem testing for this section preparation and mineralogical studies during the year is Rs.4.46 lakh, which is all time high. When compared to the previous year this shows an increase of 78 percent.

Table 8.17
Revenue Collection of Mining & Geology Department

Name of Office	Revenue Collection (Rs Lakh)		
	Major Mineral	Minor Mineral	Total
Thiruvananthapuram	98.37	171.23	269.60
Kollam	199.45	159.23	358.68
Pathanamthitta		70.08	70.08
Alappuzha	22.68	23.37	46.05
Kottayam	12.11	95.23	107.34
Idukki		54.52	54.52
Ernakulam		140.45	140.45
Thrissur		109.00	109.00
Palakkad	328.69	158.21	486.90
Kozhikkode		149.85	149.85
Malappuram		153.09	153.09
Wayanad	0.42	38.53	38.95
Kannur	15.75	141.00	156.75
Kasaragod	6.12	78.72	84.84
Cherthala	24.58	2.10	26.68
Kerala Mineral Squad (NR)		19.17	19.17
Kerala Mineral Squad (SR)	0.25	19.05	19.30
Directorate	25.06	39.11	64.17
Gem Testing Laboratory			4.39
Chemical Laboratory			0.42
Total	733.48	1621.94	2360.23

Source: Department of Mining & Geology

8.110 Details on the mapping of minor mineral quarries conducted by the department in Pathanamthitta, Idukki and Kannur districts are given in Table 8.18.

Table 8.18
Minor Mineral Quarries

District	Details collected on	Location
Pathanamthitta	484 Granite quarries 36 crusher units 2 dimension stone quarries	Adoor, Kozhencherry, Ranni, Thiruvalla, Mallappalli Taluks.
Kannur	199 granite quarries 496 laterite quarries 78 crusher units	Kannur
Idukki	336 quarries including crusher units.	134 in Thodupuzha 108 in Udumbanchola 50 in Devikulam 44 in Pirumed Taluks

8.111 The total area covered by mining leases, production of mineral sand and production and sale of major minerals other than mineral sand in Kerala during 2005-06 are given in Appendices 8.52, 8.53 and 8.54 respectively.

CHAPTER 9

TOURISM

The State of Kerala is one of India's largest developed tourism destinations. According to a study conducted by TCS, the major components of tourism industry in Kerala were identified as Restaurant, Transportation, House boat, Health and Tourist Shopping

9.2 International tourist arrivals increased to 3.46 lakhs in 2005 from 2.08 lakhs in 2001. Domestic tourist arrivals (excluding pilgrims) rose from 52.40 lakhs in 2001 to 59.46 lakhs in 2005. Thus in five years to 2005, annual growth rate for foreign and domestic tourist arrivals are respectively 13.27% and 2.69%. According to the study of World Travel and Tourism Council (WTTC) on tourism sector in the State, Travel and Tourism generates as much as 7.7% of GSP and 6.2% of total employment. Visitor exports (tourism receipts) is worked out as 14.3% of the total export of the State.

9.3 Travel and Tourism has now become an important catalyst for the development of other economic sectors within the State such as manufacturing, construction and service industries.

9.4 The focus of Kerala tourism now is to sustain the interest created in the National and International tourism market through continued efforts on creation of quality infrastructure at the tourist destinations and en-route and focused marketing.

9.5 The strategies for tourism development in the State

- Implementation of "Tourism Vision 2005" with focus on sustainable development by conservation and preservation of heritage.
- Development of selected tourist destination with proper planning for development so as to retain high quality of aesthetic and environmental beauty and to develop the destinations in a sustainable and eco-friendly manner
- Development of basic infrastructure and ensure cleanliness of tourist destinations
- Development of specialized tourism – eco-tourism, health tourism, rural tourism, adventure tourism and plantation tourism besides back water tourism
- To develop Infrastructure through private sector and Private-Public Partnership with Government acting as a facilitator and catalyst
- Continuation of extensive and aggressive marketing of Kerala at National and International markets as a unique tourism destination for up-market clientele
- Promotion of domestic tourism especially pilgrim tourism
- Strengthening local tourism initiated by local Governments
- Ensure quality in tourism services and facilities
- Human Resource Development.
- To ensure the safety and security of tourists.
- To develop and promote souvenir, handicrafts, artifacts & shopping industry
- Formation of new tourism zones.

9.6 Performance of Kerala Tourism

Awards and Recognitions

- Kerala is the only tourism destination selected for superbrand in India
- Nomination as one of the three finalists at the WTTC (World Tourism Travel Council)
- 'Tourism for Tomorrow' awards in the destination category, 2005
- World Tourism Organization (WTO) selected Thenmala eco-tourism project as one of the best 64 eco-friendly tourist destinations, spread over 47 countries.

Pacific Asia Travel Association (PATA)

- Gold Award for Best E-Newsletter –2005
- Honourable Mention for Culture –2005

Government of India Awards

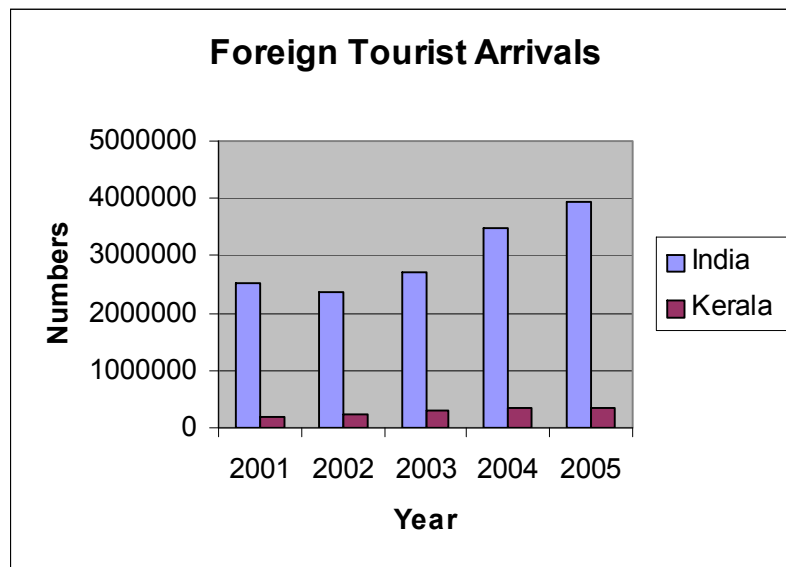
- Best Performing Tourism state, 2005
- Best Maintained Tourist-friendly Monument, 2005'
- Best Publishing, 2005.

Tourist Statistics

Kerala Achieves Highest Growth Rate in Tourist Arrivals

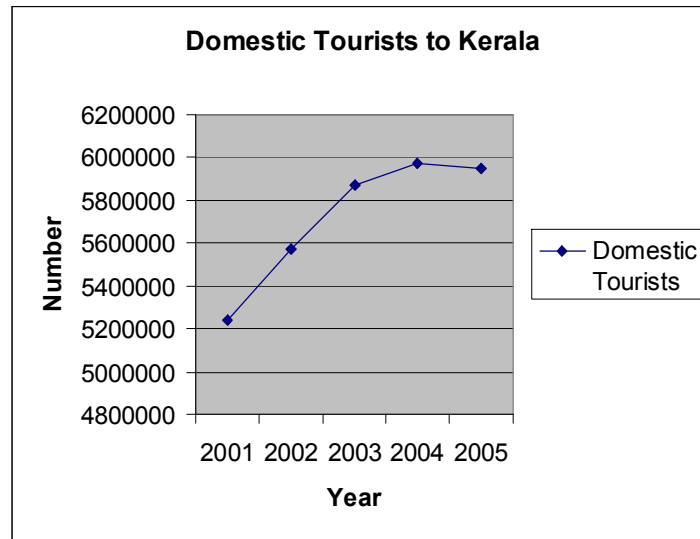
9.7 The number of foreign tourists arrived in Kerala during 2005 is 346499 whereas the number of foreign tourists during 2004 is 345546 showing an increase of 0.28%. Appendix 9.1 gives the details of foreign tourist arrivals in Kerala and in India from 2001 to 2005. During the last year Kerala has contributed 8.85% of the total foreign tourist arrivals to India.

Fig.9.1



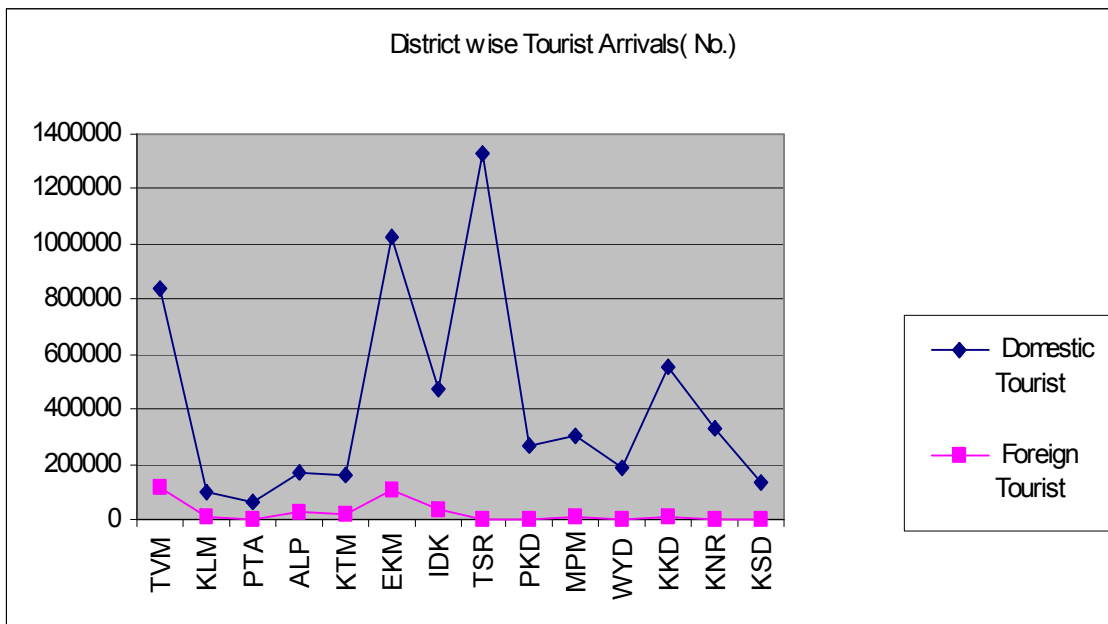
9.8 The number of domestic tourists to Kerala during 2005 is 5946423 showing a decrease of 0.43% than the previous year. In 2004, 5972182 domestic tourists arrived in Kerala. Appendix 9.2 gives the domestic tourist arrivals to Kerala from 2001 to 2005.

Fig 9.2



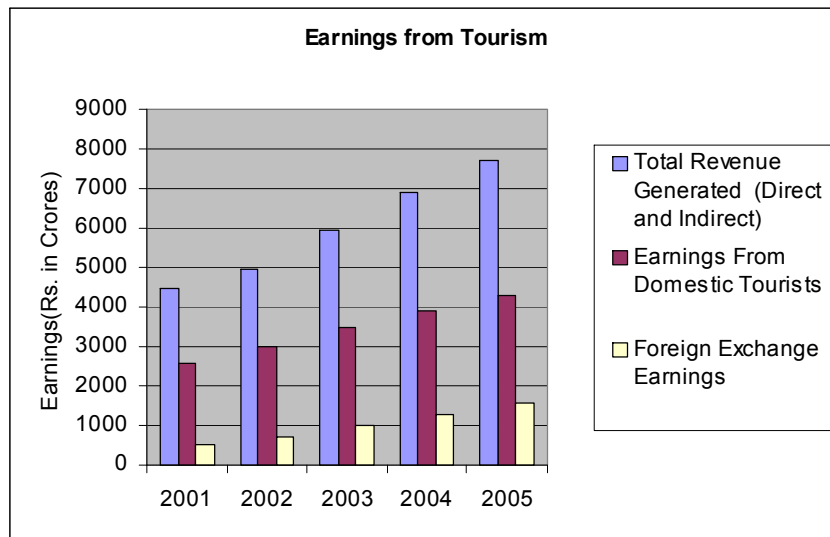
9.9 It is observed that Thiruvananthapuram, Ernakulam and Idukki are continuing as the leading district for the last few years on the basis of foreign tourists arrivals to Kerala. Thrissur is the leading district on the basis of domestic tourists arrival to Kerala, the other leading district are Thiruvananthapuram and Ernakulam. The district wise arrival of foreign and domestic tourists for the last two years are given in Appendix 9.3.

Fig 9.3



Income and Employment from Tourism

9.10 Appendix 9.4 gives earnings from foreign tourists (2001-2005). It is found that the foreign exchange earnings during 2005 is Rs. 1552.31 crores. The total earnings from tourism in the State are worked out as about Rs. 7738 crores. Tourism employs around 10 Lakhs persons in the State.

Fig 9.4

100% Plan Utilisation

9.11 The State Plan allocation for tourism for the year 2002-07 is given in appendix 9.6. The Department of Tourism has spent 100% of its plan allocation during last year.

Central Financial Assistance

9.12 The Ministry of Tourism, Government of India assists State Government in executing the following schemes.

- Development of Tourism Circuits.
- Development of Tourist Destinations
- Large revenue Generating projects
- Rural Tourism
- Information Technology and Capacity Building.
- Festivals and Fairs

The agencies involved in Tourism Development and the programmes implemented during 2006 is given below.

1. Department of Tourism

9.13 The Department of Tourism undertakes the task of developing and providing direction to tourism in the State. The State's Tourism on policy envisages providing leadership along with organizational and strategic direction to improve the quality of tourism product, to develop places of tourist interest, to provide necessary facilities to tourists and pilgrims and to market the tourism products domestically and internationally for the economic, environmental, social and cultural benefits of citizens. The Government is offering various incentives to the private sector for the development of infrastructure to facilitate growth of tourism. The department has also focussed on "conservation and preservation of heritage, environment and culture" and development of Eco-tourism. Now Tourism Sector is forced for a new direction to 'Responsible Tourism'

Initiatives in Promotion and Publicity

9.14 Department of tourism has taken various initiatives in Promotion and publicity. The major initiatives in the promotion includes conducting fairs and festivals, Participation in major tourism marts, Advertising in electronic and Print Media.

The following are some of the major festivals and fairs conducted by the department.

- Kerala Travel Mart
- India International Boat Show
- Mystique of Malabar
- Nishagandhi Dance & Music Festival
- Onam week celebrations.

9.15 Kerala Tourism's campaign already featuring in CNN and BBC, was launched on the Discovery Channel too. Kerala is the first Indian destination to be featured in the Discovery Channel. Kerala was also first Indian destination, to be featured in CNN's Sight and Sound infomercial programme, which was telecast in Europe, Asia and Asia Pacific beams. It was also the first Indian destination to be featured in BBC Worldwide – in the Voyage series on Middle East prime time, in United Airlines inflight BBC World Programme. This international TV Campaign helped Kerala tourism talk directly to the consumers and to build on the awareness levels created among the tour operators and other members of the travel trade. Last year department has initiated TV campaigns in BBC, CNN, Discovery Channel Star Plus, HBO, NDTV CNBC and National Geographic Channel.

9.16 As part of its promotional efforts, Kerala Tourism has participated in the following major International fairs.

- PATA Annual Conference
- PATA Travel Mart-05, Malaysia
- China International Travel Mart, China
- ITB Berlin, WTM London and ATM Dubai
- Sri Lanka Travel Mart – 05
- BIT-06, Milan
- FITUR – 06, Spain

9.17 In addition to the above, Department of Tourism also participated in the following National tourism fairs;

Travel and Tourism Fair Bangalore, Travel and Tourism Fair Chennai, Travel and Tourism Fair Hyderabad, Travel and Tourism Fair Kolkata, Travel and Tourism Fair New Delhi, Travel and Tourism Fair Mumbai, India International Travel Mart Bangalore, India International Trade Fair New Delhi, South Asia Travel and Tourism Exchange New Delhi, Travel World, Mumbai.

9.18 To market Kerala to a wider range of domestic audience, road shows were conducted in new destinations in India, identified as potential markets.

Focus on Use of Information Technology

9.19 With more than half the world connected to the world wide web and the discerning traveller surfing the web for the latest information on tourism destinations and facilities, the Government of Kerala taps the potential of information technology as an effective communication medium. Stress is therefore on the electronic media & the use of latest devices in IT to promote tourism. This includes website, CD-ROMs, VCDs, VHSs etc. Kerala.

9.20 The various sections featured in the site include tourist attractions like beaches, backwaters, hill stations, accommodation facilities, travel tips, calendar of events, shopping options etc. Now, upgraded into a Java-based dynamic one has incorporated the innovative IT promotional tools such as Online virtual environment of certain unique attractions of Kerala, Desktop wall papers, Online Post cards, desktop Calendars etc.

9.21 **The Products on CD- ROMs, VCDs, DVDs include Kerala-** The Green Symphony; Ayurveda: The Mantra of Niramaya Panchakarma; Ayurveda's Mantra of Rejuvenation, Where the Season Never Ends: Malabar Mystique, Sculpting Time Sculpting colours, Rhythms of Kerala, Sailing Beyond Dreams, Kalaripayattu: Unique Martial Art of Kerala, Racing the Wavers, Where the Season Never Ends, Return with a glow, The Rhapsody of rain, Expressions, Onam, Kathakali, Kutiyattam, Training Centres of Kerala, Nature's Myriad Blooms, Beaches & Backwaters of Kerala, Wildlife Sanctuaries & Hill Stations, Beaches & Backwaters of Kerala, Festivals & Pilgrim Centres of Kerala, Hotels, Tour Operator & Ayurvedic Resorts, Heritage Tours, Cuisine of Kerala – 100 Dishes of Kerala, Rhythms of Kerala etc..

Initiatives on Comprehensive infrastructure Developments at Tourist Destinations and creation of en-route facilities.

9.22 Department of tourism has initiated various projects for the development of basic infrastructure at tourist destinations, improvement of tourism attractions at the destinations, creation of new tourism products and creation of en-route facilities. Department made use of various schemes offered by State and Central Government to implement these projects. The projects are either executed directly by Department of Tourism or through Line departments or other government agencies.

Facilitating Private Sector

9.23 Ever since tourism was declared as an industry in 1986, several incentives, which were available to investors in other industrial sectors, have been extended to the tourism sector as well by the State Government. These include subsidies, technical guidance, marketing assistance, publicity through governmental publications, help in availing loans etc.

New Initiatives

The new initiatives of Kerala Tourism for the past one year are as follows:-

Kerala Tourism (Conservation and Preservation of Areas) Act 2005

9.24 Government has passed the Kerala Tourism (Conservation and Preservation of Areas) Act 2005 on 9th February 2005. The Act envisages the conservation, preservation and integrated development of 'Special Tourism Zone'. Special Tourism Zone is any area, which is identified and declared by the notification of Government in Gazette as Special Tourism Zone. As per the act, no developmental activity including construction in Special Tourism Zone shall be carried except in accordance with such guidelines as may be issued by State Tourism Conservation and Preservation Committee constituted under section 4 of Act.

9.25 As the first phase of the above enactment, Department of Tourism desires to declare Kovalam, Munnar, Kumarakam and Fort Kochi as Special Tourism Zones.

Vazhiyoram

9.26 'Vazhiyoram', the wayside facility with minimum standardized facilities is proposed to be set up along all the major roads/waterways in the State through private sector initiatives. Vazhiyoram will be located in such a way that there will be at least one facility within 10-20Kms in National Highways, major State Highways/waterways and roads leading to tourist destinations. The project will be implemented in phases after prioritizing the roads/waterways with respect to their importance.

Kerala Institute of Travel and Tourism Studies (KITTS) and Kerala Institute of Hospitality Management Studies (KIHMS)

9.27 KITTS imparts quality education and training in the field of Travel and Tourism. The institute, established in 1988, caters to the manpower requirements of tourism industry by offering various courses directly benefiting the industry.

9.28 The institute has excellent record of placement for students of its courses and the alumni are spread all over the world occupying responsible position in various sectors in tourism industry

Centres of KITTS

9.29 In addition to the main campus at Thycaud, Trivandrum, KITTS has three more centres situated at different parts of the state. Kerala Institute of Hospitality Management Studies (KIHMS), the hospitality wing of KITTS, is situated in the Yathri Nivas at Malayattoor. Two new study centres were established last year, one at Yathri Nivas building in Kozhikode and the other at Alappuzha (functioning in a rented building)

Courses offered at KITTS.

9.30 The institute offers job-oriented courses, both short as well as long term. The courses offered are given below

KITTS Thiruvananthapuram

- Post Graduate Diploma in Business Administration (PGDBA) (2 years)
- Cambridge international Diploma in Travel & Tourism (CIDTT) (6 months)
- Certificate Course in Front Office Management (FOM)/Customer relations and Services Management (6 months)
- Certificate Course in Airfare Ticketing & Travel Agency Management (CATM) (6 months)

KIHMS, Malayattoor

- Masseurs, Training Programme (1 year)
- Certificate Course in Front Office Management (1 year)
- Certificate Course in Food Production (1year)

KITTS, Kozhikode Study Centre

Certificate Course in Airfare Ticketing and Travel Agency Management (6 months)

KITTS, Alappuzha Centre

Certificate Course in Front Office Management (4 months)

9.31 During the year 2005-06 and the period up to September 2006, 408 students were in roll, out of which 258 students completed their courses and 158 students continue their studies

Training Programmes

9.32 The Institute develops and implements continuous training programmes to the host community to be visitor friendly so as to create a positive mindset to the concept of tourism. It also conducted programmes to create awareness and tourism consciousness among the tourist taxi drivers, auto rickshaw drivers, guides, information assistants, and others. The institute is actively involved in awareness campaigns in various schools and colleges in the state through training

programmes for teacher coordinators and student coordinators of tourism clubs. Guide training programmes are also conducted at the institute to develop guiding skills at local and state level. The following training programmes of the institute targeting the host community are expected to create a visitor friendly destination

- Orientation programme for Student Coordinators at various districts (6 days)
- Orientation programme for Teacher coordinators at Kollam (1 day)
- Guide Training programme at Trivandrum & Kasargode (2 days)
- Training programme for house boat operators at Alleppey & Kollam (3 days)
- Induction Training Programme for DTPC Secretaries at Trivandrum (4 days)
- Customer orientation training programme for Masseurs at Ernakulam & Trivandrum (2days)
- Training Programme for VSS volunteers at Kozhikode (3days)
- Training Programme for EDC members at Munnar (5days)
- Training programme for Life guards at Trivandrum (15 days)

Activities conducted during the year

- **International Travel Film Festival**

9.33 Around twenty films on destination, nature, environment and culture were screened in the festival. A seminar on “Tourism and Media” and an open forum were also held as part of the festival.

- **AITTA National Seminar**

9.34 KITTS has hosted the third annual national seminar of All India Tourism Teachers Association (AITTA) on the theme “ Issues and Trends in Eco-tourism Development in India”. More importantly, the seminar offered platform for academicians and working professional in the tourism industry to share the knowledge and discuss on the crucial aspects of development of Eco-tourism in the country to offer strategies and solutions for future developments.

- **Seminar on “ Problems and Prospects of Tourism in Kerala”**

9.35 KITTS in association with KTDC has organized a seminar on the above topic on 6th of December 2006.

- **Releasing of ‘Tourism Vogue’**

9.36 Towards building up a mechanism to interact with the young generation for contributing to the growth of tourism in the State, ‘Tourism Vogue’ a newsletter was introduced by KITTS on behalf of Kerala Tourism. The main objective behind it was to provide a platform for both the Government and the public, especially the young generation, to become aware of the tourism activities in the State as well as outside. All the tourism clubs in the state were sent copies of the newsletter free of cost.

- **World Environment day Celebrations**

9.37 KITTS organized one day programme to observe World Environment Day on 5th of June 2006 at KITTS Campus

- **World Tourism Day Celebrations**

9.38 Students of KITTS, in association of District Tourism Promotion Council (DTPC, Trivandrum) have organized Miles – 06, World Tourism Day Celebrations on 27th September 2006. Students have arranged stalls exhibiting various tourism products in the country. Various contests were organized as part the event for the tourism club members of schools and colleges in the districts.

- **Tourism Quiz**

9.39 On behalf of Department of Tourism, Government of Kerala, KITTS has organized state level tourism quiz competition for the members of tourism clubs during January 2006.

- **Founding Workshop on International Ecotourism Training Centre**

9.40 KITTS, in association with Eplerwood International, USA, has initiated steps to develop an international training centre on Eco-tourism. As part of this, a two day founding workshop was organized from 12 January 2006 to set up a training centre in the name International Institute for Eco-tourism Development with the mission to ‘develop capacity in eco-tourism to provide viable solutions for communities, government and business towards economic development and poverty alleviation that conserves bio diversity through training, education, applied research and knowledge transfer

- **Research Journal on Tourism**

9.41 KITTS has been publishing ‘The Green Portal’, a biannual research journal aimed at the promotion of research in tourism and it is sent to major tourism institutes in the country. This journal has already gained its own name and recognition among various stakeholders, especially the academicians in the country in the filed of tourism

- **Seminar Proceedings: “Issues and Trends in Eco-tourism Development in India”**

9.42 Recently KITTS has published the proceedings of the national seminar on “Issues and Trends in Eco-tourism Development in India”. of AITTA, organized by KITTS. This 320 page, multi color book consists of 29 research articles along with the report of the seminar.

- **Placement in 2005-06**

9.43 During 2005 and till September 2006, KITTS could offer commendable placement opportunities for the students. Placements were given to all the PG students who have successfully completed the PGDBA courses. KIHMS, KITTS study centre at Malayattoor, also offered placement opportunities to the students of the centre.

Development Programme

- KITTS new Academic Building
- Project Digitization
- WTO Depository library Programme
- Library up gradation
- GIS computer Centre

Directorate of Eco-tourism

9.44 Tourism is an environmental development industry. Kerala Tourism has attempted a series of eco-initiative to make the tourism industry truly environment friendly. The following are the objectives of Eco-tourism.

- To convert entire tourism industry in Kerala into Eco-friendly mode
- To strengthen Eco-tourism development initiatives in the State
- To ensure local community involvement in Tourism initiatives leading to employment and income generation.
- To create public awareness and involvement in responsible Tourism development

Directorate of Ecotourism implements the following programmes / Schemes

A. Thenmala Ecotourism Project

9.45 The first phase of the Thenmala Ecotourism project was inaugurated on 12.12.1999 with the commencement of boating in the Shendurney Wildlife Sanctuary Reservoir and the Deer Rehabilitation Center. The second phase of the Thenmala Ecotourism project was inaugurated on

31.01.2001 with the commencement of eco-friendly general tourism activities like Leisure Zone, which is having Sculpture Garden, Board Walk, etc: Adventure Zone, which provides Elevated Walkway, Mountain Biking, Rock Climbing, River Crossing and Culture Zone, which is having the Musical Dancing Fountain, Amphitheater, Restaurant, Office Complex in addition to the already existing activities like Boating on the Reservoir, which falls within the Shendurney Wildlife Sanctuary, Deer Rehabilitation Center etc.

9.46 The details of the revenue generated and the number of tourists visited from 2000 to 2006 are as detailed below

Financial Year	Number of tourists visited	Revenue generated
2000-2001	26148	445437/-
2001-2002	41161	1138839/-
2002-2003	65075	2147985/-
2003-2004	118404	4044571/-
2004-2005	104622	3563820/-
2005-2006	114443	3926439/-
April 2006 to September 2006	51377 (Aprox)	2058783/-

Source: Office of the Director, Ecotourism

B. Developing ecotourism products in Wildlife Sanctuaries and National Parks

9.47 The Department of Tourism in consultation with the Forest Department has selected consultants for developing ecotourism products in all Wildlife Sanctuaries and National Parks. Director Ecotourism monitors this project. The report is expected shortly which will result in development of new and innovative Ecotourism products

C. Ecotourism Initiatives Implemented Through Forest Department

9.48 The Forest Department is evolving modalities for developing community based ecotourism products in the already identified potential ecotourism spots through the institution of Vana Samrakshana Smithy (VSS) / Eco-Development Committees (EDC) that is the committee of the local dependent communities. Certain successful models of these efforts are programmes at Athirapally, Vazhachal and Thekkady. Community led ecotourism activities are already in place at Palaruvi, Kallar, Chinnar, Aralam, Thommankoothu etc.

D. Kerala Tourism Eco Initiatives (Eco Kerala)

9.49 The awareness seminar for the eco-certification of hotels as part of the “Kerala tourism Eco Initiatives (Eco – Kerala)” is nearly completed and the certification programme has commenced.

E. Constitution of a Committee of Experts for Ecotourism

9.50 Government has constituted a “Committee for Ecotourism” as per the recommendation of the Commission on World Trade Organisation Concerns in Agriculture

F. Jadayupara Tourism Project

9.51 From the name itself it is understood that this is connected to the legendary bird Jadayu in the epic Ramayana. The proposed project is to be developed in the 63 acres provided to Department of Tourism. It is proposed to develop the road and its surrounding as an eco-friendly tourism spot targeting tourists with pilgrim interest, nature specialty interest, picnic interest and ethnic interest.

Kerala Tourism Development Corporation (KTDC)

9.52 KTDC is a commercial agency, which is actively participating in building up basic infrastructure needed for the development of tourism in the State such as hoteliering, provision of transport facilities and publicity. They operate star hotels, budget hotels, Araam hotels, Yatri Nivasses, Restaurants and Beer Parlors, Central Reservation Systems and Conducted Tours.

9.53 The number of bed available for the year 2005-06 is around 416490 around 312284 domestic tourists and 34468 foreign tourists occupied during 2005-06. The details of income and operational expenditure details of KTDC for 2005-06 is given in the Appendix 9.8.

District Tourism Promotion Council (DTPC)

9.54 DTPC are mainly concentrating on tourism promotion activities like marketing of local products through private/public participation, improvement of quality/standards and evolving procedure for certification of all tourism products, improvements of signages in the district, improvement of sanitation by working through the local governments, heritage conservation and preservation, coordination of tourism clubs, creation of tourism awareness and preparation of host community, promotion of paying guest scheme, information dissemination, local basic infrastructure projects like boat jetties, tourist facilitation, pay and use toilets, development of parks, promotion of tourism clubs, holding awareness campaign and developing basic infrastructure etc.

BRDC (Bekal Resorts Development Corporation)

9.55 Bekal is one of the most promising tourist destinations in the State and BRDC is the agency to co-ordinate development and disposal of tourism sites at Bekal. The aim of BRDC is to develop the site and infrastructure development in and around Bekal. All the basic infrastructure here have been completed and 3 hotel projects are already started construction

Tourist Resort (Kerala) Limited.

9.56 The policy of the Government is to develop infrastructure through private sector and mainly through joint venture project wherever possible. Tourist Resorts (Kerala) Ltd. is the agency meant for joint venture projects. Most of the investors are reluctant to come to the State due to non-availability of suitable land. The land bank project can be successfully made use of for acquiring bulk land and to develop the infrastructure so that it can be leased to private sector. The objective of TR(K)L is for executing these including projects like Marina at Kochi, Air Tax Services, Dream City project Kozhikode, Airport Hotel Project at Nedumbasserry, Golf Course project at Kozhikode.

CHAPTER 10

INFRASTRUCTURE

Good physical connectivity in the urban and rural areas is essential for economic growth. During the last decade, India's growing economy has witnessed a rise in demand for transport infrastructure and services by around 10 percent a year. India's transport sector is large and diverse; it caters to the needs of 1.1 billion people. However, the sector has not been able to keep pace with rising demand and is proving to be a drag on the economy. Major improvements in the sector are therefore required to support the country's continued economic growth and to reduce poverty.

10.2 Roads are the dominant mode of transportation in India. It carries almost 90 percent of the country's passenger traffic and 65 percent of freight. The density of India's highway network at 0.66 km of highway square kilometer of land – is similar to that of the United States (0.65) and much greater than China's (0.16) or Brazil's (0.20). However, most highways in India are narrow and congested with poor surface quality, and 40 percent of India's villages do not have access to all-weather roads.

10.3 Indian railways are the largest railways in Asia and the fourth most heavily used system in the world. It carries 14 million passengers a day and is one of the world's largest employers. Till recently, the railways played a leading role in carrying passengers and cargo across India's vast territory.

10.4 India has 12 major and 140 minor ports along its vast coastline. These ports serve the country's growing foreign trade in petroleum products, iron and coal as well as the increasing movement of containers. Inland water transportation remains largely underdeveloped despite India's 14,000 km of navigable rivers and canals.

10.5 India has 126 airports, including 11 international airports. The dramatic increase in air traffic for both passengers and cargo in recent years has placed a heavy strain on the country's four major airports.

10.6 Availability of good quality infrastructure is a prerequisite for sustained economic growth. Infrastructure forms the foundation on which social, economic and industrial development is built. The transport infrastructure in India largely consists of roads, railways, air and inland water. As regards roads, it occupies prime position because even for using other modes of transport road is needed. Roads cover every corner of the country that the railway could not even cover. India has a large network of roads, aggregating to 3.3 million km, comprising of National High ways, State Highways, Major/Other District Roads and Village/Rural Roads.

10.7 Initiatives have been undertaken in recent years to set the stage for a quantum leap in India's road system. These initiatives combine new institutional arrangements, highway engineering of international standards and self financing revenue model comprising tolls and a cess on fuel. Roads in India carry 65 percent of the freight and 90 percent of the passenger traffic. Reports indicate that there is an annual growth rate of seven to ten percent in road traffic of the country. The total length of National Highways in the Country is 65,569 Km.

10.8 The most important challenge in the road sector revolves around building all weather roads connecting each and every village. Even though Kerala is better placed than most other states, as

regards road length, the condition of many of these roads is very poor. Therefore, the main emphasis under road development in Kerala has been on improvement and upgradation of existing road rather than construction of new roads. The investment need in the road sector is of high magnitudes that are beyond the resources available with the Government at present. These resources therefore need to be augmented. It is therefore, imperative to strengthen the road infrastructure for carrying out all sorts of development.

10.9 Transport system of the State consists of 1.61 lakh Km of road, 1148 Km of Railways, 1687 Km of Inland Waterways and 111 statute miles of Airways and 17 Ports.

National Highway

10.10 The Central Government is responsible for the national Highway system in the State. National Highway wing of Kerala PWD deals with the development and maintenance of National Highways in the State. The development of National Highways in the State leads to faster movement of freight, passenger traffic, industrialisation, agricultural development that in turn results in the growth of economy of the State. Further the development of the roads to the prescribed standards will reduce the rate of road accidents.

10.11 Since the inception of the department, the State National Highway Wing had only two National Highways viz, NH 17 and NH 47, having total length of 836 km. Now there are 8 National Highways in Kerala with the total length of 1525.57 km. National Highways in the State during 2005-06 is 1525.57 km. It is only 2.3% of the total length of National Highways in India. Details of National Highways in Kerala is shown in the Table 10.1

Table 10.1
National Highways in Kerala

Sl.No	Name of National Highways	Length (KM)
1	NH 17 – Thalappady – Edappally	420.777
2	NH 47 – Walayar – Kaliyikkavila	416.800
3	NH 47 A – Wellington Island to Kochi Bypass	5.920
4	NH 49 – Bodimettu – Muvattupuzha – Kochi	167.593
5	NH 208 – Kollam – Aryankavu – Thirumangalam	81.280
6	NH 212 – Kozhikode – Kallingel	117.600
7	NH 213 – Kozhikode – Palakkad	125.300
8	NH 220 – Kollam – Kottayam – Kumily – Theni	190.300
	Total	1525.57

Source: PWD (NH)

10.12 Out of this, about 838 km of National Highway in Kerala has been brought under National Highway Development Programme (NHDP) as indicated below

North South Corridor	:	160 km
Port Connectivity	:	27 km
NHDP III A	:	230 km
NHDP III B	:	421 km

Total	:	838 km

Problems / Issues

10.13 Main problem facing the department is the delay in land acquisition process. Due to this, many projects could not be started and completed in time. At present many projects are due for commencement for want of land. There should be proper arrangement for acquiring land at fast pace, for development of National highways in the State.

10.14 The plan allocation for National Highways in Kerala for the last 3 years shows a decreasing trend. The National Highways of NH 17 and 47 are generally below two lane standards and require major improvement works. Most of these roads in National Highways are through hilly areas and needs substantial improvement. Hence increase in allocation is necessary. The allocation for CRF scheme to the State is very less when compared with neighbouring states like Tamilnadu & Karnataka. Hence the quantum of allocation must be increased substantially for implementation of the projects.

10.15 National Highway wing of PWD has submitted a proposal for Rs 30.00 crores under Inter State Importance (ISI) scheme and Rs 66.00 crores under Economically Importance (E&I) Scheme. The neighboring State of Karnataka has a lot of works under ISI & E&I scheme but no work has been sanctioned to Kerala under the above scheme.

State Road Network

10.16 A well-knit and co-ordinated system of transport plays an important role in the sustained economic growth of a country. The present transport system of the state comprised roads, railways, inland water transport and air transport. As regards roads, it occupies prime position because even for using other modes of transport road is needed. As such the transport demand in the State has been increasing at a rapid rate. Total road length in Kerala during 2005-06 is 160944 Km. Road density in the State is 414 km/ 100 sq.km and it is far ahead of national average of 74.9km/100 sq.km. The length of road per lakh population is 505.46 km and it is much higher than the national average of 259.20km. Roads maintained by different agencies as on 31.03.2006 are shown in table 10.2

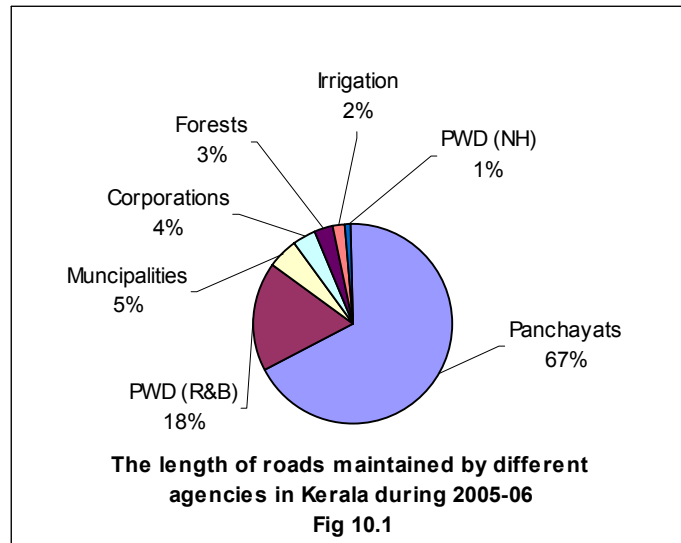
Table 10.2
Agency wise Distribution of State Roads

Sl. No	Name of Department/ Agency	Length (KM)	Percentage
1	Panchayats	108451	67.38
2	PWD (R&B)	28203	17.52
3	Municipalities	8917	5.54
4	Corporation	6644	4.13
5	Forests	4175	2.59
6	Irrigation	2664	1.66
7	PWD (NH)	1526	0.59
8	Others (Railways, KSEB)	364	0.23
	Total	160944	100

10.17 Out of the total road length of 160944 km as on March 2006, 108451 kms are maintained by Panchayats (67.38%) followed by 28203 kms (17.52%) of the PWD. Corporations and Municipalities maintain a road length of 15561 kms (9.67%) and National Highway covered

1526 kms (0.59 %). While Irrigation Department maintains 2664 kms (1.66%) of road, the share of Forest Department was 4175 kms (2.59%) and that of KSEB and Railways 364 kms (0.23%). Out of the total road length of 108451 kms under Panchayats 49302.69 kms (45.46%) are gravelled and earthen roads and 35009.94 kms (32.28%) are black topped.

10.18 Category of road network in Kerala is shown in figure 10.1



10.19 The total length of roads in Kerala as 3/2006 is 160944 kms under different categories. Out of this the PWD (R&B) maintains 28203 kms. The PWD Road density comes to 72 km per 100 sq. Km of area and 88 km per lakh population. The PWD roads fall broadly under three categories viz, State Highways (SH) (4137 km), Major District Roads (MDR) (24066 Km) and Other District Roads (ODR). As part of decentralisation of powers to the local self governments, the maintenance of Village roads are vested with the concerned local governments.

10.20 Out of total road length of 108451 km held by Panchayats 26870.5 km (25.77%) is black topped and 62408.157 km (60%) are gravelled. The Agencies maintaining roads in the State include PWD, Local bodies, National Highways, Irrigation Department, KSEB, Forest Department, Railways etc. Out of total roads maintained by PWD 28203 km, Ernakulam district has the major share with a road length of 2655 km (9.41%) and Wayanad district has the lowest share 970.00 km (3.43%). Kerala is the only State in the country where all the villages are connected by road.

10.21 Analyzing surface wise road maintained by the PWD, black topped surface roads increased from 19959 km in 2000 to 27135 in 2006. During the Tenth plan the main emphasis under road development in Kerala has been on improvement and upgradation of existing roads rather than construction of new roads. A number of new road construction projects however are currently on the anvil.

10.22 Even though Kerala has a very good connectivity with all villages, there are gaps in intermodal connectivity. There are some initiatives such as sea port-airport road implemented through RBDCK, but needs a network approach for establishing an effective road link. Also due

to open sky policy of Central Government and commissioning of Vallarpadam Container Terminal and proposed Vizhinjam Port, there will be increase in demand for inter modal connectivity. Also emergence of Kerala as a tourist hot spot will create great demand for inter modal connectivity. PWD has established a fully functional GIS system using satellite imagery and top sheets. Using this system PWD will be developing a scheme for improving Inter Modal connectivity. By upgrading and widening important corridors, fast and safe movements of passengers and cargo will be possible which in turn will increase economic activity.

10.23 As on 31.03.06 there were 2179 bridges and 51422 culverts on PWD roads. Of them 148 bridges need reconstruction /renovation and 1519 culverts are not in good condition The number of bridges and culverts on different categories of roads are given in Appendix 10.6

Road Network Quality

10.24 PWD is managing around 28203 km of road network including the recently upgraded ODR. The overall road network quality of PWD roads is much below the prescribed standard set forth by the Indian Road Congress. Due to poor network quality State is loosing huge amount of money through increased vehicle operating cost and accidents. Therefore improvement of road network quality is the need of the hour. PWD has developed a modern system called Road Maintenance Management System (RMMS) which can be used for assessing the road network quality and appropriate maintenance strategy for bringing down the road roughness to acceptable limits. A study in PWD has shown that the overall road network quality is much below the IRC standards.

Table 10.3
Serviceability Indicator of PWD roads

Serviceability Indicator	Set by IRC			Other Standards/Levels		
	Level 1 (Good)	Level 2 (Average)	Level 3 (Acceptable)	Fair	Poor	Very Poor
	NH	SH	MDR			
IRI No. (Roughness by Bump integrator –max. permissible IRI in m/km)	2	3	4	4-6	6-8	>8
Potholes/km (max numbers)	Nil	2-3	4-8			
Cracking and patch repairs (max. permissible)	5%	10%	10-15			
Rutting-20mm (max. permissible)	1%	1.5%	2.5%			
Skid Resistance expressed as skid number (SN)	50 SN	40 SN	35 SN			
Defective bridge deck and bump at approach (max. permissible)	Nil	10%	15%			

Source: PWD (R & B)

10.25 Improved traffic flow (speed) and safer movements of vehicles and pedestrians (road safety) are the two important parameters related to road function. There are other related issues in road function, which will be properly addressed by other departments like Police and Transport. For this road network quality should be improved. Also widening and improving geometrics of roads are necessary. PWD is doing heavy maintenance and upgradation

programmes on a priority basis. Ongoing World Bank funded KSTP is improving only a part of the whole road networks.

Major Problems and issues of PWD

- Low budgetary allocation
- Delay in completion of works due to various reasons such as:
 - *Untimely release of fund
 - *Lengthy monsoons and heavy seasonal rainfall
 - *Delay in land acquisition procedures
 - *Non availability of tar
- High spill over commitments
- Poor pavement conditions/structural deficiencies
- Poor geometrics
- Poor shoulder conditions
- Narrow/Weak bridges
- No timely maintenance of road
- Low level of standard in construction methods
- Lack of co-ordination with the departments with as KSEB, KWA, TELECOM
- Unauthorised occupation on road sides by the vendors.

10.26 The main problem faced by the PWD is huge accumulation of pending bills of work done under plan schemes during the 10th five year plan period. The accumulation of pending bills has occurred due to the following reason.

10.27 The short fall in revenue mobilization by the State have caused ways and means crisis in the financial management as a whole and on number of occasions during the 10th five year plan period. The ways and means crisis caused delay in making payments for work done under plan schemes.

Policies and Priorities

10.28 The Kerala PWD has initiated implementation of the Institutional Strengthening Action Plan (ISAP), a component of World Bank aided Kerala State Transport Projects. ISAP covers the institutional framework that provided legality and underpins the proper functioning of the PWD. ISAP of PWD are taken up with the following objectives.

- Comprehensive road development policy
- Establishing sustainable road funding mechanism to meet the projected financial requirements for medium to long term road sector development through increased budgetary allocations and mobilised funds
- Reforming PWD to ensure greater accountability, restructure its existing service delivery functions, introduction of new functions, developing human resource capacities etc
- Revising outdated PWD codes and manuals.
- Introducing environmental and social impact monitoring
- Promoting modern good practices within KSTP including feasibility studies, Engineering design etc.

10.29 A major constituent of ISAP is the implementation of a department wide Management Information System. The department has taken the following steps.

1. IT cell formed in PWD and Chief Engineer R&B was appointed as Chief Engineer, Information Technology
2. Comprehensive PWD Portal WINGS (Web based Information and Governance System) started
3. Financial Management System (FMS), GIS based Road Information and Management System (RIMS), and Road Maintenance Management System (RMMS) under development.
4. IT infrastructure enhanced up to Division Offices

Road Safety Programme

10.30 Road Safety Action Plan is being implemented by PWD in association with State. Traffic Police, Motor Vehicle Department, Road Safety Council, Research and Academic Institutions and other State Government agencies are responsible for Road Safety. Objective of the Road Safety Programme is to reduce the road accident upto 20 percent at accident blackspot sites improved under the project. The following activities are initiated under the programme.

- Accident site improvement schemes
- Road safety Audit-model road
- Junction improvements
- Improvement of hazardous locations on NH
- Safety assessment of maintenance of roads
- Demonstration of signs and markings
- Mass Action Scheme
- Training on Safety Engineering

10.31 An International Consultant is now coordinating the implementation part and carrying out the task.

Road Policy

10.32 Government of Kerala has approved in GO(MS) 5/06/PWD the Kerala Road Sector Policy (2005). It aims at facilitating an efficient and safe road transportation system to fulfil the demand and aspiration of the users for improving the quality of life and concomitant economic development. The policy document seeks to cover transportation of both passengers and freight, duly taking into account the environmental, technological, fiscal aspects related to motorised transport. The policy recognize the important backward and forward linkages as manifest in developing an efficient road infrastructure on the one hand and the criticality of road safety on the other.

10.33 The Government seeks to address the following key road sector issues:

1. Addressing network deficiencies and improving road sector financing

10.34 The draft road policy outlines Government's strategic approach to improve the network capacity. GoK aims to rehabilitate existing high and medium density corridors in a phased and timely manner and upgrade the network to comply with modern highway design standards. Greater emphasis will be placed on road maintenance. PWD will be encouraged to contract out maintenance and operations to private contractors on a pilot basis and use more modern

technology for road pavement and treatments. The Government aims to provide adequate funds to meet the growth demand, simultaneously exploring avenues of private sector participation in the transport sector. Since budget allocations alone are not expected to meet the road sector's growing requirements, the State budget allocations alone are not expected to meet the road sector's growing requirements, the State intends to supplement its road sector resource allocation by instituting a wide base of road user charges. The Government recently legislated the establishment of a State Road Fund that will seek to generate user charge through road tolls and dedicated fuel levies.

2. Reducing accident rates and mitigating environmental and social impacts

10.35 The high accident rate in Kerala has prompted the Government to address road safety problems by introducing road safety audits for new road projects and analyzing accident blackspot locations. PWD has developed, as part of project preparation, a draft comprehensive and integrated State Road Safety Action Plan, which includes recommendations for the following road safety sub sectors:

- Coordination and management of road safety,
- accident data system

Road Fund Board and City improvement Project

10.36 Recognizing the need for mobilising greater non-budgetary resources for development and maintenance of the PWD road network, regulatory and institutional initiatives were undertaken for generating more user charges and mobilising greater private sector involvement in road projects. The Kerala Road Fund was constituted under the Kerala Road Fund Act 2001, which became law on 23rd November 2001. The purpose of the Road Fund is to finance.

- Routine recurrent and periodic maintenance of PWD roads.
- Development of existing road network system including upgradation of any road maintained by the PWD
- Construction of new roads wherever necessary.
- Such road safety projects as are found essential for safe and smooth traffic.
- Research related to maintenance and development of roads.
- Any cost-sharing, donor-funded project intended for all or any of the purposes mentioned above.

10.37 Projects under the Road Fund can be taken up in association with private entrepreneurs or financing institutions on a cost and benefit-sharing basis. Some of the projects envisaged may not be remunerative enough to attract 100% private participation. In such cases some incentives will have to be in form of a share of the costs involved.

Research and Development in Road Sector

10.38 Research and Development activities have an important role to play in meeting the challenges of modernizing the road system, technology upgradation and finding cost effective solutions to infrastructure problems in general. Design, Research, investigations and Quality control Board (DRIQ Board), Kerala Highway Research Institute (KHRI) and National Transportation Planning and Research Centre (NATPAC) are engaged in research and development of the road sector. The DRIQ Board consists of the following three Divisions

1. Design
2. Research and project preparation units
3. Quality control and computer cell

10.39 During 2005-06 the design wing of DRIQ Board has completed detailed design of 38 Bridges and general design of 60 bridges. DRIQ Board has completed design works of 34 buildings in 2005-06. The project preparation units of DRIQ Board has undertaken 18 works during 2005-06

Kerala Highway Research Institute (KHRI)

10.40 The main objectives of KHRI at the beginning were to cater to the needs of the Roads and Buildings wing of the State PWD. The activities are to carry out laboratory and field testing of samples of flexible pavements, building materials, concrete, soil, tiles, steel etc. Now the Institute is developed to a good training center for providing training to Engineers on quality control of works, mix design, detailed project preparation etc. The institute has extended its activities to the filed of detailed survey works using modern computerized equipments like Total Station and Auto Level. Engineering College students and Polytechnic students from inside and outside Kerala do project work in this Institute. Central Public Works Department (CPWD), Airport Authority of India (AAI), ISRO, Techno Park, BHEL, Power Grid Corporation, BSNL, etc. use the facilities of Highway Research Institute for testing and studies. The Activities of KHRI during the last two years is given to table 10.4

Table 10.4
Activities of KHRI during 2004-05 & 2005-06

	2004-05	2005-06
Testing of various materials	730	1108
Research study on soil explorations, Soil Testing, quality, evaluations work, silt, content etc	37 Nos	48 Nos

Source: KHRI

10.41 KHRI has completed feasibility study on a new alignment for Vandipriyar Bridge and site survey with contour levels. KHRI has also conducted non-destructive test for the 'Karapuzha River Project' during January 2005.

National Transportation Planning and Research Centre (NATPAC)

10.42 National Transportation Planning and Research Centre (NATPAC) was established in 1976 as a unit of Kerala State Electronics Development Corporation (KELTRON) with a mandate to promote scientific research, planning and development in all aspects of transportation . It was one of the pioneering institutions to take up research and consultancy works as early as in the seventies, when no other institution of this kind existed in India. In 1982, NATPAC was registered as a Society and brought under the Department of Science, Technology and Environment, Government of Kerala as an autonomous R&D institution. Consequent to the formation of Kerala State Council for Science Technology and Environment (KSCSTE), NATPAC was amalgamated to the new Council in 2003 and is functioning as R&D Centre of KSCSTE.

10.43 NATPAC has been set up to undertake Research, Training and consultancy projects pertaining to transport sector in the State. NATPAC has taken up studies on all modes of transportation covering road, rail, water, seaport and Airport.

Objectives

10.44 NATPAC has mandate for carrying out the following objectives

- To promote modern scientific research, planning and development in all aspects of transportation
- To function as a Centre of Excellence in multi-modal system of transportation
- To create and establish all necessary infrastructure in various facts of transportation
- To provide judicious solutions for special transportation problems in different regions
- To undertake studies and provide consultancy services for the Central and State Government organisation, public and private sector undertakings, allied industries and institutions
- To establish maintain and manage extension units, display centres etc., to further scientific research and development to solve transportation problems.
- To organize and conduct special course, and training Programmes in transportation and related areas.
- To demonstrate and utilise the results of the researches conducted for the betterment of transportation system.
- To work in close collaboration with similar national and international institutions engaged in pursuit of all related subjects.

Kerala State Transport Project (KSTP)

10.45 Kerala State Transport Project (KSTP) an initiative of Public Works Department of Government of Kerala was officially launched in June 2002 to improve 1600 km of State Road network and 77 km of Inland Water Transport (IWT) with World Bank assistance of US\$ 255 million (Rs. 1224 crores). Total cost of the project was supposed to be US\$ 336.00 Million (Rs. 1612.8 crores) with US\$ 81 million (Rs. 388.8 crores) being the State Government's contribution. The project period was five years and the closing date was 31.12.2007.

10.46 The project was to have four main components: (a) Upgrading and widening of about 600 km length high priority state highways and piloting IWT component for improving of inland waterways of about 77 km canal length, for exploring the revival of the IWT system in Kerala (b) periodic maintenance of 1000 km State roads; (c) reforming Road and IWT associated institutions and strengthening their capacities by implementing the Institutional Strengthening Action Plan (ISAP) and (d) Road safety action plan and improvement of black spots and awareness

Table 10.5
Details of the Costs of Various Project Components as per
Project Appraisal Document(PAD)

Project Scope	Total Cost in US \$ million	Total Cost INR Crores	Bank Loan		GOK SHARE	
			In US \$ million	In INR Crores	IN US \$ million	In INR Crores
Up gradation works including IWT	204.09	979.63	163.27	783.71	40.82	195.93
Road Maintenance Works	57.04	273.79	45.63	219.03	11.41	54.76

Services (Supervision for upgradign + PCC + maintenance + Performance based)	14.49	69.55	14.49	69.55	-	-
Land Acquisition & Utility shifting	19.77	94.90	-	-	19.77	94.90
Resettlement & Rehabilitation	18.21	87.41	16.39	78.67	1.82	8.74
Institutional Development Study	9.45	45.36	9.45	45.36	-	-
Performance based contract works	1.20	5.76	0.96	4.61	0.24	1.15
Road Safety	4.20	20.16	3.36	16.13	0.84	4.03
Incremental Operating Cost and taxes	5.01	24.05	-	-	5.01	24.05
Front End Fee	2.55	12.24	2.04	9.79	0.51	2.45
Total	336.01	1612.85	255.59	1226.85	80.42	386

Source: KSTP

10.47 For a number of reasons however, including faulty project design to start with, the project got inordinately delayed, resulting in a massive cost over-run. One consequence of this cost over-run has been a substantial increase in the burden on the state government. Instead of the initial estimate of Rs.386 crore which the state government was to contribute towards this project, it has already spent Rs.821 crore till November 30, 2006, and will end up spending a lot more. At every stage the government has been forced to increase its contribution, so as not to let the money already sunk in the project go waste. And the project has also entailed disputes between the government and the contractors. The KSTP project is a classic illustration of the pitfalls that may arise in such externally-financed mega projects.

10.48 The budget allocation and actual expenditure for the year 2002-03 to 2006-07 (up to 30-11.2006) are given in Table No.10.6

Table 10.6
Budget Allocation and Expenditure of KSTP (2002-03 to 2006-07)
(Rs. Crores)

Year	Budget Provision	Expenditure
2002-03	100.00	66.94
2003-04	155.00	145.90
2004-05	235.00	197.41
2005-06	575.00	312.21
2006-07	575.00	98.69
Total	1640.00	821.15

Source : KSTP

Table 10.7
Statement showing cumulative Expenditure

Component	Cum. 31.03.2006	Cum. 30.11.2006
Upgradation Phase I – KSTP 1	107.98	124.02
Upgradation Phase I – KSTP 3	57.79	77.00
Upgradation Phase I – KSTP – 4	74.32	86.28
IWT Component	12.27	12.27
LA and utility shifting	115.87	127.84
Resettlement & Rehabilitation	45.79	52.67
Consultancy Services – Upgradation & PCC	26.36	30.68
Total	440.38	510.85
Maintenance Component – year – 1	90.60	90.76
Maintenance Component – Year –2	95.58	101.95
Maintenance Component – Year –3	52.56	75.59
Consultancy Services – Maintenance	2.90	3.24
Total	241.64	271.54
Road Safety Component – Works & Goods	1.81	5.12
RSAP – Consultancy	4.28	5.22
Total	6.09	10.34
Performance Based Maintenance Contract		
ISAP Consultancy	9.04	10.57
GIS – Consultancy	1.81	2.44
RMMS – Consultancy	1.69	1.79
IT related equipment's	3.49	3.58
Miscellaneous Study & Training	3.10	3.41
Net Incremental Operating Cost	5.09	6.63
Total	24.22	28.42
Grant Total	712.33	821.15

Source: KSTP

Road Transport Services

10.49 Road Transport is the dominant mode of transport for moving goods and passenger traffic. Road Transport acts as the feeder service to the rail, air and inland water Transport. The vehicle density of the state during 2005-06 is very high compared to many other states in India. The road freight services are wholly owned and operated by the private sector.

10.50 Kerala State Road Transport Corporation (KSRTC) is the largest single public sector undertaking which carries out transport operation in the state. The passenger transport operations in Kerala is mainly carried out by private operators. The State analysis shows that in respect of the load factor, passenger lead, passenger per bus per day, performance of KSRTC is above average.

10.51 The number of buses owned by KSRTC increased from 4626 by 2005 to 4668 in 2006. Out of which 1054 are aged above 10 years (22%). The age wise details of KSRTC buses are given in appendix 10.15. The number of schedules operated as on 31-3-2006 has increased from 4083 to 4337 in 2005-06. The Corporation operated its bus services to a distance of 5274 lakh km during 2005-06. About 12022.47 lakh passengers travelled in KSRTC buses during 2005-06

as against 11846.82 lakh passengers in the previous year. The major indicators showing operational efficiency of KSRTC are given in appendix 10.16. The major issues and problems of KSRTC are given in box 10. 1

Box 10.1
Issues/Problems of KSRTC

- High Staff Vehicle ratio
- Ageing fleet
- Operation in uneconomic routes
- Operating losses
- Operations by Parallel Service operators
- Fare concession not fully reimbursed.
- Incapability to generate sufficient funds for its activities
- Lack of quality management at unit level
- Lack of systematic costing methods for including repair and maintenance
- Insufficient capital contribution by Government

10.52 Inter unit analysis of KSRTC reveals that about 30% of the units of the state exhibit poor performance. The unit wise details of operational statistics are given in Appendix 10. 17

10.53 With effect from 25-11-2005 KSRTC enhanced the fares by 48 paise per km in city and ordinary services, 70 paise in super deluxe services and 90 paise in High Tech (Volvo) buses. The fare structure of KSRTC is given in appendix 10.18

10.54 Financial Performance of KSRTC is not in tune with its physical achievements due to increase in operating expenditure, hike in pension commitments, increase in interest payments, operation in uneconomic routs and granting concessional travel add loss to the Corporation.

10.55 Performance of KSRTC during 2005-06 is given in the Box 10.2

Box 10.2
Performance of KSRTC at a glance

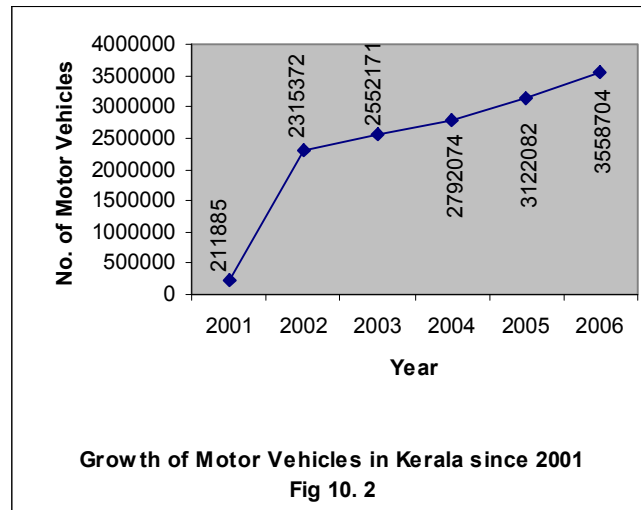
- Implemented electronic ticketing machines at 13 depots
- Introduced 9 A/C Bus
- Introduced 5 Super fast Buses
- Introduced 74 Fast Passenger Buses
- Introduced 72 Ananthapuri City Fast Buses
- Introduced 51 Venad Buses for town to town services
- Introduced 11 Ordinary Buses
- Introduced 50 Mini buses
- Concreting of Bus stations yard at Guruvayoor, Peroorkada & Kannur
- Providing 11 KV substations at R/W Kozhikode
- Construction of new bus station building at Adoor
- Construction of inspection ramp at Kollam
- Construction of four bus bay garages at Kozhikode
- Construction of bus station yard at Attingal, Kollam and Vaikom

10.56 KSRTC has declared the year 2005 as 'save fuel year'. A series of good practices has been introduced in the Corporation with a view to increasing the fuel efficiency. The Staff Training Centre, which had been closed for long, has been restarted. More than 3500 drivers have been trained systematically on a three-day course in the Staff Training Centre in collaboration with the Petroleum Conservation and Research Association (PCRA). The fuel efficiency that was hovering around 3.75 Kms has come upto 3.99 Kms per litre of diesel. Depots have reported higher fuel of 4.10 Kms and upto 4.76 Kms per litre. It is estimated that KSRTC has achieved a net saving of around Rs. 2.00 crores per month by resorting to such fuel saving techniques. Since there is more scope for such activities, efforts are being made in this direction to train at least 2000 drivers more. It is expected that more fuel saving will be achieved by the end of the current year. It is noteworthy that for an improvement in 0.1 in KMPL rate, the savings will be around Rs. 85.00 lakh per month.

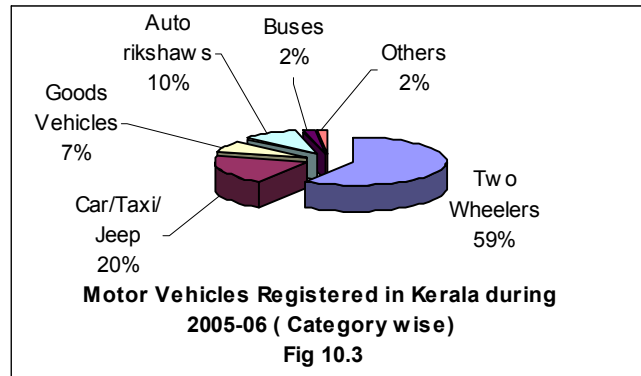
10.57 Introduction of Electronic Ticketing Machine (ETM) is another programme implemented by the Corporation. The Corporation has planned to introduce Electronic Ticketing Machines in all units, and so far 33 units were brought under the system. Through the introduction of ETMs the Corporation could save three to four man days/ units/day.

Motor Vehicle Population

10.58 The growth of vehicle population in Kerala is 13.48 percent. The growth of Motor Vehicles since 2000-01 is shown in figure 10.2



10.59 The number of Motor Vehicles having valid registration as on 31.3.2006 is 35,59,504 as against 31,22,082 in the previous year. The newly registered vehicle comes to 437,422 (12.28%) during 2005-06. The percentage of category wise motor vehicles registered during 2005-06 is shown in figure 10.3



10.60 The district wise details of vehicles newly registered, vehicles with valid registration and growth of vehicles in Kerala are given in appendices 10.7 and 10.8. An analysis of growth of Motor Vehicle and its impact on local development in the State reveals that the vehicle population have increased from 15.1 lakh in 1998 to 35.59 lakh in 2006, while only marginal increase has been achieved in augmentation of road length.

10.61 About 1198 vehicles are newly added to vehicle population every day. Out of which 758 are two wheelers. The number of goods vehicles, ie four wheelers and above registered in the State increased form 135058 as on 3/2001 to 194232 as on 3/2006. The details of category wise growth of Motor Vehicles in Kerala since 1990 are given in Appendix 10.10. The highest vehicle population was recorded in Ernakulam District with 51518 (12.57%) followed by Thrissur with 41640 vehicles (10.16%). Wayanad has the lowest number with 4239 (1.03%). The tremendous increase in the volume of road traffic in recent years has caused increase in road accidents.

Road Accidents

10.62 Eventhough several initiatives have been taken by the police to enforce road discipline and enforcement of rules by Motor Vehicle Department, road accidents are increasing. The increasing trend of traffic accidents is a matter great concern. The total number of road accidents in Kerala during 2001 was 37256 which increased to 42365 in 2006. Statistics on road accidents per day in the State during 2004-05 and 2005 -06 are shown in Table 10.8

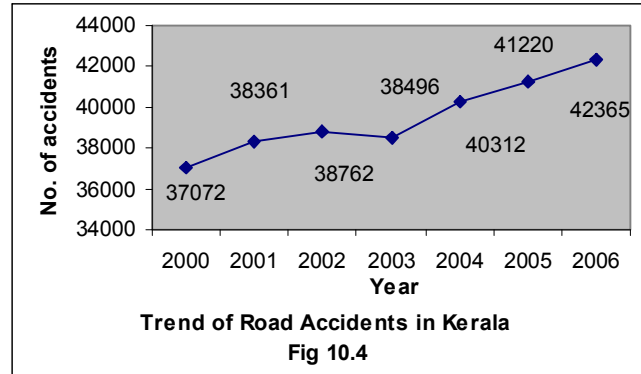
Table 10.8
Statistics on Road Accidents per day

Description	2004-05	2005-06
No. of Accidents	113	116
No. of persons killed / injured	140	140
Accidents involving two wheelers	55	59

Source: State Crime Records Bureau

10.63 During 2005-06, Kerala registered 42365 accidents (116 per day) in which 3203 persons were killed and 51127 persons were held injured. Accidents due to KSRTC buses were 1513 (4 per day) and private buses 4447 (12 per day). The number of traffic crashes involving two wheelers have grown from 7668 in 1990 -91 to 21569 in 2005-06. Accidents due to two

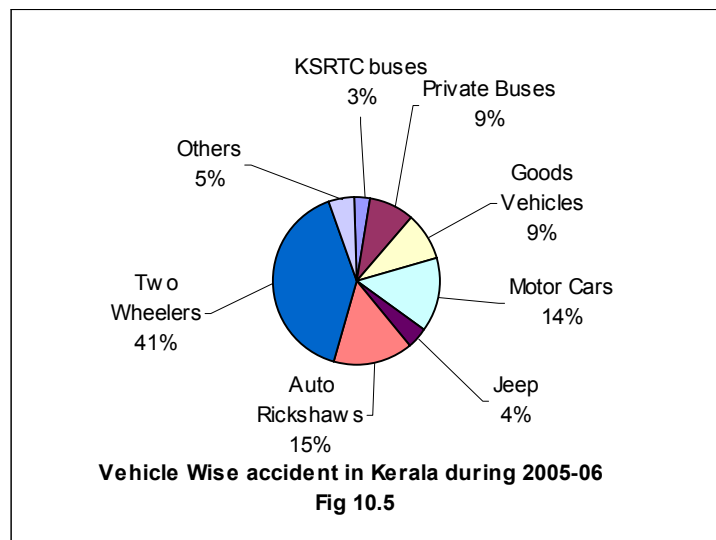
wheelers account for nearly 41 percent of the total accidents reported in the State. The trend in road accidents in Kerala since 2000 is shown in figure 10.4



10.64 According to records, almost 99.74% of accidents occurred due to the fault of drivers of the Motor vehicles. The rest of the accidents were due to other reasons like bad weather, poor road condition and defect of Motor Vehicles. Road Accidents are caused due to the following reasons

- Rash driving and unhealthy condition of vehicles
- Defective eye sight of drivers
- Poor surface condition, badly maintained side shoulders
- Uncontrolled access street unmanned junctions
- Least care regard to traffic rules
- Haphazard parking on Road side
- Locations of bus stops close to junctions
- Lack of pedestrian crossing, walkway facilities etc
- Encroachment / dumping of materials on the road

10.65 The percentage of category wise and vehicle wise accidents in Kerala during 2005-06 is shown in figure 10.5



10.66 Government of Kerala has initiated various programme to address the alarming issue of increasing road accident by coordinating all stakeholders of Road safety viz, Engineering, Education and Enforcement agencies. Public Works Department is primarily responsible for engineering aspects and a safety engineering component has been introduced as a part of World Bank aided Kerala State Transport project. PWD has established a Road Safety Cell under Chief Engineer (R&B and IT) for overseeing the road safety measures of Public Works Department. This cell is functioning under an Executive Engineer and the cell is properly trained in Road Safety engineering. PWD is planning to address the road safety Cell under Chief Engineer (R&B and IT) for overseeing the road safety measures of Public Works Department. PWD is planning to address the road safety issues by designing counter measures through proper road safety audit and black spot improvement programme. PWD is also developing a road accident database through Geo KAMS (Geographical Kerala Accident Management System) which is now being implemented in all Police Stations. PWD is planning to implement black spot improvement programme to reduce road accidents.

Kerala Transport Development Finance Corporation (KTDFC)

10.67 The KTDFC was set up exclusively for financing transport services in the State and started functioning in 1991 – 92 with equity capital contribution from State Government. It is a non-banking Financial Company registered under the Reserve Bank of India and started commercial business in 1992. The Corporation was formed with the objective of providing loan to KSRTC and other Governmental / Quasi Government Organisation and individuals for purchase of new vehicles. The Corporation also finance transport sector through hypothecation of transport vehicles used by individuals, firms and companies particularly by KSRTC and for building up commercially viable infrastructural facilities of KSRTC and also assist transport undertaking with in Kerala with long, medium or short term loans. The company is also granting loans to Small Road Transport Operators (SRTO) for the purchase of commercial vehicles. The Company is mobilising the funds required for these business activities through the issue of Bonds, Fixed deposits with Government guarantee. The Corporation also accepts fixed deposits from public. The authorised capital of the company is Rs. 50.00 crores and the paid up capital is Rs. 43.83 crores. The Government of Kerala holds 100% of the paid up share capital of the Company. The corporation has granted a total loan amount of Rs. 18756.93 lakhs to various Agencies and individuals during 2005-06 as shown below.

Table 10.9
Details of loan sanctioned to various agencies during 2005-06

Sl.No	Name of Agency	Amount (Rs.lakhs)
	Vehicle Loans	
1	KSRTC	13100.00
2	Capex	4.75
3	S.R.T.O	2279.98
4	Individuals	1252.96
5	Housing Loans	2005.29
6	Personal loans	113.95
	Total	18756.93

Source : KTDFC

10.68 The Corporation has mobilised fixed deposits from the public, accounting to Rs. 242.39 crores and an amount of Rs. 193.60 crores has been mobilised through issue of bonds.

Railways

10.69 Indian Railways are the longest Railways in Asia and the fourth most heavily used system in the World. It carries about 14 million passengers a day and is one the World's largest employers. Till recently, the railways played a leading role in carrying passengers and cargo across Indian vast territory. It provides one the cheapest means of transport in India.

10.70 Thiruvananthapuram, Palghat and Madurai Divisions of southern Railway controls the railway operations in the State. The railway network runs gauge operations extending over 1148 route kms in Kerala of which 111.14 KM are meter gauge. The route length has remained stagnant in the State for a number of years. The total route length of Railways in Thiruvananthapuram Division is 488.600 kms.

Table 10.10
Performance of Railway Division, Thiruvananthapuram during 2005-06

Sl.No	Details	Units
1	Total railway route length	488.600 kms
a.	Broad Guage	487.790 ''
b	Meter Guage	0.900 ''
2	Number of Stations	88 Nos
3	Passengers	
a	Originating	713 lakhs
B	Terminating	818 ''
4	Goods Traffic	2129 (00 tonnes)
5	Revenue Receipts	
a.	Passenger Traffic	291.99 crores
b	Goods traffic	92.47 crores
6	Trains operated	
a	Express Trains	20280 Nos
b	Passenger Trains	18250 ''
C	Specials	853 ''
7	New Trains (Nos)	2

Source: Thiruvananthapuram Railway Division

10.71 Total route length of railways in Madurai Division in 111.14 km. Performance of Madurai division during 2005-06 is given in table 10.11

Table 10.11
Performance of Railway Division, Madurai during 2005-06

Sl.No	Details	Units
1	Total railway route length in Kerala	111.14 kms
a	Length of Broad Gauge	Nil
b	Length of Meter gauge	111.14 kms
2	Number of railway route	2 Nos
a	Thenkasi - Quilon route (SI route)	80.25 kms
b	Pollachi - palghat route (S2 route)	30.89 kms
3	Number of railway stations (Nos)	19 Nos

Source : Madurai Railway Division

Water Transport

Port Sector

10.72 India has about 7517 km of main coastline serviced by 12 major ports and about 186 other ports. The major ports are under the purview of the Central Government while other ports (popularly termed as minor/intermediate ports) come under the jurisdiction of the respective State Governments.

10.73 Mumbai, Jawaharlal Nehru at Nhava Sheva, Kandla, Mormugao, New Mangalore and Cochin on the west coast and Kolkata/Haldia, Paradip, Visakapatanam, Chennai, Ennore and Tuticorin on east coast are the major ports.

10.74 At the beginning of the Tenth Plan, the capacity of major ports was about 344 M.T. It is proposed to be increased to 470 MT by the end of the Tenth Plan. Since 2001-02, the aggregate capacity in the major port is an excess of the traffic handled. Consequently capacity is no longer a constraint in major ports. As a result, there has been a substantial improvement in their efficiency as borne out by the reduction in waiting time for the ships.

Private Sector participation in Ports

10.75 In order to improve efficiency, productivity and quality of services as well as to bring in competitiveness in port services, the port sector has been thrown open to private sector participation.

10.76 Various areas of port functioning, such as leasing out existing assets of various ports, Construction/Creation of additional assets, leasing of equipments for port handling and leasing of floating crafts from the private sector, pilotage and captive facilities port based industries have been identified for participation/investment by the private sector.

Kerala Port Sector

10.77 Along its Coastal line of 585 kms Kerala has one major port at Cochin and 17 minor/intermediate ports.

Cochin port

10.78 It is the only major port in Kerala. It is an I.S.O, 9001-2000 port. A study shows that 97% of the total volume of traffic from the Cochin port is accounted by Kerala, though the hinterland of the port spread to parts of Tamil Nadu and Karnadaka States.

10.79 The Administration of the port got vested in a Board of Trustees on 29th February 1964 under the major port Trusts Act- 1963.

10.80 The entrance to port is through the Cochin port between the peninsular headland Vypeen and Fort Cochin. The port limits extend upto the entire backwaters and the connecting creeks and channels.

10.81 The approach channel upto the Cochin gut, is about 1000 metre long with a designed width of 200 metre and maintained dredged depth of 13.8 metre.

10.82 From the gut the channel divide into Mattancherry channel and Ernakulam Channel leading to West and east of Wellington island respectively and berthing facilities for ships have been provided in the form of wharves, berths, jetties and steam moorings alongside these channel.

10.83 A draft of 41 ft is maintained in the Ernakulam channel along with berthing facilities, which enable the port to bring in larger vessels to the port. In the Mattancherry channels a draft of 30ft is maintained. The port provide round the clock pilotage to ship subject to certain restrictions on the size and draft of the vessels there is an efficient network of railways, roads, waterways and airways connecting the port with the hinterland centres spread over the state of Kerala, Tamilnadu and Karnataka. Facilities for supply of water and bunkering to vessels are also available.

10.84 During current fiscal year 2006-07 the port handled 11.39 million Tonnes of cargo upto December 2006 as against target of 11.58 million Tonnes. In respect of container handling, these was an increase of 1,66,962 TEUs upto December 2006 from 148759. During this period a total of 844 vessels called at the port as against 878 vessels in the same period of preceding year.

10.85 The details of various type of vessels called in Cochin Port are included in Appendix 10.21

10.86 As regards performance parameters the port registered a total turn round time of 2.27 days, preberthing detention time of 15.33 hours and output/ship berth-day to the tune of 8129 Tonnes, up to December 2006 against 2.20 days, 14.17 hours and 7558 Tonnes during the corresponding period of previous year.

10.87 The details of Commodity Wise Traffic handled up to December 2006 is furnished below.

Table 10.12
Commodity Wise Traffic handled in Cochin Port

Sl. No.	Commodity	April 2006, to December 2006
	A. IMPORTS	
1	POL	6244805
2	Fert & its Raw materials	481235
3	Food grains	181044
4	Cashew Nut	23827
5	Iron steel & machinery	63992
6	News Print	11874
7	Cement	557
8	Coal	218968
9	Others	1465741
	Total	8692043
	B. EXPORT	
1	P.O.L	1627845
2	Tea	20101
3	Cashew Kernals	49540
4	Marine Products	61863
5	Coir Products	36658
6	Wood & Timber	36678
7	Spices	34284
8	Coffee	54639
9	Others	781734
	Total	2703342
	Grand Total	11395384

Source: Cochin Port Trust

Non Major Ports

10.88 The non major ports are under the direct control of State Government. The Government agencies involved in the development of ports in the state are Port Department, Harbour Engineering Department, Hydrographic Survey Wing and Kerala State Maritime Development Corporation.

Box 10.3	
Ports in Kerala	
Major Port	- Cochin
Intermediate Ports	- Neendakara, Alappuzha, Beypore
Minor Ports	- Vizhinjam, Valiyathura, Thankasseri, Munambam, Ponnani, Vadakara, Thalasseri, Kannur, Azhikkal, Kasargod, Manjeswaram, Neeleswaram, Kayamkulam, Manacodam

10.89 Cargo handling was mainly confined to Kozhikode & Beypore port except a small volume of cargo in Vizhinjam. Commodity wise details are shown in ppendix. 10.22. The number of steamers and sailing vessels that called at non-major ports were 425 with registered tonnage of 131817. Details are furnished in Appendix.10.23

10.90 The activities of other ports are limited to registration and licensing of harbour crafts, maintenance of local lighthouses, display of Water warning signals for sea rescue operations and collection of revenue. The registration of harbour crafts done during 2005-06 are shown in Appendix.10.24 . The earnings collected through Port department during the year 2005-06 was Rs. 227.47 lakh. The details are furnished in Appendix. 10.25.

Development of Beypore Cargo Harbour

10.91 Construction of a new Wharf is completed and new passenger terminal has been constructed completely to cater to the needs of passengers for Lakshadweep.

Development of Azheekkal Cargo Harbour

10.92 The work of breakwater at Aheekkal side has been reached up to 996 m including head and that at Mattool side reached upto 850 m out of 1150m and 1070m respectively.

10.93 Construction of approach road, weigh bridge installation, establishment of water supply systems and land acquisition were completed..

Development of Vizhinjam Port

10.94 Resurfacing road from Azhakulam to fire station and road to Theatre Junction at Vizhinjam are completed. Work of Watchmen Shed at Leeward Breakwater, Sanitary facilities for the port staff, Electrification of Ist floor building to signal station, providing rolling shutters to Transit Shed, providing Water Supply and Sanitary arrangements to the first floor of signal station and maintenance of road from light house to Azhakulam etc were completed.

Cargo Berth at Thangassery

10.95 A cargo berth at thangassery has been completed and pile cap concreted.

Hydrographic Survey Wing

10.96 Hydrographic survey of Tsunami affected area from Thangassery to Thottappally, Parvoor, Vizhinjam, Thankassery Fishing Harbour, Thottapally, Pachalam to Vaduthala, Cost line Survey of Vizhinjam on the southern range and Thanur, Azhikkal, Cheruvattur, Beypore, Puthiyappa, Koyilandy and Azheekkal, Continuous Tidal observation at Beypore in the northern range were conducted.

10.97 Hydrographic survey wing conducted Dredging Survey at Thevara for Kerala State Maritime Development Corporation Ltd. Hydrographic Survey at Neendakara fishing Harbour, Anchuthengu, Nedumkandam, Kappil, Nadayara, Chavara, Kovilthottam, Azhikkal, 24 hours Tidal observations and metrological at Neendakara were conducted.

10.98 The department prepared charts for Vizhinjam, Pachalam to Vaduthala, Thangassery port and approaches, Thottappally, Arthungal, Azhikkal port and approaches, Thanur, Cheruvathur, Puthiyappa, Beypore port and approaches, Anchuthengu, Kappil and Neendakara Basin.

Inland Water Transport

10.99 Inland Water Transport is the most fuel efficient, economic and environment friendly mode of Transport among all other Transport Systems. India has about 14500 km of Inland Waterways network comprising rivers, lakes and canals.

10.100 Inland Water Transport has advantages over railways and roadways both in terms of cost and energy consumption in Cargo transportation.

Inland Water Transport in Kerala

10.101 The Government agencies engaged in the development of Inland Water Transport in the State are Coastal shipping and Inland Navigation Department (CSIND) State Water Transport Department (SWTD) and Kerala State Inland Navigation Corporation (KSINC).

10.102 There are 41 navigable rivers in Kerala. The total length of the Inland waterways in the state is 1687 km. The main arterial water way in the state is the west coast canal. The west coast canal connects the Hosdurg in the North to Thiruvananthapuram in the south and is about 560 km including the 47 km uncut portion from Badkara to Azheekkal.

10.103 The W.C.C can be broadly divided into four sections as below

1. Hosdrug to Kottapuram	324 km
2. Kottapuram – Kollam	168 km
3. Kollam - Kovalam	68 km

Total	560 km

10.104 The canal portion from Thiruvananthapuram to Ponnani and along Bharathapuzha River upto Shornur is known as Thiruvananthapuram- Shornur canal (T.S canal). As part of a program for developing Waterways by the Central Government, length of 168 km of Waterways from Kollam to Kottappuram of West Coast Canal including Udyogmandal and Champakara canals was declared as National Waterway No III. The canals coming under National Waterway III are as follows.

Table 10.13
National Water Way III

Sl. No.	Route	Distance
1	Kottapuram- Kochi	00-30km
2	Kochi- Alappuzha	30-92 km
3	Alappuzha- Kollam	92-168 km
4	Udyogmandal	23 km
5	Champakara	14 km
	Total	205 km

Source : Irrigation Department

10.105 Under Central Sector scheme, construction 37 boat jetties and fixing of control point for Hydrographic Survey has been completed. The dredging of waterway is in progress. Out of the 434 jetties proposed for modernisation, 396 jetting have been completed under central sector scheme.

12th Finance Commission Award.

10.106 The 12th finance Commission has awarded an amount of Rs. 225 Crores for I.W.T Sector for the period 2005-2010. The main works proposed to be undertaken are divided into two phases.

Box 10.4
Programme of 12th Finance Commission Award

Phase I programme

- Deepening of the exiting canal to a minimum depth of 1.7m and a minimum width of 10m with vertical clearance of 5.0 m.
- Side protection of the exiting Waterway using pile and slab in the vicinity of Towns and cities and Dry Rubble packing in other areas where necessary.
- Providing Re-inforced concrete lining for the existing Tunnel.

Phase II Programme

- Construction of Boat Jetties and aprons
- Reconstruction of bridges
- Formation of Canals in the uncut portion

State Sector Scheme

10.107 Improvements and modernisation of Inland Waterways and canals, construction and maintenance of Jetties_etc are the main components under implementation with State fund.

World Bank Assisted Scheme

10.108 Three feeder Canals in Kerala is selected for improvement as pilot project based on the preliminary report prepared by the Irrigation Department of Kerala. The extent of these feeder Canals is

1. Alappuzha- Kottayam Canal (23 km)
 2. Alappuzha – Changanacherry Canal (28 km)
 3. Kottayam – Vaikom Canal (42 km)
- Decided progress could not be achieved

Kerala Shipping and Inland Navigation Corporation Ltd.

10.109 During 2005-06 the Corporation had completed construction of 5 fibre boats for the State Water Transport Department. During 2006-07 construction of another 8 fibre boats will be completed, one House Boat was constructed for Jungle lodges Karnataka at Thoppumpady and one Patrol Boat for Cochin port Trust. The Corporation is running tourist cruise boat services “Sagararani,” “Inland pride” “Lake Queen” and Lake Princess”. During the year 2006-07, the corporation proposes to run another vessel ‘Ashtamudi’ and have also started a Jhankar services at Ponnani during the month of Sept 2006.

10.110 The details of operational statistics of Kerala Shipping and Inland Navigation Corporation Ltd are as follows:-

Table 10.14

Operational Statistics of Kerala Shipping and Inland Navigation Corporation Ltd.

Particulars	Kerala Inland Navigation Corporation Ltd.	
	2004-05	2005-06
No. of Boats/Jhankars	13	13
Boats/ Jhankars in Operation	11	4
No. of Trips on Schedule	28197	13505
No. of Passengers carried (Rs.in lakhs)	36	10.62
Gross Route Distance (in k.m)	299525	149285
Volume of Cargo carried (000 tonnes)	879	743
Total Revenue Receipts (Rs. in lakhs) (including sales of boats)	1067.77	819.29
Total Revenue Expenditure (Rs. In lakhs)	1056.14	912.23
No. of Employees	274	262
Profit (Loss) after Tax. (in lakhs)	11.63	(92.63)

Source : *KSINC*

State Water Transport Department

10.111 State Water Transport Department operates passenger boats in the Water logged areas of Alappuzha, Kollam, Kottayam, Ernakulam, Kannur and Kasargod. The total revenue receipt increased from Rs. 448 lakhs to Rs. 483 lakh. The loss of the department increased from Rs. 983 lakh to Rs. 996 lakhs. The number of Trips on schedule and gross Route Distance (in KM) remained the same in 2004-05 and 2005-06. The number of passengers carried decreased from

163.6 lakhs in 2004-05 to 148.26 lakhs in 2005-06. The number of employees increased from 983 in 2004-05 to 1003 in 2005-06.

Air Transport

10.112 The Airport Authority of India formed in 1995 is the provider of the infrastructure facilities for the aviation industry in the country. It is responsible for providing 1) Safe and efficient Air Traffic Services, Communication and Navigational Aids at all the Airports, 2) Planning developing ,constructing and maintaining runway, taxiways, apron, terminal buildings etc. 3) Providing Air Safety Services 4) Arrange rescue facilities etc. The Authority manages 126 Airports including 11 international, 86 domestic airports and 29 civil enclaves at defence air fields.

10.113 Kerala has already got three air ports, at Thiruvananthapuram, Kochi and Kozhikode, with all of them handling both International and Domestic flights. While Thiruvananthapuram and Kozhikode airports are owned by Government of India, that at Kochi is owned by Cochin International Airport Ltd. (CIAL) a company set up with public private participation. The traffic dealt with by the three airports has been growing steadily in recent years due to increased tourist arrivals, large number of Keralaites working in Gulf and other countries and also as a result of the 'open sky' policy measures taken by Government of India. During 2005-06 43394 flights (17839 domestic and 25555 international) were operated from the three Airport. The details of flight operated and passengers travelled during 2005-06 from the three Airports are given in Table 10.16

Table 10.16

Details of Flights operated & Passengers Travelled in 2005-06.				
Airport	International		Domestic	
	Flights (Nos.)	Passengers (Nos.)	Flights (Nos.)	Passengers (Nos.)
Thiruvananthapuram	7659	1002647	3701	322525
Kozhikode	6452	752004	4807	182035
Kochi	11444	1154717	9331	696822
Total	25555	2909368	17839	1201382

Source: TVPM, Kochi and Kozhikode Airports

10.114 During 2005-06 4110750 passengers (1201382 domestic and 2909368 international) were travelled as against 3390697 passengers travelled in previous year. Details of flight operated during 2004-05 and 2005-06 by the three airports are shown in Appendix 10.27 (A), (B) and (C).

Cargo Traffic

10.115 Kerala State Industrial Enterprises is engaged in the operation of Air cargo complexes attached to Thiruvananthapuram and Kozhikode Airports. The company is the official export house for the promotions of exports as recognized by Government of India. Both of its Air cargo complexes are ISO certified ones. Thiruvananthapuram is being the first in the country.

10.114 During the year 2005-06 the company have registered a turn over of Rs. 1017.34 lakhs and a profit of Rs. 267.15 lakhs. During 2005-06 the company handled 14990 MT of import cargo and 24166 MT of export cargo through its two cargo Terminals attached to the two International Airports as against 13482 MT of import cargo and 25550 MT of export cargo in the previous year. The company has been registering steady increase in its turn over and profit all through the years. Details of Export and Import cargo is furnished in Table No. 10.16

Table 10.16
Details of Export and Import through Air cargo complexes at
Thiruvananthapuram and Kozhikode during 2003-04 to 2005-06

Year	Export (MT)	Import (MT)	Value (Rs. lakhs)
2003-04	25545	12177	571.13
2004-05	25550	13482	681.32
2005-06	24166	14990	1017.34

Source : KSIE

Passport

10.117 The Passport issuing offices in the State are at Thiruvananthapuram, Kochi and Kozhikode. The total number of applications for passport received in the State during 2005-06 was 557800 as against 5,25,341 in 2004-05. The number of passports issued decreased from 5609192 in 2004-05 Rs. 5,59,302 in 2005-06, showing a marginal decrease. The passport office wise details of applications received and number of passports issued are shows in Appendix 10.28.

Communications

Postal Services

10.118 Indian Postal system is the largest in the world with a net work of about 1.56 lakh post offices spread all over the country.

10.117 The Postal Services in Kerala comprises 51 Head Post offices, 1451 Sub post Offices, 470 Extra Departmental sub post offices and 3099 Branch Offices, totalling 5071. In addition there are 208 Speed Post Centres/Centers including 9 National and 16 State Centers and 183 Extension Centers. These are organized under 24 Divisions with all 51 Head post offices located at the Divisional Headquarters towns. The Postal System in Kerala at a glance is given in Box 10.4

Box 10.5		
Postal System in Kerala at a glance		
1	Post Offices functioned during 2005-06	5071
2	Head Post Offices	51
3	Sub post Offices	1451
4	Extra Departmental Sub Post Offices	470
5	Branch Offices	3099
6	Speed Post Centres	208
7	Other Postal Services	102
8	Rural Post Offices	4201
9	Urban Post Offices	870
10	Area served by one Post Office (Sq. km)	7.68
11	Population served by one Post Office	6299

Source: CPMG, Kerala Circle, Thiruvananthapuram

10.120 The Postal System covers all the villages in the State. Mail processing is the Central activity in the entire set up of postal operations. The postal system in Kerala requires expansion and modernisation.

10.121 The growth of post offices in Kerala, category-wise details of postal services, rural/urban split up of post offices and details of area and population served by one post office etc. are given in the appendices 10.29 to 10.32

Telecommunications

10.122 Telecommunication is one of the prime support services needed for rapid growth and modernisation of the economy. It is one of the fastest growing sectors of the economy and has immense potential of growth in future. Technology in telecommunications is rapidly changing and is constantly leading to major changes even in the structure of telecommunication industry worldwide. The telecom sector in the country has been witnessing a continuous process of reforms since 1991. The operation network of the erstwhile department of telecom has been converted into owned public sector undertakings called BSNL. The company had become operational from 1.10.2000. The policies and programmes of the department are guided by the basic goal of creating a world class telecom infrastructure in order to provide the information communication technology (ICT) based sector needs of a modern economy on the least cost basis.

10.123 Kerala Telecommunication circle serves the whole of Kerala State, the Union Territory of Pondicherry (Mahe). The circle has 11 major Secondary Switching Areas (SSAs) and one minor SSA of Lakshadweep. Kerala Circle has an impressive record performance in telecom sector and Kerala has the rare distinction of being the first state in the country having all automatic telephone exchanges. Kerala circle became the first state to provide public Telephone facilities in all villages and Panchayat Headquarters

10.124 The State has a telephone density of 120.24 per thousand populations as on 31.3.2006. The rural telephone density is 111/1000 population and urban density is 152/1000 population. The state has a modern telecom network comprises of the state-of-the-art Digital Switches interconnected by reliable optical /Fibre /microwave/satellite media. The state is served by 1223 automatic digital exchanges having a capacity of 47.00 lakh lines and the number of telephone connection working is 38.90 lakh. Kerala Telecom circle has a plan to provide 6.1 lakh connections in the basic telecom network during the current financial year and 6 lakhs of mobile connections are expected to be provided during 2006-07. All the Panchayats and Villages in the State have been provided with public telephones.

10.125 In Kerala Telecom Circle, internet nodes are at present functioning at all 14 district head quarters and at Kavarathy in Lakshadweep Island. Broad band service has been introduced in all SSAs and there are 39480 broad band customers under the Circle. There are 17.57 lakh of mobile connection and a total of 333179 internet customers using BSNL facilities. The circle has estimated 15% growth in the customers. The status of Kerala Telecom Circle is given in box. 10.5.

Box 10.6
Status of Telecom Sector in Kerala

No. of Telephone exchanges	:	1223
Equipped Capacity	:	47700880
Telephone Density as on 31.03.2006	:	120/1000 population
Telephone Density (Rural)	:	111/1000 Population
Telephone Density (Urban)	:	152/1000 population
No. of Mobile connections (as on 30.9.2006)	:	1757557
(1) prepaid	:	1346197
(2) postpaid	:	411360
No. of connections proposed to be Provided during 2006-07	:	600000
No. of Internet customers as on 30.9.2006	:	333179
No. of Broad band customers	:	39480

Urban Development

10.126 The urban system in Kerala comprises of 5 Municipal Corporations, 53 Municipalities and 40 Urban agglomerations. Urbanisation trend in the state shows slow progress and it is presented in Table-10.17 This table shows the number of urban agglomerations /towns have increased over the period from 1901 to 2001, but the change from 1991 to 2001 is only marginal.

Table 10.17
Trends in Urbanization of Kerala 1901-2001

Sl.No.	Census Year	Total number of UAs/Towns	Total Population (in crores)	Total Urban Population (in crores)	Percentages of Urban Population	Decennial growth (%)
1	1901	21	0.64	0.04	7.11	
2	1911	27	0.71	0.05	7.34	+15.44
3	1921	44	0.78	0.07	8.73	+29.78
4	1931	53	0.95	0.09	9.64	+34.58
5	1941	62	1.10	0.12	10.84	+30.47
6	1951	94	1.35	0.18	13.48	+52.72
7	1961	92	1.69	0.25	15.11	+39.89
8	1971	88	2.13	0.35	16.24	+35.72
9	1981	85	2.55	0.48	18.74	+37.64
10	1991	109	2.91	0.77	26.39	+60.97
11	2001	98	3.18	0.83	25.96	+7.64

Source: Census 2001 Government of India, New Delhi

10.126 The share of Urban population in Kerala increased steady from 7.11% in 1901 to 26.39% in 1991, but then declined to 25.96% in 2001. Urban population growth is due to the increase in number of urban areas and urbanisation in the fringe areas.

10.127 The population of Kerala has increased from 254 lakhs in 1981 to 290 lakhs in 1991 and 318.38 lakhs in 2001. This growth marks an increase of 14.32 per cent during 1981 to 1991 and 9.78 percent during 1991 to 2001. The population density was 747 persons per sq km in 1991, increasing to 819 persons per sq km in 2001. The density of population varies from the coastal plains to the highland regions, the highest in the coastal land and the lowest in the highland. In 2001 the total population of the State was 318.38 lakhs, with an urban population of 26% of the total population of Kerala.

10.128 The settlement pattern of Kerala is most intriguing on account of the limited land availability and the composite nature of family income. The population has got settled all along the transportation routes in non-nucleated settlements with the conurbation points wherever community facilities have been created such as schools, administration and market centres etc. The geographical features, availability of subsoil water, climatic factors, easy access to transportation corridors and the socio-economic factors have contributed to the development of a dispersed settlement pattern.

10.129 The rural community most often has dwellings scattered along the roads wherever there are trees to provide shades. There is no little sense of the need to concentrate around a focal point. In spite of the unorganized appearance, the rural communities have quite elaborate social culture. Each have at least one school, public library, public health services, trade union branches and political party groups, places of worships and always a few shops which serve as gathering places. Many officials and working class as well as students for higher education return to their native villages and take active part in the local activities, so that there is even a cultural sophistication about the rural life in Kerala and in many respects it is almost urban in character.

10.130 The urban character is much diffused with buildings for various uses dotted along the entire linear transportation corridors. It is often difficult to differentiate between the boundaries of urban and rural areas. With high population densities and the composite primary and tertiary occupational structure in the rural area, the urban characteristics are present even in the rural areas.

10.131 There were 197 census urban towns (65 statutory towns and 132 census towns) in the state in 1991 and this number changed to 159 (58 statutory towns and 101 census towns) in 2001. The urban content of the total population of the state has been 18.74 percent in 1981, 26.4% in 1991 (76.76 lakhs) and 26% in 2001. The increase has been 60.89 per cent during 1981-91 and 7.64 percent during 1991 to 2001.

10.132 It is seen that more urban centres are located along the main transportation routes with about 75% by the side of National Highway or the railway line. The average distance between these urban centres is about 15 Km. The settlement pattern is characterized by scattered settlements of varying sizes. The overall development presents a rural urban continuum or 'rurban' character. This has led to the development of evenly spaced urban centres. Due to the nearness of the urban centres and the easy availability of infrastructure facilities even in rural areas, there is practically no push factor to urban areas from rural areas. The fast urbanization trend noticed in Kerala is not due to the rural to urban migration, but rather due to the transformation of the rural areas due to occupational shift.

Urban House holds

10.133 In Kerala, 25.06% of the total households are in the urban system. Of the total urban housing stock, 64.90% are good, 29.40% are livable and 5.70% are dilapidated. Of the total

number of houses, 78.80% of them are permanent, 14.48% are semi-permanent and 6.62% are temporary houses. Of the temporary houses, 52.79% are serviceable (57723 houses) and 47.21% are non-serviceable (51624 houses). The distribution of census houses accordingly to occupied vacant, residence, residence-cum-other use, households, permanent, temporary etc. are given in Appendix -10.35,10.36,10.37,10.38 and 10.39

Urbanisation Policy for Kerala

10.134 In Kerala, urban content has been increasing from 7.1% in 1901 to 26% in 2001. But a slight decline seen from 1991 to 2001 is partially due to the declassification of Pandalam, Piravom, Koothattukulam and Mannarkad municipalities during 1991-2001. The declassification of Eloor and Earattupetta municipalities has not affected urbanization due to classification of the area contained in these municipalities as census towns in 2001 census.

10.135 Declassification of a few census towns in 2001 as rural has also contributed to the lower proportion of urban population in the state. Among the districts, the percentage of urbanization has varied from 3.8% in Wayanad to 50.4% in Kannur. Ernakulam District follows Kannur with 47.6% urban population. In six districts of Kannur, Ernakulam, Kozhikode, Thiruvananthapuram, Alappuzha and Thrissur, the percentage of urban population is higher than the state average. In three districts namely Wayanad, Malappuram and Idukki, the urban population is 10% or less. District wise details are given in Appendix.10.40

10.136 In Kerala situation, the development of tertiary sector is the main cause of urbanization. It is not the outcome of accelerated industrialization and urbanization, as seen in Tamil Nadu, Maharashtra, Andhra Pradesh and Karanataka. Kannur district, with an urban population of 50.4% is ranked first in urban content, but 11th in per capita income. This is mainly due to the prevalence of low-income generating small-scale industries. Ernakulam District with an urban content of 47.6 % is ranking second in urban content and first in per capita income. This is due to production specialization in industrial activities and port induced service sector development. Idukki district though ranks 13th in urban content, is second in per capita income. This is due to production specialization in plantation crops.

Urban Development Strategy

10.137 As per 2001 census, the number of urban agglomeration in Kerala is 17. It is distributed within the following districts - Thiruvananthapuram, Kollam, Alappuzha, Kottayam, Ernakulam, Thrissur, Palakkad, Malappuram, Kozhikode, Kannur, Kasaragod.

10.138 The 2001 census give a picture of urbanization in Kerala; the number of urban settlements has decreased to 159 in 2001 compared to 197 in 1991. It is true that the jurisdiction of a few of the urban settlements in the state have expanded by including the neighbouring Panchayats. Such formation of urban agglomerations was one of the reasons for reduction of urban areas in the census 2001.

10.139 The State Urban development Strategy prepared in 1996 states that the first priority in the strategy for urban development shall be given for Kochi Urban Agglomeration. Second priority is for Thiruvananthapuram Urban Agglomeration and the third for Kozhikode Urban Agglomeration. Major parameters considered in evolving the State Urban Development Strategy were:

- Density of population
- Functional linkage with parent settlement
- Functional dependency of the surrounding panchayats
- Corridor development along major arterial roads
- Transportation and land use
- Functional category of town in the region

Urban Development Programmes

10.140 The major Urban Development Programmes implemented at the state level are given below.

1. Integrated Development of Small and Medium Towns.

10.141 Integrated Development of Small and Medium Town's Programme was initiated in 1979-80 with the aim to slow down migration from rural areas and smaller towns to larger cities. The objective of this scheme is to restrict the growth of larger cities by developing small & medium towns through increased investment for the improvement of their economic and physical infrastructure, besides other essential facilities and services. The scheme has been covered in 45 urban local governments except Thiruvananthapuram and Kochi. This is a centrally sponsored scheme, which is in the ratio 60:40 (Central: State).

10.142 The Budget allocation for the year 2005-06 including central share is Rs. 1370 lakh of which Rs. 19 lakh has been released as on October 2005 and proposal to release Rs. 474.10 lakh has been forwarded to the Government. It is also proposed to consider Guruvayoor, Kottayam, Thrissur, Kayamkulam, Changanasserry, Vadakara, Malappuram, Thodupuzha, Manjeri and Palakkad towns for second assistance under the scheme, subject to the approval of Government of India. An amount of Rs.200 lakh is provided as state share during 2006-07.

10.143 The guidelines for implementing the Integrated Development of Small & Medium Town schemes were revised by Government of India in August 1995 and salient features of the revised scheme are:

- Schemes are implemented only in Towns with elected Local Bodies.
- Schemes are extended to towns having population up to 5 lakhs.
- State Governments are required to prepare State Urban Development Strategy Papers and identify towns for priority development along with comprehensive justification.
- The revised scheme provides for central grant for development of selected towns on a whole town development basis.
- Increase in the ceiling limits and change in the nature of budgetary support from soft loan to a grant.
- Reduction in the quantum of institutional finance loan component from 40% -70% to 20% - 40% of the project cost.

2. Modernization of Slaughter Houses

10.144 The objectives of this scheme are :

- Providing wholesome hygienic meat to consumers.
- Eliminating avoidable sufferings of animals.
- Eliminating environmental pollution around slaughter houses and meat outlets, and
- Create awareness among the public, policy makers and consumers.

10.145 The State Government and the participating urban local government will meet the state share on 50:50 basis. Half of the state share shall be provided by the local government concerned and the remaining share alone is provided in the state scheme.

10.146 The proposals for implementing the scheme in Changanassery, Pathanamthitta, Chalakkudy, Kottayam (revised), Perumbavoor, Malappuram (Revised) and Kasaragod Municipalities are pending for approval in the Government of India. An outlay of Rs.68 lakh is provided as state share for continuing the scheme during 2006-07.

3. Capital City Development Project

10.147 The Capital City Development Project was introduced during 2003-04 to improve the quality of life in the capital city by strengthening and improving the critical infrastructure like roads, water supply augmentation, solid waste management, surface water drainage and city beautification. The major projects under taken in the Capital City Development project are:

- Development of Vizhinjam Port Project for developing mother cargo transshipment terminal.
- Development of Thiruvananthapuram Airport to International standards.
- Supply of tools and equipments, purchase of tripper lorries, etc to Thiruvananthapuram Corporation for the development of ISWM.
- Restoration of Parvathy Puthanar Canal and Master Planning of Theerapatham area.
- 49 KM of city roads improvement.
- A short term water supply project to provide water supply to water scarce area in Thiruvananthapuram.
- To modernize bus stand at Thampanoor and construct new terminal at Enchakkal by acquiring 5 acres of land.
- To prevent perennial floods, a surface water drainage programme to construct culverts.
- Althara Vellayambalam Road, Sanghumugham palace renovation, Puthirikandam maidan development and Kovalam area development under city beautification and parking area construction.
- Renovation of the existing Tagore Theatre Complex into a state of the Art Theatre Complex including additional seating capacity, land scaping etc.
- 26 link Roads have been completed during 2005-06
-

10.148 An amount of Rs.36.18 core was provided during 2005-06, out of which 17.61 crore had been spent

4. Development Authorities

(i) Calicut Development Authority

10.149 Calicut Development Authority has undertaken eight schemes for implementation during 2004-05, which are included in the Master Plan/DTP scheme as approved by the State Government. The major works under taken by the Authority are:

- construction of shopping centre and parking plaza in ward No. 3
- Construction of housing colony and shopping centre in ward No. 33

- Road widening and rehabilitation of shopping centres due to the development of Kallai road.
- Construction of residential flats at Bilathikulam.
- Project for Energy Survey & Power Line Mapping.

(ii) Thiruvananthapuram Development Authority (TRIDA)

10.150 TRIDA is the primary implementing agency for the overall developments in the Capital city. Under Capital Region Development Programme, 12 roads totaling to a distance of 42 Km have been taken up for improvements. Out of which 13.74 Km road works have been completed. The construction of fly over at Bakery Junction is also completed. The other road projects taken up by TRIDA like Vellayambalam –Thycaud & Bakery- Poojappura are under progress. Construction of “C” Block at Palayam is a project, which envisages widening and improvement of roads development on the Connemera market including the rehabilitation of the existing traders. Another proposal for the development of a Mini bus station and other facilities such as banks, post offices, shopping complex etc at Kazhakuttam has also been taken up by TRIDA.

(iii) Greater Cochin Development Authority

10.151 The major programmes under taken by Greater Cochin Development Authority are detailed below.

- Kalloor -Kadavanthara road work comprising 3.25 Km length and 22 meter width has been completed and opened for public transport.
- The yard development work to the eastern entry of South Railway Station is in progress.
- Panampilly Nagar to Ananthuruthy road is in progress. A stretch of about 615 m length to a width of 27 m is remaining to be completed.
- Housing scheme for a total cost of Rs. 822 lakhs has been started at Gandhi Nagar. The scheme is on a BOT basis.
- Administrative sanction has been obtained from the Government for the Edathala Housing Scheme at a cost of Rs. 355 lakhs. The work has been tendered for implementation.

5. Kerala Sustainable Urban Development Project (KSUDP)

10.152 The Kerala Sustainable Urban Development Project is proposed to be funded by the ADB in the sectors of (1) Water Supply, (2) Sewerage and Sanitation, (3) Urban Drainage (4) Solid Waste Management (5) Roads and Transportation and (6) Poverty Alleviation in the five Municipal Corporations of Thiruvananthapuram, Kollam, Kochi, Thrissur and Kozhikkode. The overall development goal of the project is to ensure sustainable growth and reduce poverty in the Municipal Corporations of Kerala. The development purpose of the project is to assist Local Self Governments to “Promote good urban management, develop and expand urban infrastructure to increase economic opportunities and to reduce vulnerability to environmental degradation and urban poverty”. The projects are being evolved with technical assistance from ADB with the following components.

- Promote good governance in Municipal Management.
- Develop and expand urban infrastructure.
- Formulate support programmes for improving urban social services for the elderly, destitute, women and street children.

10.153 An amount of Rs.30 crore was provided during 2005-06 and Rs 90 crore is provided during 2006-07.

**6. Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
(Central Assistance)**

10.152 Government of India has approved a Mission Mode approach for implementation of urban infrastructure improvement programme in a time bound manner in selected cities. The mission entrusted with this task will be known as the Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

10.155 The Mission objectives are:

- (a) Focused attention to integrated development of infrastructure services in the cities covered under the Mission.
- (b) Secure effective linkages between asset creation and asset management so that the infrastructure and services created in the cities are not only maintained efficiently, but also become self-sustaining overtime.
- (c) Ensure adequate investment of funds to fulfill deficiencies in the urban infrastructure services.
- (d) To take up urban renewal programme, ie, redevelopment of inner cities area to reduce congestion.
- (e) For providing basic service to urban poor.

10.156 Major components of the scheme include Basic Services to the Urban Poor (BSUP) and Integrated Housing & Slum Development Programme (IHSDP). The duration of the Mission would be seven years beginning from the year 2005-06.

Admissible components included in the mission are:

- (i) Redevelopment of inner city areas
- (ii) Water supply and sanitation
- (iii) Sewerage and solid waste management
- (iv) Construction and improvement of drains/storm water drains
- (v) Urban Transport including roads, highways/expressways/MRTS/metro projects
- (vi) Parking lots/spaces on Public Private Partnership basis
- (vii) Development of heritage areas
- (viii) Prevention and Rehabilitation of soil erosion/landslides only in case of special category states where such problems are common
- (ix) Preservation of water bodies

10.157 An amount of Rs.90 crore is provided during 2006-07

CHAPTER 11

EDUCATION

Literacy

Literacy is a basic step towards education, which is a process of life-long learning and an entry point to the world of communication and information. The literacy rate of Kerala, which was 47.18% in 1951 almost doubled in 2001. According to 2001 Census, the literacy rate for Kerala is 90.92 per cent as against the All India average of 65.38 per cent. Kerala's male literacy rate at 94.20 per cent and female literacy rate at 87.86 per cent are unique features compared to the corresponding national averages of 75.85 per cent and 54.16 per cent respectively. Among the districts in Kerala, the highest literacy rate of 95.90 per cent is in Kottayam and the lowest in Palakkad at 84.31 per cent. More details are given in Appendix 11.1. A taluk-wise analysis reveals that literacy rate is the highest in Mallappally taluk (97.03 %) of Pathanamthitta district and the lowest in Nilamboor taluk (81.39 %) of Malappuram district.

School Education

11.2 In Kerala, there were 12644 schools in the year 2006 consisting of 6817 lower primary schools, 3037 upper primary schools and 2790 high schools. Besides there were 587 CBSE schools, 78 ICSE schools, 26 Kendriya Vidyalaya and 13 Jawahar Navodaya Vidyalaya. For more details, see Appendices 11.2 to 11.4.

Table 11.1
Stage-wise Educational Infrastructure: 2005 & 2006

Year	LP	UP	HS	Total
2005	6827	3042	2781	12650
2006	6817	3037	2790	12644

Source: Directorate of Public Instructions.

11.3 Table 11.1 reveals that there is a marginal decline in the overall number of schools from 12650 in 2005 to 12644 in 2006. Lower primary schools decreased from 6827 to 6817 and upper primary schools also show a small decline from 3042 to 3037; on the other hand high schools show a slight increase from 2781 to 2790. Thus there is a decrease of 6 schools compared to an increase of 328 schools in the previous year. Government schools increased to 4498 in 2006 from 4497 in 2005, aided schools rose from 7287 to 7290 and unaided schools showed the reverse trend of decreasing from 866 in 2005 to 856 in 2006. A detailed analysis of school education infrastructure would show that 2384 upper primary schools have lower primary sections, 818 high schools have lower primary sections and 2171 high schools have upper primary sections.

Box 11.1

In 2006, school education infrastructure consisted of 6817 lower primary schools, 3037 upper primary schools and 2790 high schools with 3202 lower primary sections in high schools/upper primary schools and 2171 upper primary sections in high schools.

11.4 The aided school system still keeps its strong presence in Kerala. Out of the total 12644 schools, 7290 are under private aided management (57.7%). Number of government schools is 4498 (35.6%) and that of unaided schools is 856 (6.8%). Again, of the total 6817 lower primary schools, government sector schools constitute 37.3 per cent, private aided sector 58.6 per cent and the unaided sector 4.1 per cent. Likewise, of the total 3037 upper primary schools, 31.4 per cent are in the government sector, 61.6 per cent in the private aided and the rest 7 per cent are in the private unaided sector. Of the total 2790 high schools, 35.7 per cent are under government control, 51.2 per cent are under private aided management and 13.1 per cent are in the private unaided sector.

Facilities in Government Schools

11.5 The physical and basic amenities of schools in Kerala have improved significantly due to the infrastructure created under Sarva Siksha Abhiyan (SSA) and the involvement of local self-governments under decentralised planning. The present position is that 98.2 percent of the schools have pucca buildings and the rest are functioning either in thatched sheds or semi-permanent buildings. The latest statistics show that 335 schools are functioning in rented buildings, of which 259 are lower primary schools, 64 are upper primary schools and 12 are high schools. Regarding basic facilities 94.4 per cent of the government schools have drinking water facilities and 94.3 per cent have urinals/latrines. More details are furnished in Appendices 11.5 & 11.6.

Enrolment of Students

11.6 The enrolment of students has been showing a declining trend for the last several years. This trend may be due to the peculiar demographic syndrome being experienced in the State for the past several years. The proportion of child population is declining and this fact gets reflected in the actual enrolment rate. There is an overall fall in the enrolment of students from 48.42 lakh in 2005 to 47.76 lakh in 2006, i.e. by 0.66 lakh students (-1.36%), in the school education sector. The enrolment of students at lower primary level decreased slightly from 18.47 lakh in 2005 to 18.25 lakh in 2006, at upper primary level it decreased to 14.57 lakh from 14.70 lakh, and at high school level it decreased to 14.94 lakh from 15.25 lakh. Enrolment details during 2005-06 is given in Table 11.2

Box 11.2

There is a sharp fall in the total enrolment of students from 57.17 lakh in 1995 to 47.76 lakh in 2006, showing a negative decadal growth rate of 19.7 per cent.

Table 11.2
Stage-wise Enrolment of Students in Schools: 2005-06

(in lakh)

Sl. No	Category	Boys	Girls	Total	% of girl students to total
1	Lower Primary	9.21	9.04	18.25	49.5
2	Upper Primary	7.50	7.07	14.57	48.5
3	High School	7.62	7.32	14.94	49.0
	Total	24.33	23.43	47.76	49.1

Source: Directorate of Public Instructions.

11.7 Out of the 47.76 lakh enrolled students 38.2 per cent are in lower primary schools, 30.5 per cent are in upper primary and the remaining 31.3 per cent are in high schools. Similar statistics in the SC category shows, out of 5.1 lakh enrolled students 40.5 per cent are in the lower primary sector, 30.1 per cent are in the upper primary sector and the rest 29.4 per cent are in the high school sector. Enrolment of students under ST category shows 48.5 per cent in the lower primary category, 28.8 per cent in the upper primary category and 22.7 in the high school section. Comparatively, enrolment is falling at high school stage both in SC and ST category. More details are furnished in Appendices 11.8 and 11.9.

11.8 Management-wise enrolment of students shows that 31.5 per cent are in the government sector, 61.1 per cent are in the private aided sector and 7.4 per cent are in the private unaided sector. This reveals a slight decline in the case of government sector and the corresponding increase is reflected on the private sector compared to the previous year. Table 11.3 furnishes stage-wise and management-wise details of enrolment. A notable feature is that there is a shift from the upper primary stage to high school stage in the government sector which makes up for a reverse trend in the aided and unaided sectors.

Table 11.3
Stage-wise and Management-wise Distribution of Enrolment in Schools: 2005-06

Management	LP Stage	UP Stage	HS Stage	Total
Government	32.4	28.8	33.0	31.5
Aided	58.1	64.8	61.2	61.1
Un-Aided	9.5	6.4	5.8	7.4
Total	100	100	100	100

Source: Directorate of Public Instructions.

More details on management-wise enrolment are given in Appendix 11.10; district-wise details in Appendices 11.7-11.9; and standard-wise/management-wise/category-wise information in Appendix 11.11.

Box 11.4

The Gross Enrolment Ratio (GER) at state level for 2004-05 for primary classes (I to V) is 98.11 and for middle classes (VI to VIII) it is 97.07, whereas at national level the figure is 95.39 and 60.99 respectively.

Enrolment of Girls' Students

11.9 The enrolment of girl students in schools constitutes 49.1 per cent of total enrolment. It is a clear indicator of the position, which Kerala enjoys in the sphere of girls' education. The percentage enrolment of girl students in LP, UP and HS levels stood at 49.5, 48.5 and 49.0 respectively. The total number of girl students has declined by 0.33 lakh from 23.76 lakh during 2004-5 to 23.43 lakh during 2005-6. The decline is at all levels: lower primary (0.1 lakh); upper primary (0.05 lakh); and high school (0.17 lakh). The decline at the lower primary level is from 9.15 lakh in 2004-5 to 9.04 lakh in 2005-6. At upper primary and high school levels the declines are from 7.12 lakh in 2004-5 to 7.06 lakh in 2005-6, and from 7.49 lakh in 2004-5 to 7.32 lakh in 2005-6 respectively.

Box 11.3

The girl students' enrolment in schools in 2006 stood at 23.43 lakh and gender gap in total enrolment is 3.7 per cent. Total FMR on enrolment is 963 per 1000.

SC/ST Enrolment

11.10 The enrolment of both SC and ST students at school level in 2005-6 stood at 5.75 lakh. It accounts for 12.03 per cent and of the total school enrolment which is slightly higher than the previous year. The enrolment of SC and ST students in absolute terms was 5.08 lakh and 0.67 lakh respectively. The percentage to total enrolled students works out to 10.63 and 1.4 respectively. The standard-wise strength of SC/ST students during 2005-06 is given in Appendix 11.11. The percentage of SC students to total students in lower primary section is 11.26, at upper primary stage 10.50 and at high school level 9.99. Likewise, for ST students the percentage in lower primary section is 1.78, at upper primary level 1.32 and at the high school stage it is 1.02. Details are given in the Table.11.4.

Table 11.4
Enrolment of SC/ST Students: 2005-06

Section	Total (Nos)	SC (Nos)	Percentage to Total	ST (Nos)	Percentage to Total
1	2	3	4	5	6
L.P	1825453	205608	11.26	32424	1.78
U.P	1456565	152995	10.50	19244	1.32
H.S	1494288	149292	9.99	15182	1.02
Total	4776306	507895	10.63	66850	1.40

Source: Directorate of Public Instructions.

Dropout Rate

11.11 The dropout rate is comparatively low in Kerala. During 2004-05, the dropout rate was 0.88 at lower primary level, 0.45 at upper primary level and 1.50 at high school level. District-wise analysis shows that Wayanad had the highest drop-out rate at lower primary and upper primary levels last year and this pattern continues this year also (2.43 and 1.23 respectively). At high school stage, Kasargod (3.22) has a high dropout rate followed by Wayanad (3.0), Palakkad (2.53) and Idukky (2.36). More details are furnished in Appendix 11.12.

Sarva Shiksha Abhiyan (SSA)

11.12 SSA, the most ambitious educational project since independence, aims to provide useful and relevant elementary education for all children in the age group 6-14 by 2010. The physical target and physical achievement of SSA during 2004-05 is given in the Table 11.5.

Table 11.5
Physical Targets and Achievements: 2004-05

Sl.No	Activity	Physical Target	Physical Achievements
1.	BRC	152	152
2.	CRC	1303	1303
3.	Civil Works	5762	--
4.	AIE/MGLC	13801	13801
5.	Free Text Books	1912382	1821349
6.	Innovative Activities	56	56
7.	IED	89147	41083
8.	Maintenance Grants	5254	5035
9.	Management & MIS	15	15
10.	Research & Evaluation	14078	7301
11.	School Grants	14078	13811
12.	Teacher Grants	112562	117000
13.	TLE (OBB)	823	809
14.	Teacher Training	120015	100434
15.	Community Mobilisation	34052	17050

Source: Annual Report 2004-05, SSA, Kerala.

Box 11.5
Achievement of SSA

1. The constitutional commitment on universalisation of elementary education has been fulfilled and that Kerala has enrolled all children in the age group 6-14 leaving a gap of 2077 children as out of school children.
2. The retention of all children enrolled is another objective of Sarva Shiksha Abhiyan, which has been fully achieved. Though Government of India's target to be fulfilled by 2007 for LP and 2010 for UP level, Kerala has already achieved the goal.
3. Multi-pronged interventions have led to a reduction in the dropout rate. The attainment of a zero dropout rate is a goal to be achieved by 2007.
4. Another goal of Sarva Shiksha Abhiyan is the removal of gender gaps and among social category groups in enrolment. There is parity of girls enrolment compared to boys in Kerala. The enrolment of SC/ST children is almost on a par with the general category. There does not exist any gender gap or gaps in enrolment among different social groups, as is evident from the statistics on enrolment, retention and drop-out.
5. The provision of quality education is the most important goal of Sarva Shiksha Abhiyan Mission in Kerala. This must get reflected in an improvement in the learning levels of students. At the 8th standard level, the percentage of students who passed out with 60 percent and above marks increased from 40 in 2002-03 to 60 in 2004-05. The various strategies adopted to achieve higher learning levels are:
 - a. Training and retraining of teachers
 - b. Revision of curriculum
 - c. Examination reforms
 - d. Scholastic, Non Scholastic areas improvement
 - e. Involvement of academic experts in planning and implementation of quality education measures.
 - f. Grading System
 - g. Systematic monitoring of quality improvement programmes.
6. A spirit and sense of community ownership of schools has been created. The orientation programme to community members and the involvement of School Support Group, Panchayat level, Block level, District level and LSG leaders have generated more public participation. This has led to positive results.
7. There are 450 Alternative/Innovative Education Centres organised with an enrolment of 12895 out-of-school children. This has contributed to a reduction of social deprivations and the attainment of greater equality of opportunities for education for everyone, including those in remote and inaccessible areas.
8. The focus on girls' education and SC/ST education imparted through enrichment programmes/remedial education, and special coaching classes, leads to improving the levels of learning of deprived students. There are about 1800 centres organised in schools. The schools with pass percentage less than the state average and students securing less than 40 percent marks are the focus areas.

9. The research/evaluation programme, particularly action researches, gave interesting feed backs which led to the identification of hard sports and to efforts towards improving the learning levels. There were 1800 action researches conducted by teachers, Block Programme Officers and Trainers.
10. Under Computer-aided learning, computers were installed in 850 UP schools. All the DIETS which are provided with 10 computers each serves as a resource centre for training. During 2003-04 and 2004-05 about 3000 teachers/trainers were given training. Moreover computers were installed in schools with the help of MP/MLA funds and LSG funds.
11. Workbook preparation for standards IV to VII was completed and eight titles were prepared. This will improve the quality of education.
12. In quality planning and academic support, State Level Resource Groups, District Level Resource Groups and Block Level Resource Groups are constituted with persons of proven ability, experience and expertise. About 3000 experts involved in the process. The major outcomes are preparation of modules, training contents and assessment of the impact of training.
13. The inclusive Education for Disabled Children identified through medical camps is yet another important activity of Sarva Shiksha Abhiyan. Every year about 1 lakh children are identified and assistive aids and appliances are distributed to about 15000 children. The participation of NGOs, LSGs and Government departments is fully enlisted at both the stages of identification and distribution of assistive aids. There are 895 disabled out-of-school children who are covered under home based tuition.
14. The implementation of Sarva Shiksha Abhiyan has given a big push to improving the school infrastructure and amenities, which has created a good learning environment for children. There are 152 BRCs in position and on an average for every 9 schools there is one Cluster Resource Centre. During the three year period 2002-03 to 2004-05, 57 BRCs and 111 CRCs were constructed. In backward areas building facility has been provided to 148 buildingless schools and 1967 additional classrooms have been constructed. Drinking water facility has been extended to 2039 schools. The provision of boundary walls, electrification and class room separation have all led to an improvement of facilities.
15. The overall capacity building over the years at different levels-State, District and BRC- has enhanced the efficiency and social commitment of personnel in Sarva Shiksha Abhiyan.

Source: Annual Report 2004-05, SSA, Kerala.

Sarva Shiksha Abhiyan II

11.13 Government of India is launching the Universalisation of Secondary Education - SSA-II from the beginning of Eleventh Five Year Plan. Accordingly Government of Kerala have constituted a Committee for the formulation of SSA for Eleventh Plan.

Schools which do not have the Minimum number of Students and have Protected Teachers

11.14 As per KER, a school in which the minimum strength per standard/batch in LP/UP/HS is below 25 is called 'uneconomic'. In schools where Arabic or Sanskrit is taught as part I and II of the first language, the minimum required strength per standard is 15. Based on this norm there are 2919 uneconomic schools in 2005. Of the total uneconomic schools, 1457 (49.91%) are government and 1462 (50.09%) are aided private. The category-wise distribution of uneconomic

schools shows that 2335 (79.99 %) are lower primary, 465 (15.93 %) are upper primary and 119 (4.08%) are high schools. District-wise details of uneconomic schools in Kerala during 2005 are given in Appendix.11. 13

Protected Teachers

11.15 The number of protected teachers both in government and aided schools stood at 3715 during 2005-06. It consists of 633 high school teachers, 2123 PD teachers and 959 special teachers. Out of the 3715 protected teachers, 1831 have been deployed in government schools, 1047 have been retained in parent schools and 312 have been deployed in other aided schools. Thus undeployed teachers' number turns out to be 525. Out of these 525, 55 are in high schools, 388 are PD teachers and the remaining 82 are special teachers. District-wise data reveal that the highest number of protected teachers is in Kannur (635) and the lowest in Wayanad (36). More details are given in Appendix 11.14.

Teacher-Pupil Ratio

11.16 One of the important indicators that influences class room interaction is the teacher- pupil ratio. The number of school teachers during 2005-06 was 176569, including TTI teachers as against 175244 in 2004-05. Out of 176569 teachers, 56059 (31.75%) were in government schools, 107047 (60.63%) were in aided private and 13463 (7.62%) were in unaided schools. Stage-wise distribution of teachers shows that 41751 (23.65%) were in lower primary schools, 45426 (25.73%) were in upper primary schools, 88453 (50.10%) were in high schools, and 939 (0.53%) were TTI teachers. More details are given in Appendix 11.15.

11.17 The Teacher-Pupil ratio during 2005-06 works out to 1:27, the same as that of the previous year. Stage-wise details show that the teacher-pupil ratio differs at each stage. At lower primary level it is 1:43, at upper primary it is 1:32 and at high school stage it is 1:17. At high school stage, there is a drastic change compared to the previous year.

Higher Secondary Education

11.18 The higher secondary course was part of the higher education system in the state. The process of de-linking and attaching it to the school system was started during 1990-91 and completed within a decade. Three groups viz. Science, Humanities and Commerce are offered at the higher secondary stage. As a first step, during 1990-91, 31 government schools were upgraded to the status of higher secondary schools. At present, the higher secondary course is being conducted in 1664 schools; 699 of these are in the government sector, 524 in aided and 441 in unaided sectors. District-wise and management-wise number of higher secondary schools is given in Appendix. 11.16.

11.19 There are 5513 batches with 275650 numbers of seats. Out of 5513 batches, three districts Malappuram (632), Ernakulam (627) and Thiruvananthapuram (607) have more than 600 batches. Total number of seats are also ranked accordingly. More details are furnished in Appendix 11.16.

11.20 Sanction has been accorded by the government, for three Regional Centres of Higher Secondary Education at Thiruvananthapuram, Ernakulam and Kozhikode and these have started functioning.

Box 11.6.

Grading System of Evaluation has been introduced in the Higher Secondary level from 2005-06.

11.21 During the academic year 2005-06 there were 3.67 lakh students studying in the second year of the higher secondary course in various schools, of which 1.9 were girls and 1.76 lakh boys. The intakes of SC and ST students were 30320 (8.3%) and 3451 (0.94%) respectively. The presence of ST students is not even 1 per cent. However, category-wise intake shows an upward trend from 2004 onwards (see Appendix 11.17)

11.22 In the March 2006 Public Examination, 357245 students have appeared and 217969 students have passed. The pass percentage is 61.01. The corresponding pass percentages for SC and ST students were 43.2 and 41.6 respectively. Gender-wise details showing the numbers that appeared in these examinations and those who passed are given in Appendix 17 (a).

11.23 The staff position in higher secondary schools in 2006 is shown in Table 11.6. Senior high school teachers are more in the government sector compared to the aided sector; on the other hand the number in the aided sector is more in the case of junior high school teachers. Besides, laboratory assistants are also categorized sectorally.

Table 11.6
Staff Position at Higher Secondary Schools: 2005-06

Sl .No.	Name of Post	Government Sector	Aided Sector
1	Principal	699	523
2	High School Teachers (Sr)	6131	6073
3	High School Teachers (Jr)	4291	4397
4	Lab Assistant	1378	1058

Source: Directorate of Higher Secondary Education.

Vocational Higher Secondary Education

11.24 Vocational Higher Secondary Education was introduced in the state with the objective of promoting employment through the creation of manpower that is more skilful and job oriented. As a first step, the course was introduced in 19 government high schools during 1983-84. At present there are 375 VHSS, of which 247 are in the government sector and 128 are in the aided sector with a total of 1000 batches for 42 different courses. Course-wise intake of students for 2005 is given in Appendix 11.18. The sanctioned intake and actual enrolment of students in VHSS in 2005 were 26874 and 25382 respectively.

11.25 During the academic year 2006-07 there were 0.47 lakh students studying for vocational higher secondary courses, of which 0.25 lakh were girls and 0.22 lakh boys. The intakes of SC and ST students were 4228 (9.02%) and 186 (0.4%) respectively. The representation of ST students at vocational higher secondary education, as at the level of higher secondary education, is very low; in the former case it amounts to not even half a per cent of the total. However, category-wise intake shows a downward trend from 2004 onwards, contrary to the case of higher secondary education (see Appendices 11.19-11.21).

11.26 A district-wise analysis shows that the total number of vocational higher secondary schools (52) and courses (160) is the highest in the Kollam district. A notable feature is that the presence of the aided sector is stronger in Kollam district than in any other; and there are 109 varieties of courses in the aided sector. More statistics are given in Appendix 11.22.

11.27 Out of 26739 students who appeared for the March 2005 Vocational Higher Secondary Examination, 21029 students have passed. Total pass percentage is 79 and girls performed better (83%) compared to boys (74%). The pass percentage for both SC and ST is 52. More details are available in Appendices 11.23-11.25.

Box 11.7

Kerala has been ranked the most developed state at all levels of schooling except higher secondary. At the higher secondary level, Haryana ranked the highest followed by Kerala, Punjab and Rajasthan.

Source: Study by Institute of Applied Manpower and Research.

University and Higher Education

11.28 The higher education system of Kerala has increased manifold. The number of universities and colleges today is several times higher compared to the time of the formation of the State. Kerala's higher education system comprises 7 universities and 2 deemed universities.

Box.11.8

There are 329 universities and 203 state universities in all at present. The Indian higher education system comprises 18 central universities, 90 deemed universities, five institutions established under state legislative acts and 13 institutes of national importance established by Central Legislation and nearly 16,885 colleges, including 1,798 women's colleges.

Source: Annual Report 2004-05- MHRD.

New Courses Started under the Universities in Kerala

11.29 Universities in Kerala have now shifted their emphasis from conventional courses to professional and technical job-oriented courses while giving sanction to new courses. Most of the new courses are self-financing in nature. This raises a number of issues. Imparting knowledge and thereby creating a better society is the ultimate goal of a university. Employment generation and skill development should be the joint-products of this basic endeavour. The challenge in Kerala today is to ensure that this basic objective of the university system is not lost sight of in the quest, no doubt legitimate, for job-oriented education.

11.30 In order to keep pace with the changing times, Kerala University has decided to introduce new courses and revise the syllabi once in two years. Recently the university has started courses like Tourism Management, Hotel Management, Hospital Management, Forensic Medicine, Training for Laboratory Assistants. New centres started were Centre for Marine Diversity, Centre for Convergence Media Studies, Nehru Centre, Centre for Bio-informatics, and Centre for Performing Art and Visual Arts.

11.31 Mahatma Gandhi University has started many new courses such as: (i) M.Tech in Computer Aided and Structural Engineering and Production and Industrial Engineering, (ii) M.Sc in Electronics, Bio informatics, Microbiology, Acquaculture (SF), Clinical Nutrition and Dietetics, Food Science and Quality Control, Child Development, Medical Surgical Nursing and Psychiatric Nursing (iii) BA courses in Multimedia, Animation and Graphic Design and Tamil.(iv) B.Sc in Biotechnology (v) B Ed Special Education (vi) M Ed ; (vii) MSW; (viii) MD in Radio-diagnosis; (ix) Post Basic BSc Nursing and (x) B Com Computer Application.

11.32 University of Calicut has added new courses on BHM (Bachelor of Hotel Management), B Sc. in Psychology, M Tech. (Embedded System), B Pharm., MBA and MCA.

11.33 Kannur University has started new courses on BBM, B Pharm, BDS, B Tech., MBA, BSc. Nursing, BA, B Com., M.A, M.Com, BSc Geography, and MA in Applied Economics.

11.34 Sree Sankaracharya University of Sanskrit has introduced new courses like MA in Psychology, Vedic Studies, History, English and Literature, Nyaya, Vyakarana and MSW.

Arts and Science Colleges

11.35 Arts and Science colleges still dominate the higher education sector in Kerala notwithstanding the mushrooming of new generation professional colleges. The number of arts and science colleges in the government sector is 39 and in the aided sector 150. According to 2005 statistics, the total number of unaided colleges is 167; but their enrolment data are not available. University-wise and management-wise number of arts and science colleges is given in Table 11.7

Table 11.7
University-wise Arts and Science Colleges: 2006

Sl No	Name of University	Govt.	Aided	Total	Un Aided
1	Kerala	9	37	46	14
2	Calicut	17	45	62	50
3	Mahatma Gandhi	7	56	63	57
4	Kannur	6	12	18	46
	Total	39	150	189	167

Source: Directorate of Collegiate Education, Thiruvananthapuram.

Enrolment of Students

11.36 The total number of students enrolled in various arts and science colleges (excluding unaided colleges) under the four general universities in Kerala during 2006 is 1.79 lakh as against 1.77 lakh in 2005. Although it shows an overall increase of 1736 students compared to previous year, a substantial decrease of 2715 is noticed in the case of under-graduates. Out of this, a bigger decrease is found in BA and BSc courses. Of the 1.79 lakh enrolled students, 156029 (87.31%) are degree students and the rest 22677 (12.69%) are postgraduate students. Girl students outdistance boys in 2006 too as in previous years. Their percentage to the total student community is 66.87 in 2006. More details are given in Table 11.8. SC students constitute 14.19 per cent of the total students; the corresponding figure for ST students is only 1.05 (see Appendix 11.34).

Table 11.8
Enrolment of Students in Arts and Science Colleges: 2005 & 2006

Name of Course	2005			2006			Increase in Enrolment
	Boys	Girls	Total	Boys	Girls	Total	
BA	23004	45618	68622	22371	45165	67536	-1086
BSc	20791	45114	65905	19788	44382	64170	-1735
B.Com	11143	13074	24217	11338	12985	24323	+106
Sub-Total	54938	103806	158744	53497	102532	156029	-2715
M.A	1862	5581	7443	2080	6309	8389	+946
MSc	1576	6616	8192	2414	8249	10663	+2741
M.Com	852	1739	2591	1216	2409	3625	+1034
Sub-total	4290	13936	18226	5710	16967	22677	+4451
Total	59228	117742	176970	59207	119499	178706	+1736

Source: Directorate of Collegiate Education, Thiruvananthapuram.

11.37 Out of the 1.56 lakh degree students 34.29 per cent are boys and 65.71 per cent are girls. As far as SC students are concerned, boys form 14.44 per cent of the total students; the corresponding ST representation is only 1.05 per cent. The proportion of SC girls to total girl students is 14.08 per cent. However, the proportion for the ST is only 0.96 (refer Appendix 11.34).

11.38 Out of the total students in various degree courses, 67536 (43.3%) are BA students, 64170 (41.1%) are BSc students and 24323 (15.6%) are B Com students. The percentage of girls in BA courses is 66.9. Sixteen subjects are offered for BA courses, of which the maximum number of students is admitted to Economics. Out of the total BSc students, 69.2% are girls. A total of 15 subjects are offered for BSc courses. The maximum number of students has chosen Mathematics. In the B Com courses, the share of girls to total students is only 53.4 per cent. Course-wise and subject wise details of students for degree courses are given in Appendices 11.28 to 11.30.

11.39 The total number of students enrolled for postgraduate courses during 2006 is 22677 as against 18226 in 2005. Out of 22677 students, 8389 (37%) are in MA courses, 10663 (47%) are in MSc courses and 3625 (16%) are in M.Com. The percentage of girl students in postgraduate courses is 74.82. A total of 16 subjects are offered for MA courses and among them the maximum number of students has opted for Economics, i.e. 1892 students (22.55%). The percentage of girls to the total MSc students is 77.36. Out of the 10 different subjects offered for MSc courses, the maximum number of students is admitted to Mathematics i.e. 2045 students (19.18%). In the case of M.Com courses, women's representation is 66.46 per cent. More details are given in appendices 11.31 to 11.33.

11.40 Out of 22677 postgraduate students, SC students are 2827 which is 12.47 per cent of the total. Women SC students constitute 11.73 per cent of total women students. However, ST students are only 226, not even one per cent of the total. ST representation among women students is only 0.88 per cent (see Appendix 11.34).

11.41 The number of teachers in arts and science colleges has decreased from 10468 in 2004-05 to 9802 in 2005-06. University-wise break up of teachers shows that the maximum number of

teachers is in Mahatma Gandhi University (3523) followed by Kerala (2833), Calicut (2609) and Kannur University (837). The percentage of women teachers is 45. The university-wise number of teachers in arts and science colleges is shown in Appendix.11.27.

Private Registration

11.42 The number of private registrants shows a fluctuating trend. It was 78734 in 2002-03 and it declined to 70902 during 2003-04. It then increased to 72322 during 2004-05. The University of Kerala has discontinued private registration in postgraduate courses from 2003-04 onwards. There is no private registration for postgraduate courses in Calicut University too. Stage-wise details of private registrants show that out of 72322 students, 65805 (90.99%) are for degree courses and the rest 6517 (9.01%) are for postgraduate courses. Further, of the total 65805 students for degree courses 27712 (42.11%) are in BA courses and 38093 (57.89%) are in B.Com courses. Out of the 6517 students for post graduate courses, 3172 (48.67%) are in MA courses, 2967 (45.53%) are in M Com and 378 (5.8%) are in M.Sc courses. University-wise details of private registration at graduate and post graduate levels are given in Appendix 11.35.

Grant to Universities

11.43 The two major sources of income for the universities in Kerala are plan and non plan grants provided to them by the state government. The plan and non plan expenditure of the universities during 2004-05 was Rs 12601.43 lakh. It increased to 13742.58 lakh during 2005-06 (RE). In the budget estimate for 2006-07, the maximum plan grant is given to Kannur University and the maximum non plan grant to Kerala University. Details regarding plan and non plan grants provided to the universities from 2004-05 to 2006-07 is given in Table 11.8A.

Table 11.8A
Grant-in-Aid given to Universities by Government of Kerala during 2004-05 to 2006-07

(Rs. lakhs)

Name of University	2004-05 Accounts			2005-06 R E			2006-07 B E		
	Plan	Non Plan	Total	Plan	Non Plan	Total	Plan	Non Plan	Total
Kerala	382.5	4490.85	4873.35	450.00	4827.66	5277.66	475	5310.43	5785.43
Calicut	297.5	3142.65	3440.15	350.00	3378.35	3728.35	375	3631.73	4006.73
Mahatma Gandhi	467.5	1875.30	2342.80	450.00	2015.95	2465.95	475	2167.15	2642.15
Sree Sankaracharya	127.5	820.00	947.50	150.00	1048.13	1198.13	150	1048.12	1198.12
Kannur	680.0	317.63	997.63	700.00	372.49	1072.49	700	400.43	1100.43
Total	1955	10646.43	12601.43	2100	11642.58	13742.58	2175	25115.72	14732.86

Source: Detailed Budget Estimates: 2006-07, Vol I, Government of Kerala.

Technical Education

11.44 The Technical Education System in the State covers courses in engineering, technology, management, architecture etc. at diploma, degree, postgraduate and research levels. Besides, Industrial Training Institutes, Technical High Schools, Fine Arts Colleges etc also come under technical education system. National Institute of Technology, Kozhikode, having the Deemed University status, offers graduate and postgraduate courses. Cochin University of Science And Technology (CUSAT) functions in line with the status of a technical university.

Engineering Colleges

11.45 In recent years, there has been a remarkable increase in the number of engineering colleges especially in the form of private self-financing colleges. By the end of the Ninth Five Year Plan, the number of engineering colleges was 44. At present there are 84 engineering colleges with a sanctioned intake of 24452 seats. Out of 84 engineering colleges, 9 are government, 5 are private aided and 70 are self-financing. University-wise analysis shows that the maximum number of engineering colleges is in M.G. University (22) followed by Kerala University (19), CUSAT (18), Calicut University (18), Kannur (5) and Agricultural University (2). More details are given in the Table.11.9. IHRD also conducts engineering courses. There are 9 engineering colleges functioning as self financing institutions under IHRD. Besides, part-time B-Tech degree courses are being conducted in three engineering colleges in different disciplines.

Table 11.9
University-wise Engineering Colleges: 2005

Sl.No	Name of University	No.of Colleges
1	University of Kerala	19
2	Mahatma Gandhi University	22
3	Calicut Univeristy	18
4	Kannur University	5
5	CUSAT	18
6	Agricultural University	2
	Total	84

Source: Directorate of Technical Education.

Box.11.9

The total number of approved engineering colleges in India is 1358 with an intake capacity of 450954.

Source: AICTE Report-2004.

11.46 District-wise analysis of engineering colleges in Kerala reveals that Thiruvananthapuram has the highest number of engineering colleges (15) followed by Ernakulam (13). In each district there is at least one government engineering college except Kollam, Pathanamthitta, Ernakulam and Malappuram. District-wise and management-wise number of engineering colleges and sanctioned intake are given in Appendix 11.36.

Box 11.10

Out of 24452 sanctioned seats in engineering colleges 2663 (10.89%) are in government colleges, 1529 (6.25%) in aided colleges and 20260 (82.86%) are in self-financing colleges.

11.47 Branch-wise analysis shows that out of 24452 seats, 5795 are in Electronics & Communication, 4760 in Computer Science, 3450 in Electrical & Electronics, 3291 in Mechanical Engineering and the rest in other branches. Branch-wise distribution of seats is given in Appendix 11.37. The annual intake of postgraduate students in government engineering colleges during 2005-06 stood at 206 and that of aided colleges at 15. Course-wise details are given in Appendix. 11.38.

11.48 The number of teachers in government engineering colleges during 2005-06 is 2026; in the aided colleges it is 1053 (See Appendix 11.39).

Polytechnics & Technical High Schools

11.49 There are 43 government polytechnics and 6 private aided polytechnics in the state. The annual intake in the government and aided polytechnics is 8160 and 1500 respectively for 2006-07. Thus altogether there is a sanctioned intake of 9660 (See Appendices 11.41-43). About 23 trades are offered for diploma courses. Among them, more seats are provided to trades like Electronics (1770), Computer Engineering (1640), Mechanical Engineering (1310) etc. Relevant details are given in Appendix.11.40.

11.50 The total number of students who studied in government polytechnics during 2005-06 is 24480 and out of this 2448 (10%) are girls. The number of students in the private aided polytechnics was 4500 in 2005-06. Here the number of girl students is 450 (10%). The number of teachers in the government and aided polytechnics was 1410 and 319 respectively during 2005-06. Details are given in Appendix.11.44. The SC/ST student population for the period was 2448 in government polytechnics and 450 in aided polytechnics. The number of SC/ST teachers was 102 in government polytechnics (see Appendix 11.45).

11.51 There are 1615 seats available for 14 different courses being conducted in the self-financing sector during 2006-07. Maximum seats are available for Computer Hardware Maintenance (285) followed by Applied Electronics (185), Electronics and Communications (170), Medical Electronics (160) and Telecommunication Technology (155) and others (see Appendix 4.46).

11.52 In addition, 6 model polytechnics are functioning under IHRD. Total sanctioned intake during 2006-07 is 525 and altogether 1533 students are enrolled for First, Second and Third years. MTP at Karunagappally does not provide gender-wise enrolment details. The gender-wise statistics show in 5 model polytechnics, except MTP Karunagappally, that 86.41 per cent are boys and only 13.59 per cent are girls.

11.53 Out of 1398 students enrolled in 5 institutions, 119 are SC (8.51%) and 66 are ST (4.72%). Among SC students, 74.79 per cent are boys and the rest are girls (25.21%). The gender-wise enrolment for ST reveals that the representation of girl students is only 19.70 per cent. The proportion of SC/ST students for technical education is lower compared to that for general education.

11.54 At secondary level, there are 39 government technical high schools. The trade-wise annual intake remains 2085 as in the previous year. Total student strength during 2006-07 was 6305 compared to 6255 in the previous year. The share of girl students is only 10 per cent. The number of teachers is 1015, and among them 178 are women.

11.55 The number of SC students was 504 during 2006-07, which was 8 per cent of the total; the corresponding proportion for ST was only 2 per cent. Among SC students, girls form only 13 per cent. However, among ST students 30 per cent consisted of girls.

Technical Education Quality Improvement

11.56 In recent years, there has been an exponential growth in the number of technical institutions, especially engineering colleges. This mushrooming has had implications for quality. In order to upscale and support the ongoing efforts of the government in improving the quality of technical education, a Technical Education Quality Improvement Programme (TEQIP) has been launched with the assistance of the World Bank in 2004.

11.57 The broad objectives of the programme are: (i) selected engineering colleges can achieve their own set targets for excellence and sustain it with autonomy and accountability, (ii) improve efficiency and effectiveness of the technical education management system in the institutions selected. The vision is to ensure the highest quality in technical education at state level consistent with state and national policies and requirements to produce the best world-class engineering professionals so as to provide impetus to industry, business and services.

11.58 The following six engineering institutions in the State are selected for the project in addition to the centrally sponsored institution, NIT Calicut:

1. College of Engineering, Thiruvananthapuram;
2. College of Engineering, Chengannur;
3. Model Engineering College, Kochi;
4. SCT College of Engineering, Thiruvananthapuram;
5. MES College of Engineering, Kuttippuram; and
6. LBS College of Engineering, Kasaragod.

11.59 The project is scheduled to be completed by December 2007. Key components of the project are promotion of Academic Excellence, Networking of Institutions, Service to Community and Economy etc. The project allocation for Kerala is Rs 6251 lakh. Rs 3107 lakh have been withdrawn from the various budgets till date from the inception of the project. Cumulative expenditure of the project up to 30-09-2006 is Rs 250.668 lakh.

Cochin University of Science and Technology

11.60 The University came into being in 1971 through an act of legislation, for the promotion of graduate and postgraduate studies and advanced research in applied science, technology, industry, commerce, management and social science.

11.61 CUSAT is academically structured into nine faculties viz., Engineering, Environmental Studies, Humanities, Law, Marine Science, Medical Science and Technology, Science, Social Science and Technology. It has 28 departments of Study and Research offering postgraduate programmes. The university has academic links and exchange programmes with several

institutions across the globe. Currently CUSAT has ongoing exchange programmes with partners in Africa, Canada, Europe, Japan, Korea, Malaysia, USA and Vietnam. CUSAT is the single Indian University to be chosen for long term financial assistance by the government of Netherlands. CUSAT has been short listed by the MHRD along with 7 other universities for upgrading it into an IIT. Department-wise details of courses in CUSAT are shown in Appendix.11.50.

Institute of Human Resource Development (IHRD)

11.62 IHRD was established by the State Government under Travancore Cochin Literary, Scientific and Charitable Societies Registration Act of 1955 to develop manpower in the field of electronics, computer and allied areas. There are 9 engineering colleges, 6 model polytechnics, 18 colleges of applied science, 25 technical higher secondary schools, 2 regional centres and 2 extension centres functioning under IHRD. In addition to this, PGDCA and Data Entry Techniques and PC Maintenance Courses are conducted through some selected institutions. Thus altogether there are 62 institutions with intake capacity of 10114. Since the admission process is continuing in Engineering Colleges functioning under IHRD, total number of students admitted to each institution is not provided. Last year total intake capacity was 10358 students and the number of students admitted was only 7206. The available details during 2006 are given in Table.11.10

Table 11.10
Institutions and Annual Intake of Students under IHRD: 2006

Sl. No.	Institutions	Institutions	Annual Intake	Students Admitted
1	Engineering Colleges	9	1405	NA
2	Polytechnics	6	700	681
3	Technical Higher Secondary Schools	25	4320	3022
4	College of Applied Science	18	1489	1124
5	Regional Centres (PGDCA)	2	NA	NA
6	Extension Centre (PGDCA)	2	NA	NA
7	In addition, PGDCA is conducted in 22 institutions mentioned above		1720	NA
8	Data Entry Techniques & PC Maintenance Course is conducted in 6 institutions mentioned above		480	NA
	Total	622	10114	4827

Source: Institute of Human Resources Development, Thiruvananthapuram.

Note: NA refers to Not Available.

11.63 Model Engineering College, Ernakulam and College of Engineering, Chengannur functioning under the aegis of IHRD have been selected for financial assistance under TEQIP (World Bank Aided) for achieving academic excellence. Under this scheme Rs. 5.89 cores and Rs. 5.989 cores have been sanctioned for 5 years for Model Engineering College, Ernakulam and College of Engineering, Chengannur respectively. Model Engineering College has received Rs. 3.65 crore and out of which Rs 3.2 crore has already been spent. College of Engineering Chengannur has already received Rs. 3.46 crore towards financial assistance and nearly 3.15 crore has already been spent.

Expenditure on Education

11.64 Kerala spent Rs 3207.56 crore for education (excluding Art & Culture and Sports & Youth Services) during 2004-05 against Rs 3034.39 crore in 2003-04. During 2005-06 it is estimated to have spent Rs 3803.01 crore. This shows that, state's expenditure on education increased by 5.71% in 2004-05 over 2003-04 and the estimated expenditure in 2005-06 over 2004-05 shows 18.56 % increase. The figures for 2006-07 are not yet available.

Box 11.11

An Education Cess @ 2 per cent on direct and indirect central taxes has been imposed through Finance Act 2004, "so as to fulfill the commitment of the government to provide and finance universalised quality basic education".

11.65 Expenditure on education is incurred under both revenue and capital accounts. In 2004-05, primary education accounted for 41.50 per cent of the total expenditure on education; secondary education including vocational education accounted for 35.78 per cent, University and higher education 16.07 per cent and technical education 4.99 per cent. Further, out of the total expenditure, 95.01 per cent is earmarked for general education and the remaining 4.99 for technical education. Of the 2004-5 expenditure of Rs 3207.56 crore, Rs 3093.11 crore (96.43%) was non plan and Rs 114.45 crore (3.57%) was plan. The details of Revised Estimates for 2005-06 and Budget Estimates for 2006-07 are given in Table 11.11.

Table 11.11
Stage-wise Expenditure on Education: 2004-05 to 2006-07

Sl, No.	Stage	2004-05			2005-06 (RE)			2006-07(BE)		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
1	2	3	4	5	6	7	8	9	10	11
1	Primary Education	6.67	1324.61	1331.28	7.50	1525.00	1532.50	7.50	1520.25	1527.75
2	Secondary Education	5.81	1141.94	1147.75	35.10	1399.85	1434.95	40.72	1445.37	1486.09
5	University and Higher Education	25.93	489.43	515.36	29.71	540.34	570.05	30.51	531.77	562.28
6	Adult Education	0.19	0.00	0.19	0.50	0.00	0.50	0.50	0.00	0.50
7	Language Development	9.05	13.35	22.40	1.84	13.50	15.34	1.51	13.67	15.18
8	General	25.01	5.67	30.68	31.39	5.29	36.68	27.36	5.33	32.69
	Sub Total General Education	72.65	2975.00	3047.65	106.04	3483.97	3590.01	108.10	3516.38	3624.48
9	Technical Education	41.80	118.11	159.91	71.40	141.60	213.00	59.54	143.23	202.77
	Total Education	114.45	3093.11	3207.56	177.44	3625.57	3803.01	167.64	3659.61	3827.25

Source: Detailed Budget Estimates: 2006-07, Vol I, Government of Kerala.

Note: RE refers to Revised Estimate and BE refers to Budget Estimate.

Industrial Training Institutes

11.66 Industrial Training Department conducts craftsman training through Industrial Training Institutes (ITIs). Industrial Training Centres (ITCs) and Related Instruction Centres (RICs). There are 34 Government ITIs, (including one Basic Training Centre at Kollam) and 354 ITCs in the state. In addition, 41 ITCs under Scheduled Caste Development Department and one ITC under Scheduled Tribe Development Department are functioning in the state. District-wise distribution of ITIs in the state are given in the Table. 11.12

Table 11.12
District-wise ITI's in the State

Sl.No.	District	No. of ITIs
1	Thiruvananthapuram	5
2	Kollam	3+1*
3	Pathanamthitta	1
4	Alappuzha	2
5	Kottayam	2
6	Idukki	1
7	Ernakulam	2
8	Thrissur	3
9	Palakkad	4
10	Malappuram	2
11	Wayanad	1
12	Kozhikode	3
13	Kannur	2
14	Kasaragod	2
	Total	33+1

Note: *-Basic Training Centre (BTC)

11.67 Total seat strength, under Industrial Training Institutes is 9901 in 2005-06 and trainees enrolled during 2005-06 is 9025. Similarly no. of trainees admitted during 2005-06 in ITC is 14806. ITI wise details of seat strength and enrolment in Govt. ITI's is given in Appendix-11.51. The Industrial Training Institutes are conducting one year, two year and three year courses. There are 26 trades in one year course but no person was admitted in trades like FHT, Mech. Auto electrical and electronics and hair and skin care. District-wise details of trainees admitted on August 2005 in these training Institutes is given in the Appendix.11.52... Similarly there are 19 trades in two year course of which no person was admitted in watch and clock making and electro plating. Details of two year course is given in Appendix..11.54.

11.68 In the one year course, the students strength is highest in trades like welder (816) COPA (597) and plumber (439) and the total strength of the one year course comes to 4004. In the two year courses fitter and MMV are the attractive ones. Out of the total strength of 5106 students in the two year courses, 698 are in fitter trade and 648 are in Electronic Mechanic. Out of 19 trades in the 2 year courses, 8 trades viz. MRTV, Fitter, Wireman, Electronic Mechanic, Electrician, Turner, Machinist and MMV are in great demand as more than 300 students are studying in these courses. Another 7 trades viz. Draughtsman Mechanic, Surveyor, Painter General, Instrument Mechanic, Agriculture Machinery and Mechanical Industrial Electronics are on the decline. No person is admitted in watch and clock maker and electro plater.

Modern Trades in ITIs

11.69 One of the Tenth Plan objectives was to upgrade the existing obsolete and unpopular trades to new trades having employment potential. Up gradation of trades has been envisaged through retraining and updating the skill of teachers and modernisation of the existing equipment. During 2003, 13 units in 9 trades were introduced in 9 ITI's. Similarly during 2004, 20 units in 8 trades were introduced in 12 ITI's. During 2005, 26 units in 13 trades were introduced in 13 ITIs and during 2006, 4 units in 4 trades were introduced in 2 ITI's. New trades introduced during the last 3 years in Govt, ITI's as part of modernisation is given in Appendix 11.54.

Apprenticeship training

11.70 Apprenticeship training is also provided through 9 RICs (Related Instruction Centres) and 5 ITI's. It has been observed that, the approved seat strength for apprenticeship is not utilised fully. During 2005, only 6660 apprentices were trained against the seat strength of 7338. Similarly during 2006, only 6920 apprentices were trained against the seat strength of 7899. Of the total apprentice trainees admitted during 2005, 6127 were boys and 530 were girls. Institution wise details of apprentices who had undergone training are given in Appendix 11.55.

Annual Intake and Out turn of ITIs students

11.71 The drop out ratio in the ITIs is much higher in comparison with college level courses. In the case of SC students, it was much more alarming. Out of 5106 students who joined in the two year course during 2004, only 65% (3301) passed the course. Result analysis of regular trainees during the last three years is given in Table.11.13

Table 11.13
Result analysis of regular trainees during the last three years

Year of trade test	ITI/ITC	No. of Trainees appeared	No. of trainees passed
July 2004	ITI	7537	5635
	ITC	13147	8552
July 2005	ITI	7367	5553
	ITC	13640	7090
July 2006	ITI	8080	5850
	ITC	17458	9406

Source: Industrial Training Department

Sports and Youth Services

11.72 The State of Kerala has produced world class athletes, swimmers, marital arts-masters, cricketers, football players, volley ball players, rowers etc. Government has also been assisting and encouraging sports and youth empowerment services in the state. The total plan provision to the sports sector in the Xth plan period was Rs. 5850 lakhs and 77% of the amount was spent for carrying out sports and youth empowerment activities in the state.

Kerala State Sports Council

11.73 Sports Council is the apex agency for the promotion of sports and games in the state. The new Sports Act 2000, which came in to effect in September 2006, empowers the council to extend its activities to Corporation/Municipalities/Blocks and Panchayats in order to decentralise the sports activities.

11.74 The Council financially supports and administer the activities of the nine centralised sports hostels, thirty sports hostels in colleges and nineteen sports hostels in schools.

11.75 The council organised camps, conducted tournaments and upgraded sports facilities during the year. Coaching camp was conducted for the participants in the National/South zone championships. Assistance was provided to the fourteen District Sports Councils for the conduct of hostel selection trials, May Day sports and district level tournaments. The council also provided assistance to sports clubs during the year for procuring sports equipments. The council conducted the state championship tournament, 2005-06. Rural sports tournaments, at district and state level were also conducted during this year.

11.76 Sports festivals for women were organised from block to state level. The council has been conducting mini games and college games every year for selecting talented players. These games were organised in 2005, for giving advanced training to the selected talented players. The council organised Kerala Marathon which is a regular sports event, with the assistance of Indian Amateur Athletic Federation.

11.77 The Sports Council has also undertaken several projects for modernising the infrastructural facilities. 'High Altitude Training Centre', Munnar, Swimming Pool (Manikkal Panchayat, Thiruvananthapuram), Indoor Stadium (Kannur), Sports Complex (Attingal), Research and Development Centre for Sports Medicine (Murukumpuzha, TVM), Swimming Pool (Nanniyode Panchayat, Trivandrum), Synthetic Track (Kochi) and Volleyball Academy (Idukki) are such construction works which are in progress. The Panchayats are also financially assisting the similar projects.

Directorate of Sports and Youth Affairs

11.78 Although, the Directorate was established (1987) for co-ordinating sports development activities, later the activity became inclined towards creation of sports infrastructure and maintenance of sports assets.

11.79 The Department provided financial assistance to 24 institutions, during 2005-06 for carrying out the maintenance and development works of play fields and stadiums. The renovation works of the wooden floor of the Jimmy George Indoor Stadium was carried out through Kerala Water Authority.

11.80 The laying of Synthetic track, at Kerala University Stadium and Maharaja's College Stadium are also in progress. The Rajiv Gandhi Medicine Centre which is a treatment centre for sports persons, conducted seminars and workshops for sports persons, coaches and Physical Education teachers in subjects like prevention and management of injuries, doping etc.

11.81 The Directorate has been keen to popularise Kalaripayattu, the traditional martial art of Kerala. Martial Arts centres were started in 12 districts, in view of promoting this art all over Kerala. Taek-won-Do, a Korean martial art was introduced in 42 selected schools for providing

training to school children. The trained students, performed extremely well in the national meet, during the year.

Kerala State Youth Welfare Board

11.82 Kerala State Youth Welfare Board, established in 1985, with the objective of channelising the talents of youth in the right direction, organise programmes as well as provide assistance to the recognised youth clubs in Kerala, for conducting youth empowerment programmes like employment training, awareness against social evils and leadership training camps.

11.83 Training programmes were arranged during 2005-06, for addressing unemployment problem. Altogether, 83 youth clubs were given financial assistance for conducting training programmes in areas like mobile phone service, DTP, computerised financial accounting, servicing of electronic equipments, auto driving, fabric painting, beautician course etc.

11.84 Boat crew training was imparted to 90 youth in association with Kerala State Inland Navigation Corporation, Kochi. Training was imparted to 50 youths in TV anchoring, compering etc. The Board organised three job fairs, one each at Thiruvananthapuram, Ernakulam and Kozhikode to help the youth in exploiting job opportunities in the corporate /private sectors. 25 to 30 corporate houses and service providers participated in each of these fairs and 670 youth were selected for jobs. (Table)

Item	Kozhikode	Ernakulam	Trivandrum	Total
Candidates registered	2782	2840	4100	9722
Candidates short listed	843	576	948	2367
Candidates selected	176	231	263	670

Source: Kerala State Youth Welfare

11.85 The Board provided internet services in the District Youth Centres and launched an absolutely free job site, namely Kerala Youth Job (www.keralayouthjob.org)

11.86 Awareness programmes against social evils and health hazards like use of tobacco, alcohol, drugs, AIDS/HIV etc were arranged through youth clubs and District Youth Centres.

11.87 A State level camp and 14 District level youth leadership camps were organised to impart training to youth in leadership qualities, personality development, soft skills etc. As part of Board's efforts to inculcate spirit of adventurism among youths, aero sports carnivals were arranged at Kollam, Kozhikode and Kannur (Muzhuppilangadu Beach) in addition to the training programmes organised by National Adventure Academy, Devikulam.

11.88 Hot air balloon programme was arranged during Kerala Piravi Golden Jubilee Celebrations at Thiruvananthapuram.

Art and Culture

11.89 This is a broad sector comprising of academies, publishing houses of books for children and grown ups, museums and zoos, well known institutions of fine arts and folk arts and institutions like KCHR and departments like Archaeology and Archives. Financial assistance is provided through the Cultural Affairs Department. The plan assistance provided to this sector, during 2005-06 was Rs. 1605.1 lakhs and expenditure incurred up to March 2006, was Rs. 1479.23 lakhs (92%).

11.90 The following section is a brief summary of activities carried out by these institutions during 2005-06.

1. Kerala Sahitya Academy

11.91 Sahitya Academy, has celebrated the golden jubilee of its service to Malayalam literature. The Academy has published 50 books, 100-E-books, initiated land acquisition process for Appan Thampuran Smarakam and modernised the book stall.

11.92 The Academy organised many literary programmes during the year, the most important being 'Kavya Bharathi- Indian Kavyotsavam'. Seminar on 'Viswasavum Sahityavum', camp for short story writing, state camp for children's literature, book-fest etc were the other prominent activities during this period. Publication wing is the most important segment of the Kerala Sahitya Academy. The Academy has more than 300 books and 500 journals to its credit. The research oriented publications include literary surveys, histories, cultural studies, literary works and directories.

2. Sangeetha Nataka Academy

11.93 The Academy promotes dance, music, drama and other classical art forms by publishing periodicals and books, organising competitions, camps, festivals and conducting seminars. The Academy has been publishing 'Keli', a periodical for imparting knowledge on music, dance, drama, folk arts and magic. The Academy could publish three editions during this year. Books (monographs), in memory of demised artists like Njeralathu Ramapothuval, Andrews Master and Sebastian Kunju kunju Bhagavathar were published. A drama workshop was conducted at Alleppey and another one was held for children at Trichur. Music festivals, music and dance festivals and Swathi Sangeetha Festival were also organised. Ninety three artists, living in indigent circumstances were given financial assistance during the year.

3. Kerala Lalitha Kala Academy

11.94 Lalitha Kala Academy has been organising programmes for encouraging and developing the talents of painters and sculptors. During this year, 16 talented artists in ancient and modern artisan skills participated in the camp on wood crafts. The participation of women artists is a notable feature of the state level and district level painting camps. A three day camp exclusively for women artists were also conducted. Portrait camp for renowned artists of India was also held. 40 artists were assisted for exhibiting their paintings/drawings. State photography exhibitions were held. Fine arts awards, fellowships and scholarships were also awarded. Twenty five demonstrations on Fine Arts were held in the various galleries of the academy.

4. Kerala Folklore Academy

11.95 The Folklore Academy organise programmes for encouraging the traditional folk art/forms of Kerala. In 2005-06, the Academy conducted workshops on Theyyam mugathezhuthu, Margam Kali and Padayani jointly with Kerala State Youth Welfare Board.

11.96 The Academy also organised programmes like Adivasi Beach festival in which tribal artists from other states also participated. Birth centenary celebrations of great poet P.Kunhi Raman Nair, Oppana and Kolkali workshop in association with Youth Welfare Board, National Folklore Festival, and Bharathotsavam in association with Tanjavor South Zone, folk photo exhibition in association with Kannur Press Club, folklore seminar and seminar on tribal handicrafts in association with Youth Welfare Board etc were the other activities.

11.97 Construction of an open air theatre has been started, three statues of Theyyams has been showcased in the museums. The academy financially assisted several ailing artists. Publication on folklore literature in addition to the academy's magazine, is the other activity, during this period.

5. Chalachitra Academy

11.98 The Programmes of the academy is centred on film and television medias. International film festival, Film –TV-Awards and national film festivals are the most prominent programmes being carried out by the Academy. Film appreciation course is conducted for college students, and for persons working in the film field. Touring Talkies is a programme for showing world classic movies, to the rural-folk using mobile projectors and DVD cassettes. The Academy has conducted visual appreciation course, film appreciation course, touring talkies, seminars and workshops. The Academy organised the 10th International Film Festival, Brisbane Film Festival, French Film Festival, provided grant and financial assistance to film organisations and Film Federation Society of India. Macta-KSCA musical travelogue, State Film T.V awards and welfare programmes were the other activities of the Academy, during the year 2005-06.

6. State Institute of Children's Literature

11.99 The Institute organise activities like seminars, literary competitions, vacation camps, publish variety of books and children's magazine, for promoting the creative talents of children.

11.100 In 2005-06, the Institute published 50 subsidiary books for children. Thirteen thousand copies of 'Thaliru', children's monthly was published and 'Thaliru' vacation camp was also conducted. Balakairalivijnanakosam was conducted during the year. Literary competitions were held for school children. The Institute organised manuscript magazine competition during this year. Altogether one hundred and fifty manuscript magazines were received from U.P and High School students through Sahityavedis at district and state level and the winners were given prizes. In the scholarship examination conducted for High School and U.P students nearly five lakh students participated. A project report for Nehru Balagramam was prepared by the Institute.

7. Kerala Book Marketing Society

11.101 Kerala Book Marketing Society sells published materials of Government institutions, Kendra Sahitya Academy and National Book Trust through the eight branches located in various parts of Kerala. During this year, two more branches were opened one at Palakkad and the other at Manchery. Books were sold by organising Book-Fests in 12 different locations of Kerala.

Book Fests were also conducted in schools (Aleppey Dt) in association with the Department of Education.

The money collected through sales amounted to Rs. 39 lakh.

8. Kerala State Library Council

11.102 The Library Council assist 6640 member libraries by providing annual grant, building grant and librarian allowance and organises programmes for strengthening library net work all over Kerala.

11.103 The council awarded affiliation to all deserving libraries and increased the number of member libraries from 6541 to 6640 during 2005-06. District libraries were established at Vadamakara, Kasaragode and Kannur. "Students corner" programme was organised in nearly 1000 libraries affiliated to High schools, for creating awareness on the importance of using library services and for developing an interest in reading among students.

11.104 The council provided a grant of Rs.1500 to each of the 242 new Balavedi centres and 110 old centres. In 2005-06, the council also sanctioned Vanitha Vedis in 39 Libraries. The 20th batch of the library science certificate course was completed. A course on "circulating library books" for rural women folk was imparted to the women librarians in 70 centres. Two Hospital-Libraries were started in 2004-05: one at Kottakkal Ayurveda hospital and the other at Malabar Cancer Centre. In 2005-06, financial assistance of Rs. one lakh each was provided for starting library services in Kozhikode Medical College, Cancer unit and Trissur-mental hospital. Malabar cancer centre library was given one lakh rupees as development grant. Pulayanarkotta T.B Sanitorium, Trivandrum and Nooranadu, Koratti leprosy sanitoriums were the other hospitals which received this financial assistance.

11.105 The council also financially assisted 55 active career guidance centres and students corner activities in 978 libraries. Focusing on the development of rural libraries, the council has been able to deliver its services to common man.

9. Kerala Council for Historical Research (KCHR)

11.106 Kerala Council for Historical Research (KCHR) is an important Social Science Research Institution which has been identified as a nodal agency to undertake research and projects for the conservation of Kerala's cultural and historical heritage. The council intends to form a consortium of organisations related to Kerala's cultural pasts like Kerala Sahitya Academy, Kerala Lalithakala Academy, Department of Museums, Archaeology etc. In 2005-06, an international seminar on Kerala History was organised from 16th to 18th at Thiruvananthapuram. More than 400 delegates attended the seminar and 45 research papers were presented. A two-day 'International workshop on "Medieval Kerala Mathematics: Historical relevance and the possibility of its transmission to Europe"' was organised in association with the Exeter university, UK. The council also organised a two-day workshop on village histories in association with KILA for the officials of villages and Panchayats. The short term Diploma course which was conducted in Indian Epigraphy benefited ten students. The council organised two History colloquiums and two memorial Lectures. The pre-editing work of the reprint of "Londonum Parisum" by Barrister G.P. Pillai was completed. Encyclopedia of Malayalam oral traditions and proverbs with explanatory notes and illustrations is to be published shortly. KCHR has also taken steps for collecting the myths and legends of Kerala and publishing them with commentaries.

10. The Centre for Heritage studies (CHS, Thrrippunithura)

- (1) The CHS, Thripunithura is an autonomous research institute for bringing out research publications and offering courses in archaeology, archival studies, museology and conservation.
- (2) It is also a Training centre for teachers and demonstrators in theoretical and practical subjects like primitive, ancient, medieval and modern art.

11.107 The Centre conducted a workshop under the guidelines of the National Museum of India for assessing the performance of the museums including private museums of Kerala. A village survey was conducted in Chengannoor and Paravoor Taluks based on the findings at Pattanam. The study and documentation of Ethnic Jewellery in Kerala is a project which is nearing completion. The documentation of the “Mural tradition in Christian Churches” has also been completed.

11.108 As a tourist centre, the Hill Palace campus has been organising programmes for tourists. The total income during the year was about 28 lakhs.

11. MARGI

11.109 MARGI which is a Kaliyogam (training-cum- performing group) in theatre arts like Kathakali and Koodiyattam started functioning since 1994. Margi has some special features. The permanent group of artists who are graded into various categories from “Guru” to “Kuttitharam” (other levels) can continue, even after completing the course. The continuous training and performance is a boon for artists in achieving perfection..

11.110 ‘Margi’ staged many classics during this year like Kirmeera vadham, Subhadraharanam, Nalacharitham (IVth day), Santhana Gopalam, Krishnaleela and Nizhalkkuthu. Several lecture demonstrations were arranged in schools, University Centres, Temples and Koothambalams. Margi was one of the venues for Kerala Piravi celebrations. The programmes for the weeklong celebrations were Chakiarkoothu and Kathakali. Koodiyattom shows were staged with the support of Kendra Sangeeta Nataka Academy. The programmes were staged in temples, colleges, university centres and koothambalams. Altogether seventy five kathakali programmes and forty six Koodiyattom programmes were staged this year. Programmes were also staged outside the state during festivals.

11.111 Seminars, lecture demonstrations and other special programmes were also organized under the Ministry of Culture Project, GOI and UNESCO Japan funds in Trust Project.

12. Multi purpose Cultural Complex Society, (Vailoppilly Samskrithi Bhavan), Trivandrum.

11.112 The cultural complex society conducts dance festivals, seminars, lecture demonstrations and various other cultural programmes. However, the cultural programmes during this year, mostly included musical concerts.

11.113 Kavya Sallapam, a seminar on literary works was conducted for the winners (who held Ist position) in the literary competition of the school Yuvajanotsavam. Musical concerts in memory of renowned singers, Sneha Sangeethadhara was held for encouraging the students talented in singing to form a music troupe of 100 students. Two days "Aganda Sangeetha Yatjam" was held for promoting religious integrity & brotherhood and cultural programmes

including recitation - competition for school children was held. Independence day celebration – 2005, Flag hoisting ceremony and group songs by college students were the other programmes held.

13. Vasthuvidya Gurukulam

11.114 Ever since the beginning in a Nalukeettu on the banks of the river Pampa, near the Parthasarathy Temple, Gurukulam has been actively involved in the preservation of traditional architecture, mural painting and other related subjects.

11.115 Vasthuvidya Gurukulam is a recognised university for conducting vasthuvidhya course. The student strength is 300, consisting mostly of engineers and other technically qualified persons. The Gurukulam has a consultancy wing too. It is also the implementing agency for the GOI- UNDP Endogenous Tourism project. The Gurukulam has many achievements to its credit during this period. Gurukulam has completed the documentation of all important architectural buildings in Kerala. Documentation of traditional architectural buildings of Kerala for tourism department is also to be carried out by Gurukulam for which the listing of three districts has been completed.

11.116 Gurukulam has designed the sketch and plan for the proposed Mannam Ayurveda Medical college at Pandalam. ‘The Koothambalam project’ at Thrissur, Ramanilayam is yet another important work during this period.

14. Guru Gopinath Natana Gramam, Vattiyoorkavu

11.117 Natana gramam conducts regular as well as vacation classes in dance and music. There are 160 students in the regular class and 130 students attended the vacation classes. The items are Kerala Natanam, (Combination of Mohiniyattam and Kathakali), Vocal music, Ottamthullal and courses in supporting instruments like Veena, Violin and Mrithangam.

11.118 The Natana Gramam organised Kala sandhya for children and arranged interaction programmes with artists. Natana Gramam also organised programmes like Kerala Natanam, Ottamthullal and other items as part of Onam Celebrations.

11.119 Natyolsav in association with south zone cultural centres, Tanjavur, a regular programme of the Natana Gramam was also organised during this year. Demonstration classes in Kerala’s dance forms were also held. The foundation stone has been laid for constructing a ‘Dance Museum’.

15. Jawahar Balabhavan

11.120 Jawahar Balabhavan, Thiruvananthapuram has been recognised as the second best among the Balabhavans in India. This Institute promotes the talents of children in all creative arts ranging from classical music to aero modelling and general knowledge. The assistance was used for carrying out painting of nursery classes, the front portion of the buildings and maintenance works on musical instruments.

16. Bharat Bhavan

11.121 Bharat Bhavan has been organising programmes for the cultural integrity of people from other states who are residing in Kerala. Programmes were conducted for acquainting other states on Kerala's cultural heritage, art and history. Bharat Bhavan celebrated Onam festival by organising cultural programmes in association with Vailoppilli Samskrithi Bhavan. Pongal Festival was celebrated along with the affiliated association, Thiruvananthapuram and Tamil Troupe at Thrissur. Film- Script- Camp was organized in collaboration with Cultural platform, Thrissur and Telungu New Year Day was celebrated in association with Telungu Sanskrit Troupe.

17. Kumaranasan National Institute of Culture

11.122 The Institute has been organising cultural programmes and popularising the philosophical works and vision of the great poet Kumaranasan. The Institute carried out the protection works of Asan museum and Asan's residence. Bronze statue of the great poet was built by sculptor Kanai Kunhiraman during this period. The institute could organise as many as 50 programmes like discussions and debates on contemporary literature and poems. Cultural fest was also organised. The publications include Vivekodayam Research Journal, Asan Krithikal and philosophical books.

18. Museums and Zoos

11.123 Museums and Zoos, Thiruvananthapuram, State Museum and Zoo, Thrissur, Art Gallery and Krishnamenon Museum, Kozhikode are tourist spots except zoological park which is also a breeding and research centre.

11.124 Modernisation activities were carried out during 2005-06. A 'Green House' was constructed. Items depicting tribal life was set up in Natural History Museum, Trivandrum. An open enclosure for panther and an ostrich enclosure were also constructed. An aviary for pheasants, a new enclosure and animal house for zebra was also constructed. Art Gallery and Krishna Menon Museum Kozhikode were renovated.

11.125 The valuable paintings, in Thiruvananthapuram museum could not be well displayed because of the space inadequacy.

11.126 Zoo management has evolved into new directions and have very little in common with museum management.

19. Archaeology

11.127 Archaeology department carry out heritage conservation activities. Besides conducting periodical explorations and excavations for archaeological objects, the department protects a wide variety of monuments like pre-historic caves, megalithic sites, cave temples, structural temples, palaces, churches, mosques and structures like forts, vazhiambalams, hanging bridges etc. Mural paintings in temples and churches, oil paintings in palaces etc are also scientifically preserved. There are altogether 132 protected monuments and 9 archaeological museums in Kerala.

11.128 The protection works this year included, Trissur Sakthan Thampuran palace, Kollamkode palace, Thrippunithura hill pace, Madavoorppara cave temple, Trivandrum, temple at Pazhoor, the pond and the premises of the Padmanabhapuram palace, Thirumaradi Mahadevar temple and Thrissur Harikanyaka temple. The Arakkal building at Kannur, the heritage garden and park in the Sakthan Thampuran palace at Trissur, protection works in Jewish church, Chennamangalam,

Guest house, Varkala, Muria Mangalam temple, Ernakulam district and protection works of Chandragiri and Powell were also carried out in collaboration with Department of Tourism.

20. Archives

11.129 Record management, conservation of records and reprography are the major functions of the Directorate. The acquired records from departments and other sources are scrutinized and arranged chronologically. During this year, check lists, subject lists, descriptive lists and indexes were prepared for quick reference.

11.130 Scientific methods were adopted for the preservation of paper and palm leaf records. The reprographic section was modernized and efforts are being made to procure microfilm readers for viewing microfilm records. The department also took the initiative for transferring the microfilm rolls from Tamil Nadu State Archives. The department conducted Archives Week Celebrations at Calicut. Records on freedom movement were exhibited at Old Assembly Hall Government Secretariat in connection with Republic Day Celebrations-2006. National level exhibition was organized at 4 places in the state hosted in memory of the 75th Anniversary of Dandiyatra jointly with National Archives of India. The department conducted 3 day training programme in record management and conservation for 3 batches of employees of various Government departments through IMG.

11.131 The project of conservation / translation / and publication of palm leaf manuscripts and preparation of finding aids for the easy retrieval of required information of the records is in progress. The Department also hosted website ([w.w.w.keralastate archives.org](http://www.keralastatearchives.org)) and upgraded research room and library facilities. The department conducted a survey for the manuscripts of Kerala to locate and identify the manuscripts from private and institutional sources in collaboration with National Mission for Manuscripts. The Books published during this year were:

- a) History of Freedom Movement in Kerala (Vol – III).
- b) Selected Speeches of Freedom Fighters.
- c) Pracheena Malayala Lipi Mathrukakal and
- d) Thiruvithamkoor Nattu Suchika.

11.132 A Project Report on setting up a museum in Honour of Freedom Fighters of Kerala has been submitted to Government for approval.

21. Kerala State Film Development Corporation, Thiruvananthapuram

11.133 Established in 1975, KSFDC carry out cinematograph trade and industry and allied activities. The authorised capital of the corporation is 22 crores whereas the paid up share capital is Rs. 19.62 crores. The corporation own ten theatres and one studio where facilities are available for production of feature films and documentaries. The corporation provide facilities for film production and for exhibiting films in various theatres. However producers are unwilling to produce films in the Chithranjali studio because the twenty five year old equipments of the KSFDC have become obsolete.

11.134 KSFDC has utilised the outlay in 2005-06, for modernising the studio and theatres. Modernisation of laboratory, recording theatre, out door unit, theatres and civil works were the activities carried out.

11.135 The Corporation is in financial crisis, owing to continuous loss since inception and most of the facilities in the studio are outdated. Technology of film production has also changed. Hence new strategies may have to be evolved for reviving the studio.

CHAPTER 12

MEDICAL AND PUBLIC HEALTH

Health status is generally measured in terms of mortality indicators like Death rate, Infant mortality rate and Expectation of life at birth among others. Mortality indicators show that health status of Kerala is far advanced and higher than the all India average and is even comparable with developed countries. This outstanding progress of health status is achieved through widespread growth of institutions in public, private, co-operative sectors combined with people's health awareness. The basic health indicators of Kerala and India are given in Table-12.1& 12.1 A. Though Kerala has attained better health care indicators, the people are now facing the problem of high morbidity both from communicable and non- communicable diseases.

Table12.1
Health Indices of the State as per NFHS Survey

Indices	NFHS-1	NFHS-2	NFHS-3
IMR (Per 1000 live birth)	24	16	15 (57)
Total Fertility Rate	2.0	2.0	1.9 (2.7)
Trends in Vaccination coverage (%)	54	80	75 (44)
Trends in Institutional Deliveries (%)	89	93	100 (41)
Trends in Any Antenatal Care (%)	98	99	100 (77)
Trends in Contraceptive use(%)	63	64	69 (56)

Source: SRS Bulletin 2005, Figures in the brackets indicate All India Average

Table 12.1 A
Birth Rate, Death Rate, MMR, Sex Ratio & Life at Birth Kerala Vs All India
(^{'000 Population})

	Birth Rate	Death Rate	MMR	Sex Ratio 0-6 Years	Life at Birth		
					Male	Female	Total
State	15.0	6.4	1.10	960	70.90	76.00	73.60
India	23.8	7.6	3.01	927	61.80	63.50	62.70

Source: SRS Bulletin 2005

Kerala faces three major problems in the health sector in the beginning of the 21st century.

1. Difficult access to health care and impoverishment of a sizeable segment of population owing to high out of pocket health expenditure.
2. Rapidly increasing prevalence of diseases associated with lifestyle and ageing.
3. Prevalence of environment related diseases owing to problems of community hygiene and pollution.

Higher prevalence of the mental health problems including the higher suicide rates, health problems and death due to road traffic accidents and other traumas are other dimensions of the health problems in Kerala.

Health care Infrastructure

Government Sector

12.2 Kerala's health care system consists of allopathy, ayurveda and homoeopathy. Three systems of medicine together have 2711 institutions in the government sector with 50515 beds. The present status is given in Table 12.2. Out of the total institutions, 47% are under Allopathy, 32% under Ayurveda and 21% in Homoeopathy. Out of the total beds, 90% are under allopathy, 8% under Ayurveda and 2% under Homoeopathy.

Table 12.2
Medical institutions, beds and patients treated under three systems of medicine in Govt. Sector during 2004 and 2005

Sl. No	Systems of medicine	Institutions		Beds		Patients treated-2004 (Lakh)		Patients treated-2005 (Lakh)	
		2004	2005	2004	2005	IP	OP	IP	OP
1	Allopathy*	1278	1279	43619	45405	17.42	431.16	23.0	461.77
2	Ayurveda	857	871	3920	3940	0.52	253.29	0.57	209.9
3	Homoeopathy	561	561	1295	1170	0.38	257.45	0.21	127.6
	Total	2696	2711	48834	50515	18.32	941.90	23.78	799.27

* Excluding sub centres

12.3 The three systems together treated around 23.78 lakh inpatients and 799.27 lakh outpatients during 2005 as against 18.32 lakh inpatients and 941.90 lakh outpatients during 2004. In-patients increased by 29.8% and outpatients treated decreased by 15.14% in the said period.

Co-operative Sector

12.4 There are 97 co-operative hospitals/ dispensaries with 5447 beds and 811 doctors and 2172 nurses and para medical staff in Kerala. However, among these some hospitals are under liquidation and some not functioning. District wise details are given in Appendix 12.1

Private Sector

12.5 Details of private health care facilities in Kerala are available only for 1995. A study conducted by Department of Economics and Statistics shows that there were 4288 allopathic medical institutions with 67517 beds, 4922 ayurveda institutions with 2595 beds and 3118 homoeopathic institutions with 394 beds in the year 1995.

Insurance Medical Services

12.6 There are 12 ESI hospitals with 1153 beds and 137 dispensaries in the State. There are 232 doctors working in hospitals and 315 doctors in dispensaries. The number of other paramedical staff including nurses working both in hospitals and dispensaries come to 1594. District-wise details of ESI hospitals, dispensaries, medical and para medical personnel are given in Appendix.12.2

Beds per lakh population in Kerala

12.7 The three systems together have 50515 beds in the Govt. sector. The beds per lakh population are 159 in government sector. District wise details of medical institutions and beds per lakh population are given in Appendix 12.3. Over and above the beds in government sector, there are 77619 beds in ESI, Co-operative and private sector. The combined bed population ratio is 403 beds per lakh population. The relevant details are given in Table 12.3.

Table 12.3
Total Beds Under Different Sectors

Category	No. of beds	Beds per lakh population*
Government sector (including three systems)	50515	159
ESI Hospitals	1153	4
Co-operative sector	5447	17
Autonomous sector	513	2
Private sector	70506	221
Total	128134	403

- Population based on 2001 Census

Directorate of Health Services

12.8 There are 1303 institutions and 41077 beds under the Directorate of Health services. Institutions include 136 hospitals, 929 primary health centres, 114 community health centres, 59 dispensaries, 18 TB clinics/ centres, 29 Grand in aid institutions and 18 leprosy control clinics/ units. Besides there are 5094 sub centres. Out of the total beds, 23665 (57.6%) beds are in hospitals, 7675 (18.7%) are in primary health centres and 4730 (11.5%) are in community health centres and 366 (0.9%) are in dispensaries and TB clinics. District wise details of institutions and beds are given in Appendix.12.4

Patients treated

12.9 During 2005-06, 455.39 lakh persons (repeated cases) availed medical treatment in various institutions under Directorate of Health Services, of which, 19.2 lakh persons were treated as IP cases and 436.19 lakh as OP cases. Also 93813 major operations were conducted during the same period. District wise details of IP, OP cases and major/minor operations conducted are given in Appendix 12.5

Immunization coverage

12.10 Kerala has almost attained universalisation of immunization. During 2005-06, the coverage of BCG was 102%. Similarly the coverage of DPT, Polio, Measles and TT for pregnant women was 96.7%, 100.1%, 97.6% and 105.2% respectively. Target and achievements of immunization programmes in Kerala during 2004-05 and 2005-06 are given in Appendix-12.6.

The comparative coverage of immunization programmes in Kerala and India during 2005-06 is given in Table 12.4.

Table 12.4
Coverage of Immunization Programme-Kerala and India (2005-06)

Sl. No.	Programme	Coverage (%)	
		Kerala	India
1	DPT	96.7	91.2
2	Polio	100.1	92.5
3	BCG	102	100.2
4	Measles	97.6	85.6
5	TT for Pregnant Women	105.2	77.9
6	TT for 5 years	94.1	77.7
7	TT for 10 years	99.9	65.5
8	TT for 16 years	97.7	59.9

Source: Directorate of Health Services

Principal diseases and death

12.11 During 2004, 333.9 lakh persons had attack from various diseases, which increased to 362.04 lakh in 2005. An analysis would show that attack of Chickenpox, Pneumonia, Enteric Fever, Viral Hepatitis-B, Meningitis, Pulmonary Tuberculosis, etc. are coming down while that of Diarrhoeal Diseases, Whooping Cough, Measles, Acute Respiratory Infection, Dengue Fever, Leptospirosis etc. are on the rise. Increasing pollution, increase in use of fossil fuel, tobacco use, vehicle transport, increasing sedentary habits and ageing may be the reasons of increase in respiratory infectious diseases. Death reported during 2005 was 8120 as against 8439 in 2004, which showed a slight decline of about 0.04%. The relevant details are given in Appendices-12.7, 12.8, 12.9 and 12.23

Prevalence rate of major public health diseases

12.12 A major achievement in health front is the eradication/ reduction of major public health diseases like smallpox, filaria, malaria etc. Prevalence rate of leprosy has increasing but that of filaria is decreasing. The prevalence rate of other diseases was almost steady in 2005 as compared to 2004. Table.12.5 shows the prevalence rate of major public health diseases in Kerala during 2004 and 2005.

Table 12.5
Prevalence Rate of Public Health Diseases

Sl. No.	Disease	Prevalence Rate per 1000 population	
		2004	2005
1	Leprosy	0.05	0.29
2	Filaria	0.05	0.03
3	Malaria	0.09	0.08
4	T.B	0.64	0.64
5	Acute Diarrhoeal Diseases	16.55	16.55
6	Pneumonia	0.68	0.68
7	Enteric Fever	0.29	0.29
8	Measles	0.09	0.09
9	Respiratory Infection	262.61	262.61
10	Chicken pox	0.15	0.15

Source: Directorate of Health Services

Chronic Diseases

12.13 Among chronic diseases, Cardio vascular disease, Cancer, Hypertension and Diabetes Mellitus stand at the top. Sedentary lifestyle, lack of physical activity and obesity increases the risk of chronic diseases.

Cancer

12.14 Cancers in all forms are causing about 12 percent of deaths throughout the world. In the developed countries cancer is the second leading cause of death accounting for 21% (2.5 million) of all mortality. In the developing countries cancer ranks third as a cause of death and accounts for 9.5% (3.8 million) of all deaths. Tobacco, alcohol, infections and hormones contribute towards occurrence of common cancers all over the world.

12.15 Cancer has become one of the ten leading causes of death in India. It is estimated that there are nearly 1.5 - 2 million-cancer cases at any given point of time. Over 7 lakh new cases of cancer and 3 lakh deaths occur annually due to cancer. Nearly 15 lakh patients require facilities for diagnosis, treatment and follow up at a given time. Data from population-based registries under National Cancer Registry Programme indicate that the leading sites of cancer are oral cavity, lungs, oesophagus and stomach among men and cervix, breast and oral cavity among women. Cancers, namely those of oral cavity and lungs in males and cervix and breast in females account for over 50% of all cancer deaths in India. WHO has estimated that 91 percent of oral cancers in South - East Asia are directly attributable to the use of tobacco and this is the leading cause of oral cavity and lung cancer in India. An estimate shows that the total cancer burden in India for all sites will increase from 7 lakh new cases per year to 14 lakh by 2026.

12.16 Cancer usually occurs in the later years of life and with increase in life expectancy to more than 60 years, the numbers would grow. Data collected from RCC shows that more patients are treated in the age group of 45-74 years. Details of cancer patients treated age group wise are shown in Table 12.6

Table 12.6
Cancer Patients Treated by Age Group (Up to September 2006)

Age group	0-14	15-29	30-44	45-59	60-74	75+	Total
Patients treated	291	911	2754	5178	3741	858	13733

Source: Regional Cancer Centre, Thiruvananthapuram

12.17 Cancer in Lungs, Oral cavity and Leukemia are the leading sites among males. Among females Breast, Thyroid and Cervix are the leading sites of cancer. Details of 10 leading sites of cancer and patients treated by sex are given in Table 12.7

Table 12.7
Leading sites of cancer and patients treated by sex (Up to September 2006)
(Nos.)

Sl.No	Male		Female	
	Site	Patients treated	Site	Patients treated
1	Lung	334	Breast	1128
2	Tongue	203	Thyroid	374
3	Leukemia	188	Cervix	349
4	Buccal Mucosa, Mouth	165	Ovary	164
5	Oesophagus	144	Leukemia	120
6	Larynx	137	Buccal Mucosa, Mouth	96
7	Stomach	127	Endometrium	95
8	Lymphoma	126	Tongue	94
9	Thyroid	116	Lung	62
10	Brain	91	Brain	61

Source: Regional Cancer Centre, Thiruvananthapuram

HIV/AIDS

12.18 For the world as a whole now, HIV/AIDS is the leading cause of death among adults aged 15-59 years. It has already killed more than 20 million people and an estimated 34-46 million people are living with this disease. Today one in every 12 African adult has HIV/AIDS. The American and the Caribbean have the second highest prevalence of HIV in the world after the Sub Saharan Africa. In Asia, an estimated 7.4 million people are living with HIV, around half a million are believed to have died of AIDS in 2003 and about 1.1 million are suspected to have become newly infected with HIV.

12.19 HIV infection and AIDS cases were detected in India in 1986. With more than 5.1 million estimated HIV positives in the country, India has the largest population of HIV infected people outside South Africa. Six states in India viz. Manipur, Nagaland, Maharashtra, Andhra Pradesh, Karnataka and Tamilnadu are identified as high incidence states because the prevalence of HIV/AIDS in the general population is more than 1%. Over 32% of all reported AIDS cases in India occur among young people in the age group of 15-29 years. AIDS cases reported in India since 31st July 2005 is given below.

Table 12.8
AIDS Cases Reported in India since 31st July 2005

Age group	Male	Female	Total
0-14	2860	1994	4854
15-29	21782	14405	36187
30-49	48342	14508	62850
> 50	6057	1660	7717
Total	79041	32567	111608

12.20 First HIV positive case was identified in Kerala in 1987. Till 2004, number of AIDS cases reported from different parts of Kerala is 2003, out of it 619 persons died. AIDS cases reported through two Care Centres of Kerala State AIDS Control Society during 2005 is 218, out of which 67 persons died. Kerala has an estimated HIV population between 70,000 and 1,00,000. Roughly 500 children are born with HIV every year. It is likely that there are at least 3500 HIV positive children below 10 years in the State. During 2006, 1607 AIDS cases were reported and 135 were died in Kerala. Details are given in Table-12.9

Table 12.9
AIDS cases reported during 2006

Category	AIDS cases reported	Death
Male	1001	--
Female	501	--
Children	105	--
Total	1607	135

Source: Kerala State AIDS Control Society

Mental Health

12.21 It is estimated that about 1% of the population at any given time suffers from mental illness. Similarly another 2 to 3% may suffer from mental disorders which may not be severe. The tendency of committing suicide is a major problem in Kerala, which is reported at 28.8 per one lakh people. According to Crimes Record Bureau the suicide rate in Kerala is almost three times the national average of 11.6 per one lakh. Kerala accounts for 10.1% of all suicides in India while the state population is only 3% of India.

12.22 Mental Health Care in Kerala is confined to three mental hospitals at Thiruvananthapuram, Thrissur and Kozhikode. A few beds are also attached to Medical Colleges and a few district hospitals. There are 1714 beds in mental hospitals. But mental health personnel to deal with mental patients are relatively very few in Kerala. For instance, in Kerala there are only 85 psychiatrists in government service and 157 in private service. Number of psychiatrists is only 0.77 per one-lakh mental patients. Also there are no nurses specialized in psychiatry in Kerala. Details of facilities in Mental Health Centres are given below.

Table 12.10
Mental Health Services in Kerala

Sl.No.	Facilities	(Nos.)
1	Mental Hospital Beds	
	(i) 3 Mental Hospitals	1342
	(ii) Medical Colleges	216
	(iii) General Hospital	156
	Total	1714
2	Man Power	
	(i) Private Service Psychiatrists	157
	(ii) Government Service Psychiatrists	85
	Total	242
3	Clinical Psychologists	7
4	Psychiatric Social Worker	11

Blood Units

12.23 There are 138 blood banks in Kerala registered under Central Drugs and Cosmetics Act. Out of these, 33 are in government/autonomous sector and 105 in private sector. During 2005, 3.1 lakh units of blood were collected and out of it 1.5 lakh units (48.4%) were from govt. / autonomous institutions and 1.6 lakh units (51.6%) from private institutions. The five Medical Colleges together collected 77707 units of blood, which formed 25.8% of the total blood units collected. During 2006 (till October) 2.74 lakh blood units were collected.

12.24 According to WHO norms, 70% of the beds are active and each such bed requires 7 units of blood in a year. Therefore the demand for blood in the state is estimated at 2.13 lakh units in the Government sector. Market value of one unit of blood is around Rs. 700. Details of blood units collected during the last 3 years are given in Appendix.12.10.

Medical Education and Training

12.25 Three systems of medicine have separate education and training. medical education, training and research under allopathy are implemented through government, Co-operative and self- financing sector. There are 5 medical colleges, 3 dental colleges, 3 nursing colleges and two pharmacy colleges in the government sector with an annual intake of 800 for MBBS, 120 for BDS, 180 for BSc. nursing and 80 seats for B.Pharm. Also there are two medical colleges in the Co-operative sector with an annual intake of 100 each for MBBS. In the self- financing sector, six medical colleges, six dental colleges and eight ayurveda colleges, 17 pharmacy colleges and 42 nursing colleges have been started during the last three years. Details of medical colleges and annual intake of students in government and self-financing colleges are given in Table 12.11.

Table 12.11
Details of Medical Colleges and intake of students for Degree course

Medical Colleges	Courses	Government		Cooperative/aided		Self-financing		Total	
		Number	Intake	Number	Intake	Number	Intake	Number	Intake
1	2	3	4	5	6	7	8	9	10
1. Allopathy	MBBS	5	800	2	200	6	600	13	1600
2. Dental	BDS	3	120	--	--	6	340	9	460
3. Ayurveda	BAMS	3	160	2	90	8	400	13	650
4. Homoeopathy	BHMS	2	100	3	150	--	--	5	250
Total		13	1180	7	440	20	1340	40	2960
5. Nursing Colleges	BSc	3	180	--	--	42	2100	45	2280
6. Pharmacy Colleges	B Pharm	2	80	1	60	17	980	20	1120
Total		5	260	1	60	59	3080	65	3400

12.26 In addition to it 198 seats for PG Degree and 37 seats for super specialty courses are available in these government medical institutions. More details of medical/paramedical courses conducted in government medical colleges are given in Appendix.12.11

12.27 Five government medical college hospitals under allopathy together have 8969 beds, which constitute 17.8% of the total beds in government sector. Inpatients treated were 3.8 lakh during 2006, which shows a decrease of 28.9% over 2005. Outpatients treated increased significantly. But major operations conducted during 2006 decreased by 31.4% over 2005. Details of beds, patients treated, major operations conducted, delivery cases attended etc. are given in the Table 12.12.

Table 12.12
Beds, Patients treated and operations conducted in Government Medical College Hospitals during 2006 (till November)

(No.)

Sl. No.	Medical college Hospitals	Beds (Nos.)	Inpatients	Outpatients	Major Operations conducted	Delivery cases attended
1	Thiruvananthapuram	3421	96700	798000	45500	15000
2	Alappuzha	883	51596	462353	3783	5415
3	Kottayam	1286	56277	508117	7358	6076
4	Thrissur	999	60118	351780	1825	3650
5	Kozhikode	2380	114931	437656	13366	18268
Total		8969	379622	2557906	71832	48409

Source: Directorate of Medical Education

Health Personnel

12.28 There are 24991 medical and para medical personnel attached to Directorate of Health Services-- 3726 are medical officers, 81 dentists, 8646 senior/junior nurses and 12538 para medical staff. While analyzing doctor- population ratio in Kerala, for every 8545 population there is one medical officer under Directorate of Health Services. District wise analysis shows that there exists considerable inter district variation. Doctor- population ratio varies from 1:6252 in Pathanamthitta district to 1:11486 in Malappuram district. Relevant details are shown in Appendix.12.12.

12.29 In the government medical colleges, there are 39 categories of specialty departments and in each department there are four categories of posts viz. Tutor/ Lecturer, Assistant Professor, Associate Professor and Professor. The total number of clinical/ non-clinical doctors in the five government medical colleges and attached institutions comes to 2183 doctors. Details are given in Appendix-12.13. The doctor- population ratio, where doctors working in government system (allopathy) only were counted stood at 1:5388. In addition there are 35246 registered medical practitioners in allopathy system, 7629 under homoeopathy and 8716 in ayurveda system. Data relating to the registered medical and para medical practitioners are shown in Appendices-12.14 and 12.15

Nursing Education

12.30 Nursing education is imparted by DHS run institutions, approved private institutions, medical colleges and nursing colleges in the self-financing sector. There are 15 government nursing schools under Directorate of Health Services which conduct general nursing cum midwives course (3 year). Out of the 15 schools, 4 schools conduct Junior Public Health Nurse course (18 months). Also there are three nursing colleges attached to medical colleges at Thiruvananthapuram, Kottayam, Kozhikode which conduct general nursing, BSc. Nursing and

MSc. Nursing courses with a total annual intake of 80,180 and 16 students respectively. Besides, there are 42 nursing colleges under self- financing sector with an annual intake of 50 students each. The available details are given in Appendix 12.16

Ayurveda

12.31 There are 115 Ayurveda Hospitals with 2744 beds and 747 Ayurveda dispensaries. Out of the dispensaries, 4 are visha chikilsa kendras, six siddha and one unani. Hospitals include 14 district hospitals, one nature cure hospital, one marma hospital, one siddha hospital, one panchakarma hospital, one ayurveda mental hospital and 96 government hospitals. Details are given in Table-12.13. During 2005, 207.7 lakh patients were treated in ayurveda institutions and out of them 207.2 lakh were outpatients and 0.5 lakh inpatients. District-wise details of ayurveda hospitals, beds, dispensaries and patients treated are given in Appendix.12.17

Table 12.13
Distribution of beds in Ayurveda hospitals

Sl. No.	Category	Number	Beds
1	District hospitals	14	950
2	Govt.hospitals	96	1664
3	Nature cure hospital	1	30
4	Siddha hospital	1	20
5	Panchakarma hospital	1	20
6	Marma hospital	1	10
7	Mental hospital	1	50
Total		115	2744

(No.)

Source: Directorate of Ayurveda

Ayurveda Medical Education

12.32 There are now 14 Ayurveda colleges in Kerala, of which 3 are in Government sector, 2 are in private sector and 9 are in self-financing sector. These colleges have an annual intake of 680 students for BAMS/BSMS courses and 82 students for postgraduate courses. The details of annual intake capacity in Ayurveda Colleges are given in Appendix-12.18. Medical College hospitals attached to the Medical Colleges under government and private aided have bed strength of 1100. During 2006, these hospitals together treated 4.2 lakh patients, and out of them 4.1 lakh were out patients. The details of beds and patients treated are given in Table 12.14

Table 12.14
Beds and patients treated in Ayurveda Colleges (2006)

Sl.No.	College Hospital	Beds	Out patients	In patients	Total
1	2	3	4	5	6
A.	Government				
1	Ayurveda College Hospital, Thiruvananthapuram.	558	192410	7981	200391
2	Ayurveda College Hospital, Thrrippunithura.	139	37553	1138	38691
3	Ayurveda College Hospital, Kannur	100	38768	1113	39881
Sub Total		797	268731	10232	278963

(Nos)

B	Private Aided				
1	Vaidyaratnam Ayurveda College, Ollur	153	36458	1354	37812
2	Vaidyaratnam P.S. Varrier Ayurveda College Hospital, Kottakkal.	150	100740	1658	102398
Sub Total		303	137198	3012	140210
Total		1100	405929	13244	419173

Source: Directorate of Ayurveda Medical Education

Homoeopathy

12.33 There are 31 hospitals and 525 dispensaries under Directorate of Homoeopathy. Hospitals include 14 district and 17 other hospitals. Total bed strength of these hospitals is 970. Out of the 525 dispensaries, 495 are in rural and 30 are in urban areas. During 2005, 125.9 lakh patients sought homoeopathy treatment and out of them, 0.21 lakh were inpatients and 125.7 lakh were out patients. District-wise details of institutions, beds and patients treated in homoeopathy hospitals during 2005 are given in Appendix.12.19.

Homoeo Education

12.34 There are 5 Homoeopathic Medical Colleges in the State, of which 2 are under government sector and 3 are in private aided sector. Total annual intake for BHMS course is 250 and for PG course is 60. Besides, the two government colleges conduct one year nurse cum pharmacist course with an annual intake of 60 students each. Details of courses and annual intake of students are given in Appendix-12.20. The hospitals attached to these colleges have 325 beds. During 2004-05, these hospitals together treated 4.36 lakh patients. Out of them 4.28 lakhs were out patients. Details of beds and patients treated under homoeopathy medical colleges are given in Table 12.15

Table 12.15
Medical College hospital wise distribution of beds and Patients treated in 2006

Sl.No.	Name of Hospital	Beds (Nos.)	Patients Treated		Total
			IP	OP	
1	2	3	4	5	6
	Government				
1	Govt. Homoeopathic Medical College Hospital, Thiruvananthapuram.	100	1542	81190	82732
2	Govt. Homoeopathic Medical College Hospital, Kozhikode.	100	1940	111309	113249
	Government Aided				
1	Dr. Padiar memorial Homoeopathic Medical College	50	2799	71516	74315
2	A.N.S.S.Homoeopathic Medical College	125	213	20287	20500
3	Sree Vidhyadhiraja Homoeopathic Medical College	25	552	41426	41978
	Total	400	7046	325728	332774

Source: Govt. Homoeopathic Medical College, Thiruvananthapuram

Family Welfare

12.35 Family welfare programme in Kerala is implemented through a network of government hospitals and community health centres in urban area and primary health centres in rural area. Family welfare programmes is also implemented by private hospitals and clinics as well as non-governmental organizations. Kerala's achievement in family welfare front has been impressive in terms of major indicators viz. birth rate, death rate, maternal mortality rate, infant mortality rate, couple protection rate etc. State has achieved couple protection level of 72.13% in 2004. District wise details of family welfare programmes and couples protected by effective family planning methods are given in Appendices-12.21 and 12.22.

Expenditure on Medical and Public Health

12.36 Kerala spends fairly substantial amount on medical and public health compared to other indian states, which is evident from per capita government health expenditure. In Kerala it was Rs.238 in 2001-02 as against the all India average of Rs.191. Including the investment of local governments, per capita expenditure on health increased to Rs.267 in 2002-03 and to Rs.312 in 2003-04. Similarly expenditure on health to total state expenditure (Revenue & Capital only) was 5.4% in 2003-04 as against the national average of 4.6%. The expenditure on health including family welfare during 2001-02 to 2005-06 is given in Table-12.16

Table 12.16
Plan and non-plan expenditure on Medical and Public Health including Family Welfare.

(Rs. Lakh)

Year	Expenditure on Medical and Public Health (excluding FW)			Expenditure on Family Welfare	Total	% to GSDP
	Plan	Non-Plan	Total			
1	2	3	4	5	6	7
2001-02	6466.88	59120.91	65587.79	10270.57	75858.36	1.02
2002-03	8950.08	62264.16	71214.24	9459.40	84974.02	1.06
2003-04	7148.08	67424.31	74572.39	11324.98	85897.37	1.0
2004-05	11126.94	73212.84	84339.78	10844.7	95184.48	1.02
2005-06 (RE)	18288.13	96535.06	114823.19	8578.07	123401.26	1.20

Source: Detailed Budget Estimates 2006-07

CHAPTER 13

HOUSING

Housing in Kerala registered enormous growth both in terms of numbers and quality during the last decades. A sustained increase in the demand for housing pushed up prices of factors of production and construction materials in a situation in which their domestic supply was inelastic.

Housing needs for the next five years

Numerical Shortage	- 0.63 lakh
Dilapidated houses	- 5.38 lakh
Expected demand from new households	- 4.00 lakh
Total housing need	- 10.00 lakh

13.2 Based on the results of several micro level studies on rural and urban housing it is assumed that 50 percent of the households in the first category (numerical shortage) and 30 percent of the newly formed households need full support for new construction. Similarly 50 percent of the dilapidated houses need major repairs and renovation for which full government support is essential. It would seem that bridging the numerical gap at the state level should not be a major problem. However a major problem here is the reliability of the data that we have used which is an estimate from the census. Housing is a location specific issue micro level data on housing situation in each locality is needed. Paucity of reliable data on the real housing situation is a major issue.

13.3 The Grama Panchayat, Municipalities and Corporations should collect and compile comprehensive data on the present housing stock and demand. The data base should be updated annually. Housing department should be entrusted with the task of compiling the data at the state level and to make it available for state level policies and planning.

13.4 Provision of secure tenure for land in adequate quantity in suitable locations at affordable prices and on equitable terms is a fundamental requirement for clearing of housing demand of the poor.

13.5 Maintaining uniformity in subsidy related schemes is essential. Housing schemes are being implemented by various agencies with varying subsidies for the same target groups. Reaching the poorest among the poor, the landless and homeless and other vulnerable and disadvantaged groups need attention.

Governmental Agencies

13.6 The governmental agencies are mainly funding the house construction of the lower middle income and poor destitute households. Kerala State Housing Board, Kerala State Co-operative Housing Federation, Kerala State Co-operative Agricultural and Rural Development Bank, Kerala Police Housing and Construction Corporation Limited, Nationalised Banks, Rural Development Department, Fisheries Department, SC department, ST Departments, and Kudumbashree are the major governmental agencies undertaking house construction directly for the people. Besides, Local Bodies are also executing housing projects for the poor .

13.7 During 2002-07 these agencies/departments have provided assistance to construct 534253 houses, out of which 1.30 lakhs were assisted during 2003-04, 1.55 lakhs during 2004-05, 1.11 lakh during 2005-06 and 4921 during 2006-07 up to 30-9-06. Nationalised Bank and HUDCO assisted almost the same number of houses during 2005-06. Agricultural and Rural Development bank assisted 17495 houses during 2005-06. Similarly 12990 houses were assisted by Rural Development Department under Indira Awas Yojana (which is now under Bharat Nirman). Houses constructed with assistance from all agencies during 2002-07 are given in Table 13.1. Agency wise assistance granted for the house construction is given in Appendix.13.1

Table 13.1
Houses Constructed by various agencies 2002-07

Year	Houses Constructed
2002-03	133228
2003-04	129564
2004-05	155929
2005-06	110621
2006-07 (up to 30-9-06)	4921
Total	534253

Kerala State Nirmithi Kendra

13.8 Kerala State Nirmithi Kendra is an agency engaged in the propagation and promotion of cost effective and environment friendly technologies in house construction. Nirmithi Kendra conducts training programmes for engineers, architects and artisans to equip them with skill to practice cost effective and environment friendly building construction. The Kendra has a joint venture with SDC (Swiss Agency for Development Corporation) for a building material project. Started as a pioneering experiment in the district of Kollam, KESNIK now has a wide network throughout the state and its innovative programmes are well sustained by the Public as well as the Government.

13.9 The objectives of Kerala State Nirmithi Kendra are:

Transfer of technology from lab to land, dissemination of CEEF technologies to the masses, training (locals/beneficiaries) in alternate building technology and implementing/demonstrating CEEF technologies by undertaking construction and consultancy projects.

13.10 Activities of KESNIK are:

Technical consultancy and housing guidance, Regional/Rural Nirmithi Kendras, Information centres at panchayat, Nirmithi Habitat arts/gurukulam, Research and Development, Information and extension division, applied technology and training Centre (AT&T Centre), Nirmithi National Institute of Habitat Management (NNIHM), material testing lab, production centres, revival of traditional architecture, rain water harvesting and training programmes for local bodies.

13.11 The institution is destined to play a larger role in meeting the housing shortage. Its greatest impact has been the creation of an “awareness” of alternate options in building technology.

Kerala Police Housing and Construction Corporation Ltd.

13.12 The Kerala Police Housing and Construction Corporation was formed in 1990 with a view to construct houses, quarters and office buildings for the police department. Now KPHCC is engaged in construction of buildings and quarters for the departments of Police, Prisons, Vigilance and Anti-Corruption Bureau and the Fire and Rescue Services of Government of Kerala. The major sources of funds for the above construction activities of the Corporation are from the central government scheme like Modernization of Police Forces, and Finance Commission Awards and State budget allocation. For the Police Department, major projects presently undertaken by the Corporation, utilizing State Funds, are Kerala Police Academy, Thrissur, Police Headquarters Complex, Thiruvananthapuram and upgradation of buildings and other facilities in Armed Police Battalions. For the projects like Kerala Police Academy at Thrissur and Police Headquarters Complex at Thiruvananthapuram, funds are raised through the financial institutions like HUDCO and LIC housing finance.

13.13 The major activities under the Modernisation of Police forces are: District Police Offices, District Police Lines, Regional Forensic Science Laboratories, Crime branch CID Offices, Special Branch CID Offices, District Police Control Rooms, Police Stations, Extension to Police Stations, Sub Divisional Police Offices, Circle Offices, WPC Rest Rooms, Lower Subordinate & Upper Subordinate Quarters, Range DIG Offices, Zonal IG Offices, Passing out parade ground, Pavilion at Kerala Police Academy, Firing Range Modification at Kerala Police Academy, Indoor Training Centre at Kerala Police Academy, Traffic training School at Kerala Police Academy and Aquatic Centre at Kerala Police Academy.

13.14 The Award under Eleventh Finance Commission is for the construction of Police Stations and Resting Rooms for Women Police Constables.

13.15 A large number of the above buildings and quarters have been completed and some are under construction. During the year 2005-06 the Corporation was entrusted with the construction of 94 new houses at Poovar in Thiruvananthapuram District. Accordingly the work was arranged and completed with in a time of 3 months.

13.16 Corporation raises institutional finance from HUDCO and LIC. During the Tenth Plan period it raised institutional finance from HUDCO to the tune of Rs. 1097 lakhs for various works. Institutional finance raised by the Corporation is shown in Table.13.2

Table 13.2
Fund raised by Police Housing and Construction Corporation
(Rs. lakh)

Year	HUDCO
2002-03	237.44
2003-04	240.00
2004-05	120.00
2005-06	200.00
2006-07	200.00
Total	1097.44

Source: Kerala Police Housing and Construction Corporation Ltd.

Kerala State Housing Board

13.17 Kerala State Housing Board is doing consultancy work in three regions namely Trivandrum, Kozhikode and Kochi region. In Trivandrum region 14 works were taken of which

some are completed and some are in progress. In Kochi region out of the 10 works taken up, three have not yet been started and others are going on. In Kozhikode region, of the 3 works one is completed.

13.18 Under Mythri – "a scheme for the construction of houses to poor" construction of 2,82,267 houses were undertaken of which 2, 64,951 houses were completed and handed over to the beneficiaries. As regards financial assistance, Central and State Government are extending their support to a certain extent. In the case of loan component, HUDCO is the main financier. During 2006-07 (up to 31.10.06), KSHB received Rs. 4305.07 lakhs as assistance, of which, Rs. 4300 lakhs was from State Government and Rs. 5.07 lakhs from Central Government. The Board disbursed Rs. 10987.49 lakhs in 2005-06 and Rs. 4305.7 lakhs in 2006-07 up to 31-10-06. Agency-wise flow of funds to the Kerala State Housing Board from 2002-03 to 31.10.2006 is given in Table.13.3.

Table 13.3
Fund raised by Kerala State Housing Board

Year	Fund flow		Others
	State Government	HUDCO	
2002-03	5120	-	2570
2003-04	4100	1480.79*	-
2004-05	5770	445.49	22.82
2005-06	6500	-	4552.69
2006-07 (up to 31-10-06)	4300	--	5.07

Source :- Kerala State Housing Board.

*This amount is after deducting Rs.628.56 lakhs refunded to Hudco.

Kerala State Co-operative Housing Federation

13.19 Kerala State Co-operative Housing Federation is an apex body with 207 primary co-operative housing societies affiliated to it. The main sources of fund to the Federation are the share capital contribution from member societies and State Government and borrowings from LIC, HUDCO and National Housing Bank. The main objective of the Federation is to finance the affiliated primary co-operative housing societies for the construction of houses. The Federation assists low income, middle income and high income families for construction of houses through the primary societies. Though the Federation mobilized only Rs. 9500 lakhs during 2004-05 as loan, and raised Rs. 6500 lakhs in the year 2005-06 (up to 30-9-2006) to strengthen the housing activities of the state. Fund flow to Kerala State Co-operative Housing Federation from 2002-03 to 2005-06 is given in the Table 13.4.

Table 13.4
Fund Flow to Kerala State Co-operative Housing Federation from 2002-03 to 2005-06

Year	Funding Agencies		Fund raised
2002-03	LIC		4000
	NHB		2500
2003-04	NHB		1500
2004-05	NHB		4500
	Canara Bank		5000
2005-06 up to 30.9.06	Canara Bank		4000.00
	Federal Bank		2500.00

Source: Kerala State Co-operative Housing Federation.

13.20 During 2004-05 Federation assisted construction of 6692 houses, of which 1747 were under EWS. Similarly during 2005-06 (upto 30.9.06) 9298 houses were assisted by the Federation, including 1508 (16%) houses under EWS. The details of assistance granted for house construction and amount disbursed by the Federation are given in the Appendix.13.2

Bharat Nirman

Box 1

Under Bharat Nirman an ambitious programme for creation of rural infrastructure- construction of 60 lakh additional houses for the poor in the country is envisaged.

Financial Institutions

13.21 Housing in Kerala attracts an annual investment of about Rs. 4000 crore. A good number of financing institutions are also playing a major role in house construction along with the governmental agencies in the state. Institutions involved in housing finance in Kerala are nationalised banks, HUDCO, HDFC, LIC Housing Finance Ltd., Sundaram Home Finance, GIC Housing Finance, HOUSEFED, Dewan Housing Finance, Canfin Homes, BOB Housing Finance, Kerala State Co-operative Bank, Kerala State Co-operative Agricultural & Rural Development Bank Ltd., HSBC and KSHB. Consequent to the recent competition among these agencies taken place in bank deposit rate and lending rates, the rates of housing loans are also changing with in short spells of time. Lowest interest rate for house loan now is 8% (up to 5 years) depending upon the period of loan and amount of loan. The interest rates as on 30-9-06 in the case of 15 institutions are given in Appendix.13.3. Housing for the poor alone needs to be addressed by government and its agencies.

HUDCO

13.22 HUDCO, since its inception in 1970, has made steady and significant strides in the field of housing in the country. Within a period of three decades HUDCO assisted construction of more than 143 lakh dwelling units in the country. HUDCO is granting assistance to institutions as well as to individuals.

13.23 Besides housing finance, HUDCO is funding the construction of sanitation units, development of plots and urban infrastructure projects. In Kerala, HUDCO had granted funds to all the local bodies which had placed their requests. Besides, a good number of government and semi-government organizations received financial assistance from HUDCO. Development Authorities, Police Housing & Construction Corporation, Kerala State Backward Classes Development Corporation, Kerala State Co-operative Bank, Kerala State Development Corporation for SC/ST, Kerala State Handicraft Apex Co-operative Society Ltd., Kerala State Housing Board, Kerala School Teachers & Non-teaching Staff Welfare Corporation, Kerala Urban & Rural Development Finance Corporation, Kerala State Co-operative Federation for Fisheries Development Ltd., and Kudumbashree were among the institutions which received assistance from HUDCO. When some of the local bodies had undertaken the Total Housing Project for the poor, HUDCO extended maximum help to the local bodies for the successful execution of the project.

Table 13.5
Assistance Provided by HUDCO to Individuals
(Rs. lakh)

Year	Units Sanctioned	Amount Sanctioned	Amount Released
2002-03	659	1405.21	1009.7
2003-04	411	927.98	900.76
2004-05	370	1129.03	1003.31
2005-06	116	344.6	435.53
2006-07 (upto 25.10.06)	37	97.61	145.88

Source : HUDCO

13.24 HUDCO sanctioned Rs. 1129.03 lakhs to individuals and released Rs. 1003.31 lakh during 2004-05. During 2005-06, Rs 435.53 lakh was released as against a somewhat smaller amount of Rs. 344.6 lakh. During 2006-07 up to 25-10-06, Rs. 145.88 was released. Details of amount sanctioned, and amounts released are given in Table 13.5.

LIC Housing Finance Ltd.

13.25 LIC Housing Finance Ltd., is one of the housing finance institutions sanctioning loans without much delay. The beneficiaries have been classified into various groups such as low income, middle income and high income, for efficient processing of the files and easy disposal of the financial assistance to individuals. The details of amount sanctioned and disbursed in Thiruvananthapuram area office from 2002-03 to 2006-07 up to 30/11/06 are given in Table 13.6

Table 13.6
Loan sanctioned, disbursed and number of houses assisted from
the Thiruvananthapuram Area office of LIC Housing Finance Ltd.
(Rs. lakh)

Year	Amount Sanctioned	Amount Released
2002-03	3294.54	2354.45
2003-04	3028.73	2269.54
2004-05	2192.92	1615.47
2005-06	2088.61	1513.88
2006-07 (Up to 30/11/06)	826.80	592.03

Source: LIC Housing Finance
(LIG, MIG and HIG included)

LIC Housing and Senior Citizens

13.26 LIC Housing Finance Ltd through its scheme for senior citizens is giving hope to those who are not included in any of the above housing schemes. The housing finance company is opening its first assisted living community centre in Bangalore in May with 100 units. The centre will have residential flats for senior citizens along with services like food, laundry and other house keeping services. In a fast changing Indian society there is a great need for assisted living community centres for senior citizens. LICHF has started a 100 percent subsidiary company- "LICHCL Care Homes Ltd" with an authorised capital of Rs. 25 crore to see that this scheme is sustained.

13.27 With the rapidly growing problems of solid waste disposal sanitation and water supply it is very essential to integrate these aspects in to planning a housing scheme. There is need for a comprehensive approach- a 'Habitat' approach- to housing if we are to mitigate the growing ecological crisis.

CHAPTER 14

POVERTY AND SPECIAL PROGRAMMES FOR WEAKER SECTIONS

Poverty can be defined in an inclusive sense as consisting of a number of elements: lack of access to, or availability of income-earning opportunities, basic health and education, food security; lack of adequate shelter, water or sanitation; lack of land or employment opportunities; and gender discrimination. The list is sometimes further enlarged to include: lack of participation in civil society, social exclusion, alienation, political instability and conflict. The inclusive definition however robs the concept of its specificity. In fact the more inclusive the definition is, the less specific it becomes. In India accordingly, a very specific definition has been traditionally used, namely the fulfillment of the nutritional requirement of 2400 calories per person per day in rural areas and 2100 calories in urban areas. The poverty line is defined as that level of expenditure at which a person accesses this minimal level of calorie intake (which is not the same as the level of expenditure required solely for accessing this intake). The practice has been to take the level of expenditure corresponding to the poverty line in some base year and to update it for subsequent years for each state using the Consumer Price Index Number for Agricultural Labourers for rural areas and the Consumer Price Index Number for Industrial Workers for urban areas. The state-wise rural and urban poverty lines for 2004-05, arrived at on this basis, are in table 14.1

Table 14.1
State Specific Poverty Lines for 2004-05

Sl. No.	State	Rural	Urban
1.	Andhra Pradesh	292.95	544.30
2.	Assam	387.64	378.38
3.	Bihar	356.36	461.40
4.	Gujarat	353.93	540.80
5.	Haryana	414.76	504.20
6.	Himachal Pradesh	394.20	504.20
7.	Jammu & Kashmir	391.26	504.20
8.	Karnataka	324.17	603.50
9.	Kerala	429.07	562.90
10.	Madhya Pradesh	324.48	569.00
11.	Maharashtra	362.25	664.50
12.	Orissa	325.65	544.00
13.	Punjab	410.38	456.10
14.	Rajasthan	374.57	531.10
15.	Tamilnadu	351.86	551.70
16.	Uttar Pradesh	369.76	487.10
17.	West Bengal	382.82	446.10
18.	All-India	358.03	540.40

14.2. This method however is extremely unsatisfactory. The CPIAL for instance is a Laspeyre price index with 1973-74 as its base year. When the poverty line updates using this index, the presumption is that the weighted average price increase of this commodity bundle is a measure of the "true" cost-of-living increase of the rural poor. This presumption is entirely unfounded for a number of reasons: first, there has been a significant increase in monetization in the economy. In the transition from kind to cash payments, traders' margin gets added which the CPIAL cannot possibly reflect. Secondly, the poor who had access to common resources earlier are now excluded from them and have to purchase them from the market which makes the increase in their cost of living much greater than what the CPIAL

indicates. Thirdly, greater awareness of health needs, together with a shrinking of public health-care facilities, enforces larger health expenditures on the people, which again is not reflected in the CPIAL. For all these reasons the official poverty estimates based on the updating of a three decades-old “poverty line” represent gross underestimates. The magnitude of this underestimation can be seen from the fact that at the official poverty line for 1999-00, at which people should in principle have been able to access 2400 calories in rural India, the actual calories they could access was only 1890 per person.

14.3 The main source of data for poverty estimation is the National Sample Survey on Consumer Expenditure. Using these data and the poverty line estimated in the manner discussed earlier the incidence of poverty in the country is estimated to have behaved in the manner shown in Table 14.2.

Table 14.2
Incidence of poverty in the country

Sl. No.	Year	Poverty Ratio (%)			Number of Poor (Million)		
		Rural	Urban	Combined	Rural	Urban	Combined
1	2	3	4	5	6	7	8
1	1973-74	56.40	49.00	54.90	261.30	60.00	321.30
2	1977-78	53.10	45.20	51.30	264.30	64.60	328.90
3	1983	45.70	40.80	44.5	252.00	70.90	322.90
4	1987-88	39.10	38.20	38.90	231.90	75.20	307.10
5	1993-94	37.30	32.40	36.00	244.00	76.30	320.30
6	1999-2000	27.10	23.60	26.10	193.20	67.10	263.30
7	2007*	21.10	15.10	19.30	170.50	49.60	220.10

Source: Tenth Five Year Plan, Vol.I Planning Commission, GOI, New Delhi

*Poverty Projection for 2007

14.4 Table 14.2 indicates that the poverty ratio has declined from 54.90 per cent in 1973-74 to 26.10 per cent in 1999-2000. The proportion of poor in the rural area fell from 56.4 to 27.1 in the same period; in urban areas the decline was from 49 to 23.6 percent. For reasons discussed earlier, these figures however are quite meaningless. Much debate has taken place in the country over the unreliability of the 1999-2000 estimates owing to the changes in recall period that characterized that round of the Survey. But a far more serious problem concerns the fact that the very “poverty line” taken for estimating poverty is a gross underestimate, so much so that if we make a direct estimation of poverty, simply by working out how many persons in rural India in 1999-2000 could not access 2400 calories per day (we can on the basis of the same NSS data make this calculation), then the figure comes to a staggering 75 percent! The official claims about declining poverty in the country therefore have very little basis in facts.

Poverty Scenario in Kerala

14.5 Kerala’s recent initiatives in democratic decentralisation have brought to the fore issues related to poverty and the role of different tiers of local government in poverty reduction. As participatory micro-level planning is being institutionalised, the need for a correct estimation of poverty and the question of a socially acceptable method for identifying the poor have assumed importance. The assessment of poverty at the local level can no longer be through vague and crude measures; such assessment would have to be transparent, comprehensive and simple reflecting the perceptions of the people along with those of the experts.

Assessment of Poverty

a) Poverty Assessment through sample surveys

14.6 Like in the rest of the country NSS Consumer Expenditure data have been used to identify the extent of poverty in the State. It is based on this assessment that central government funds for various Anti-Poverty programmes are released to the State. As per the NSSO 55th round (1999-2000), Kerala has poverty figures of 9.38 per cent in the rural area and 20.27 per cent in the urban areas, whereas at the all India level, it is 27.09 percent in rural areas and 23.62 percent in the urban areas. But as in the case of India as a whole, these figures are gross underestimates. At the official poverty line for 1999-2000 in rural Kerala, only 1440 calories could be accessed which is 960 calories short of the 2400 calories that define poverty! If we stick to the norm of 2400 calories for rural areas, then the number of persons in rural Kerala who could not access this norm in 1999-2000 comes to a staggering 82.5 percent! Even if we take a lower norm of 2100 calories for rural Kerala the proportion that could not access it in 1999-2000 still comes to 60 percent. And at a still lower norm of 1800 calories the proportion still comes to 38 percent. The figure of 9.38 percent therefore appears to be a completely arbitrary and meaningless figure, and a gross underestimation of rural poverty. This fact of underestimation is also borne out by other measures discussed below.

b) Other measures related to Poverty Assessment

14.7 The Human Poverty Index (HPI) using the UNDP methodology (Index of survival deprivation, deprivation of education and deprivation in economic provisioning with respect to safe water, health services and under-nourished children) is 15 for Kerala whereas it is 36.7 for the whole country. Similarly the Human Development Index (1995) (Index of life expectancy, educational attainment and income) for Kerala has been calculated as 0.628 whereas it is only 0.451 for the whole country. The HDI and HPI values for Kerala and some Asian countries make interesting comparison.

Table 14.3
HDI and HPI Values for Kerala and some Asian Countries

Country/State	HDI Value (1995)	HPI Value (1996)
Kerala	0.628	15.0
India	0.451	36.7
Sri Lanka	0.716	20.7
Thailand	0.838	11.7
Malaysia	0.834	N.A
Indonesia	0.679	20.8
China	0.650	17.5

14.8 The Capability Poverty Measures (Index of percentages of under-nourished children, women with non-institutional deliveries and female illiteracy – (CPM-I using the stunting concept CPM-2 using the wasting concept) give Kerala the following position:

	CPM-1	CPM-2	Rank (least)
Kerala	12.0	10.7	1
India	52.3	45.0	1

14.9 Human Development Measures – HDM1 to measure capabilities and opportunities at the micro level and HDM2 to measure capabilities and opportunities at the macro level also give Kerala a high position.

HDM – 1

Income & Poverty Index	0.642(1)*	HDM-1 0.636(1)
Education Index	0.909(1)	
Health Index	0.951(1)	
Housing Index	0.089(13)	
Participation Index	0.587(1)	

14.10 Kerala is at the top in the Country in human development index (0.638). This position is consistent since 1981. This is because of the physical quality of the life of the people. Punjab (0.537) stood next to Kerala followed by Tamil Nadu (0.53), HDI is the lowest for Bihar. Poor States show relatively poor performance on HDI. Similarly, the economically better off States are the ones with relatively better performance on HDI. But the relation between HDI and the level of development does not show any correspondence in the case of middle income States. For example, some States like Kerala have high attainments of HDI at the same time; there are States like Andhra Pradesh and West Bengal where HDI values are not as high. The details are given below: -

Table 14.4
Human Development Index of Major States

States	1981		1991		2001	
	Index	Rank	Index	Rank	Index	Rank
1. Andhra Pradesh	0.298	9	0.377	9	0.416	10
2. Assam	0.272	10	0.348	10	0.386	14
3. Bihar	0.237	15	0.308	15	0.367	15
4. Gujarat	0.360	4	0.431	6	0.479	6
5. Haryana	0.360	5	0.443	5	0.509	5
6. Karnataka	0.346	6	0.412	7	0.478	7
7. Kerala	0.500	1	0.591	1	0.638	1
8. Madhya Pradesh	0.245	14	0.328	13	0.394	12
9. Maharashtra	0.363	3	0.452	4	0.523	4
10. Orissa	0.267	11	0.345	12	0.404	11
11. Punjab	0.411	2	0.475	2	0.537	2
12. Rajasthan	0.256	12	0.347	11	0.424	9
13. Tamil Nadu	0.343	7	0.466	3	0.531	3
14. Uttar Pradesh	0.255	13	0.314	14	0.388	13
15. West Bengal	0.305	8	0.404	8	0.472	8
All India	0.302	-	0.381	-	0.472	-

c) BPL Surveys

14.11 While central funds for poverty alleviation flow based on NSS data interpretation, at the State level, activities are formulated and funds spent as per the periodic surveys of Below Poverty Line families.

14.12 The first full survey of BPL families was done in 1985 capturing the same data and the next comprehensive Survey was done in 1992. However, this was not the survey of all BPL families as those who had been assisted under IRDP earlier were not included.

14.13 In 1997, the Government of India took a landmark decision based on the suggestion by an Expert Group appointed by the Ministry of Rural Development. They directed the States to conduct a full BPL Survey, which had the following new features.

- (1) There was to be a census of every household with certain exclusion criteria determining elimination of Above Poverty Line households.
- (2) The surveys were to rely on expenditure in the last 30 days on the pattern of NSS assessment.

14.14 The Survey revealed the following facts.

- 1) The percentage of poverty is 36.58.
- 2) Agriculture labourers constitute the largest single occupational groups among the poor families.
- 3) Nearly 20% of the families are women headed.
- 4) Only 40% of the BPL families have pucca houses.
- 5) More than half of the BPL families have an annual income of less than Rs.10,000.
- 6) There are 7.65 lakh illiterates among the poor.
- 7) There are 1.28 lakh landless families 9.68 lakh families have only homestead.
- 8) There are 8.05 lakh families without sanitary latrines.

d) Innovative initiatives in assessment of poverty.

14.15 In the early 90s, a break-through was made in the assessment of poverty in a pilot project on Urban Basic Services Programme in Alleppey Town, which was supported by UNICEF. It was felt that the conventional head count system was too much remote from the people and that a transparent index based on well-recognised features of poverty would be more acceptable. Trained Community Volunteers and ICDS Volunteers in seven Wards of Alleppey conducted a survey of 5728 families. The analysis of the survey led to the development of a set of nine criteria for identifying the most vulnerable families who were classified as risk families. The risk index or poverty index was formulated consisting of the following nine non-monetary factors, each reflecting a kind of deprivation.

1. Kutch House
2. No access to safe drinking water
3. No access to sanitary latrine
4. Illiterate adult in the family
5. Family having not more than one earning member
6. Family getting barely two meals a day or less
7. Presence of children below 5 years in the family
8. Alcoholic or drug addict in the family
9. Scheduled Caste or Scheduled Tribe family

14.16 A family, which had four or more of the risk factors, was classified as high-risk poor.

e) Qualitative Assessment of the Poverty situation by Experts

14.17 Interaction with academic experts, local government leaders, representatives of the poor and key practitioners reveals the following points about the prevalence of poverty in Kerala.

- (i) More important than drawing the poverty line with precision would be identification of layers of poverty, consisting of the decrepit poor, the very poor and the marginal poor. There has to be a prioritisation of the families below poverty line based on severity of poverty, enabling formulation of separate strategies ranging from direct benefits support to facilitation of self-help.
- (ii) There are several out-liers of the Kerala model who are still very poor and deserve special support. They are the tribals, traditional fishermen, Scheduled Castes and groups of people employed in certain declining traditional industries like coir, cashew, handloom stone-crushing etc. There is persistent poverty in this group.
- (iii) The number of practically landless poor is very high in Kerala. Since land reforms was implemented more than a generation ago, the home steads given to nearly three lakh families have now been partitioned or sold out and a large number of the poor have nothing more than their house plots. So the conventional strategy of improving land productivity would not be of any much direct benefit to the poor.
- (iv) The phenomenon of educated poor is very peculiar to Kerala. A large number of the poor have completed high school education and passed the school final examination. But in the competitive job market, they get left out. Wage employment is of no use to them, most of them lack the entrepreneurial talent for self-employment and they are not skilled enough for the job market. Capacity building of this group is a major challenge.
- (v) The falling agriculture labour opportunities and the shrinkage of government job prospects has further complicated the poverty situation.
- (vi) The quality of the products of twin strategies behind Kerala's development success viz., health and education is on the decline particularly in the public sector. This has placed a lot of burden on the poor and has important ramifications in determining an anti-poverty strategy.

Poverty Profile

14.18 Though the poverty figures of the sample survey conducted by the NSSO in its 55th round amount to only 9.38% in rural and 20.27% in urban the 1997 BPL census conducted by the Rural Development Department show that it is 36.58% in rural areas and 27.8% as per the urban survey conducted by department of Urban Affairs. Interestingly the Community Based Organisation of Poor created by the Kudumbashree has a membership of 32,10,440 families. Absolute poverty, which has been the focus of attention in India, is closely linked to "simple unemployment". From the proposition that "simple unemployment" in the state is seriously underestimated, it would follow that the magnitude of absolute poverty too is underestimated. According to the Planning Commission's estimate, the rural poverty ratio in Kerala went down from 25.73 percent in 1993-94 to a mere 9.4 percent in 1999-2000. But while rural poverty is officially defined in terms of a calorie norm of 2400 per person per day, these poverty percentages do not actually refer to the population falling below this norm on the two dates. They refer to the population below a "poverty line". This "line" corresponded to the level of expenditure at which a person got 2400 calories per day in the base year, and is

updated for every subsequent year by using the Consumer Price Index for Agricultural Labourers. There would be no problem with the use of this “poverty line” if it was the case that those on this line on any date were actually accessing at least 2400 calories per person per day. But the amount of calories accessed in Kerala at the “poverty lines” corresponding to the two dates mentioned above were only 1526 and 1440 respectively.

14.19 In a State-wide Survey conducted in 2004, the Kerala Sastra Sahithya Parishad (KSSP) has come out with some startling revelations about how KERALAM actually lives and thinks (KERALA PADHANOM, 2006). The Report gives, among other things, a profile and status of housing, income and expenditure, employment and livelihood, poverty and inequality, social mobility, education, health, women and culture and raises interesting issues like “development for whom”. The major findings of the KSSP study on poverty, employment and livelihood are given below.

14.20 KSSP Study compares the NSS data relating to 2002 with its data for 2004. After adjusting for changes in the prices level index, the study finds that the average per capita income in the rural and urban areas stood at Rs.1059 and Rs.1397 respectively for 2004. This is in contrast to the NSS estimates of Rs.881 and Rs.1267 respectively for rural and urban areas.

14.21 Rural poverty measured by the Head Count Ratio (HCR) in the KSSP study was 22.9 and it was more than double that of 9.4 given in the NSS data. The NSS 50th Round (1993-94) had put rural poverty (HCR) at 25.8. But KSSP does not find any significant developments in Kerala during the period 1993-94 to 2002 that might have led to this substantial reduction in rural poverty (HCR) from 25.8 to 9.4.

14.22 From 61st round of the National Sample Survey (NSS) conducted in 2004-05 estimate that all India poverty in 2004-05 was 28.7 percent in rural areas, 25.9 percent in Urban areas and 27.9 percent overall. But in Kerala it was 13.2 percent in rural areas and 20.6 percent in Urban areas during 2004-05. While during 1993-94 the all India Rural poverty was 37.2 percent and 32.6 percent of urban poverty while that of Kerala was 25.4 percent in rural and 24.3 percent in urban poverty. The 61st round data confirms that the some what faster post "reforms" of 1991 GDP growth has not been accompanied by more rapid poverty reduction. It has, in fact, been accompanied by an increase in inequality.

14.23 Although poverty did reduce between 1993-94 and 2004-05 the pace of poverty reduction was lower than in the previous two decades. Taking the rural and urban together, the pace of poverty reduction fell from 1.1 percent point per annum during 1973-88 to only 0.6 percent point per annum during 1987-2005 and 0.7 percent point per annum during 1993-2005. The 61st round should therefore set at rest all claims that economic reforms have led to faster poverty reduction.

14.24 As far as inequality measured GINI ratios is concerned, this has worsened between 1993-94 and 2004-05 in rural areas of all states except Bihar, Jharkhand, Karnataka, Madhyapradesh and Rajasthan. In urban areas inequality increased between 1993-94 and 2004-05 in all states as well as the all India level.

14.25 The rather strange upshot from the various available NSS datasets used together with official price deflators shows that while the period from 1989-90 to 1998 saw insignificant rural poverty reduction despite fairly high growth in measured agricultural GDP, the period after 1999-2000 is associated with significant rural poverty reduction despite stagnant agricultural growth. In conjunction with the fact that the 61st round results reported show that the annual rate of urban poverty reduction nearly halved in the period 1993-05 as compared to 1983-94, although GDP growth accelerated, there is a general indication of disassociation between GDP growth and poverty reduction in the post reform period.

14.26 Poverty Gap Ratio (PGR) is an important indicator of intensity of poverty. The gap between the level of consumption at above the Poverty Line and the level of consumption at Below Poverty Line is the PGR. A comparison of data PGR for Kerala suggests that it is neither better nor worse than that of India.

14.27 Regarding employment and livelihood, the KSSP study defines the 'unemployed' as those who seek work, but fail to get any useful work that brings some money earnings. By this standard, 15.1% of work seekers in the age group 18-60 years were totally unemployed. However, those who never had any income earning employment of any sort during their life came to 85.6%, which would work to 10.58 lakhs in absolute terms. 10.2% had occasional employment. Among females, highest unemployment of 38.8% was reported and in the age group of 18-25 it was 20.4%.

14.28 Gender differences in average income from employment were very prominent. While women employees earned Rs.1185, 1146 and 3570 respectively in Primary, Secondary and Tertiary sectors, the male employees earned Rs.2560, 3510 and 4216 respectively.

14.29 Another important finding in the KSSP study was on the differential preference and involvement of 'old generation' and the 'new generation' in the employment in the Primary, secondary and Tertiary sectors. While 62.5% of the 'old generation' were employed in the Primary sector, only 28.6% of new generation were employed in this sector, most of them preferring Tertiary sector employment. This shift over a generation has significant implications in formulating the employment strategy. It must also take in to account the fact of changing composition of employment.

14.30 Using income, expenditure, character of housing, and ownership of assets, the KSSP study classified the households in to 4 groups, Absolutely Poor, Poor, Lower Middle Class and Upper Middle Class. Agricultural workers constituted 30.4% of the absolutely poor. Among the agricultural workers 35.5% were absolutely poor. Families of Gulf emigrants and unskilled workers accounted for 13.4% and 7.9% respectively in the total number of absolutely poor. Cultivators who accounted for 7.5% of absolutely poor took the next position.

14.31 In short, the findings of the KSSP study may also be taken in to account in formulating the strategies of poverty eradication and employment generation during the Eleventh Plan of Kerala.

Special Features of Poverty in Kerala

Spread out Population

14.32 In Kerala either in villages or in towns, people live in scattered habitats. The population is spread out over the geographical area and not in cluster. The poor families also live in scattered hamlets. This habitation pattern often costs much for providing infrastructure facilities such as housing, water supply and sanitation etc. The pattern of the habitat has also influenced the life style of the individuals and families.

Educated poor

14.33 Though poverty rate more or less equates with the all India rate the structure of poverty is entirely different from that of the country. With the progressive reform initiatives of the State Government from time to time, the literacy levels are very high in the state and consequently the poor families also are conscious about the value of education. In Kerala 100% children at the age of 5 are enrolled in school and the drop out rate is as low as 1.5%.

The compulsory schooling has rather become a culture of the state. This has resulted in educated unemployment.

Assetless poor

14.34 As far as the poor are concerned, they do not possess any income generating assets especially agricultural land or any other form of assets. The tiny homestead most of them acquired by virtue of the land reforms has been further fragmented even the decades. The assetlessness keeps them in poverty for generations.

Malnutrition

14.35 The statistics show that in Kerala there are 36,53,578 children in the age group of 0-6 and out of this 9,89,868 are in the pre school age group ie 3-5. Of the population of pre school children, 50% are covered by the Anganvadies of Social Welfare Department and 30% covered by other institutions. The remaining 20% children are out side pre schooling.

Poverty Reduction Strategies

a) Past Strategies

14.36 Originally, Kerala followed the path of human development to reduce poverty. Substantial funds were spent for improving health and educational facilities and making the access of poor to these facilities easy through creation of health and education infrastructure in all parts of Kerala. Simultaneously proactive practices of food security, social security, legislative support through land reform and labour laws and institutional mechanisms like industrial relations Committees have combined to reduce poverty by expanding the entitlements.

b) Current Strategies

14.37 In the late 70's the Poverty Reduction Strategies in Kerala have moved in tandem with the national policy of direct attack on poverty. The direct attack is basically launched through two modes – one providing subsidized assets for self-employment at the individual level or at the level of the group and the other providing wage employment with or without food security through public works programme. Over the last decades the schemes have undergone various modifications but the essential approach has remained the same.

14.38 In rural areas the key schemes under implementation are Swarnajayanthi Grama Swarozgar Yojana (SGSY) for self-employment and Sampoorna Grameen Rozgar Yojana (SGRY) for providing wage employment. SGSY marks an improvement over the earlier scheme of IRDP with insistence on the process aspects of group formation as well as on the concept of economic clustering for identification of activities. SGRY, which has been launched in September 2001, is basically a rural public works programme with a strong food for work component which covers 50% of the allocation.

14.39 In the urban areas, the Swarna Jayanti Shahari Rozgar Yojana (SJSRY) combines elements of self-employment and wage employment though the accent is on the former. Under SJSRY self-employment component 16727 micro enterprises have been set up in the urban areas of Kerala which includes 1345 group enterprises of women.

14.40 Under the National Slum Development Programme (NSDP) slum development activities are taken up particularly, provision of minimum needs infrastructure and housing. During the first year of the X Plan Government of India has launched another housing scheme

for reclamation of the slums in the urban area namely Valmiki Ambedkar Awas Yojana (VAMBAY). Though it was started in 2002-03, the State has constructed 16812 houses against a target of 19454. The remaining houses are in various stages and nearing completion. During the year 2005-06 the State Poverty Eradication Mission is targeting the construction of 10000 houses under this programme.

14.41 In Kerala it is the local governments which implement the Anti-Poverty Programmes. In rural areas the Block Panchayats look after SGSY and IAY; and the SGRY is implemented by Panchayats from the three tiers in the ratio 50 : 30 : 20 among Village, Block and District Panchayats respectively. Likewise, the Municipalities and Corporations are responsible for implementing SJSRY, NSDP and VAMBAY programmes.

c) Towards a new Strategy of Poverty Reduction

14.42 Stated briefly, the failure of anti-poverty programmes in the past can be attributed to the fixation of target, lack of involvement of beneficiaries, absence of continued handholding in the context of poor understanding of poverty and its causes and manifestations, the top down approach and the over dependence of bureaucracy. Kerala is seeking to achieve a breakthrough in participatory poverty reduction through Kudumbashree, which is implemented by the State Poverty Eradication Mission through the local governments. All urban local governments and Village Panchayats have been included under Kudumbashree.

Kudumbashree Programmes in Rural Areas

14.43 State Poverty Eradication Mission implements this Programme by organizing the poor by creating community based structures of women below poverty line with focus on self help, demand – led convergence of available services and resources under the leadership of the Local Governments. The key components of the programmes are:

- Enabling certain minimum needs infrastructure, setting up of micro enterprises and capacity building of the poor.
- Providing high quality support services for the design and implementation of self employment ventures.
- Setting up of Challenge Fund to support pro – poor policies of the Local Governments, a Technology fund to support transfer of technology relevant for poverty reduction, an Innovation fund to support path breaking innovations in poverty reduction and a common revolving fund to provide seed capital for micro enterprises.
- Expansion of Asraya:- Destitute Identification Rehabilitation and Monitoring Project was launched during 2002-03 in 101 Grama Panchayats and later expanded to another 499 Grama Panchayats during 2003 -2004, and upto 31st October 2006. This Programme is targetted to be universalized in the next year.
- Generating jobs for educated youth.
- Special schools for physically and mentally challenged.
- Conduct an evaluation study on Kudumbashree.

Community Based Organizations for the Poor

14.44 The Kudumbashree programme covered the entire rural area in the state formed 163426 NHGs, 15288 ADS and 999 CDS. Community Based Organizations, which has coverage of 3183529 families, mobilized a sum of Rs.719.23 crores as thrift fund and disbursed credit to the tune of Rs. 1825 crores to its members. The Panchayat functionaries and CDS/ADS Office becares were trained utilizing the plan funds for strengthening the CBOs. [District wise details Appendix 14.2]

Linkage Banking

14.45 The Linkage Banking Programme was launched during 2002-2003 after proper grading the NHGs as per NABARD norms. During 2002 – 03, and upto 31 st October 2006, 99688 were graded and 78680 NHGs were linked with banks. A sum of Rs.40636.69 lakhs has been made available to the NHGs as loan. [District wise details Appendix 14.3]

Lease Land Farming

14.46 The Lease Land Farming programme, initiated in the rural areas during the year 2002-03, has been successfully extended to 820 Grama Panchayats. In these Panchayats 31710 NHGs consisting of 307960 families have participated in the programme. Through this programme 52873.18 Acres of land has been brought under cultivation. The programme is successfully continuing during 2006 - 07 also. [District wise details Appendix 14.4]

Bala Sabha

14.47 During 2004 - 05, Bala Sabha which intends to prevent intergenerational transmission of poverty, has been extended to the rural area also. So far, 34538 balasabhas have been formed with 606470 children. [District wise details Appendix 14.5]

IT Enabled services to the Poor

14.48 An innovative component in the Destitute Identification Rehabilitation and Monitoring project is the online monitoring system built in the project. As per the project, the CDS Office will be computerized in these panchayats where the destitute rehabilitation project is taken up and the system provided would be best utilized for the benefit of the poor.

Kerashree & Vidhyashree

14.49 Kudumbashree has brought out a new branded coconut oil in the brand name of Kerashree. 115 Kerashree units started in the State. Similarly in the IT education sector a revolutionary experiment was made by the Kudumbashree by setting up 151 Vidyashree units in schools to impart computer education to the students studying in 8th, 9th & 10th standards as per the curriculum prepared by the education department on a micro enterprise mode. The educated women entrepreneur groups set up the computer laboratories by availing bank loan.

Micro Enterprises in Rural areas

14.50 The State budget provide support to set up micro enterprises of women. It has been set up in the pattern of the SGSY. So far 2268 group micro enterprises of women have been set up in the rural areas. The activities are diverse and innovative in nature. Apart from this, about 919 individual enterprises are also functioning in the rural areas. [District wise details Appendix 14.6 & 14.7]

Coconut tree climbers training

14.51 An innovative equipment has been invented for facilitating to climb the coconut tree at Chemberi, Kannur. 1244 youths were trained from different Grama Panchayats. The training is for 7 days. A trained youth can climb a 30 feet tall coconut tree in 2 to 3 minutes.

Self Sufficient, Self reliant and Sustainable CDS

14.52 The scaling up of Kudumbashree programme to rural areas has been completed and the CDS System is in vogue in all the Grama Panchayats. But still there is a lot to go to

achieve the end goal of Kudumbashree. Therefore it has been decided to develop a few panchayats, at least one from each District as a model in poverty alleviation. With the objective of total eradication of poverty by 2005, the novel programme 'Self sufficient, Self reliant and sustainable CDS' has been launched. The Venganur Grama panchayat in Thiruvananthapuram District, Kodakara Grama panchayat in Thrissur District and Munniyur Grama Panchayat in Malappuram District have voluntarily come forward to take this venture representing three regions of the State. The programme has been scaled up to 2274.1.

Box 14.1

Kudumbashree – The Journey so far

The significant achievements of Kudumbashree are listed below:

- Kudumbashree Programme has been extended through out the State.
- Formed 163426 NHGs of BPL women
- Thrift Fund collection crossed Rs.719.23 crores
- Internal lending to the tune of Rs.1825 crores
- Under Linkage Banking scheme, 99688NHGs were graded and 78680 NHGs linked with banks.
- Credit flow Rs.406.36 crores through linkage banking.
- Formed 34538 Balasabhas with 606470 children
- Bhavanashree – 34035 houses constructed using credit amounting to Rs.13837.38 lakh from banks.
- Encouraged the NHG members to involve in leased land farming and 52873 acres of land brought under cultivation with the involvement of 307960 families in 820 Grama Panchayats
- Started 115 Kerashree units in Thiruvananthapuram, Kollam, Ernakulam, Idukki, Palakkad, Thrissur, Malappuram, Kozhikkode, Kannur and Kasargode Districts.
- Ashraya – Destitute Identification, Rehabilitation and Monitoring (DIRM) Programme launched in 584 Grama Panchayats and 16 Municipalities.
- Started 118 Vidyashree units under IT @ School Programme.
- Cluster Development Programme with the support of Industries Department.
- Multi purpose job clubs formed with the financial support of SC Development Department.
- Loan linked Micro Housing scheme launched with the support of Banks.
- Launched Self Sufficient, Self – reliant and sustainable CDS Programme (S3 CDS) for model building in 227 Grama Panchayats
- Yuvasree – Employment Opportunities to 50000 educated Youth launched in the State and 3521 youths covered.

Asraya - A Programme for Community based rehabilitation of destitute families.

14.53 Asraya is the first integrated programme for tackling the poorest of the poor who live at the margins of the economy, society and polity without a voice or the power of choice, with no capabilities to access entitlements – the really 'excluded'. It originated from the realization that even in a State like Kerala, the benefits of Anti-Poverty policies and programmes do not reach the absolutely poor, who constitute only about two percent of the population.

14.54 The programme now under implementation in 598 Grama Panchayats and 16 Municipalities is proposed to be extended to rest of the Grama Panchayats, Municipalities and Corporations.

14.55 As of now, there is no schemes akin to Asraya in India targeting the poorest of the poor. Thus, Asraya is a pioneer, developing a model, which can be adapted by the rest of the country. Hence, special support from Government of India is expected.

Box 14.2

The key features of the programme 'Asraya' are:

1. It is a sub – programme of Kudumbashree, the highly successful anti – poverty mission mode programme implemented through community-based organizations of Kudumbashree. This three - tier network organization include every poor family in the State and each family being represented by a women.
2. These CBOs identify the poorest of the poor using socially accepted objective indicators of poverty.
3. The Grama Panchayats and Municipalities are the real planners of this project with Government playing the role of an activist facilitator.
4. After transparent identification participatory plans are prepared for each destitute family on the basis of close interaction with the family members and on-site verification of details.
5. The plans are implemented by converging services and resources from different sources including PDS, Special Nutrition, Health, Remedial Education, Pensions, Basic Minimum services, Skill Development, etc. Gaps are filled up with funds from Panchayats and Municipalities with the State share being limited to 25% of the project cost or Rs.10 lakhs whichever is lower.
6. The entire programme is monitored regularly. The destitute families would be taken care of till they achieve a minimum standard of life. Thus Asraya is not one-time assistance but is a promise of continuous support till the objective is realized.

Source: Kudumbashree, Government of Kerala

14.56 The destitute identification, rehabilitation and monitoring programme is an extension of the poverty eradication mission of Kudumbashree through the Community based Organizations of poor. The Mission has rekindled their hope and sensitised the Local Self Government institutions about their new roles in focussed poverty eradication and community development.

The Destitutes

14.57 The destitutes are the poorest of the poor. They are the outliers of the development scenario in the negative extreme. They live at the margins of the economy, society and polity. They do not have a voice or the power of choice. They face the worst forms of deprivation and lack of access to the minimum services. They are exposed to all forms of vulnerability and do not have any safety net against risks. Their income is below subsistence and they are dependent. These faceless powerless people lack capabilities and are neither aware of their entitlements nor can they access them. They neither compete nor bargain. They drift pushed by circumstances. Severity of destitution is by unfavourable physical gender or caste status. That is, disability being a disabled, being a widow, belonging to a scheduled caste or tribe can singly or in combination aggravate the suffering. The collapse of the traditional social support systems has orphaned the destitutes. They are sometimes objects of charity. But they are never subjects of development. They have to be invested with identity, personality and empowered to stand on their own. Only an Antyodaya approach can reach them. Only care and support can lift them. They can develop only after a period of well - targeted well - designed welfare.

Identification of Destitute families

14.58 The destitute families are identified following the 9-point indices developed by the State Poverty Eradication Mission.

Rural

1. No Land /Less than 10 cents of Land
2. No house/Dilapidated House
3. No Sanitary Latrine
4. No access to safe drinking water within 300 meters
5. Women headed house hold/ Presence of a widow, divorcee / abandoned lady / unwed mother
6. No regularly employed person in the family
7. Socially Disadvantaged Groups(SC/ST)
8. Presence of Mentally or physically challenged person / Chronically ill member in the family
9. Families with an illiterate adult member

Urban

1. Less than 5 cents of Land / No Land
2. Dilapidated House / No house
3. No Sanitary Latrine
4. No access to safe drinking water within 150 meters
5. Women headed household
6. No regular employed person in the family
7. Socially Disadvantaged Groups SC/ST
8. Mentally retarded / Disabled / Chronically ill member in the family
9. Families without colour TV

14.59 In the case of destitute family, all the risk factors or at least eight out of the nine are to be positive. To have a more proper identification the presence of any of the following factors can also be taken into account in addition to the nine point indicators.

Box 14.3

Special parameters for identifying Destitute families in urban areas

- (i) Those families who have no landed property to create their dwelling place (living in purombke land, forest land, side bunds of canal and paddy fields etc.)
- (ii) Those who spend the night time in public places, streets or in the verandas of shops for sleeping.
- (iii) Families led by unwed mothers, single parent or those seperated women living in distress.
- (iv) Families led by young widows who are economically poor or having women who had passed the age of marriage and remains unmarried.
- (v) Families having members who are subjected to severe, chronic and incurable diseases or physically and mentally challenged.
- (vi) Families having no healthy member to win bread for the family.
- (vii) Beggars who resort to beggary as a vocation.
- (viii) Women subjected to atrocities.

14.60 The identification is done very transparently through the Neighbourhood Groups (NHG) network of Kudumbashree. The members of Neighbourhood Groups belong to poor families but need not be destitutes. At the same time, since the members of Neighbourhood Groups belong to a specific geographical area, they know who are all the specified destitute families within their Neighbourhood better than anyone else. The preparation of Micro Plan using the Risk Indices and problem identification mechanism also enable them to identify the destitutes Families in their vicinity.

Other major poverty alleviation programmes

14.61 Other major poverty alleviation programmes implemented in the state through Panchayat Raj Institutions are Swarnajayanti Gram Swarozgar Yojana (SGSY), Indira Awas Yojana (IAY) and Sampurna Gramin Rozgar Yojana (SGRY).

1. Swarnajayanti Gram Swarozgar Yojana (SGSY)

14.62 The objective of the programme is to provide self employment to the poor establishing a large number of micro enterprises in the rural areas building upon the potential of the rural poor. Emphasis will be given to group approach in this programme.

- (1) The objective of SGSY is to uplift every assisted family above the poverty line within three years time. SGSY is conceived as a holistic programme of micro enterprises covering all aspects of self employment viz. formation of self help groups, capacity building, planning activity, clusters, infrastructure buildup, technology, credit and marketing.
- (2) This Programme will adopt a project approach in each key activity. SGSY is a credit cum subsidy programme where credit forms the critical component. This programme lays emphasis on skill development through training courses. It also proposes to ensure technology upgradation in identified activity clusters.
- (3) Subsidy under SGSY will be uniform at 30% of the project cost subject to maximum of Rs. 7500/-. In respect of SC/STs this will be 50% and Rs. 10,000/- respectively. For group Swarozgaris the subsidy would be at 50% of the project cost subject to per capita subsidy of Rs. 10,000/- or of Rs. 1.25 lakhs whichever is less. There will be no limit on subsidy for irrigation projects. The programme expects at least 50% of the Swarozgais to be SC/STs, 40% to be women and 3% to be disabled.

14.63 Total amount of subsidy and credit disbursed to SHGs and individual swarozgaris during 2005-06 and up to the month of October 2006-07 are as follows:

Table 14.5
Credit and Subsidy Disbursed

(Rs. lakh)

Year	Credit disbursed to (Rs. In Lakhs)			Subsidy disbursed to (Rs. In Lakhs)		
	SHGs	Ind.Swarozgaris	Total	SHGs	Ind.Swarozgaris	Total
2005-06	2566.20	913.29	3479.49	1397.58	411.40	1808.98
2006-07 (Oct)	1082.37	329.99	1412.36	565.60	144.57	710.17
Total	3648.57	1243.28	4891.85	1963.18	555.97	2519.15

14.64 During 2005-06, total numbers of SHGs which started economic activities are 1437, of which total number of members covered is 17791. In the case of individual swarozgaris, total number of families covered is 4692. Similarly, total number of SHGs which started economic activities upto the month of October 2006 during the current financial year is 568,

of which total number of members covered is 6719. In the case of individual swarozgaris, total number of families covered is 1567.

Table 14.6
Achievement of SGSY during 2005-06 & 2006-07

Year	Self Help Group (No. of members covered)					No. of Individual Swarozgaris				
	Total	SC	ST	Women	Disa bled	Total	SC	ST	Women	Disab led
2005-06	17791	5503	621	15582	98	4692	3709	259	2188	455
2006-07 (Oct.)	6719	1995	196	6041	50	1567	1226	60	636	120
Total	24510	7498	817	21623	148	6259	4935	319	2824	575

Box 14.4
SGSY Special Project

Three special projects under SGSY captioned viz “Micro Enterprises Development and Market Linkages in Aryad and Kanjikuzhi Blocks” in Alappuzha District, Sustainable Business Development of Innovative Coconut based Micro Enterprises for Holistic Growth and Poverty Alleviation (SUBICSHA) in Kozhikode District and Micro Enterprises Development for Sanitation and Employment Generation in Malappuram District, sanctioned by Government of India are under implementation through DRDAs.

Indira Awaas Yojana (IAY)

14.65 The objective of Indira Awas Yojana is to help construction of dwelling units by members of SC/ST, freed bonded labourers and also non-SC/ST Rural Poor below poverty line by providing them with grant-in-aid @ Rs. 27,500/- per house. This is a Centrally Sponsored Scheme sharing cost between Centre and the State in the ratio of 75:25.

14.66 The beneficiaries of the Schemes are selected by Grama Sabhas. The beneficiaries should have at least two cents of land for house construction. They should not have dwelling units fit for occupation. The assistance is sanctioned to the female members of the family or in the joint name of husband and wife. The house constructed under the Scheme should have not less than 20 sq.mts of plinth area but no plans or design is prescribed.

14.67 Out of the total allocations for Indira Awas Yojana, upto 20% of the total funds can be utilized for upgradation of existing kutchha houses and towards subsidy for construction of houses with credit from Banks/Financial Institutions. The maximum assistance available is Rs. 12,500/- per household.

14.68 The Physical achievements during 2004-05 and 2005-06 up to October is as follows:

Table 14.7
Physical Achievement under IAY

Year	New Houses (Nos)				Upgradation (Nos)			
	SC	ST	Other	Total	SC	ST	Other	Total
2005-06	12925	1467	10168	24560	5197	507	3980	9684
2006-07 (Oct.)	3508	451	2356	6315	1368	125	984	2477
Total	16433	1918	12524	30875	6565	632	4964	12161

3. Sampoorna Gramin Rozgar Yojana (SGRY)

14.69 This Programme is being implemented as a Centrally Sponsored Scheme on cost sharing basis between the Centre and the State in the ratio of 75:25. The Central Government also provide food grain costing equivalent to the cash component, free of cost, as additionality. The cost of transportation of the food grains from the FCI Godown to the work site/PDS and distribution is the responsibility of the State Government.

14.70 The objective of the scheme is to provide additional wage employment in the rural areas as also food security – alongside the creation of durable community, social and economic assets and infrastructure development in the areas. The works to be taken up would assist in drought proofing such as soil and moisture conservation works, watershed development, promotion of traditional water resources, afforestation and construction of village infrastructure and link roads, primary school buildings dispensaries, veterinary hospitals, marketing infrastructure and Panchayat ghars.

14.71 The benefit of the SGRY is made available for all the rural poor who are in need of wage employment and are willing to take up manual or unskilled work in and around his village and habitations. Preference is given to the poorest among the poor, SC&ST and parents of child labour withdrawn form hazardous occupation.

14.72 Under the Scheme, 10 Kg. of Food grains is made available per man-days @ Rs. 6.20/- per Kg for rice and Rs. 5.50 for wheat. Food grains is being distributed to the rural poor a s raw rice. Boiled rice and wheat in the ratio of 1:1:1. The balance wage as per the notified minimum wages is paid in cash.

14.73 The physical achievement (Mandays generated) for the years 2005-06 and upto the month of October 2005-06 are indicated below:

Table 14.8
Mandays Generated under SGRY

Year	SGRY (Lakh Mandays)			
	SC	ST	Others	Total
2005-06	36.90	5.52	67.04	109.46
2006-07 (Oct.)	10.01	1.10	19.48	30.59
Total	46.91	6.62	86.52	140.05

(Financial achievement under SGSY, IAY, JGSY, EAS/SGRY – See Appendix 14.8)

Scheme under National Rural Employment Guarantee Act- 2005

14.74 The National Rural Employment Guarantee Act, 2005 seeks to enhance the livelihood security of the households in Rural areas of the country by providing at least one hundred days of guaranteed wage employment to every house hold whose adult members volunteer to do unskilled manual work.

14.75 Every household whose adult members volunteer to do unskilled manual work would be entitled to get registered with the Grama Panchayat and get a job card. They may submit their names, age and the address of the household to the Grama Panchayat at the village level for issuance of a job card. It shall be the duty of the Grama Panchayat to register the household, after making such enquiry as it deems fit and issue a job card containing such details of adult members of the household affixing their photographs.

14.76 Every registered household would be entitled to at least 100 days guaranteed employment at the wage rate. The act provides that the wage rate specified from time to time under any such notification shall not be at a rate less than sixty rupees per day.

14.77 Every eligible applicant, subject to the household entitlement, is entitled to get work within 15 days for as many days as he/she applies. Applications for work must be for at least fourteen days of continuous work. A period of employment shall ordinarily be at least fourteen days continuously with not more than six days in a week.

14.78 If the eligible applicant is not provided employment within 15 days of receipt of applications or from the date from which the applicant seeks employment (in the advance applications), he or she shall be entitled to a daily unemployment allowance, in cash.

14.79 The central government will provide 90% of funds and State Governments will provide for 10% of the total funds.

14.80 The details of financial position of NREGP for the years 2005-06 and up to the month of October 2006-07 are indicated below.

Table 14.9
Details of Financial Position of NREGP

(Rs. Lakh)

Year	Opening balance	Misc. Receipts	Release			Total Fund	Total Expdr	% of Expdr
			Centre	State	Total			
2005-06	0.00	35.00	1134.18	0.00	1134.18	1169.18	0.00	0
2006-07 (Oct.2006)	1169.18	0.00	2179.51	0.00	2179.51	3348.69	188.77	6

Box 14.5

The State Government shall meet the cost of the following:

- The cost of unemployment allowance payable under the scheme.
- 1/4th of the mentioned cost of the scheme including payment of wages to skilled and semi skilled works subject to the provisions of Schedule II of the NREG Act.
- Establish a fund called the State Employment Guarantee Fund.

14.81 **Wages and payments:** Not less than Rs. 60 per day per person (the minimum wage at Kerala is Rs.125). Minimum wages fixed for agricultural labourers by the respective State Governments will be paid as wages under the schemes till such times that the central Governments, specifies wage rate which will not be less than Rs. 60 per day per person. Wages will be paid fully in cash/partly in cash and partly in kind. However minimum 25% wages shall be paid in cash. Wages are to be paid on weekly basis and in any case not later than 15 days.

14.82 It is expected that the implementation of the programme would enable the unemployed poor households in **Wayanad and Palakkad** districts to cross the poverty line. It would also lead to a dramatic reduction in migration rate from rural areas to urban areas. It would be a major source of empowerment of women by way of employment generation

resulting in economic independence. A unique feature of this programme is that women are paid the same wages as are given to men.

14.83 The EGA is a unique opportunity to activate and empower the Panchayat Raj institution including Grama Panchayat and Grama Sabhas and it will give the scope for meaningful employment generation resulting in reduction of poverty in rural areas.

The major responsibility for programme implementation has been given to the Panchayat Raj institutions

14.84 The NREG Act, 2005 gives priority for water harvesting and water conservation, drought proofing including afforestation and plantation, construction of irrigation canals, micro and minor irrigation works and provision of irrigation facilities to land owned by Scheduled Castes and Scheduled Tribes. Renovation of traditional water bodies, land development and rural connectivity has also to be given priority in the Annual Works Programme that is to be prepared by the implementing agencies.

14.85 Government of India issued the notification on 2.2.2006 to launch National Rural Employment Guarantee Act for 200 selected districts in the country. Wayanad and Palakkad districts have been selected in Kerala for the implementation of the National Rural Employment Guarantee Act. Therefore, the preparatory work started immediately and the implementing machinery and other necessary arrangements were put in place.

14.86 The Five-year Perspective Plan for implementation of National Rural Employment Guarantee Act for Wayand District is being prepared by making adjustment in the Perspective Plan for the National Food for Work Programme. The action for the preparation of Perspective Plan in Palakkad is being taken as the election process is over.

14.87 An amount of Rs. 20 crore is earmarked for 2006-07 as state share for its various activities.

Attappady Environment Conservation and Wasteland Development Project

14.88 The objectives of the project are "Ecological restoration of degraded wasteland in Attappady and development of replicable models of participative eco-restoration, so as to prevent further degradation and promote sustainable method of livelihood to the local people (with special emphasis on tribal population) in harmony with resource base".

14.89 This is an eco-restoration project for reclamation of 507 Sq. Km degraded wasteland of Attappady and to provide livelihood to the local people particularly the Tribal population. The Japan Bank for International Co-operation (JBIC) is assisting this project. The total cost of this Project is Rs. 219 crore, of which the external assistance Rs. 177 crore.

14.90 The project is being implemented in a phased manner through a huge network of grassroot level community organizations. Prominent among these are the Users Association (UA) formed in 93 inhabited micro watersheds of the Project area. Further, there are the Ooru Vikasana Samithies (OVS), Joint Forest Management Committees (JFMC) and Local Action Groups (LAG) to execute the identified activities.

14.91 The State Government has set up a society named "Attappady Hills Area Development Society" (AHADS) for the implementation of the project.

14.92 The scope of the Project is to carry out the following works.

1. Solid and Biomass Management
2. Water Resources Development
3. Infrastructure facilities such as Project Offices, Equipment, Vehicles and Access roads
4. Detailed Survey, Detailed designing Evaluation
5. International Consultancy Services
6. Ecological Compatible Income Generating Schemes

14.93 The distinct but interlinked levels of Project Planning and Management have been adopted for the implementation of the Attappady Eco-restoration Project:

1. Perspective Planning at the project level through AHADS
2. At the watershed level through the Development Units (DUs)
3. At the level of micro-Watershed through the User Associations (UAs)
4. At the adivasi hamlets through Ooru Vikasana Samities
5. Interventions for forest conservation and afforestation through JFMCs

14.94 So far 93 user Associations (CA) have been formed in 93 Micro Watersheds with human population out of the total 146 MWSs. A total of 164 Ooru Vikasana Samithies (OVS) have been formed and activated at the Tribal Hamlets level.

Physical Achievements

14.95 The works so far completed consisted of Private Land Development (10,921 ha.), Private Drainage Line Treatment (418 K.m.). Planting activities – Treated Area (3811.02 ha.) No. of plants (14,44,264) total number of seedlings produced (25.39 lakh), Organic farming (7.1 ha), medicinal plan gardens (11.6 ha), production and use of vermi compost (24.35 tones), Mushroom production (550 kg harvested), Access Roads (24.50 Km), Construction of pits & trenches (11 lakh nos.), Check dams (5067), Contour bunds (7.4 km), Drainage canals (3.9 km) and retaining walls (10227 m) etc. A total of 329 kg of vegetable seeds distributed in 4666 nos of vegetable mixed kits of 25 gr/50 grm to beneficiaries. A joint venture with Central Silk Board to promote sericulture in a major way has been started. 49 beneficiaries started sericulture – 2,42,000 saplings planted in 20 ha. in association with Central Silk Board.

Land Reforms

14.96 The major objectives of Land Reforms are re-ordering of agrarian relations in order to achieve an egalitarian social structure, reduction of poverty among the rural poor, realizing the age old goal of land to the tiller, strengthening the asset base of the rural poor, increasing agricultural productivity. Kerala is acknowledged to be ahead of most other States in land reforms.

14.97 Distribution of surplus land is the important activity under Land Reforms. Land were distributed to 230 families from 01-04-2006 to 31-01-2007. 103 SC and 11 ST families were benefited under this scheme, and they received 8.83 acres and 2 acres of land respectively. The distribution of surplus land to SC/ST and others from 01-04-2006 to 31-01-2007 is shown in Appendix 14.9.

Urban Poverty

14.98 Poverty especially in the urban context is said to have positive functions, of course, not for the poor, but for the affluent. An affluent way of life, expression of ethical mortality in comparison to the immortality of the poor and fulfillment of various kinds of vested interests by the more affluent are made possible only at the cost of the poor. As per the National

Commission on Urbanization, Poverty cannot be characterized adequately in terms of income, expenditure or consumption pattern alone. The focus should be a human up gradation in resulting from poverty. Thus what is required is a multi dimensional concept inclusive of the environment, access to services and social psychological supports.

14.99 According to the National Sample Survey Organization (NSSO) from its 55th Round Survey (July 1999-June 2000), the poverty ratio is estimated at 27.9 per cent in rural areas and 23.62 per cent in urban areas and 26.10 per cent for the country as a whole. In spite of the remarkable development of Kerala could achieve in health, literacy and social sectors, threats of poverty grows. In Kerala, the poverty ratio is estimated 9.38 per cent in rural areas and 20.27 per cent in urban areas and 12.72 per cent for the state. The composition of the poor has been changing – rural poverty is getting concentrated in the agricultural labour and artisan households and urban poverty in the casual labour households.

14.100 Rapid growth of urban population, expansion of existing towns and cities and low investment in urban development have created serious deficiencies in basic amenities in the country. The shortages are serious for the urban poor, in particular, due to inequality in the access to these amenities.

14.101 Urban poverty reduction strategies are delivered through major Centrally sponsored Urban Poverty Reduction Programmes viz. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY), Integrated Housing and Slum Development Programme (IHSDP), National Slum Development Programme (NSDP) and Valmiki Ambedkar Awas Yojana (VAMBAY) and they are implemented by Kudumbashree. The physical and social developments as well as direct assistance to employment generation are the schemes taken up under these programmes. Kudumbashree has organized Community Based organizations (CBOs) of the poor in the state. Community Development Societies (CDS) act as delivery system for various Centrally Sponsored Urban Poverty Reduction Programmes.

14.102 The CDSs has evolved and crafted an innovative methodology for assessing the urban poor. Every two year, a survey is conducted by using the poverty index following non-economic criteria with nine risk factors reflecting the poverty situations of families. The neighbourhood community verifies these factors with the identified families.

Box 14.6

The Nine Risk Factors of the Poverty Index in Urban Area

A family having

- Less than 5 cents of land/no land
- Dilapidated house/no house
- No sanitary latrine
- No access to safe drinking water within 150 meters
- Women headed household
- No regular employed person in the family
- Socially disadvantaged groups SC/ST
- Mentally retarded/disabled/chronically ill member in the family
- Families without colour TV

Any family having 4 or more factors is classified as a family at risk.

Source : Kudumbashree, Thiruvananthapuram

Urban Poverty Reduction Programmes

1. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY)

14.103 Swarna Jayanthi Shahari Rozgar Yojana (SJSRY) is a Centrally Sponsored Scheme launched in December 1997. The objective of this integrated poverty alleviation programme is to provide gainful employment to the urban unemployed and under employed poor by setting up of self employment ventures and taking up of wage employment in public works. The programme is being implemented by the Urban Local Bodies through Community Based Organization (CBOs) of the poor.

14.104 SJSRY has the following 3 components

1. Urban Self Employment Programme. (USEP)
 - Assistance for setting up individual enterprises
 - Development of Women and Children in Urban Areas. (DWCUA) – Assistance to Urban Poor Women for setting up group enterprises.
2. Urban Wage Employment Programme.
 - Revolving Fund for Women Self Help Groups and Group Enterprises.
 - Skill upgradation training, General training, Management of Community Development Societies.
 - Conducting Urban household surveys
3. Community Structure.

14.105 **Urban Self Employment Programame:** Urban Self Employment Programame (USEP) assist individual urban poor for setting up gainful self employment ventures. The project cost is Rs. 50,000 per individual but if two or more eligible persons join together in a partnership, higher project cost is allowed, provided individual share does not exceed Rs. 50,000. Subsidy is provided at the rate of 15 % of the project cost subject to a maximum of Rs. 7500 per beneficiary. Beneficiary share is 5% of the project cost either in cash or in kind or both. Out of the total project cost, 80% is sanctioned as loan by financial institutions including Banks and Thrift and Credit Societies. A house to house survey for identification of genuine beneficiaries is being done. Now economic Para methods are to be applied to identify the urban poor. Women beneficiaries belonging to widows, divorcees, single women, where women are the sole earners is to be ranked higher in priority. Not less than 30% of the beneficiaries should be women, 3% to be reserved for disabled and Scheduled Caste / Scheduled Tribe beneficiaries are given special attention in proportion of their strength in the local population.

14.106 **Development of women and children in urban Areas:** Development of women and children in urban Areas (DWCUA) assist the urban poor women for starting gainful employment through group activity. The scheme is extended to the poor women of urban areas who decide to set up self employment enterprise as a group. Minimum number of a group is fixed as 10. The project cost is Rs. 25 lakhs or less. The DWCUA group is given a subsidy of Rs. 1.25 lakh or 50% of the project cost whichever is less. To ensure the contribution of members, 5% of the project cost is brought as their share, either in cash or in kind or as both and 45% of the project cost is as bank loan.

14.107 These programmes are being implemented at the Urban Local Body through Community Based Organizations (CBOs) of the poor. Community Organizations like Neighborhood Groups (NHGs), Neighborhood Communities (NHCs) and Community Development Societies (CDSs) are set up the target areas based on the Urban Basic Services for the Poor (UBSP) pattern. Identification of beneficiaries, Selection of Projects for micro

enterprises, preparation of application, implementation, monitoring, social audit etc. are done through the community Development Society (CDS) system of the respective Urban Local Bodies.

14.108 Kudumbashree has organized Community Based Organization (CBOs) of the poor in all the 53 municipalities and 5 Corporations in the State. There are 11862 Neighborhood Groups (NHGs) covering 314299 BPL families, 986 Area Development Societies (ADSs) and 59 Community Development Societies (CDSs). The CBOs in the urban areas act also as Thrift and Credit Societies and facilitate savings and credit to the poor. In 2006, the CBOs in urban areas mobilized thrift fund to the tune of Rs. 4357.21 lakhs and disbursed loan worth Rs. 4857.02 lakhs. District wise details of NHGs, ADSs, CDSs and Thrift Fund mobilized are given in Appendix.14.10

14.109 Under the SJSRY, so far Kudumbashree have developed 20,477 micro enterprises of which 1,696 units area group enterprises (each group with minimum 10 women) and 18,781 are individual enterprises. Details of micro enterprises and group enterprises are given in Appendices 14.11 and 14.12. Most of the group enterprises are innovative and are owned and operated by the women from poor families. The activities of group enterprises vary from solid waste management to the computer hardware manufacturing, Post-partum care to Courier service.

Table 14.10
Plan Progress of SJSRY (2002-03 to 2006-07)

Year	Fund Received				% of Expenditure
	Central Share	State share	Total	Expenditure	
2002-03	301.99	150	451.99	453.04	100.2
2003-04	610.50	400.00	1010.50	452.06	44.7
2004-05	554.95	175.00	729.95	480.48	65.8
2005-06	681.26	227.09	908.35	305.15	33.6
2006-07 up to Dec- 06	319.61	Not released	319.61	668.73	209.2
Total	2468.31	952.09	3420.4	2359.46	68.9

Source : Kudumbashree, Thiruvananthapuram

Table 14.11
Physical achievements of SJSRY (2002-03 to 2006-07)

Year	Individual Enterprises Developed	Group Enterprises Developed	Persons Trained	Mandays created under Wage Employment
2002-03	803	181	1829	1000
2003-04	432	176	--	2000
2004-05	1615	139	4736	16400
2005-06	2055	179	4496	67000
2006-07 (Up to Dec-06)	1334	172	3239	32111
Total	6239	847	14300	118511

Source : Kudumbashree, Thiruvananthapuram

2. Integrated Housing and Slum Development Programme (IHSDP)

14.110 Integrated Housing and Slum Development Programme (IHSDP) is a newly launched Centrally sponsored programme, for housing and infrastructure development in Urban Slums. Government of India launched this programme in December 2005. IHSDP was evolved by

merging the ongoing Centrally sponsored programmes for slum development viz. National Slum Development Programme (NSDP) and Valmiki Ambedkar Awas Yojana (VAMBAY).

14.111 The scheme is applicable to all cities and towns as per 2001 Census except cities/towns covered under Jawahar Lal Nehru National Urban Renewal Mission (JNNURM). It will be implemented in the 56 urban local bodies in the state excluding Kochi and Thiruvananthapuram corporations.

14.112 The basic objective of the scheme is to strive for holistic slum development with a healthy and enabling urban environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas. The components for assistance under the scheme will include all slum improvement/upgradation/relocation of projects including upgradation/ new construction of houses and infrastructural facilities, like water supply and sewerage. Cost of land for such projects will not be provided under the programme and has to be borne by the State Government. Housing should not be provided as free to the beneficiaries by the State Government. A minimum of 12% beneficiary contribution should be stipulated, which in the case of SC/ST/BC/OBC/PH and other weaker sections shall be 10%. Minimum floor area of dwelling unit is not less than 25 sq.mtrs. Ceiling cost for dwelling unit will be @ Rs.80000 per unit for cities other than those covered under the Jawahar Lal Nehru National Urban Renewal Mission (JNNURM).

14.113 Kudumbashree is the State Nodal Agency for the scheme. The funding pattern of IHSDP is 80:20 shared by the Central and State Governments. The State Share (20%) would be equally shared (ie, 10% each) by State Government and concerned Urban Local Governments. Central assistance released will go directly to the nodal agency as Additional Central Assistance. Release of Central share to nodal agency will depend on availability of State share and submission of utilization certificates in accordance with the provisions of General Financial Rules. State share has to be deposited in a separate account to become eligible for the central grant. 50% of the central grant will be released to the State Nodal Agency after verification of the state share and on signing the tripartite Memorandum of Agreement

3. National Slum Development Programme (NSDP):

14.114 NSDP is also a continuing scheme started implementation during 1997-98. It is 100% centrally sponsored programme formulated to tackle the problems of urban slum dwellers. Under this scheme there is provision for physical amenities such as water supply, storm water drainage, community bathroom, widening and paving of existing lanes, sewers, community latrines, street light, community infrastructure, community health centres, primary health care, social amenities, etc. The scheme also has a component for construction of new houses and shelter up gradation. The pattern of funding is 70% as loan and 30% as grant. Financial and physical achievements of NSDP are given in Table 14.12 and 14.13.

Table 14.12
Financial Achievement of NSDP (2002-03 to 2005-06)

<i>(Rs.Lakh)</i>			
Year	Amount Released by GOI	Amount Released by State Govt.	Expenditure
2002-03	972.00	1997.00	725.55
2003-04	972.00	972.00	825.49
2004-05	2083.00	2083.00	884.98
2005-06	-	-	1448.12
Total	4027.00	5052.00	3884.14

Source : Kudumbashree, Thiruvananthapuram

Table 14.13
Physical Achievement on NSDP (Cumulated) as on 31-03-2006

Sl. No.	Components	Total
1	House Construction including repair of houses	67953
2	No. of Latrine	52396
3	No. of Wells	7550
4	No. of Garbage Bins	1402
5	Roads & Pedestrian footpaths (Distance in Km)	7776
6	Storm Water Drainage (in Km)	218
7	Extension of Pipe line (in meters)	1498
8	Wiring	20725
9	Streetlight (No. of post)	1681
10	Primary Education Centres & Anganwadi (building)	150
11	Community Hall	60
12	Primary Health Centres	40

Source : Kudumbashree, Thiruvananthapuram

4. Valmiki Ambedkar Awas Yojana (VAMBAY)

14.115 Valmiki Ambedkar Awas Yojna (VAMBAY) is a centrally sponsored scheme launched during 2001-02 for the benefit of slum dwellers. It mainly aims at ameliorating the housing problems of the slum dwellers, who are living below the poverty line. The scheme shared on 50:50 basis by Central and State Governments. In Kerala the 50 % State share is equally contributed by State Government and concerned Urban Local Bodies. VAMBAY will be discontinued from 2007-08 onwards.

14.116 The financial limit for construction of a housing unit under the scheme is Rs.40000. The amount is released in four installments – Rs. 5,000/- after executing the agreement, Rs.20000/- after completing basement level, Rs. 10000/- after completing the lintel level and Rs. 5,000/- will be released after fully completing the house. Financial and physical achievements of VAMBAY are given in Table 14.14 and 14.15

Table 14.14
Financial Status of VAMBAY (Release of Fund) - 2001-02 to 2005-06

Year	Release of Fund (Rs. in Lakhs)			
	Central Share	State Share	ULB Share	Total
2001-02	266.00	266.00	--	532.000
2002-03	2305.65	1000.00	1152.825	4458.475
2003-04	1385.20	1000.00	692.600	3077.800
2004-05	1227.44	1000.00	613.70	2841.14
2005-06	309.30	1000.00	154.60	1463.90
Total	5493.59	4266.00	2617.725	12373.315

Source : Kudumbashree, Thiruvananthapuram

Table 14.15
Physical Achievement of VAMBAY (2001-02 to 2005-06)

Year	No. of Houses Targeted	Houses Completed Basement Level	Houses Completed Lintel Level	Houses Completed
2001-02	1330	1220	1220	1220
2002-03	11528	11438	11315	11260
2003-04	6926	6604	6218	5817
2004-05	6137	5514	4858	3487
2005-06	1546	731	398	99
Total	27467	25507	24004	21883

Source : Kudumbashree, Thiruvananthapuram

Social Security and Welfare

14.117 The social security measures in the State can be broadly categorized into institutional care and pension schemes. Government departments, statutory and non-statutory boards, are implementing the social security and pension schemes. Social security has given greater thrust on welfare than on relief measures. Successive Governments in Kerala have introduced nearly 30 social security schemes and more than 3% of the State Budget was being spent on social security initiatives. Kerala has several achievements in introducing social security measures for the disabled, old aged, pensioners, women in deprived status, children in need of care and protection, welfare of prisoners, ex-servicemen and war-widows, workers in unorganized sectors, etc.

Institutional Care and Protection

14.118 The major welfare institutions run by Social Welfare Department offer the following services.

1. **Mahilamandir:** The Mahilamandirs in the state takes care of the maintenance, education, vocational training activities, rehabilitation etc. of the abandoned women above the age of 13.
2. **After Care Home:** These institutions which are meant for boys and girls coming from Juvenile Justice/Welfare Institutions are intended to give care, protection and rehabilitation to children/adolescents in the age group of 14 to 21.
3. **Rescue Home:** The protection and rehabilitation of the girls above the age of 13 who are engaged in immoral activities or those who are in fear of being forced into such activities are being taken care of.
4. **Children's Home:** This institution functioning in Alappuzha district provides care and protection to destitute children and children of leprosy patients.
5. **Old Age Homes and Day Care Centre:** These focus on care, protection and rehabilitation of the aged by providing food, clothing, medical services, shelter etc.
6. **Home for Physically Handicapped:** This institution takes care of the maintenance and rehabilitation of the destitute handicapped above the age of 16. Separate homes for men and women are there.
7. **Asha Bhavan:** It is an institution where mentally cured patients abandoned by relatives are taken care of by providing food, medicine, clothing etc. and rehabilitation / reunion with family whenever possible.
8. **Care Home for the Disabled:** The maintenance, education and rehabilitation of the handicapped children in the age group of 4-16 are taken care of.
9. **Short Stay Home:** The women who are in distress caused out of family discord, those fearing being forced in to immoral activities are housed in this institution. They are given proper counseling and rehabilitated within a stipulated period.

10. **Home for Mentally Deficient Children:** Special education, maintenance and rehabilitation of mentally challenged children up to the age of 16 are taken care of in this institution.
11. **Pratheeksha Bhavan:** Care, protection, maintenance of those mentally challenged persons above the age of 16 are looked after.
12. **Vocational Training Centres:** Vocational training centres are functioning in the state to provide vocational training courses in DTP, Computer, Book Binding etc. for the physically handicapped boys and girls so as to rehabilitate them.

14.119 There are 50 Welfare Institutions in Kerala. They are 12 Mahila Mandirs, 15 Old Age Homes, 3 Homes for Physically Handicapped, 6 Asha bhavans, 3 Care Home for the Disabled, 2 Rescue Homes, 3 After Care Homes, 1 Children's Home, 1 Short Stay Home, 1 Home for Mentally Deficient Children, 1 Pratheekshabhavan and 2 Vocational Training Centres. Details are given in Table 14.16.

14.120 The number of inmates in the Government welfare institutions is far below the sanctioned strength. As against the total sanctioned strength of 3025 inmates in the 50 institutions, the occupants were 901 in 2003, 1398 in 2004 and 1808 in 2005. This indicates the need for revamping and restructuring the institutions to avoid excess capacity and improve the delivery of services. The sanctioned strength and district-wise beneficiaries in welfare institutions are given in Appendix 14.13.

Table 14.16
Welfare Institutions, Sanctioned strength and Inmates – 2006

Sl. No.	Institutions	Numbers	Inmates (Nos)	Sanctioned Strength (Nos)
1	2	3	4	5
1	Mahilamandir	12	221	300
2	After Care Home	3	81	250
3	Rescue Home	2	32	200
4	Children's Home	1	36	50
5	Old Age Home	15	463	1175
6	Homes for Physically Handicapped	3	70	175
7	Asha Bhavan	6	191	300
8	Care Home for the disabled	3	102	125
9	Short Stay Home	1	13	50
10	Home for Mentally Deficient Children	1	24	50
11	Pratheeksha Bhavan	1	30	50
12	Vocational Training Centre	2	180	300
	Total	50	1443	3025

Source: Social Welfare Department

14.121 Social Welfare Department runs Old Age Homes and Day Care Centre for the aged. There are 487 inmates in these institutions as against the sanctioned strength of 1225 persons (Table 14.17).

Table 14.17
Old Age Homes and Day care Centre for Aged during 2006

Sl. No.	Institution	Institutions	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Old Age Home	15	463	1175
2	Day care Centre & Old Age Home	1	24	50
	Total	16	487	1225

14.122 Network of 622 Orphanages and Fondling Homes in the state are being run by NGOs, the total inmates in these institutions are 52064 in 2006 as against the sanctioned strength of 52000. Available data show that there are 707 Non-Governmental Organizations engaged in various social service activities.. These Institutions have an intake capacity of 67574 inmates. As against it, there are 64073 inmates (Table 14.18).

Table 14.18
Non-Governmental Welfare Organizations and inmates – 2006.

Sl. No.	Category	Institutions (Nos)	Inmates (Nos)	Sanctioned strength (Nos)
1	Orphanages & Fondling Homes	622	52064	52000
2	Beggar Homes	3	470	419
3	Old Age Homes	82	11539	14835
	Total	707	64073	67574

Disability

14.123 National Sample Survey Organization in the year 2002 estimated that the number of persons with disabilities is 1.85 crore which constitute 1.8% of the population. Estimates by different types of disabilities are: (i) Locomotor - 106.34 lakh, (ii) Hearing - 30.62 lakh, (iii) Speech - 21.55 lakh, (iv) Blindness - 20.13 lakh, (v) Low vision - 8.13 lakh, and (vi) Mental Retardation - 9.95 lakh. According to the results of Census 2001, there are 2.19 crore persons with disabilities which constitute 2.13 per cent of population (India-2006).

State Commissionerate for Persons with Disabilities

14.124 Persons with Disabilities Act, 1995 - a comprehensive law has been enacted and enforced in February, 1996. The law deals with both prevention and promotion aspects of the rehabilitation such as education, employment and vocational training, creation of barrier free environment, provision of rehabilitation services for persons with disabilities, institutional services and supportive social security measures like unemployment allowances and grievance redressal machinery at the Central and State Level. The State Commissionerate in Kerala conducts awareness camps, mobile medical board as per PWD Act, redressal of the complaints of disabled persons, inspection of institutions for disabled, issuing certificate on disablement, seminars/meetings etc.

Box 14.7 **AIDs and Appliances**

Through the Central scheme for Assistance to Disabled Persons for Purchase - Fitting of AIDs and Appliances, 100 per cent financial assistance is provided to the implementing agencies. Aids and appliances amounting up to Rs. 6000 are covered under the scheme. However, for students with disabilities the limit is Rs. 8000 during their study period after IX standard. It is provided free-of-cost if the income of the disabled beneficiary or his guardian is up to Rs. 6,500 p.m. and 50 per cent of the cost is covered, if the income of the beneficiary is between Rs. 6,501 to 10,000 p.m.

Source: India 2006.

14.125 There are 6 institutions for the care of physically and mentally retarded children in the state with facilities for 750 children. Details are given in Table 14.19.

Table 14.19
Institutions for Physically & Mentally retarded persons – 2006

Sl.No	Institutions	Total Inmates (Nos)	Sanctioned Strength (Nos)
1	Home for Mentally Deficient children	24	50
2	Home for physically Handicapped	70	175
3	Home for cured Mental patients	191	300
4	Care Home for Disabled Children	15	50
5	Home for Physically Handicapped (Aged)	102	125
6	Pratheeksha Bhavan (Home for Mentally Retarded above 16 years)	30	50
	Total	432	750

National Institute of Speech and Hearing (NISH)

14.126 The National Institute of Speech and Hearing established in 1997 aims at the education, training, treatment and rehabilitation of hearing impaired persons. The major activities of the Institute are (i) Audiology and speech division. (ii) Pre-school parent Guidance centre, (iii) Vocational Training Centre (iv) Academic programmes, (v) Medical Division including psychology. The first phase of construction of NISH campus commenced in 2004 on 10-acre land allotted by the Government at Aakkulam.

Kerala State Handicapped Persons Welfare Corporation

14.127 Kerala State Handicapped Person's Welfare Corporation implements self employment programmes and distributes aids and appliances for disabled persons. During 2005-06, 996 aids and appliances were distributed costing Rs.28.00 lakh. It is against 4368 aids and appliances costing Rs. 28.00 lakhs during 2004-05. Table 14.20 gives details of self employment assistance provided to physically handicapped persons. More details are given in Appendix 14.14.

Table 14.20
Self Employment Assistance to Disabled Persons

Year	Applications Received (Nos)	Applications sanctioned and forwarded to Banks	Applications sanctioned by the Bank(Nos)	Amount released by the Corporation (Rs)
1	2	3	4	5
2001-02	1348	1348	242	4,81,00
2002-03	1303	1303	281	5,62,500
2003-04	1256	1256	344	7,56,535
2004-05	1417	1417	314	7,73,475
2005-06	1503	1503	354	8,74,660

State Institute for the Mentally Handicapped

14.128 C.H. Mohammed Koya Memorial State Institute for the Mentally Handicapped at Pangappara, Thiruvananthapuram is an autonomous society under Education Department imparting special education, training and rehabilitation service to the mentally retarded in the State.

Social Security and Pension

14.129 Several pension schemes are being implemented by Government as a safety net for vulnerable sections of the society. There are more than 40 pension schemes of which 20 are financed by the State itself. These pension schemes are implemented directly by the Government or through different Welfare Fund Boards. More than 37 lakh people are benefited through different pension schemes.

14.130 The National Old Age Pension Scheme is part of National Social Assistance Programme of Government of India and was implemented from 1995 for persons above 65 years of age. Under this scheme central share is Rs.75 and state share is Rs.35 per month. During 2006, 1,31,912 persons were benefited by this scheme. District wise beneficiaries on pension schemes implemented through Revenue Departments are given in Appendix 14.15. The details on the rate of assistance of social security/pension schemes in the State including Welfare Fund Boards are given in Appendix 14.16.

Social Protection Measures Exclusively for Women

14.131 Women constitute 51.42 % (2001 census) of the total population of the state. Several schemes for the social security of women are under implementation. Destitute /widow pension is a major scheme. The scheme benefits 259438 women and the monthly rate of pension is Rs.110 during 2006. Of the total number of beneficiaries, Thiruvananthapuram has the largest number with 35376 women and the lowest number is in Idukki District with 3082 beneficiaries. Unmarried women above 50 years are also paid a monthly pension @ Rs.110 and the scheme benefited 29839 women during the period under review. Its district-wise details are given in Appendix 14.15. Financial assistance is also given to poor widows for the marriage of their daughters. The rate of assistance is Rs.5000.

Kerala Women's Commission

14.132 Kerala Women's Commission was established in 1996 with the objective to improve the status of women in Kerala and to enquire into unfair practices against women. Conducting gender concentration seminars, adalaths, district level Jagratha Samithies, conducting DNA tests, publishing of Sthree Sakthi magazine, managing short stay home, petition/redressal are the major activities. The nature of complaints show that majority of them relate to harassment of women, harassment by husband, dowry harassment, and neighbours' nuisance. District-wise complaints received by Kerala Women's Commission from January 2006 to September 2006 are given as Appendix 14.17

Kerala State Women Development Corporation

14.133 KSWDC was established in 1988 with the objective of formulating, promoting and implementing women welfare and development schemes. Various self-employment schemes, entrepreneurial development, employment and training program etc are the major programs. KSWDC has been selected as State Channelising Agency for National Corporations such as NSFDC, NSTFDC, RMK, NBCFDC, NMDFC and NHFDC.

Women Development Programmes

14.134 Major development programme are implemented through the Social Welfare Department. Vocational Training Centers, starting of one day homes, economic support to women headed families, development of Anganwadi Centers as community resource centres for pregnant and lactating mothers, adolescent girls, and overall development of women and children are provided through various schemes and programs.

Box 14.8**Women's Development Programs in Kerala through G.O.I.**

STEP: Support to Training and Employment Programs for Women (STEP) was launched in 1986-87. It aims at making a significant impact on women in traditional sectors by upgrading skills and providing employment on project basis.

Swawalambam: Previously known as NORAD/Women's Economic Programs, was launched in 1982-1983. The objective is to facilitate women to obtain employment or self-employment on a sustainable basis.

Swayamsidha: Swayamsidha is an integrated project for the development and empowerment of women based on the formation of Self Help Groups (SHG's).

Swa-Shakti: Also known the Rural Women's Development and Empowerment Project supported by the World Bank and International Fund for Agricultural Development (IFAD). Not started in Kerala.

Condensed courses of Education of Women: This scheme implemented through the Central Social Welfare Board and aims at facilitating social and economic empowerment of women and providing them with education and relevant skills.

Working Women's Hostel: Under this scheme assistance is provided to non-governmental organisations, co-operative bodies and other agencies engaged in the field of women's welfare.

Swadhar: This was launched in 2001-2002 for the benefit of women in difficult circumstances such as destitute widows, women prisoners released from jail, women survivors of natural disasters, trafficked women or victims of sexual crimes etc.

Short Stay Homes: This scheme was launched in the year 1969 and is now implemented through Central Social Welfare Board with the objective to protect and rehabilitate those women and girls who are facing any kind of problems, moral danger etc.

Family Counselling Centres: To provide preventive and rehabilitative services to women and children who are victims of atrocities and family mal-adjustments.

National Policy on Empowerment of Women: Launched on 20th March 2001 to bring about overall development of women and to eliminate all forms of discrimination against women.

Grant-in-aid for Research, Publication and Monitoring: To promote research studies for development of innovative programmes etc.

Organizations:

National Commission for Women: A statutory body constituted under the National Commission for Women Act, 1990-relating to safeguards for women under the Constitution as well as under other laws.

Rashtriya Mahila Kosh: Started on 30th March 1993 to facilities credit support to poor women for their socio-economic upliftment.

National Institute of Public Co-operation and Child Development (NIPCCD): An autonomous organization under Department of Women and Child Development. The Institute is the apex body for training of functionaries of the ICDS programs.

Central Social Welfare Board: Set up in August 1953. The programmes of the Board include socio-economic programmes for needy/destitute women, vocational training courses for women/awareness generation, family counseling etc.

Source: India2006.

Welfare of Ex-Servicemen

14.135 Department of Sainik Welfare implements the welfare activities of Ex-Servicemen and War Widows mainly through funds from non-plan provision of state budget and interest accrued from two Welfare Funds viz (i) State Military Benevolent Fund & Flag Day Fund and (ii) Amalgamated Fund for Reconstruction and Rehabilitation of Ex-Servicemen.

14.136 Re-employment opportunities of Ex-Servicemen and employment to Widows are limited to State service and Quasi Government Institutions. Hence new ventures and policies are required to absorb those seeking employment. The present status of Ex-Servicemen and widows in Kerala holding identity cards issued by Zilla Sainik Welfare Officers for the last six years are given in Table 14.21.

Table 14.21
Ex-Servicemen and War Widows in Kerala – 2000 to 2006

Year	Ex-Servicemen (nos)	War Widows (nos)
2000	129525	278
2001	134522	276
2002	138148	272
2003	142088	269
2004	145140	267
2005	146952	263
2006(upto 6/2006)	148224	261

Source: Department of Sainik Welfare

14.140 Major activities implemented through the Sainik Welfare Department and its achievements during 2006 are shown in Table 14.22.

Table 14.22
Major Welfare schemes/ achievements of Ex-Servicemen/War Widows during 2006

Sl. No.	Name of Scheme	Beneficiaries (Nos)	Amount spent during 2006 (upto 10/06) (Rs)
1	Financial assistance to Second World War Veterans who are in indigent circumstances @Rs. 400 p.m.	3065	76,18,615
2	Construction of houses for disabled Ex-Servicemen	13	5,55,000
3	Cash awards to recipients of Gallantry Decorations in the Defence Service and dependents of defence personnel	5	1,71,320
4	Financial help for children of Ex-service men	145	1,77,000

Source: Department of Sainik Welfare

Welfare of Prisoners

14.137 The Jail infrastructure in the state consists of 3 Central Prisons, 1 Open Prison, 3 District Jails, 5 Special Sub Jails, 26 Sub Jails, 1 Women prison and one Borstal School. In 2006, there were 7118 prisoners out of which 177 were women. The details of district wise jail prisoners are furnished in Table: 14.23.

Table 14.23
Jails in Kerala and District-wise Prisoners – 2006

Sl .No.	District	Central Jail		District Jail		Sub Jail		Open Jail		Women Jail		Special Sub Jail		Grand Total	
		Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Trivandrum	160 2	26	289	0	75	3	278	0	40	40	0	0	2284	69
2	Kollam	0	0	175	11	132	6	0	0	0	0	0	0	307	17
3	Pathanamthitta	0	0	0	0	162	3	0	0	0	0	0	0	162	3
4	Alappuzha	0	0	0	0	105	0	0	0	0	0	47	6	152	6
5	Kottayam	0	0	0	0	30	0	0	0	0	0	88	1	118	1
6	Idukki	0	0	0	0	115	2	0	0	0	0	0	0	115	2
7	Eranakulam	0	0	0	0	294	6	0	0	0	0	0	0	294	6
8	Thrissur	531	25	0	0	117	0	0	0	0	0	183	0	831	25
9	Palakkad	0	0	0	0	106	0	0	0	0	0	145	5	251	5
10	Malappuram	0	0	0	0	174	4	0	0	0	0	0	0	174	4
11	Kozhikode	0	0	435	4	97	2	0	0	0	0	0	0	532	6
12	Wayanad	0	0	0	0	65	0	0	0	0	0	0	0	65	0
13	Kannur	165 8	33	0	0	41	0	0	0	0	0	52	0	1751	33
14	Kasargod	0	0	0	0	82	0	0	0	0	0	0	0	82	0
	Total	3791	84	899	15	1595	26	278	0	40	40	515	12	7118	177

Source: Department of Prisons

14.138 The modernization of prisons mainly consists of 75% financial assistance from Government of India and 25% by the State Government. Construction of new jails to reduce overcrowding, repair and renovation of existing jails, improvement in sanitation and water supply and living accommodation for Prison Staff are the major components. The following new jails are now being constructed to reduce the overcrowding:

1. Women's Prison, Kannur
2. Sub Jail, Kannur
3. Sub Jail, Kozhikode
4. Sub Jail, Viyyur

14.139 Expansion and renovation works have been completed in various jails. An improvement in sanitary and water supply facilities has been arranged in 9 jail institutions. There are 112 new residential quarters under construction for the use of Prison staff.

Juvenile Homes

14.140 In Kerala, there are 7 Juvenile Homes, 14 Observation Homes and one Balasadanam (Certified as juvenile home). More than 7000 children in the age group of 5 to 18 years are accommodated in these homes. The Government of India gives maintenance grants @ Rs. 150 per month per inmate and bedding grants @ Rs. 50 per annum per inmate. The per capita maintenance charge per inmate is about Rs.750 per month for food, clothing, and bedding and for contingency charges.

Adoption

14.141 The state government have approved and declared the state policy, i.e., State Plan of Action for the Child in Kerala 2004 and reiterated its commitment to children. The major activities proposed are; (i) to establish baby cradle centres (Amma Thottils) in four district hospitals i.e., Kollam, Pathanamthitta, Idukki and Kottayam (2) strengthen/organize adoptive parents organization in all districts and organize district level and state level get-together conferences of adoptive parents, adoptive children and other stakeholders (iii) adoption awareness programme in each district by involving state departments such as Local Self Governments, Revenue, Police, Social Welfare, Health, NGOs and other stakeholders (iv) minimum standards of services and procedures for adoption placement agencies and minimum standards of services for all functionaries will be developed with the help of expert academic institutions. Details on adoption of children as in-country and inter-country under Juvenile Justice law from 2002-03 to 2005-06 are given in Table 14.24 shown below:

Table 14.24
Adoption of Children in Kerala – 2002-2006

Year	In-country adoption			Inter-country adoption		
	Male	Female	Total	Male	Female	Total
2002-03	125	136	261	12	19	31
2003-04	134	152	286	10	10	20
2004-05	115	104	219	12	13	25
2005-06	119	147	266	15	16	31

Source: Social Welfare Department

Welfare Fund Boards

14.142 In Kerala, there are 22 Welfare Fund Boards providing welfare assistance and income security and employment to workers in the unorganized sector. Details available for 22 Welfare Fund Boards show that the total number of members enrolled in these Boards are 49.95 lakh which constitute 62.33% of the total number of estimated workers. Out of them, 16.27 lakhs are in agriculture sector and 11.58 lakhs are in construction sector. Female workers outnumbered males in cashew, tailoring, coir, and beedi industries. In Cashew Workers Welfare Fund Board, 96% enrolled workers are female. Similarly in coir, 80% workers are female. In Boards like Toddy Workers, Head Load Workers and Abkari Workers above 99% of the workers are male. Details regarding estimated workers, enrolled workers and male-female workers are shown in Table 14.25

Table 14.25
Workers in the Sector and Workers Enrolled as Members in the Welfare Fund Boards – 2006

Sl. No	Name of the Board	Total workers in the sector (Nos)	Members enrolled in the Board (Nos)			Percentage of Members to total workers		
			Male	Female	Total	Male	Female	Total
1	Kerala Coir Workers Welfare Fund Board	400000	41744	165978	207722	10.45	41.50	51.95
2	Kerala Cashew Workers WFB (2005)	220000	7800	187200	195000	3.55	85.09	88.64
3	Kerala Toddy Workers WFB	39880	39624	256	39880	99.36	0.64	100
4	Kerala Building and Other Construction Workers WFB	1500000	-	-	1158040	-	-	100
5	Kerala Tailoring Workers WFB	500000	100845	248773	349618	20	50	70

6	Kerala Bamboo, Kattuvalli and Pandanus Leaf Workers WFB	15006	757	14249	15006	5	95	100
7	Kerala Agriculture Workers WFB	1653601	--	--	1626908	--	--	98.38
8	Kerala Head Load Workers WFB	300000	84363	389	84752	28.12	0.13	28.25
9	Kerala Artisans and Skilled Workers WFB	231177	--	--	231177	--	--	100
10	Kerala Hand Loom Workers WFB	100000	23399	26188	49587	23.4	26.2	49.6
11	Keala Beedi and Cigar Workers WFB	150000	12894	26177	39071	8.6	17.5	26
12	Kerala Abkari Workers WFB	2057	-	-	2057	-	-	100
13	Labour Welfare Fund Board	508454			489808			96.33
14	Kerala State Lottery WFB	32296	3850	171	4021	11.92	0.52	12.44
15	Traders Welfare FB	61375			23086			14.17
16	Kerala Motor Transport Workers Welfare Board	273175	58372	--	58372	21.37	--	21.37
17	Kerala Anganwadi Workers & Helpers WF(2004)	50786	--	42074	42074	--	82.84	82.84
18	Kerala Autoickshaw Workers W.F Board	303092	19088	--	19088	6.3	--	6.3
19	Kerala Khadi Workers Welfare Fund Board	16933	100	16833	16933	1	99	100
20	Kerala Fishermen's WFB	277862	222611	55251	277862	80	20	100
21	Kerala Ration Dealers Welfare Fund Board	14363	11310	2348	13658	78	17	95
22	Kerala Co-operative Employees Board (2004)	20610	-	-	20610	-	-	100
	Total	7964751			4964330			62.33

14.143 The expenditure on administration and for welfare measures by each Welfare Fund Boards is given as Table 14.26.

Table 14.26
Expenditure on Administration and Welfare Measures in Welfare Fund Boards – 2006

(Rs. Lakh)

Sl. No	Name of the Board	Administrative Expenditure		Expenditure on Welfare Measures		Total Expenditure	
		2004-05	2005-06	2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6	7	8
1	Kerala Coir Workers Welfare fund Board	61.00	67.00	499.00	1212	560.00	1279
2	Kerala Cashew Workers WFB	67.12	NA	585.18	NA	652.30	NA

3	Kerala Toddy Workers WFB	510.63	602.73	6794.85	6591.46	7305.48	7194.14
4	Kerala Building and other construction W WFB	198.53	NA	2620.98	NA	2819.51	NA
5	Kerala Tailoring Workers WFB	79.62	84.63	193.03	231.45	272.65	316.08
6	Kerala Bamboo, Kattuvalli and Pandanus Leaf W WFB	5.15	4.83	6.91	6.82	12.06	11.65
7	Kerala Agriculture W WFB	130.06	118.55	457.20	744.93	487.20	863.48
8	Kerala Head Load Workers WFB	666.72	733.52	3042.55	3219.38	3709.27	3952.90
9	Kerala Artisans and Skilled W WFB	39.89	39.98	79.21	95.01	119.10	134.99
10	Kerala Hand Loom Workers WFB	23.24	27.40	207.13	54.90	230.37	82.30
11	Keala Beedi and Cigar WWFB	16.30	14.41	11.15	23.44	27.45	37.85
12	Kerala Akbari WFB	41.54	NA	109.36	NA	150.90	NA
13	Labour Welfare Fund Board	72.56	68.66	78.30	73.63	150.86	142.29
14	Kerala State Lottery WFB	18.98	19.36	2.12	2.86	21.10	22.22
15	Traders Welfare F.B	9.39	7.71	13.31	20.40	22.70	28.11
16	Kerala Motor Transport Workers Welfare Board	157.79	171.35	149.32	3.86	307.11	643.49
17	Kerala Anganwadi Workers & Helpers WF	19.03	18.95	6.50	7.15	25.53	26.10
18	Kerala Autoickshaw Workers W.F Board	0.32	0.11	9.49	14.85	9.81	14.97
19	Kerala Khadi Workers Welfare Fund Board	23.47	23.67	19.99	24.49	43.46	44.48
20	Kerala Fishermen's WFB	160.25	167.34	740.15	1098.23	900.40	1265.57
21	Kerala Ration Dealers Welfare Fund Board	9.20	9.04	39.56	61.50	48.76	70.54
22	Kerala Co-operative Employees Board	NA	NA	NA	NA	NA	NA
	Total	2291.76	2179.24	15676.79	13486.36	17968.55	15665.55

Note: WF - Welfare Fund, FB-Fund Board, WFB- Welfare fund Board, WWFB-Workers Welfare Fund Board

Welfare Measures of the Workers of Welfare Fund Board

14.144 General Welfare Measures implemented by the Workers Welfare Fund Boards are the following:

1. Pension benefits to the workers on their retirement or invalidity or family pension after their death.
2. Ex-gratia financial assistance to workers on prolonged illness/ permanent disability and death relief to the dependents for funeral and related functions.
3. Medical reimbursement for medical treatment of the workers or dependents.
4. Marriage assistance for daughters marriage.

5. Educational assistance to members' children like scholarships, cash awards and lumpsum grants.
6. Long term housing loans at low interest rate.
7. Maternity benefits.

The major welfare measures implemented by the Workers Welfare Fund Boards are given in Appendix.14.18.

Unemployment Assistance

14.145 Unemployment assistance scheme was introduced in the state in 1982 under non-plan and is being implemented through Local Governments. The present rate of assistance is Rs.120 per month. During 2006, there were 339879 beneficiaries under unemployment assistance and an amount of Rs.3667.71 lakh was disbursed. The details of unemployment assistance from 2002 to 2006 is given in Table 14.27.

Table 14.27
Beneficiaries of Unemployment Assistance and Expenditure (2002-2006)

Year	Beneficiaries (Nos)	Amount disbursed (Rs. in lakh)
2002	332287	2,516.40
2003	348027	1423.10
2004	387370	7398.43
2005	344698	10243.38
2006	339879	3667.71

Source: Directorate of Employment and Training

Nutrition and Child Welfare

Integrated Child Development Services

14.146 Kerala has around 40.37 lakh children, that is, 13% of Kerala's population, who are below the age of 6 years. A large number of them live in economic and social environment which impedes the child's physical and mental development. These conditions include poverty, poor environmental sanitation, prone to disease, infection, inadequate access to primary health care, inappropriate child caring and feeding practices. Government of India proclaimed a National Policy on Children in August 1974 declaring children as, "supremely important asset". The policy provided the required frame work for assigning priority to different needs of the child. The programme of the Integrated Child Development Services (ICDS) scheme was launched in 1975 seeking to provide an integrated package of services in a convergent manner for the holistic development of the child.

14.147 The scheme provides a package of services as indicated below to children below six years and pregnant women and nursing mothers;

1. Supplementary nutrition ,
2. Immunization,
3. Health check-up,
4. Referral services,
5. Pre-school non-formal education,
6. Nutrition and health education

14.148 The Integrated Child Development Services is a Centrally Sponsored Scheme wherein the State Government is responsible for programme implementation. The scheme is implemented all over Kerala through 163 projects (151 Rural, 11 Urban and 1 Tribal). There

is one Anganwadi Centre for every 1000 population in rural and urban projects and one for every 700 population in Tribal area. There are 25393 sanctioned Anganwadi Centres of which 25384 are functioning. Anganwadis provide services to 3.77lakh children below 3 years; 5.25 lakh children in 3 to 6 years and 1.6 lakh pregnant and lactating women and 1.82 adolescent girls.(see Table 14.28). A district wise break up of ICDS beneficiaries in Kerala is shown in Appendix 14.19. Project wise details of ICDS are given in Appendix 14.20.

Table 14.28
Total Beneficiaries under the Nutrition Programme

Sl.No.	Category	Beneficiaries 2006 (Nos)
1	0-3 years group	377107
2	3-6 years group	525848
3	Pregnant and Lactating women	162478
4	Adolescent Girls	182083
	Total	1247516

World Bank assisted ICDS (Phase III) Project

14.149 The project started in the State during 1999-2000 aims at improving the nutritional and health status of children, nursing and expectant mothers, and adolescent girls. Revised World Bank assistance for 5 years is Rs.123.59 crore. Expenditure of the 10th Plan comes to Rs.156.58 crore against the outlay of Rs.138.00 crore.

National Nutrition Mission

14.150 The basic objective of the mission is to address the problem of malnutrition in a holistic manner and to accelerate reduction in various forms of malnutrition particularly among women and children. In Kerala, Palakkad and Malappuram districts have been selected to implement this programme for which Rs.469.96 lakh was provided.

Kishori Sakthi Yojana

14.151 This scheme is viewed as a holistic initiative for the development of adolescent girls which was launched in 2000-01 as part of the ICDS scheme. Kishori Sakthi Yojana is being implemented through Anganwadi Centres in both urban and rural areas. The main objective of the scheme is to improve the nutritional and health status of the girls in the age group of 11- 18 years. The expenditure for the 10th Plan comes to Rs.542.59 crore against the outlay of Rs.461.19 crore.

Balika Samridhi Yojana

14.152 Government of India started Balika Samridhi Yojana on 15th August, 1997 with the objective of changing the negative attitude towards the girl child at birth, to improve enrolment and retention of girls in schools, to raise the age of marriage, to assist the girls to undertake income generating activities etc. During 2003-04 one lakh girl children were benefited and the target for 2006-07 is to cover another lakh girl children in the state.

Udisha Training Programme

14.153 Government of India has introduced this project for the provision of training of ICDS functionaries to achieve better quality care of early childhood and development. It is carried out in all the 163 ICDS projects. The components of the scheme include job training, orientation training, IEC materials and other training.

Box 14. 9**Child Development - Government of India Programs and Policies**

Integrated Child Development Services (ICDS): Launched on 1975 to improve the nutritional and health status of children below six years, pregnant and lactating mothers adolescent girls, etc.

Creches/Day care Centers for Children of Working and Ailing Mothers: Launched for Children adopted in 1974. The scheme aims to provide day care services to children 0-5 years of parents whose monthly income does not exceed Rs. 1800 per month.

National Creche Fund: Set-up in the year 1993-94 to meet the growing requirement for creches through voluntary organisations, mahila mandals to convert Anganwadi Centers into Anganwadi-cum-creche Centre.

National Charter for Children: A policy document adopted by the Government highlighting the roles and responsibilities of the Government and the community towards children.

Co-operation with UNICEF: DWCD is the nodal department for coordinating the implementation of the Master Plan of operations so as to empower families and communities with knowledge and skills to care and protection of children etc.

National Commission for Children: The National Commission for Children Bill 2003 was introduced in Parliament in December 2003 but got lapsed due to elections. It was considered with certain changes that include, more power, constitution of State Commissions and Children's Courts in States.

Assistance of voluntary organizations for providing Social Defense Services: Assistance is given to voluntary organizations working in the field of child and women welfare.

Universal Children's Day: India observes Universal Children's Day on 14 November every year. National Child Awards for Exceptional Achievement will be presented.

Convention on the Rights of the Child: India ratified to the UN Convention on the Rights of the Child on 11 December 1992 for the cause of children. A National Coordinating Group has been constituted by the DWCD to monitor the implementation of the Convention on the Rights of the Child (CRC).

National Plan of Action for Children: The DWCD prepared the draft of the National Plan of Action for Children by considering the goals for children set in the UN General Assembly Special Session on Children held in May 2002.

National Child Award for Exceptional Achievement: Instituted in 1996 to give recognition to the children of 4 to 15 age group with exceptional abilities.

National Award for Child Welfare: Instituted in 1979 to honor five institutions and three individuals for their outstanding performance in the field of child welfare.

Rajiv Gandhi Manav Seva Award: Instituted in 1994 to honor an individual who makes outstanding contribution towards service for children.

Source :India 2006.

Social Justice

Population

14.154 The Scheduled Caste population of Kerala is 31.24 lakh constituting 9.81 per cent of the total population, as per Census 2001. The Scheduled Tribe population is 3.64 lakh accounting for 1.14 per cent of the total population of the State. In India, the Scheduled Caste and Scheduled Tribe population to total population accounts for 16.23 per cent and 8.15 per cent respectively as given in Table 14.29.

Table 14.29
SC/ST Population of India & Kerala 1971 – 2001

(Population in lakh)

Sl.No	Census Year	Population of India			Population of Kerala		
		Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8
1	1971	5481	800	380	213.47	17.22	2.69
2	1981	6834	1047	516	254.50	25.49	2.61
3	1991	8463	1382	678	290.32	28.87	3.20
4	2001	10264	1666	836	318.40	31.24	3.64

Source: Census Reports

14.155 The growth rates of Scheduled Caste and Scheduled Tribe population in the State are 8.14 per cent and 13.75 per cent respectively as against 20.55 per cent and 23.30 per cent respectively in India during the decade 1991-2001. The growth rate of Scheduled Caste population is slightly lower than that of the total population in Kerala. But the growth rate of Scheduled Tribe population is more than that of the state's total population growth. The decadal growth rate of Scheduled Caste and Scheduled Tribe is given in Table 14.30.

Table 14.30
Growth rates of SC/ST Population in Kerala (1971-2001)

Sl. No.	Year	Decadal Growth Rate (%)		
		Scheduled Caste	Scheduled Tribe	Total Population
1	2	3	4	5
1	1971	20.00	26.29	26.33
2	1981	48.02	2.97	19.2
3	1991	13.26	22.61	14.3
4	2001	8.14	13.75	9.45

Note: The drop in the decadal growth rate for Scheduled Tribe during 1971-1981 was due to declassification of Tribal communities.

14.156 The Scheduled Caste people live along with the rest of the people across the state. The highest distribution of Scheduled Castes is in Palakkad district (13.85 %) followed by Thiruvananthapuram (11.87 %), Thrissur (11.34 %) and Kollam (10.34). Nearly half of SC population of the state is distributed in the above four districts. The Scheduled Tribes in Kerala are not only geographically concentrated, but are overwhelmingly rural. Highest concentration of Scheduled Tribes is seen in Wayanad district (37.36 %) followed by Idukki (14 %) and Palakkad (10.89 %) and the three districts together account for over 60 per cent of STs of the state. Details are given in Table 14.31. District wise Scheduled Caste/Scheduled Tribe population details are given in Appendix. 14.21.

Table 14.31
District-wise distribution of SC/ST Population in Kerala

Sl. No.	District	Percentage Distribution		Percentage to Total Population	
		SC	ST	SC	ST
1	2	3	4	5	6
1	Kasargod	2.88	8.33	7.49	2.52
2	Kannur	3.17	5.48	4.11	0.83
3	Wayanad	1.07	37.36	4.27	17.43
4	Kozhikkode	6.43	1.63	6.98	0.21
5	Malappuram	9.14	3.36	7.87	0.34
6	Palakkad	13.85	10.89	16.53	1.52
7	Thrissur	11.34	1.33	11.91	0.16
8	Ernakulam	8.44	2.76	8.48	0.32
9	Idukki	5.1	14	14.11	4.51
10	Kottayam	4.81	5.04	7.69	0.94
11	Alappuzha	6.37	0.86	9.45	0.15
12	Pathanamthitta	5.19	1.8	13.13	0.53
13	Kollam	10.34	1.43	12.49	0.20
14	Thiruvananthapuram	11.87	5.74	11.47	0.65
	Total	100	100	9.81	1.14

Source: Census 2001

14.157 Adiya, Paniya and Kattunaikan are the three tribal communities in Wayanad district who are still in a very under developed stage compared to other tribal communities there. The Adiya and Paniya, who together form 53 per cent of the tribal population of Wayanad, are all landless agricultural labourers and were bonded labourers by tradition and their rehabilitation are still underway. Kurumbas, Mudugas, Kadars and Irulas are the four major tribal communities in Palakkad district of which Kurumbas and Kadars are primitive tribes. Even though a good proportion of the tribal families in Attappady area possess lands, these lands could not be utilised for a sustainable means of livelihood for them. Muthuvan, Urali, Hill Pulaya, Mannan, Ulladan and Malayaraya are tribal communities in Idukki district. Among them a section of Malayaraya are better off than their counterpart socially and economically. Nearly 90 per cent of the tribal workers in the district are still engaged in agricultural and allied sectors.

Child Population

14.158 The Table 14.32 shows that at state level there was 14.24 per cent child population of age 0-6 years to total population, according to Census 2001. This ratio is 11.65 in case of Scheduled Caste population and 13.70 for Scheduled Tribe population in Kerala. Both national level and state level details of child population for the last two Census years are given in the Table 14.32.

Table 14.32
Child Population of SC/ST in Kerala/India 1991 to 2001

Sl. No	Census Year	India			Kerala		
		Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8
1	1991	17.97	19.60	20.18	13.19	12.90	15.03
2	2001	16.01	17.42	18.43	14.24	11.65	13.70

14.159 While the per cent of total child population to total population has shown a marginal increase during 2001 compared to 1991, the corresponding ratio with regard to SCs and STs declined marginally during the period.

Sex Ratio

14.160 As compared to State's overall sex ratio (1058 females per 1000 male), the sex ratio among Scheduled Castes and Scheduled Tribes are 1048 and 1027 respectively.

14.161 Kerala has registered an increasing trend in the sex ratio of Scheduled Castes and Scheduled Tribes during the last 3 decades. While the sex ratio of Scheduled Caste increased from 1012 in 1971 to 1048 in 2001, the sex ratio of the Scheduled Tribes increased from 995 to 1027. In India as a whole, the sex ratio of Scheduled Caste only marginally increased from 935 to 936, while the sex ratio of Scheduled Tribe decreased from 982 to 978. Details are given in the Table 14.33.

Table 14.33
Sex Ratio of SC/ST in Kerala/India 1971 to 2001

Sl. No	Census Year	India			Kerala		
		Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8
1	1971	930	935	982	1016	1012	995
2	1981	934	932	984	1032	1023	992
3	1991	927	922	972	1036	1029	996
4	2001	933	936	978	1058	1048	1027

Source: Census Reports

Literacy

14.162 Kerala raised the literacy levels of SC and ST population by more than two folds from 1971 to 2001 and it succeeded in reducing the gap between the literacy rates of SC/ST and that of general population. The Table 14.34 reveals that the literacy rate of SCs in Kerala was 82.66 per cent as against 90.86 per cent for the state as a whole, as per Census 2001. At the national level the literacy rates are 54.32 per cent and 64.36 percent respectively. The literacy rate of Scheduled Caste of the state increased from 40.21 percent during 1971 to 82.66 per cent during 2001.

14.163 The literacy rate among the Scheduled Tribes in the state was 64.35 per cent as against 47.08 per cent at national level in 2001.

Table 14.34
Literacy Rates of SCs and STs in India and Kerala – 1971-2001

Census	India			Kerala		
	Country Total	SCs	STs	State Total	SCs	STs
1	2	3	4	5	6	7
1971	29.45	14.67	11.30	60.42	40.21	25.72
1981	36.03	21.38	16.35	70.42	55.96	31.79
1991	52.21	37.41	29.60	89.81	79.66	57.22
2001	64.36	54.32	47.08	90.86	82.66	64.35

Source : Census Reports

14.164 The female literacy rate of Scheduled Castes in Kerala increased from 33.4 percent in 1971 to 77.56 percent in 2001. During the same period, the all India female literacy rate of Scheduled Castes increased from 6.4 per cent to 41.31 per cent. The female literacy rate of Scheduled Tribes increased from 19.4 per cent in 1971 to 58.11 per cent in 2001. In India as a whole, the female literacy rate increased from 4.9 per cent to 34.75 per cent during the same period.

Enrolment

14.165 The proportion of Scheduled Caste and Scheduled Tribe students in Lower Primary and Upper Primary Schools are relatively higher than their population share as seen in Table 14.35. In High School section the share of Scheduled Tribe students is a little less than their population share. It can be seen that while drop out ratio beyond class VIII is relatively considerable in the case of Scheduled Caste, the same is overwhelmingly serious for Scheduled Tribes. The standard wise details of the enrolment of SC/ST students at school levels are given in Appendix 14.22.

Table 14.35
Enrolment of Scheduled Caste/Scheduled Tribe Students
in Schools and Colleges 2006-07

Sl.No	Section	No of Total Students	Scheduled Caste		Scheduled Tribe	
			No. of Students	% to Total	No. of Students	% to total
1	2	3	4	5	6	7
1	Lower Primary Section	1795472	202962	11.30	32482	1.81
2	Upper Primary Section	1458713	157121	10.77	20379	1.40
3	High School Section	1457546	146258	10.03	15069	1.03
	Total	4711731	506341	10.75	67930	1.44

Source: Director of Public Instruction

Performance in SSLC Examination

14.166 The percentage of pass in the SSLC examination is a good indicator of social and educational development among different social groups. In the regular SSLC examination, there were 43,998 students belonging to Scheduled Castes appeared and 26,905 passed out in the year 2004-05. The corresponding figures for Scheduled Tribes during the same period are 4788 and 2537 respectively.

Table 14.36
Performance of Students in SSLC Examination
(Percentage of Pass)

Year	Total Students	Sch.Caste Students	Sch.Tribe Students
1	2	3	4
2001	56.22	36.74	32.85
2002	60.62	39.32	39.69
2003	64.85	43.75	37.72
2004	70.06	48.14	45.95
2005	77.97	61.15	52.99

Source : Commissioner for Govt. Examinations

14.167 During March 2005 the percentage of pass of SC and ST students were 61.15 and 52.99 respectively against the state percentage pass of 77.97. It is significant to note that the per cent of passed out ST students is only 0.69 against their population share of 1.14 per cent. However, an upward trend in the percentage of pass of SC as well as ST is observed. District wise details of students appeared and passed in SSLC Examination 2004-05 is given in Appendix 14.23.

Occupational Pattern

14.168 The Table below shows that while just 25.87 per cent of total population were main workers as per 2001 Census, the corresponding figures for SC and ST population are 29.75 and 30.17 respectively indicating that a moderately higher proportion of the disadvantaged groups are workers. The ratio of female workers belonging to SCs and STs is almost double that of other population. It is significant to note that the decline of workers among total population was marginal during the decade 2001 compared to 1991, it is substantial in case of SCs and the same is alarming for STs during the period. The decline in the proportion of main workers, both male and female, is not a welcome change as it is indicative of growing unemployment and dependency among the population.

Table 14.37
Distribution of Main Workers 1991-2001 (per cent)

Sl. No.	Category	Total		Scheduled Castes		Scheduled Tribes	
		1991	2001	1991	2001	1991	2001
1	Main Workers	28.53	25.87	36.82	29.75	40.28	30.17
2	Male Main Workers	44.82	41.77	47.22	41.54	51.11	40.66
3	Female Main Workers	12.81	10.85	26.72	18.51	29.42	19.90
4	Percentage of Cultivators to Main Workers	12.24	7.12	3.10	1.61	16.66	13.67
5	Percentage of Agricultural Labourers to Main Workers	25.54	12.40	53.79	29.48	55.47	41.12
6	Percentage of Main Workers engaged in Household Industry	2.58	3.35	2.44	2.60	0.47	2.57
7	Percentage of Main Workers engaged in Other Services	15.17	77.13	10.70	66.31	5.28	42.65
8	Marginal Workers	2.90	6.43	4.38	10.63	5.76	16.18
9	Work Participation Rate	31.43	32.30	41.21	40.38	46.04	46.35

Source: *Scheduled Tribe Atlas of India*

14.169 An analysis of the Table 14.37 indicates excessive dependence of STs on agriculture (54.79 %) for their livelihood as against just 19.52 per cent for the total population and for SCs the corresponding figure is 31.09 per cent. Other services is the source of income for 77.13 per cent of the total population, while the sector offers livelihood for two third of the SC population. The above analysis of the occupational pattern shows that the SC population is closely following the other population with regard the change in occupational structure that has been taking place in the Kerala economy while the ST population is far behind in this respect.

Poverty

14.170 Kerala has registered a remarkable improvement in poverty reduction over the years among all the social sections, including Scheduled Caste and Scheduled Tribe population. Poverty level among the Scheduled Castes was reduced to 14.6 per cent in 1999-2000 from 62.3 per cent in 1983. The share of BPL population among Scheduled Tribes was declined to 24.2 per cent in 1999 – 2000 from 37.3 per cent in 1993-94. Details are given in Table 14.38.

Table 14.38
Percentage of Population below Poverty line
(Rural in 38th, 50th and 55th NSSO Rounds)

Sl No.	NSSO Rounds	India			Kerala		
		Country Total	SC	ST	State Total	SC	ST
1	2	3	4	5	6	7	8
1	38 th Round(1983)	45.6	58.1	63.8	39.1	62.3	NA
2	50 th Round (1993-94)	37.1	48.1	52.2	25.5	36.3	37.3
3	55 th Round (1999-2000)	27.1	36.2	45.8	9.4	14.6	24.2

14.171 The incidence of poverty among Scheduled Castes and Scheduled Tribes is only half that of the all India level. The decline in the incidence of poverty in the state may be broadly attributed to the land reform measures and the large number of anti-poverty programmes undertaken by both the Central and State Governments and also due to the growth of the economy which in turn raises the level of income.

14.172 Scheduled Castes constitute 19 per cent of the BPL population in Kerala, though they are only 9.81 per cent of the total population of the State. It shows that the incidence of poverty among the Scheduled Caste people is about double that of the population of the state. Scheduled Tribes constitute 3 per cent of the total BPL population while the proportion of Scheduled Tribe population is only 1.14 per cent. It implies that the incidence of poverty among the Scheduled Tribes is about three times that of the total population of the state.

Table 14.39
Category-wise percentage of Families Below Poverty Line

Sl. No	Category	Share of BPL	Percentage of Total Population
1	2	3	4
1	Scheduled Castes	19	9.81
2	Scheduled Tribes	3	1.14
3	Others	78	89.05

Generalised Deprivation

14.173 To assess disparity among districts in terms of the incidence of poverty, a more desirable approach would be to examine the incidence of deprivation that is not based on household consumer expenditure. The index of deprivation as resorted in Human Development Report 2005 (Kerala) is based on deprivation in four basic necessities for well being such as **housing quality, access to drinking water, good sanitation and electricity lighting**. The Table 14.40 given below shows the index of deprivation for Kerala by districts in 2001.

Table 14.40
Generalized Deprivation

Sl. No.	District	SC	Rank	ST	Rank	All	Rank
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	54.4	13	60.1	10	39.5	11
2	Kollam	47.8	8	50.7	5	30.4	8
3	Pathanamthitta	50.3	10	54.6	7	31.1	9
4	Alappuzha	45.9	6	40.1	3	29.6	6
5	Kottayam	42.1	4	43.1	4	25.1	3
6	Idukki	40.8	2	65.3	13	42.7	13
7	Ernakulam	29.3	1	37.2	1	15.5	1
8	Thrissur	42.0	3	37.5	2	24.7	2
9	Palakkad	52.9	12	65.3	12	40.4	12
10	Malappuram	46.2	7	56.8	8	28.6	5
11	Kozhikkode	48.8	9	50.9	6	28.3	4
12	Wayanad	51.5	11	66.0	14	46.3	14
13	Kannur	43.8	5	57.7	9	29.7	7
14	Kasargod	62.7	14	61.3	11	37.6	10
	Total	45.5		57.9		29.5	

Source: Human Development Report 2005

14.174 The incidence of deprivation among SCs and STs is 45.5 and 57.9 respectively while that for all people is only 29.5. Kasargod, Trivandrum, Palakkad, and Wayanad districts have the highest deprivation indices of above 50 percent regarding SC population. In 10 districts, the deprivation indices is above 50 in respect of ST population and the same is highest in the three ST population concentrated districts of Wayanad, Idukki and Palakkad.

Development Programmes for Scheduled Caste and Scheduled Tribes

14.175 Kerala earmarks funds for SCP and TSP from State Plan outlay in proportion of Scheduled Castes and Scheduled Tribes population to the total population of the State.

14.176 Two third of the Special Component Plan budget and one half of Tribal Sub Plan budget are earmarked to Local Self Government Institutions. The balance amount is set apart to Scheduled Caste/Scheduled Tribe Development Departments and other Development Departments.

14.177 The total plan provision set apart for the development of Scheduled Caste and Scheduled Tribes during 2006-07 was Rs. 609.20 crore and Rs. 120.05 crore respectively.

14.178 A two pronged strategy is followed for development of Scheduled Castes and Scheduled Tribes in the state. Infrastructure facilities like roads, electricity and water supply are provided in habitats having more than 50 per cent of SC/ST families. For implementing minor irrigation work, more than 50 per cent of the area should be owned by Scheduled Castes or Scheduled Tribes. Whereas, for projects benefiting individuals and families, 100 per cent of the beneficiaries should belong to SCs and STs.

Special Component Plan and Tribal Sub Plan through Local Governments

14.179 During the year 2005-06 a total of Rs 334.47 crore was given to Local Governments as plan grant under Special Component Plan and Rs. 50.17 crore as Tribal Sub Plan. Local Government wise budget provision and expenditure during the year 2005-06 is given in Table 14.41. Percentage distribution of plan grant to Local Governments is represented in diagram 1 and 2.

Table 14.41
Budget Provision and Expenditure of SCP/TSP through
Local Self Government Institutions – 2005-06

(Rs. lakh)

Sl. No	Local Self Government Institutions	Special Component Plan			Tribal Sub Plan		
		Budget Provision	Expenditure	Percentage	Budget Provision	Expenditure	Percentage
1	2	3	4	5	6	7	8
1	Grama Panchayat	17750.33	10729.05	60.44	2479.96	1725.67	69.58
2	Block Panchayat	5916.77	3764.62	63.63	991.98	624.80	62.99
3	District Panchayat	5916.77	3006.50	50.81	1487.97	968.39	65.08
4	Municipality	2079.84	1203.42	57.86	57.09	19.56	34.26
5	Corporation	1783.29	585.95	32.86	0.00	0.00	0.00
	Total	33447.00	19289.53	57.67	5017.00	3338.41	66.54

Source : Information Kerala Mission

14.180 Physical achievements of Local Self Government Institutions for 2002-03 to 2005-06 is given in Appendix . 14.24.

Fig. 14.1

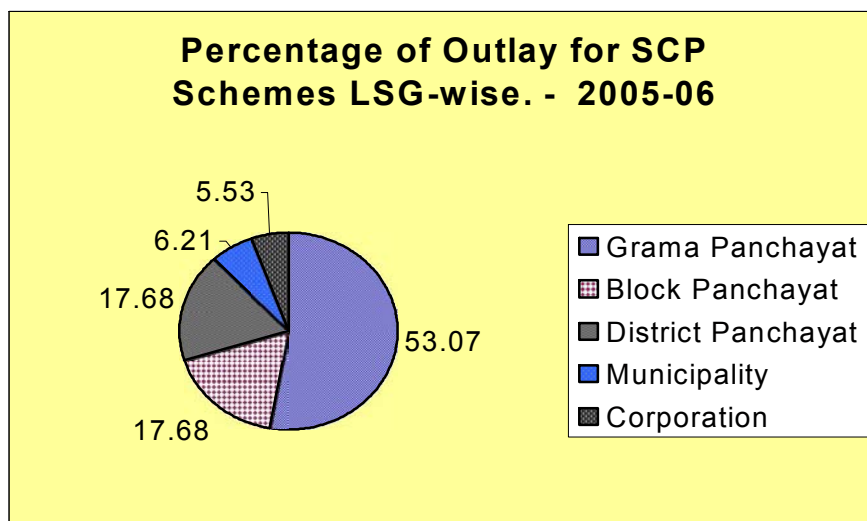
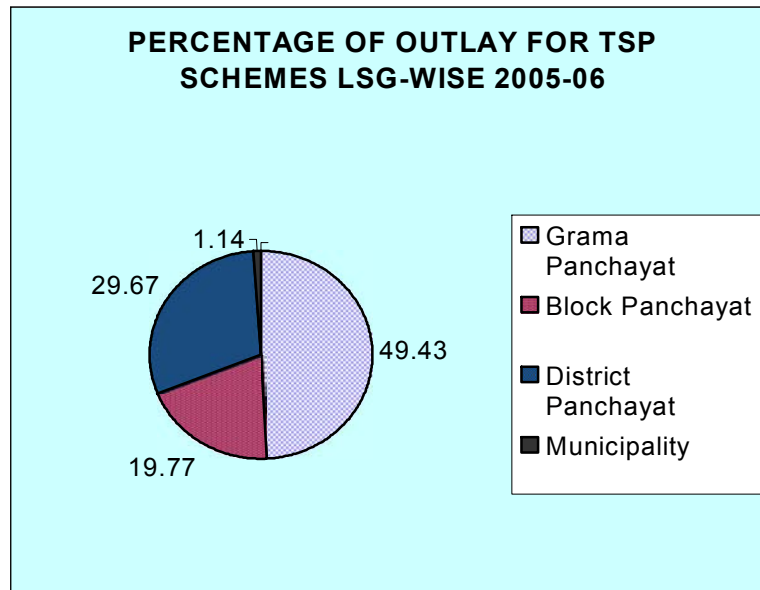


Fig. 14. 2



Programmes of Scheduled Caste Development Department

14.181 State schemes and Centrally Sponsored Schemes as well as the projects taken up under Corpus Fund are the programmes implemented by the Scheduled Caste Development Department for the welfare of Scheduled Castes. During the year 2006-07, the share earmarked for the State Plan Schemes, state share of Centrally Sponsored Schemes and Corpus Fund amounted to Rs. 112.39 crore, whereas the central share for the Centrally Sponsored Schemes is Rs. 66.24 crore.

14.182 The schemes implemented by the Scheduled Caste Development Department cover a wide area comprising education, health, housing and so many other schemes which promote the economic and social welfare of scheduled castes and other backward classes.

14.183 Scheduled Caste Development Department implements 19 schemes for educational development. Programme for education includes boarding and lodging facilities at pre-metric and post-metric level, incentives and awards to talented students stipends, lump sum grant, pocket money to students, special coaching and tutorial facilities to improve results, supply of books and equipments etc.. Eight Model Residential Schools run by the department provide residential school facilities. Information Cum-Guidance Centre, Pre-Examination Training Centres and Civil Service Examination Society etc are also run by the department for Scheduled Caste candidates to equip them to appear for various competitive examinations.

Box 14.10

Educational assistance amounting Rs 30.56 crore was provided to 5,24,915 Scheduled Caste Students during the year 2005-06. Out of the them 4,47,787 were from pre-metric classes and 77,128 belonged to post matric classes. An amount of Rs 10.39 crore was disbursed as educational assistance benefiting 80,321 Scheduled Tribe students in the same period.

14.184 An intensive drive for providing houses to the houseless people was taken up recently. Accordingly, 4617 houses were constructed in the year 2005-06 and during the current year, up to 2006 October, 927 houses have been constructed.

14.185 Scheme wise expenditure of Scheduled Castes/Scheduled Tribes Development Department for the years 2002-03 to 2006-07 is given in Appendix 14.25. The physical achievements of major schemes of SC Development Department is shown in Appendix 14.26.

Programmes of Scheduled Tribe Development Department

14.186 A total amount of Rs.61.35 crore is earmarked during the year 2006-07 for the development programmes by the Scheduled Tribe Development Department which consist of State Plan schemes, Centrally Sponsored Schemes and projects under Corpus Fund as well as Special Central Assistance. Details of Financial and Physical achievements of schemes implemented by the department during the period from 2002-03 to 2006-07 is given in Appendixes. 14.25 and 14.27.

14.187 The main objective of the development plan is to promote the socio-economic conditions of the Scheduled Tribes and to free them from exploitation. To achieve this objective, top priority is given for the educational development of the Scheduled Tribes. Educational concessions, scholarships and other kinds of assistance are provided to tribal students from pre-primary level to post graduate level. During the year 2006-07, educational assistance benefited 83,000 Scheduled Tribe students. Major portion of the non-plan outlay of Scheduled Tribe Development Department is for educational development activities. Rs. 26.03 crore was expended for educational programmes under Plan and Non plan during the year 2005-06 against the budget provision of Rs. 28.17 crore. During the current year an amount of Rs 20.60 crore was expended towards educational assistance up to 31.12.2006.

14.188 In order to provide residential education to tribal students from remote areas, the department runs 108 pre-metric hostels and for providing quality education 18 Model Residential/Ashram Schools are functioning under the department. In addition to the existing 40 single teacher schools for providing pre-primary education to tribal students living in very remote and inaccessible areas, 37 centres were also started during 2005 under the peripatetic education scheme for imparting primary education to primitive tribe children. For imparting job oriented technical training, 28 training centres are functioning under the department. The students who get admission in professional courses are given one month residential course in personality development and spoken English.

14.189 During the Tenth Plan period the department provided assistance for the construction of more than 5000 houses. But housing is still a serious problem among Scheduled Tribes as large number of houses constructed 10 to 15 years ago have become dilapidated. According to the Scheduled Tribe Department, requirement of new houses is more than 25,000. During the current year, 1111 houses were sanctioned to the primitive tribal families under Additional Central Assistance and also under State Plan 250 houses are being constructed.

14.190 In order to provide better medical facilities to tribes, department expended Rs 1.92 crore for health programmes during 2005-06 under Plan and Non-plan. An amount of Rs 3.68 crore is provided under Plan and Non-plan for various health programmes during the current year. The Health department conducts medical camps in tribal areas to diagnose diseases. Serious diseases detected are referred to district hospitals and financial assistance is given for their treatment. Studies by the Health Department as well as AIIMS, New Delhi show that, nearly 15 per cent of the tribal families in Wayanad and Palakkad districts have the traits of

the genetical problem- Sickle Cell Anemia. In order to tackle the problem, Kozhikode Medical College has set up a Sickle Cell Anemia unit.

14.191 Insurance coverage has been provided to 500 families of Primitive Tribal Groups for a period of 5 years beginning from 2004-05. The Primitive Tribal Groups of Koraga in Kasaragod district and Cholanaikan in Malappuram district are covered under the scheme. Government of India have sanctioned Rs. 5.00 lakh to the state for the coverage of 1000 families during 2005-06. This amount was released to LIC for the coverage of Kadar in Palakkad and Thrissur districts; Kattunaikans in Malappuram and Kozhikode districts and Kurumbas in Palakkad district. An amount of Rs 15.00 was also sanctioned during 2006-07, for the insurance coverage of another 3000 families.

Resettlement of Landless Tribes

14.192 A special scheme for providing land to the landless and houses to the houseless is being implemented in the state. As part of the resettlement of landless, Tribal Development Mission has been formed to undertake rehabilitation activities based on a Master Plan. They have identified 22052 landless tribal families and 32131 families with less than one acre of land. The highest number of landless tribes are found in Wayanad District (60.32 %) of the followed by Palakkad (24.44%). So far a total of 6690.59 acres of land have been distributed to them benefiting 4532 landless tribal families. A Committee with Chief Secretary being Chairperson has been formed to identify more land for resettlement and the same has identified some more land for distribution.

14.193 The Aralam Farm with an extent of 7612 acres, has been purchased by the State Government for the resettlement and out of this 840 acres was distributed to 840 families during March 2006. In addition to the above Government of India has been approached for diversion of 12196 hectare of forest land for assignment to the landless families and sanction is being awaited for the same.

Box 14.11

The passage of the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Bill, 2006, on December 18 is an important step in the struggle to reverse the historical marginalisation of the tribal people of India. Many tribal people who could not prove that they were living in forests before October 25, 1980, had been termed “encroachers” in the wake of the Forest (Conservation) Act 1980, and an eviction order had been served on them in May 2002. It was argued that the legislation could avert this situation. The Bill proposed the vesting of 14 different rights over land and forest produce on tribal people.

Source: Frontline January 12, 2007.

14.194 The Government is also proceeding with the move to give possession certificate to tribals who had settled in forest till January 1, 1980 as per Central guidelines. About 19,500 tribal families will get possession certificate under these guidelines, and the Government is planning to complete the process by this year itself. The possession certificate will vest the tribal with all rights of ownership over his land except the right to alienate it.

Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes

14.195 The Corporation, with its Registered office at Thrissur, functions through 12 Regional Offices and covering all the districts, is implementing various schemes to enable the SC/ST people to become self-reliant in all respects. The sources of finance for implementing various schemes are Corporation's own share capital and assistance from other national refinancing agencies like NSFDC, NSTFDC, NSKFDC and HUDCO. The Corporation is now concentrating more on self employment schemes to enable the target people to engage in some creative and most viable income generating activities and earn their livelihood and thereby improve their socio-economic status in the society.

14.196 The major schemes implemented by the Corporation include agricultural land purchase, micro-credit finance, mini-venture loans, small enterprise loans, housing, educational loan, marriage assistance etc. During 2005-06, a total of 895 families were assisted under various schemes incurring an expenditure of Rs 483.97 lakh. Under the Land Purchase Schemes there were 194 beneficiaries and the Micro credit finance schemes benefited 258 families in this period.

14.197 The Corporation also conducts a few training programmes for improving the workmanship, efficiency and vocational skills among SC/ST people. The refinancing agencies like NSFDC and NSTFDC are sponsoring the entire training cost. During the year 2005-06, training on mobile phone servicing and vermi composting were under taken with participation of a total number of 50 trainees. In addition to this Entrepreneurship Development Programme' was conducted with the participation of 30 trainees from ST community.

Kerala State Backward Classes Development Corporation

14.198 The Corporation aims at the socio-economic upliftment of the backward classes and minorities in the state. The major objectives of the Corporation are:

1. To promote the comprehensive development of the Other Backward Classes and Minorities of Kerala by rendering assistance by way of loans and advance for establishing small income generating enterprises in various sectors.
2. To promote schemes, establish institutions for the socio, economic and educational upliftment of the target group.
3. To assist Other Backward Classes and Minorities for the upgradation of technical and entrepreneurial skills.

14.199 The Corporation mobilizes funds from the National Backward Classes Finance & Development Corporation (NBCFDC) and National Minorities Development & Finance Corporation (NMDFC) in addition to State Government support.

14.200 The source-wise expenditure and the physical achievements of the Corporation during 2005-06 and 2006-07 are given in the Table 14.42.

Table 14.42
Kerala State Backward Classes Development Corporation Ltd.
Physical and Financial Achievements 2005-06 and 2006-07 (upto 31-10-2006)

(Rs lakh)

Sl No.	Source of Fund	Fund received		Expenditure		Physical Target and Achievements (Nos)			
		2005-06	2006-07*	2005-06	2006-07*	2005-06		2006-07	
						Target	Achievement	Target	Achievement
1	2	3	4	5	6	7	8	9	10
1	Government of Kerala	400.00	0.00	1255.56	915.67	5928	2422	5140	1358
2	KSBCDC**	855.56	832.31						
3	NBCFDC	2000.00	1200.00	2210.72	1039.92	9375	17151	5525	2286
4	NMDFC	1700.00	160.00	1883.66	1168.53	4925	6789	8450	2214
5	Opening Balance	1326.19	931.81	-	-	-	-	-	-
	Total	6281.75	3124.12	5349.94	3124.12	20228	26362	19115	5858

Source: Kerala State Backward Classes Development Corporation Ltd

* Up to 31st October 2006, ** Own Accruals

Kerala State Development Corporation for Christian Converts from Scheduled Castes and the recommended Communities

14.201 The main objective of this Corporation is to improve social, educational, cultural and economic condition of the converted Christians from Scheduled Castes and other recommended communities. The main schemes under implementation by the Corporation are agricultural land purchase, foreign employment, housing, cash incentive to students, marriage loan, agriculture and allied sector assistance, small business, educational loan etc. The Corporation implements these schemes with the financial assistance received from state government and the loan assistance from NBCFDC.

Information and Publicity

14.202 State's Public Relation activities and Information services are envisaged under Information and Publicity. Information and Public Relation Department and Centre for Development of Imaging Technology (C-Dit) are undertaking such activities. It involves Press Information Services, Field Publicity, Display Advertisement, Information Centres, Films and Publications, Maintenance of Government Website and Setting up of Mail Server etc. During the Tenth Five-Year Plan, total budgeted allocation other than C-Dit came to Rs.3000.00 lakh in which Rs.2466.75 lakh is the anticipated expenditure.

Sutharya Keralam

14.203 One of the prestigious programmes adopted by the Government of Kerala during 2005-06 was the phone-in-programme called "Sutharya Keralam" through Doordarshan and All India Radio. Presently, it seems to be one of the major programmes aimed at sorting public grievances. 42 episodes of Sutharya Keralam have already been telecast. Outlay and expenditure from 2005-06 on this programme is shown below as Table 14.43.

Table 14.43
Outlay and Expenditure on Sutharya Keralam from 2005-06 to 2006-07

Sl.No.	Year	Budgeted Outlay(Rs.lakh)	Expenditure(Rs.lakh)
1	2	3	4
1	2005-06	81.00	79.78
2	2006-07	85.00	85.00*

* Anticipated.

Government on People's Response

14.204 The scrutiny wing of the I&PRD watches reactions on Government policies and activities and provides feed back to the Government on people's response and reactions reflected in the newspapers and electronic media. During 2006, 54450 press clips had been analysed and sent to the ministers concerned for necessary action and follow up. Since the electronic media has started 24 hours news channels in Malayalam, the department has also started recording news and news based programmes for analysis.

Press Release

14.205 During 2006, the Department has released 7368 press releases and 36 special features through the print and electronic media. Video news clips are also being released to the T.V. media covering press meets and state level programmes. 1023 video news clips were released to 10 T.V.channels in the reporting year. Table 14.44 shows the details of press releases undertaken during 2006.

Table 14.44
Details on Press Release activities during 2006.

Sl.No,	Items	Total during 2006 (Nos)
1	2	3
1	Press Releases from H.Q.	7368
2	Special features	36
3	Video news clips released to 10 T.V.channels	1023
4	Press releases from 14 D.I.O.s	2250
5	Press notes by Information Office, New Delhi	1223

Media Information and Monitoring

14.206 A new techno-based media information and monitoring system has been evolved to enable ministers to review their performance and people's response with online support. All editions of news papers and T.V. news reports will be scrutinised in the respective districts and will be sent to concerned ministers and authorities with remarks for follow-up.

Editorial and Publication

14.207 Publications of reference books, magazines, newsletters, pamphlets etc are also taken up over years. Details on the publication in the reporting year 2006 are shown as Table 14.45 given below:

Table 14.45
Details on Publications during 2006 through I&PRD

Sl.No.	Publications	Total during 2006 (Nos)
1	2	3
1	Two Magazines:	
	(a) Janapadham (Malayalam) 56000x12	6720000
	(b) Kerala Calling (English) 35000x12	4200000
2	Two News Letters:	
	(a) Vikasana Samawayam (Malayalam) 100000x12	1200000
	(b) Kerala Interface (English) 50000x12	600000
3	Economic News Digest (English)	N.A.
4	Reference Books on Cultural Heritage of Kerala	2
5	Handouts on Government policies and programmes	32

Field Publicity

14.208 Special field publicity campaigns were organised within and outside the state during 2006. Exhibitions at National, State and District levels are arranged. Exhibitions in the rural areas are also conducted. Issue based campaigns are arranged in different parts of the State viz, Gandhi Jayanthi, Communal tension, Chikun Guniya and Golden Jubilee Celebrations.

14.209 The major activities under field publicity and exhibitions are given below as Table 14.46

Table 14.46
Details on Field Publicity and Exhibitions during 2006

Sl.No.	Activities	Total functions during 2006
1	2	3
1	Seminars on various topics	32
2	Film shows at district level	1423
3	Exhibitions on different occasions	68

14.210 Government of Kerala received **Gold Prize** award for its participation in India's International Trade Fair 2006 at New Delhi. Salient features other than the above with regard to the information and public relation during 2006 are shown below as Table 14.47 Study tours for journalists, awards to media persons, pension schemes to retired journalists, eminent journalists, and non-journalists, social awareness campaigns are the other programmes.

Table 14.47
Salient Features of the Information and Public Relation Activities - 2006

Sl.No.	Items	Total Nos.
1	2	3
1	Display Advertisements released to the print media	78
2	Production of video spots	34
3	Publishing of tenders and notifications of various departments in the print media activities.	7283
4	Documentation of all happenings relates to Government through photos which are released to the press (H.Q.)	1134
5	--do-- (D.I.O.s)	1480
6	Posters circulated on different subjects	12
7	Production of video film documentaries	25
8	Films on Modern Kerala Series	10

CHAPTER 15

PRICES & FOOD SECURITY

Prices

Consumer Price Index (CPI)

Consumer Price Index helps to measure the average percentage change of retail prices paid by the consumers for a fixed basket of goods and services. Consumer Price Index is an appropriate measuring rod to determine the impact of price rise on the cost of living of the common man.

15.2 During 2006 (up to October) the Consumer Price Index of agricultural and industrial workers in the State went up by 7 points (base 1998-99=100), compared to the corresponding period in 2005 ie the index rose from 124 points in October 2005 to 131 points in October 2006 (Table 15.1). The corresponding increase in 2005 was 3 points only which shows that inflation in terms of Consumer Price Index was higher in the State during the period under review, compared to the corresponding period during the previous year.

Table 15.1
Annual Average Consumer Price Indices of Selected Centres in Kerala - 2003 to 2006
(Base:1998-99=100)

Sl. No.	Centres	Year						% Variation over previous year			
		2003	2004*	2004	2005*	2005	2006*	2004	2005*	2005	2006*
1	Thiruvananthapuram	122	126	126	132	132	138	3	5	5	5
2	Kollam	123	126	126	129	130	137	2	2	3	6
3	Punalur	113	116	116	120	121	129	3	3	4	8
4	Pathanamthitta	118	121	121	125	125	133	3	3	3	6
5	Alappuzha	115	120	120	124	124	131	4	3	3	6
6	Kottayam	117	121	121	123	124	130	3	2	3	6
7	Mundakkayam	115	118	118	121	121	126	3	3	3	4
8	Munnar	114	118	118	121	121	125	4	3	3	3
9	Ernakulam	117	120	121	125	126	132	3	4	4	6
10	Chalakkudy	116	119	119	123	124	129	3	3	4	5
11	Thrissur	116	119	119	122	123	129	3	3	3	6
12	Palakkad	116	120	120	124	125	131	3	3	4	6
13	Malappuram	118	121	122	125	126	130	3	3	3	4
14	Kozhikode	116	119	120	123	123	129	3	3	3	5
15	Meppady	114	117	117	120	121	128	3	3	3	7
16	Kannur	117	124	124	126	126	130	6	2	2	3
17	Kasaragod	119	126	126	129	130	133	6	2	3	3
	State Average	117	121	121	124	125	131	3	3	3	6

Source:- Directorate of Economics & Statistics.

* up to October

15.3 When the indices of seventeen centres were subjected to review, Thiruvananthapuram recorded the highest index (138 points) followed by Kollam (137 points). The lowest position was recorded at Munnar (125 points). The Indices of 10 centres fall below the State average of 131 points. The year to year variation of indices over previous year for the various centres ranged

from 3 to 8 percent, with largest increase being at Punalur and the least at Munnar, Kannur and Kasaragod. Compared to southern regions of the State, percentage change in Consumer Price Index of northern districts particularly Kannur, Kasargod and Malappuram are rather low.

15.4 The month-wise movements of Consumer Price Indices are shown in Appendix 15.1. The movement of indices is within the range of 123 points to 139 points. The indices of Munnar registered the lowest index of 123 points in the beginning of 2006 and reached to 126 points at the end of October 2006. Thiruvananthapuram recorded the highest movement of Consumer Price Index of 139 points at the end of October 2006 from 136 points in the beginning of the year.

Retail Prices

15.5 The Average Retail Prices of essential commodities from 2003 to 2006 (up to November) are shown in Table 15.2. On reviewing the prices of 18 essential commodities in 2006 (up to November), it was observed that the prices of Coconut Oil, Coconut (without husk) and Refined Oil, under Oil and Oil Seeds group declined to 13 percent, 12 percent and 11 percent respectively, compared to the corresponding period of 2005. At the same time the price of Groundnut Oil went up by 4 percent. Items under Spices & Condiments group witnessed heavy spurt in prices, coriander 27 percent, chillies (dry) 69 percent, onions (small) 23 percent. The prices of tapioca increased by 17 percent and potato 30 percent, compared to the corresponding period of 2005. The prices of Cereals also witnessed heavy spurt during 2006. Among them highest increase was registered by blackgram (62%) followed by redgram (32%) and greengram (31%). However the price rise was moderate in the case of rice, dhal and sugar, when they went up by 8%, 6% and 5% respectively.

Table 15.2
Annual Average Retail Prices of Essential Commodities in Kerala 2003 to 2006

Sl. No.	Commodities	Unit	Prices at the end of December (Rs)					% variation over previous year		
			2003	2004	2005*	2005	2006*	2004	2005	2006*
A	Cereals									
1	Rice (Red) OM Matta	Kg	13.81	13.76	13	13.50	14	-0.4	-2	8
2	Greengram	Kg	27.61	27.95	32	32.60	42	1.2	17	31
3	Blackgram	Kg	25	27.1	34	34.60	55	8	28	62
4	Redgram	Kg	23.2	20.9	22	21.60	29	-10	3	32
5	Dhall	Kg	33.6	34.6	33	33	35	4	-5	6
B	Other Food Items		33.42							
6	Milk(Cow's)	Lr	14	14.01	15	14.60	15	0.1	4	-
7	Egg(Hen's Nadan)	Dozen	27.08	27	30	29.60	30	0.3	10	-
8	Sugar (OM)	Kg	14.04	16.40	19	18.70	20	17	14	5
C	Oil and Oil seeds									
9	Coconut Oil	Kg	70.86	71	64	63.80	56	0.2	-10	-13
10	Groundnut Oil	Kg	68.2	69	69	68.60	72	1	-1	4
11	Refined Oil (Postman)	Kg	90.38	86	85	84.70	76	-5	-2	-11
12	Coconut (without Husk)	100 Nos	689.04	676	628	625.8	555	-2	-7	-12
D	Spices & Condiments									
13	Coriander	Kg	38.5	32.42	30	30.4	38	-16	-6	27
14	Chillies (dry)	Kg	53.73	43.85	36	36.90	61	-10	-16	69
15	Onion (small)	Kg	13.23	13.80	13	13.80	16	4	-	23

E	Tubers									
16	Tapioca	Kg	5.62	5.81	6	6.20	7	3	7	17
17	Potato	Kg	9.67	10.90	10	12.70	13	13	17	30
F	Fruits & Vegetables									
18	Banana	Kg	14.68	15.40	14	13.50	14	5	-12	-

Source: Directorate of Economics & Statistics

* up to Nov.

15.6 The month-wise movement of retail prices is given in Appendix 15.2. A significant point noted was that while the prices of coconut (without husk) witnessed uptrend at the end of November 2006 compared to the price level of January 2006, the prices of Sugar, Refined Oil, Pumpkin, Ladies Finger and Cabbage came down from January 2006 to the end of November 2006. Almost all other items maintained a substantial increase in their retail prices from the beginning of 2006 to November 2006.

Consumption Expenditure

15.7 The report of 60th round of NSS Survey on "Household Consumer Expenditure of India" carried out by National Sample Survey Organization (NSSO) relates to the period January - June 2004. A special feature of this survey by NSSO is that they used the conventional method of 30 days recall reporting and 7 day recall reporting in respect of certain food items, viz., edible oil, egg, fish and meat, vegetables, fruits, spices, beverages and processed foods, pan, tobacco and intoxicants. This was in accordance with the recommendations of a 'Pilot Survey on Suitability of Different Reference Periods for Measuring Household Consumption (January - June 2000)'.

15.8 The conventional method was in line with the practice of past rounds in which all items of food as well as pan, tobacco and intoxicants were included. The schedule used for this type is referred as type 1, while the other was referred as type 2. The details of average monthly percapita consumption expenditure of per thousand distribution of persons in the rural sector of selected States and all India during the 60th round in two types are given in appendix 15.3 & 15.4

15.9 The average MPCE for rural sector according to schedule type 1 is Rs.564.70 and Rs.616.57 which is higher by Rs.51.87 according to schedule type 2. The state wise comparison reveals that Kerala had the highest MPCE both in terms of schedule type 1 and 2. It is Rs.990.22 according to schedule type 1 and Rs.1058.54 according to type 2. Next to Kerala is occupied by Punjab with Rs.946.86 according to schedule type 1 and Rs.1015.40 according to schedule type 2. According to schedule type 1, major States viz., Orissa, Madhya Pradesh and Bihar had MPCE between Rs.400 and Rs.450. The concentration of persons to the higher expenditure class is higher in states like Kerala and Punjab which top the position in average monthly per capita consumption expenditure. More than 1/3 of thousand persons belong to this class (Rs.950 and more) in Kerala. The pattern is similar in the case of schedule type 2 also.

15.10 The MPCE of urban sector according to type 1 and 2 are presented in appendix 15.5 and 15.6. The all India average MPCE of urban sector is Rs.1060.16 according to schedule type 1 and Rs.1149.52 according to schedule type 2. As in the rural sector in urban sector also, Kerala holds the highest position among the major States (Rs.1371.51 according to schedule type 1 and Rs.1403.89 according to schedule type 2). Among the major 15 States the MPCE of as many as 9 States are below the all India average of Rs.1060.16 according to schedule type 1 & 10 according to schedule type 2 in which the all India average Rs.1149.52. Concentration of people is highest for higher income group is true for Kerala in urban sector also as in the case of rural sector. In urban Kerala, while 14.3 percentage of people belong to income group Rs.1925 and above according to type 1, it is 18.7 according to schedule type 2. At all India level these are estimated respectively by 10.6 percent and 11.4 percent.

15.11 The alternative method of recording household consumption, using a seven day reference period for certain (mostly food) items mentioned earlier showed higher estimates of average MPCE on all items of consumption expenditure, Rs.617 for rural India (9 percentage higher than the estimate based on 30 days recall) and Rs.1150 for urban India (higher by 8.5 percent).

15.12 The average consumer expenditure per person for a period of 30 days in various NSS rounds is given in Table 15.3. The average consumer expenditure in Kerala and all India were very close during the early 70's. However from the late 70's the average consumer expenditure of Kerala gradually surpassed the all India level both in urban and rural sectors. Rate of change in the rural sector was more pronounced than in the urban sector. The percentage variation while in the urban sector stood at 8.4 percent compared to all India level in 1983-84, it was 29.5 % in rural sector. The rising trend continued in all the following rounds and reached a peak level of 77 percent in the rural sector during 2003 (59th round) and 32 % in urban sector during 2000-01 (56th round). A similar trend can be observed even in both schedule of reporting resorted in the 60th when the rate of change in the rural sector of Kerala compared to all India was 75 % according to schedule type 1, 72% according to schedule type 2. In the urban sector these were respectively by 29.4% and 22.1%.

15.13 Table 15.4 presents the percentage distribution of expenditure on food and nonfood items in various NSS rounds. The decline in the share of food in total expenditure seen over the past several rounds continued. The share of expenditure on food items exceeded nonfood item in the rural sector of Kerala till 55th round. However in all other rounds excepting the 58th round, non food item has shown a higher share. In the urban sector, the share on nonfood item exceeded food item much earlier than in the rural sector ie from 46th round. At all India level, share of expenditure on food item exceeded non food item in all rounds in the rural sector, but the trend in the urban sector was not same from 55th round onwards when non food item exceeded food item.

Table 15.3
Trends in Average Consumer Expenditure per person for the period of 30 days
in various NSS rounds

Year & Round of NSS		Rural			Urban		
		Kerala	India	% variation over all - India	Kerala	India	% variation over all - India
1		2	3	4	5	6	7
1970-71 (25 th)		36.12	35.31	2.3	47.63	52.85	(-)9.9
1972-73 (26 th)		42.19	44.17	(-)4.4	58.27	63.33	(-)8
1977-78 (32 nd)		74.76	68.89	8.5	84.10	96.15	(-)12.5
1983-84 (38 th)		145.44	112.31	29.5	179.81	165.80	8.4
1987-88 (43 rd)		211.47	158.10	33.8	266.81	249.93	6.8
1990-91 (46 th)		261.85	202.12	29.5	369.36	317.75	16.2
1993-94 (50 th)		390.40	281.60	38.6	493.50	457.70	7.8
1999-00 (55 th)		765.71	486.00	57.5	932.00	855.00	9.0
2000-01 (56 th)		841.31	494.91	70.0	1203.65	914.58	31.6
2002-03 (58 th)		881.00	530.74	66.0	1266.64	1011.94	25.2
2003 January to December (59 th)		981.00	554.0	77.0	1300.0	1022.00	27.2
January - June 2004 60 th round	Schedule Type - I	990.22	564.70	75.3	1371.51	1060.16	29.4
	Schedule Type- II	1058.64	616.57	71.7	1403.89	1149.52	22.1

Source: N.S.S.O

Table 15.4
Trends in percentage distribution of Food and Nonfood Expenditure classification in
various NSS rounds

Year & Round of NSS	Rural				Urban				
	Kerala		India		Kerala		India		
	Food	Nonfood	Food	Nonfood	Food	Nonfood	Food	Nonfood	
1	2	3	4	5	6	7	8	9	
1970-71 (25 th)	70.21	29.79	73.58	26.42	63.34	36.66	64.41	35.59	
1972-73(26 th)	70.42	29.58	72.81	27.19	64.85	35.15	64.49	35.51	
1977-78 (32 nd)	60.75	39.25	64.35	36.65	60.61	39.39	59.98	40.02	
1983-84 (38 th)	61.56	38.44	65.56	34.44	58.24	41.76	58.69	41.31	
1987-88 (43 rd)	59.92	40.08	63.77	36.23	57.08	42.92	55.92	44.08	
1990-91 (46 th)	63.29	36.71	65.97	34.03	49.66	50.34	55.63	44.37	
1993-94 (50 th)	60.45	39.55	63.21	36.79	53.90	46.10	54.62	45.38	
1999-00 (55 th)	53.70	46.30	59.47	40.53	49.03	50.97	48.07	51.93	
2000-01 (56 th)	49.63	50.37	56.29	73.71	43.22	56.78	43.80	56.20	
2002-03 (58 th)	50.23	49.77	55.07	44.93	40.25	59.75	42.47	57.53	
2003 (January to December) (59 th)	44.92	55.08	53.88	46.12	38.36	61.64	41.98	58.02	
January - June 2004 60 th round	Sch. (Type I)	46.54	53.46	53.94	46.06	40.76	59.24	41.64	58.36
	Sch- (Type II)	50.23	49.77	57.96	42.04	40.92	59.08	46.00	54.00

Source: N.S.S.O.

Box 15.1
Household Consumption Expenditure

- During the NSS Survey (60th Round 2004 January-June), the all India average Monthly Per capita Consumer Expenditure (MPCE) was Rs.565 for Rural India and Rs.1060 for Urban India. Thus, average Urban MPCE exceeded average Rural MPCE by 88%. However, urban price levels being higher than rural price levels, the differential would be narrower in real terms.
- During January-June 2004, one half of the rural population of India had MPCE below Rs.471 as per schedule type 1. About 20 percent had MPCE below Rs.340. Among the urban population, 82 % had MPCE above Rs.500. About 18 percent had MPCE above Rs.1500/-.
- For Rural India, average MPCE of Rs.565 comprised Rs.305 for food and Rs.260 for nonfood. Food expenditure included Rs.103 for cereals and cereal Substitutes, and Rs.107 for milk and milk products, vegetables and edible oil. Nonfood Expenditure included Rs.54 for fuel and light, and Rs.45 for clothing and footwear.
- For the urban population average MPCE of Rs.1060 comprised Rs.441 for food and Rs.619 for non-food. Of food expenditure, only Rs.106 went towards cereals and cereal substitutes while Rs.165 was spent on milk and milk products, vegetables and edible oil Rs.96 was spent per person per month on fuel and light, and Rs.74 on clothing and foot wear.
- The share of cereals in total consumption expenditure was 18% in Rural India during January-June 2004 compared to 26% in 1987-88. In Urban India it was 10 % during January-June 2004 compared to 15% in 1987-88.
- The decline in the share of food in total expenditure seen over the past several rounds continued. The share of food was 54 % in rural areas compared to 64 percent in 1987-88 and 42 % in urban areas compared to 56% during 1987-88.
- The rural-urban differences in the share of expenditure were considerable for cereals (18% for rural against 10% for urban), miscellaneous consumer services (rural 7%, urban 12%) and education (rural 3%, urban 7%).
- In the rural sector, among the major states, Jharkhand Orissa, Chhattisgarh, Madhya Pradesh and Bihar had MPCE less than Rs.450. Kerala had the highest MPCE (Rs.990), followed by Punjab (Rs.947).
- In the Urban Sector, among the major States, Bihar and Madhya Pradesh had MPCE less than Rs.800. Kerala had the highest MPCE (Rs.1372), after which came Maharashtra (Rs.1259).
- A separate schedule on Consumer Expenditure, named Schedule Type 2, which used a 7 day reference period for items of edible oil, egg, fish and meat, vegetables, fruits, spices, beverages, processed food, pan, tobacco and intoxicants, showed higher estimates of average MPCE as Rs.617 for rural India (more by 9% than the estimate based on conventional schedule, (Schedule Type 1) and Rs.1150 for Urban India (more by 8.5%).

Other Aspects of Living Conditions

- The proportion of rural households living in Katcha Structures was 17% in January-June 2004 compared to 30% in 2000-01. For urban households, the proportion of households living in Katcha structures was 3.5 percent in January-June 2004 compared to 7 percent in 2000-01.
- The proportion of urban households using LPG as cooking fuel rose to 56% in the first half of 2004 compared to 47% in 2000-01. Among rural households, the proportion increased to 9% from 7% in 2000-01.
- The proportion of rural households using Kerosene as primary source of energy for lighting fell to 46% in January-June 2004 from 48% in 2000-01. In urban households, the percentage fell to 7% in January-June 2004 from 9% in 2000-01.

Source : NSSO 60th round

Box 15.2

Trends in All-India Average Percapita Consumption Expenditure, and in Consumption Pattern at all India Level, Since 1987-88.

- a. The index of all India rural MPCE in money terms has increased to 357 in this round from 100 in 1987-88 (43rd round). Consumer price in rural India have increased during the same period from 100 to 291 (Index Values). This would indicate a rise in real percapita consumption expenditure of the order of 23 %.
- b. For urban India, the index of average MPCE in money terms rose from 100 in 1987-88 to 424 in 2004, indicating a real increase of 27 % with the consumer price Index having increased from 100 to 333 over the same period.
- c. In 2004 an average rural Indian spent 18 paise on Cereals out of every rupee he spent on household consumption, compared to 26 paise in 1987-88. The average urban resident spent 10 paise of his rupee on Cereals compared to 15 paise in 1987-88.
- d. In both rural and urban India, the share of food in total expenditure continued to fall throughout the period 1987-2004. The overall fall judging by Schedule Type 1 was from 64% to 54% in rural areas and from 56% to 42% in urban areas. The fall was spread over nearly all food groups for urban areas. In rural areas, such fall was not clear for a number of food groups.
- e. The share of fuel and light in household consumer expenditure rose from about 7% to 9-10% in both sectors. The share of the "pan, tobacco and intoxicants" group fell noticeably in the urban sector from 2.6% to 1.6% and from 3.2% to 2.5% in the rural sector.

Source : NSS 60th round

Wholesale Price Index

15.14 The wholesale Price Index is the most properly quoted inflation index in the country. The wholesale price index of agricultural commodities in Kerala in 2006 (upto July) came down by 57 points compared to the corresponding period of 2005, registering a decline of 2 percent Table 15.5. Index of all commodities except food crops, rice, fruits & vegetables and plantation crops declined during the year under review, compared to the corresponding period of 2005. Among various crops deceleration of prices registered for Oil and Oil Seeds was sharper. It declined by 609 points (16 percent) during 2006 from 3771 points in 2005 to 3162 points in 2006. The fall in price index of Non-Food Crops (11 percent), Molasses (3 percent), Condiments and Spices group (0.6 percent) also witnessed a decline in prices.

Table 15.5
Wholesale Price Index of Agricultural Commodities in Kerala - 2003-06.
Base: 1952-53=100

Sl. No.	Crops	Weight	Year					% Variation over previous year			
			2003	2004	2005*	2005	2006*	2004	2005*	2005	2006*
A	Food Crops	63.5	2660	2806	2825	2802	2920	5.5	0.2	-0.1	3
	Rice	40.4	2504	2601	2612	2614	2712	3.9	-1	.5	4
	Condiments & Spices	10.4	2298	2873	2967	2748	2948	25.00	0.4	-4.	-0.6
	Fruits & Vegetables	10.7	3743	3527	3474	3522	3695	-5.8	-2	-0.1	6
	Molasses	2.0	1899	2979	2895	3005	2810	56.9	1	.9	-3
B	Non-food Crops	36.5	2899	3287	3134	3036	2783	13.4	-3	-8	-11
	Oil & Oil Seeds	25.5	3551	3920	3771	3617	3162	10	-2	-8	-16
	Plantation Crops	11.0	1392	1824	1662	1693	2004	31	-6	-7	21
c	All Crops	100	2747	2982	2938	2887	2881	8.6	-1	-3	-2

Source: Directorate of Economics & Statistics.

* up to July

15.15 Month-wise details of wholesale price index is given Appendix 15.7. Wholesale Price Index of all crops showed a declining trend during July to October 2005. However, ups and downs in its movement was witnessed from next month onwards. This trend continued till April 2006 and started to increase thereafter. Index of food crops though presented a mixed trend during the months from July 2005 to January 2006 but continued to rise from February 2006 onwards. Fruits and vegetables under food crops experienced a positive movement in its index in almost all months from January 2006 onwards. All other items viz rice, molasses, condiments and spices showed a mixed trend from July 2005 to July 2006. The non-food crops presented an erratic movement in its price index on all months from July 2005 to July 2006.

Parity Index

15.16 Parity index is constructed to assess how the states' consumer price situation affects the farming community. It is a relative measure of prices received and paid by farmers. In 2006 (upto July), the parity index came down by 3 points from 53 points in 2005 to 50 points in 2006, as against the decrease of 6 points in 2005 from 59 points in 2004 to 53 points in 2005 (Table 15.6). The index of prices received by farmers, over the pervious year while declined by 43 points and the prices paid by farmers increased by 194 points signifies that the price situation is unfavourable to the farming community. The ratio of prices received and prices paid by farmers were well below 100 over the last several years reflects the continuance of adverse terms of trade to the farming community.

Table 15.6
Index of Parity-Prices Received and Prices paid by Farmers from 1996-2006.

Base: 1952-53=100

Year	Prices received by farmers (Rs)	Growth Rate	Farm Cultivation Cost (Rs)	Growth Rate	Domestic Expenditure (Rs)	Growth Rate	Prices Paid by Farmers (Rs)	Growth rate	Parity index Col.2 to 8
1	2	3	4	5	6	7	8	9	10
1996	2079		3928		1810		2666		78
1997	2486	19.58	4571	16.37	1979	9.34	3007	12.79	83
1998	2447	-1.57	4895	7.09	2107	6.47	3212	6.82	76
1999	2907	18.80	5556	13.50	2246	6.60	3532	9.96	82
2000	2492	-14.28	6173	11.11	2384	6.14	3836	8.61	66
2001	1927	-22.67	6584	6.66	2489	4.40	4048	5.53	48
2002	1999	3.74	6684	1.52	2542	2.13	4122	1.83	49
2003	2454	22.76	7056	5.57	2615	2.87	4295	4.20	57
2004	2651	8.03	7360	4.31	2705	3.44	4459	3.82	59
2005	2440	-7.96	7703	4.66	2795	3.3	4640	4.1	53
2006(P)	2397	-2	8025	4	2913	4	4834	4	50
Annual Average Growth Rate		2.4		7.5		4.2		6.2	

Source: Directorate of Economics & Statistics

P-Provisional and up to July 2006.

15.17 Farm cultivation cost and domestic expenditure, the two input components on the part of the farmers surpassed their receipts and apart from this, factors such as crop failure, occurrence of natural calamities, fall in prices of Agricultural crops especially commercial crops, agricultural related trade policies followed by Government of India adversely affected the farming community in general.

Wages

15.18 The average daily wage rates of skilled and unskilled workers in agricultural sector from 1995-96 to 2005-06 are given in Tables 15.7 & 15.8. The daily wage rates of carpenter in the Agricultural sector increased by Rs.8.6 (4.3 percent) in 2005-06 over 2004-05 while that of Mason increased by Rs.12.17 (6.3 Percent).

Table 15.7
Average Daily-wage Rates of Skilled Workers in the Agricultural Sector

(Rs)

Year	Average Daily Wage Rates		% Change Over Previous Year	
	Carpenter	Mason	Carpenter	Mason
1995-96	107.20	105.96	22.60	21.74
1996-97	128.54	127.81	19.91	20.62
1997-98	145.94	144.04	13.54	12.70
1998-99	155.42	154.80	6.50	7.47
1999-2000	165.35	164.70	6.39	6.40
2000-01	176.15	173.85	6.53	5.56
2001-02	182.42	180.06	3.56	3.57
2002-03	190.07	186.30	4.20	3.5
2003-04	192.00	188.00	1.02	0.9
2004-05	199.23	194.08	3.82	3.2
2005-06(P)	207.83	206.25	4.3	6.3

Source: Directorate of Economics & Statistics

P. Provisional

15.19 In 2005-06, the daily rates of Male unskilled workers in Agricultural Sector showed an increase of Rs.9.09 (5.5 percent) over 2004-05. At the same time for the female workers it was Rs.4.05 (3.5 percent). There is a gap in the wage rates of male and female paddy field workers over the years. In 1995-96 it was 51 percent and in 2000-01 it came down to 50 percent and further to 46 percent in 2005-06.

Table 15.8
Average Daily-Wage Rates of Unskilled Workers in the Agricultural Sector
(Rs)

Year	Average Daily Wage Rates of Paddy Field Workers			
	Male	% Growth over previous year	Female	% Growth over previous year
1995-96	77.17	-	51.17	-
1996-97	92.18	19.5	60.52	18
1997-98	103.72	12.5	69.35	14.6
1998-99	111.76	7.8	71.42	3
1999-2000	118.90	6.4	78.80	10
2000-01	123.15	3.6	82.38	4.5
2001-02	127.21	3	88.75	7.7
2002-03	144.90	13.9	99.73	12.4
2003-04	148.72	2.6	101.64	1.9
2004-05	165.58	11	115.75	13.9
2005-06(P)	174.67	5.5	119.80	3.5

Source: Directorate of Economics & Statistics
P-Provisional

Food Security

Public Distribution System (PDS)

15.20 The Public Distribution System is an instrument for ensuring the availability of certain essential commodities for consumption at subsidised rates to the people particularly the poor. The commodities distributed under PDS include rice, wheat, sugar edible oil and kerosene oil. The Government, through the Food Corporation of India (FCI) procures and stocks food grains and releases every month for distribution through the Public Distribution System network across the country. The Essential Supplies Programme gave way to Revamped Public Distribution System (RPDS) in 1992 with focus on disadvantaged areas. Subsequently Government of India introduced Targeted Public Distribution System (TPDS) from 1st June 1997 in which allocation of foodgrains out of the central pool was made to the states at two sets of prices, at higher subsidised price for the poor and near open market price for others.

Public Distribution System in Kerala

15.21 Kerala has a long history of public distribution system, dating back to the beginning of Second World War. Universal and Statutory rationing was introduced on 1-7-1965. The state also switched over to the national pattern of Targeted Public Distribution System from 1.6.1997. Accordingly families under Above Poverty Line (APL) and Below Poverty Line (BPL) categories have been identified and distinctive ration cards under each category have been issued and food grains are distributed to the families at different prices.

15.22 The shift in policy in the allocation and pricing of food grains, by the Central Government, caused a major departure with regard to food security policy in the country. On the one hand, it has sought to restrict the coverage of the subsidized Public Distribution System to the poor. On the other hand it has increased the price of the food grains. One of the hard hit states of this policy shift is Kerala which is facing severe food grains deficit. In the process, State's Public Distribution System, built-up over a long period of time and hailed as a model one, is now facing survival problems.

Profiles of PDS System in Kerala

15.23 In Kerala, the coverage of ration cards is almost hundred percent. Ration cards are issued to all families including those who do not have house numbers. The total number of ration cards in the state has increased from 66.11 lakhs as on 1st April 2005 to 67.77 lakhs as on 1st April 2006 showing an increase of 2.5 percent. As on August 2006 the number of cardholders rose upto 68.59 lakhs of which 47.70 lakh families (69.54%) are APL, 14.93 lakh (21.77%) are BPL and 5.96 lakhs are (8.69%) under (AAY) scheme. The number of ration permits for institutions has come down from 15215 in 2005 to 14187 in 2006. Rationed articles at subsidised price are distributed to the cardholders through a network of 333 authorized wholesale dealers and 14195 authorized retail dealers. At present there are 21 FCI sub depots in the State. Table 15.9 describes the position of PDS in Kerala from 2001-02 to 2005-06.

Table 15.9
Public Distribution System in Kerala – A profile (2001-2005)

(Nos.)						
Sl.No	Items	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
1	a) Ration cards for families	63,89,241	62,60,966	64,46,957	66,11,298	67,77,075
	b) Ration Permits for institutions	17,338	16,183	15,878	15,215	14,187
2	FCI Sub Depots	23	23	22	22	21
3	Wholesale Shops					35
	a) Co-operative Sector	38	42	38	37	
	b) Others	297	259	269	288	298
4	Ration shops					595
	a) Co-operative Sector	958	828	697	634	
	b)Others	13212	13249	13441	13513	13600

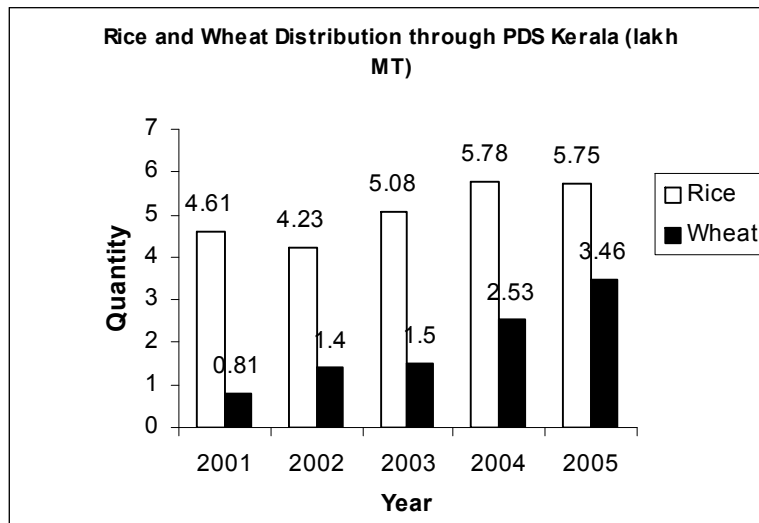
Source: Directorate of Civil Supplies

Distribution of Rice and Wheat

15.24 Food grains are allotted by the Government of India for distribution to all cardholders at the rate of 35 Kg per month irrespective of all category. During 2005-06, total allotment of rice and wheat in the country as a whole from the Central Pool was 269 lakh tonnes and 148 lakh tonnes respectively. Compared to previous year this was 12% increase and 12 % decrease respectively. Appendix 15.8 represents the procurement and off take of rice and wheat by the central government for the last decade. The off take quantity was 250 lakh tonnes of rice and 171 lakh tonnes of wheat.

15.25 Distribution of rice and wheat through Public Distribution System in Kerala shows declining trend up to 2002, but increasing trend afterwards. In 2002 the off take of rice and wheat in the state was 4.61 lakh tonne and 0.81 lakh tonne respectively which marginally increased to 5.75 lakh tonne rice and 3.46 lakh tonne wheat in 2005, constituting 2.3% and 2.02% of the total central offtake. Reduction of Central subsidy for foodgrains under APL category from April 2000, lack of desired quality of foodgrains and restriction of levy sugar to BPL cardholders are the reasons for the low off-take of foodgrains under TPDS. The trend in the distribution of rice and wheat during the past five years shown in Fig.15.1.

Fig. 15.1



Source: Civil Supplies Department.

15.26 After the introduction of TPDS, there is sharp fall in APL families buying food grains from PDS shops. District wise distribution of rice and wheat to BPL and APL families during 2004 is given in Appendix 15.9. Retail prices of commodities for last five years for issued through ration shops for are shown in Table 15.10.

Table 15.10
Retail Price of Commodities issued through Ration Shops

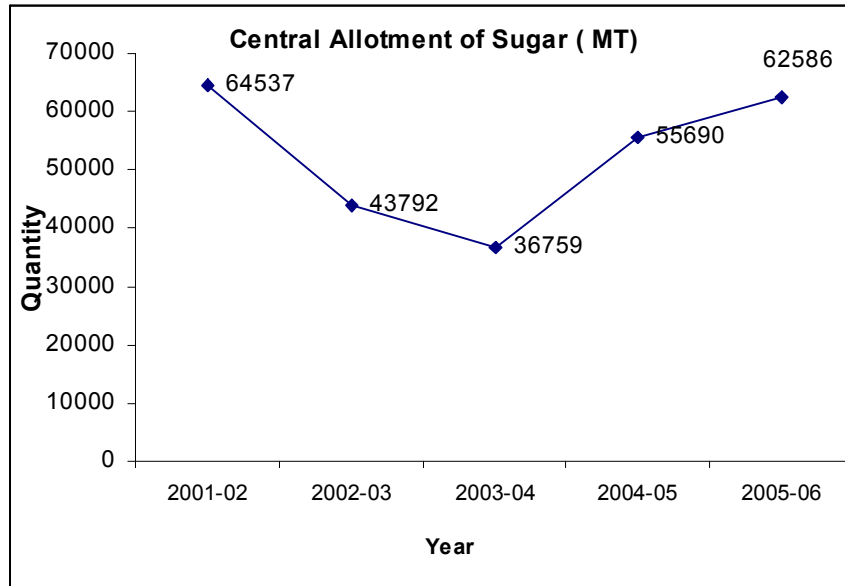
Sl.No.	Items	Price as on April 2006 (Rs. per Kg)
1	Rice - APL	8.90
	BPL	3.00
2	AAY	3.00
3	Wheat - APL	6.70
	BPL	3.00
4	Sugar - BPL	13.50
5	Kerosene/Litre	9.30 to 9.70
6	Annapoorna rice	Free of cost

Source: Directorate of Civil Supplies

Central Allotment of Sugar and Kerosene

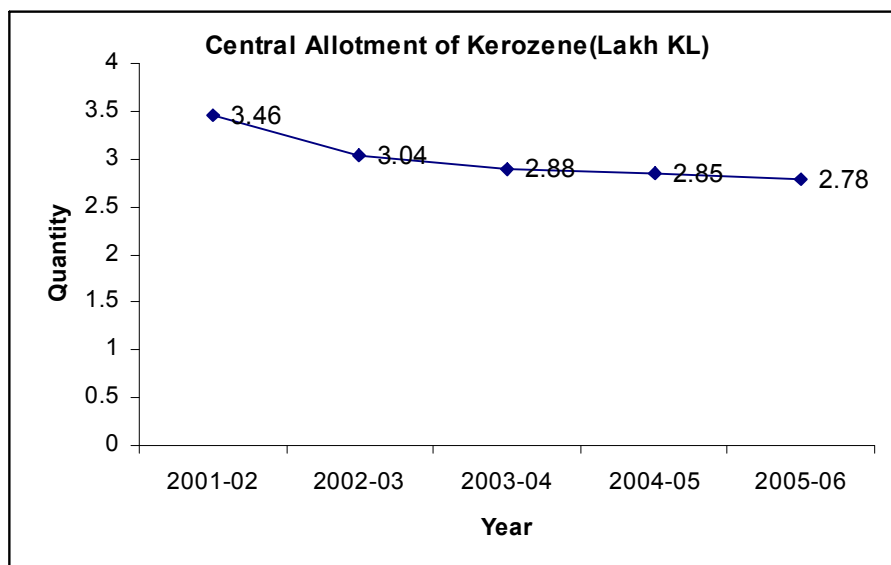
15.27 Central allotment of Sugar is restricted to BPL card holders alone from February 2001 onwards. Thus central allotment sharply declined from 147517 MT in 2001 to 64537 MT in 2002. But forward trend was observed after 2002 and is 62586 in 2005. The central allocation of kerosene to the state also reduced year after year. Allotment of Kerosene to state was 396620 Kilo Litres in 2000-01 and it came down to 290077 Kilo Litres in 2005 showing a decrease of 27%. Fig.15.2 shows the trend in allocation of sugar and kerosene from central pool. Monthly distribution of sugar and kerosene from 2001 to March 2005 is given in Appendix 15.10.

Fig 15.2



Source: Civil Supplies Department.

Fig . 15.3



Source: Civil Supplies Department.

Special Schemes

1. Antyodaya Anna Yojana Scheme (AAY)

15.28 This scheme which was implemented in Kerala since Feb. 2001 provides 35 kgs of foodgrains to the poorest of the poor families per month @ Rs.3 per kg. Even though the Central Government have fixed the target of beneficiaries in the state initially at 2,38,200, as part of tribal welfare measures, all the eligible tribal facilities have been included under the scheme during 2003. The Government of India has decided to enhance the number of beneficiaries to 357400. As part of further expansion of the scheme the target further enhance to 595800 (114400 during 2nd phase and 124000 during 3rd phase expansion). The Government of India is allotting rice under the scheme at the rate of 20855 MT of rice per month at the cost of Rs. 3/Kg and the State Government is meeting the expenses towards transportation and handing charges due to the dealers. The expenditure on this account comes to around Rs.12 crore per year.

2. Annapoorna Scheme

15.29 Annapoorna scheme originally was a 100% centrally sponsored one and from 1-4-2001, it has been transferred to State. The Central Government provides fund under Additional Central Assistance for purchase of rice from Food Corporation of India and State will have to meet the expenses on transportation and handling charges due to the dealers through a mandatory provision. As per the Scheme, destitutes above the age of 65 years who are not receiving National Old Age Pension are eligible for 10 kgs of rice per month free of cost. The Central Government have identified 44980 beneficiaries and the distribution of rice could not be satisfactorily maintained as the actual beneficiaries come over one lakh in Kerala. As decided by the State Government, all tribals who are unable to work have also been included under the scheme.

3. Mid day Meal Programme

15.30 The Mid-day Meal Programme aimed at providing nutritional support to primary school-going children, was introduced in 1995. Under this scheme, every child is entitled for 3 kg wheat or rice per month for 10 months a year where food grains are distributed in raw form and at the rate of about 100 gms per child per day where cooked meal is being served. The food grains are issued by the FCI to the nominees of the District Collectors without charging any price from them. However, a revolving fund of Rs.300 crore has been created by the Ministry of Human Resource Development to reimburse the cost of the food grains to FCI.

15.31 The Supply of Commodities to schools for Noon – Meal scheme is entrusted to SUPPLY CO. During 2005-06 the Corporation supplied 344929.14 Qtls of rice and 105826.4 Qtls of pulses to 11135 schools and about 21.16 lakh children got the benefit of the scheme. The number of schools under this scheme decreased compared to last year and the quantity food grains distributed decreased correspondingly while the number of children benefited remains the same. Due to reduction in the purchase price, through various measures, noon feeding issue price has been reduced up to 30%. Details of Mid –day Meal Programme during the last five years are given in the Table 15.11.

Table 15.11
Mid – day Meal Programme – 2001-02 to 2005-06

Sl.No.	Year	Schools (Nos.)	Children benefited (Lakhs)	Supply of food grains (Quintal)	
				Rice	Pulses
1	2	3	4	5	6
1	2001-02	11881	23.35	466047	93693
2	2002-03	11897	21.56	46477	95141
3	2003-04	11906	21.67	595327	98248
4	2004-05	11968	21.16	590272	96509
5	2005-06	11135	21.16	344929.14	105826

Source: Civil Supplies Corporation

Kerala State Civil Supplies Corporation

15.32 The Kerala State Civil Supplies Corporation was set up in the state in 1974 with the mission of “food security for Kerala.” The Corporation acts as a second line of PDS in the State by distributing essential commodities through Maveli Stores/Labham Markets at reduced prices. At present Corporation has 869 Maveli Stores and 217 Labham Markets. In addition to these the Corporation has established some profit making ventures like Sabari super market which sell luxury items, Maveli Medical Stores, petrol bunks and LPG outlets. In maveli medical stores, the selling price is less by 10% to 30% of the market price. Over and above, the corporation is the wholesale distributor of levy sugar for the entire state. The Corporation is running 9 sub depots for PDS items in 7 districts viz Thiruvananthapuram, Kollam, Alappuzha, Idukki, Ernakulam, Thrissur and Kozhikode. The Corporation has started selling essential commodities through a chain of 1370 ARD Sabari Stores. Details of outlets under the SUPPLYCO from 2001-02 to 2005-06 is given in Table 15.12.

Table 15.12
Outlets opened by the Civil Supplies Corporation - 2000-01 to 2005-06

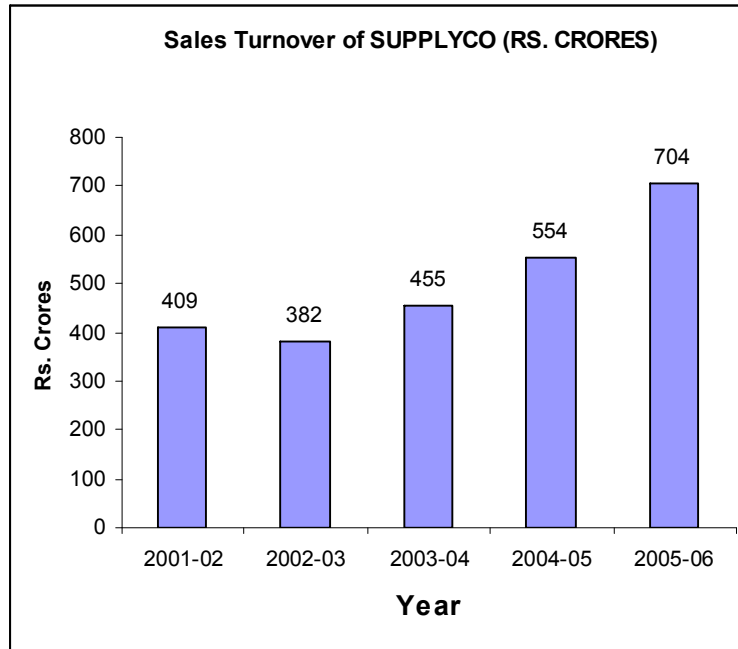
Sl.No	Name of Outlets	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8
1	Maveli Store	854	882	842	834	866	874
2	Labham/Sabari Super Market	Nil	Nil	77	102	158	208
3	Supply co Super Market	19	15	10	10	10	10
4	Medical Stores	26	30	34	38	43	49
5	Petrol Bunk	9	9	9	10	10	10
6	LPG Outlet	4	4	4	4	4	3
7	ARD Sabari Stores	Nil	Nil	Nil	Nil	Nil	1240
Total		912	940	976	998	1091	1154

Source: Civil Supplies Corporation

15.33 Another major activity of the Corporation is the organisation of fairs and markets in all parts of the State during the festival seasons so as to control price levels. During the period under review, the Corporation organised 5 onam metro fairs, 10 district fairs and 133 onam markets in the District and Taluk Headquarters and 993 onam markets attached with maveli stores through which a variety of consumer goods and vegetables were sold. The total turn over of the onam markets was Rs.8.19 crore. The Corporation has also set up a hotel at Sannidhanam during

sabarimala season. The sales turn over of the Corporation increased from Rs.554 crores in 2001-02 to Rs.704 crores during 2005-06. It is depicted in Fig.15.4.

Fig. 15.4



Source: Civil Supplies Corporation

15.34 Apart from these, the Corporation has started paddy procurement scheme as a market intervention to protect the income of farmers and providing quality rice through PDS. Paddy procured through Agricultural Co-operative Societies and Padasekharam Committees at the price fixed by the Government is converted into rice and distributed by the Corporation for sales.

CHAPTER 16

EXPORT AND IMPORT

India's Foreign Trade

According to the World Trade Organization, 2005 Germany remains the world's largest goods exporter with US\$971.9 billion, followed by the United States with US\$897.68 billion, contributing 9.46% and 8.73% respectively to World Trade in goods. India has jumped five places to become the world's 11th biggest exporter of commercial services in 2005, and inched one step ahead to the 29th rank among the largest merchandise exporters. The country has also emerged as the world's 13th largest importer of commercial services- up to position from last year, and 17th largest importer of goods from 23rd a year ago. WTO has listed India among the leading services traders, with value increase of 15 per cent or more in exports. The country's goods export is just 0.9 percent and in goods import a mere 1.3 percent, in services, the country has 2.3 percent share in exports and 2.2 percent in imports during 2005 in world trade. Share of goods and services of selected countries in the world trade during 2005 is given in Table below and figure 16.1 represents the percentage contribution of India and China to world merchandise export from 1948-2005 where China leaps and bounds over running India.

Table 16.1
Share of goods and commercial services in the total trade of selected countries, 2005
Value: Billion Dollars
Share: Percentage

Sl.No.	Name of Countries	Export			Import		
		Value	Share		Value	Share	
		Total	Goods	Commercial Services	Total	Goods	Commercial Services
1	World	12690	81.0	19.0	12610	81.4	18.6
2	Canada	427	87.8	12.2	385	83.3	16.7
3	United States	1252	71.7	28.3	1959	85.6	14.4
4	Belgium	321	83.4	16.6	313	83.9	16.1
5	France	554	79.3	20.7	576	81.8	18.2
6	Germany	1121	86.7	13.3	985	79.5	20.5
7	Ireland	156	65.9	34.1	131	49.7	50.3
8	Italy	465	79.9	20.1	464	80.1	19.9
9	Netherlands	418	81.7	18.3	368	80.7	19.3
10	United Kingdom	571	66.9	33.1	655	76.5	23.5
11	Russian Federation	268	90.9	9.1	164	76.5	23.5
12	South Africa	65	84.5	15.5	68	83.0	17.0
13	China	836	91.2	8.8	711	88.3	11.7
14	India	153	63.3	36.7	187	72.1	27.9
15	Japan	676	84.0	16.0	607	78.2	21.8
16	Singapore	273	83.5	16.5	236	81.4	18.6
17	Viet Nam	35	87.4	12.6	39	86.3	13.7

Source: WTO Report on world Export and Import 2005

Fig 16.1



Source : WTO 2005

16.2 The Government of India announced a foreign trade policy for 2004-2009 on 31st August 2004 with two major objectives. (1) To double our percentage share of global merchandise trade within next five years (2) to act as an effective instrument of economic growth by giving a thrust to employment generation.

16.3 Government of India has introduced a new scheme to accelerate the growth of exports called "Target Plus". Exporters who achieve a quantum growth in exports would be entitled to duty free credit based on incremental exports substantially higher than the general annual export target fixed. A new scheme to establish Free Trade and Ware Housing Zone has also been introduced to create trade related infrastructure to facilitate the export & import of goods and services with freedom to carryout trade transactions in free currency.

16.4 India's export as well as import have shown remarkable progress during 2005-06. India's export grows up to Rs. 454800 crores equivalent to 102725 million US\$ showing an increase of 21.17% compared to previous year. At the same time the rate of growth observed in import was 25.83% by importing commodities equivalent to Rs. 630527 crores. In dollar terms the achievement was 23% and 28% respectively. The decadal export import performance of India in terms of rupee value for the last five decades is revealed in the table below and year wise details from 1990-91 to 2005-06 given in Appendix. 16.1

Table 16.2
Foreign Trade of India – 1970-71 to 2005-06

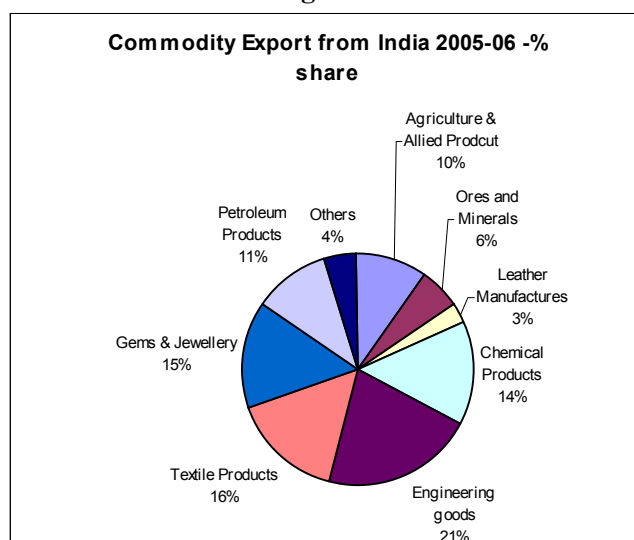
(Rs. Crore)

Sl.No.	Year	Export	Import	Trade Balance
1	2	3	4	5
1	1970-71	1535.25	1634.20	-98.95
2	1980-81	6710.71	12549.15	-5838.44
3	1990-91	32557.63	43192.86	-10635.23
4	2000-01	203571.01	230872.76	-27301.75
5	2005-06	454799.97	630526.77	-175726.80

Source: CMIE

16.5 Major items of Indian exports are agriculture & allied products, gems and jewellery, manufactured goods, engineering goods consisting of leather goods, textiles, chemicals and other related products. Export earnings of manufactured goods from the country alone constitute about 70% of the total followed by gems and Jewellery (15%). Among the manufactured items export of engineering goods shared 21% and textiles more than 15% of the total export value. India's major import items are petroleum and non-petroleum products, capital goods, electronic goods, pearls (precious & semi precious), gold, silver and non electrical machinery. Import of petroleum products constitute 31% of the total import of the country during 2005-06 followed by capital goods (22%). Fig. 16.2 represent share composition of commodities exported from India during 2005-06. Commodity wise export details from 2001-02 to 2005-06 are furnished in Appendix 16.2 and import in Appendix 16.3

Fig. 16.2



Source: CMIE

Export – Import Trade of Kerala through Cochin Port

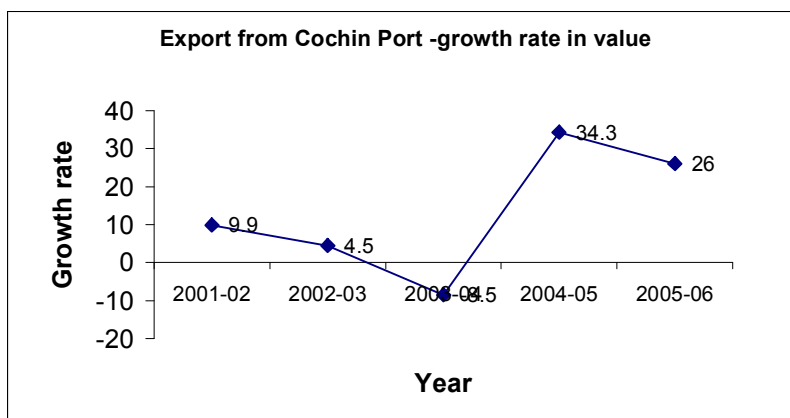
16.6 A lion's share of Kerala's trade is being conducted through the port of Cochin. It is expected that the volume of export will be strengthened on completion of Vallarpadam container terminal and Vizhinjam Port. Important export items from Kerala are pepper, cashew, coir and coir products, tea, marine products and spice oils and oleoresins. Software export is also gaining momentum in recent years.

Commodity Composition of Exports through Cochin Port

16.7 Total value of foreign export through Kochi port increased from Rs. 8033.73 crores in 2004-05 to Rs. 10122.84 crores in 2005-06 showing an increase of 26%, but the quantity of export declined from 3153344 MT to 2919817 MT during 2005-06 registering 7.41% decline compared to 2004-05. All the items exported through Cochin Port except spices registered sharp decline in quantity but total export earnings increased. The quantity of spices export increased from 24846 MT to 65321 MT showing 163% growth compared to previous year.

16.8 The export of sea foods through Kochi port declined by 3.34% in 2005-06 as against 2.17% increase in 2004-05. Export of coir products shows a decrease of 17.04 per cent in quantity but value realised increased from Rs. 1.1 crores to Rs. 7.73 crores compared to previous year. The export of tea steeply declined from 86589 MT in 2004-05 to 31985 MT during 2005-06, showing a decrease of 63.1%. But value of tea export increased by 163%. Details of commodity wise export though Kochi Port is furnished in Appendix – 16.4. Growth rate of value realised from export through Cochin port is shown in Fig. 16.3

Fig. 16.3



Source: Cochin Port trust

Commodity composition of Kerala's Imports through Kochi Port

16.9 During 2005-06 total import registered through Cochin Port was 10967642 MT which is almost constant compared to previous year. Petroleum products accounted for 84% of the total imports through Kochi port during 2005-06 showing a decrease of 7.72% compared to previous year. A great jump in the growth rate of news print import was registered with 766% increase during 2005-06. Import of Iron, steel and machinery increased from 76278 tonnes during 2004-05 to 308468 tonnes in 2005-06. Commodity wise imports through Kochin port is given in Appendix. 16.5

Cargo handled by Kochi Port

16.10 The total export of Cargo (both coastal & foreign), from Kochi Port was 29.21 lakh MT during 2005-06 showing a decline of 7% compared to previous year. The foreign export from Kochi Port during 2005-06 was 17.86 lakh MT. The trend in total import (both coastal and foreign) through Kochi Port is almost constant through out past five years. Total import during 2004-05 was 109.5 lakh tonnes, and stand with slight variation at 109.67 lakh tonne. While coastal import through Kochi Port declined from 42.39-lakh tone of 2001-02 to 29.61 lakh tonne during 2005-06, foreign import through Kochi Port increased from 58.12 lakh tonnes in 2001-02 to 80.06 lakh MT during 2005-06 registering a increase of 38%. Details given in table 16.3

Table 16.3
Cargo Handled at Cochin Port during 2001-02 to 2005-06

(In Lakh MT)

Traffic	Export					Import				
	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11
Coastal	7.51	10.16	8.97	11.16	11.35	42.79	36.70	28.44	26.26	29.61
Foreign	12.17	11.09	16.59	20.27	17.86	58.12	72.29	81.73	83.24	80.06
Total	19.68	21.25	25.56	31.43	29.21	100.91	108.99	110.17	109.5	109.67

Source: Cochin Port Trust

Export of Marine Products - National Scenario

16.11 The export of marine products set an ever time record of 152164 tons valued Rs. 7245.30 crores during 2005-06. The quantity of export increased by 11% and value in rupee by 9% and over 11% in US dollar realization. The average unit value realization was almost static US\$3.21/kg. The export details of marine products during the last two years from India is shown in Table 16.4

Table 16.4
Export Growth of Marine Products 2004-05 & 2005-06
(Qty: in tons, Value: Rs.Crore, \$: US \$ Million)

Year	Unit	Export	Variation to Previous year	Percentage variation	Unit value
1	2	3	4	5	6
2004-05	Q:	461329	49312	11.97	
	V:	6646.69	554.74	9.11	Rs.144.08
	\$:	1478.48	147.71	11.10	\$: 3.20
2005-06	Q:	512164	50835	11.02	-
	V	7245.30	598.61	9.05	141.46 (Rs)
	\$:	1644.21	165.74	11.21	3.21 (\$)

Source: MPEDA, Kochi

16.12 During 2005-06 all items of seafood exported recorded a growth both in terms of volume and value. Frozen shrimp continued to be the major item of marine products export sharing 28% in quantity and 59% in value during 2005-06. But compared to 2004-05-growth rate of 5.17% in value and 6.14% in quantity, the increase was only 1.2% in value and 5.14% during 2005-06. The export of frozen fish achieved an increase of 14.19% in quantity and 31.62% in rupee value. Frozen squid export increased in quantity by 8.29% and value by 20.57%. Export of dried items from its negative growth rate during 2004-05 shifted to positive position of 46.18% growth in volume and 9.54% in value. Details on item wise export of marine products from India for last 5 years are given in Appendix 16.6.

16.13 The European Union emerged as the largest market for Indian marine products with a share of 29% in the total export earnings followed by USA (23%), and Japan (16%). Export to

the European Union during 2005-06 increased to 136842 tons valued at Rs.2134 Crores. Market wise export of marine products from India for the last 5 years are given in Appendix -16.7

16.14 Export of marine products from India to all-important markets except South Asia recorded an increase during 2005-06. While the export of marine products to Middle East Countries increased by 34% in volume and 26% in rupee value compared to previous year, export to South East Asia declined by 5.8% in volume and 6.84% in rupee value. But USA continued to be the single largest market for Indian marine products with a share of 23% in value during 2005-06 relegating Japan to the 2nd position. The export to China increased by 22.52% in rupee terms and 9.81% in volume. Details are given in Table 16.5

Table 16.5
Country – Wise Export Of Marine Products from India
Qty: in Tons, Value in Rs.Crore, US \$: in Million

SL.No.	Country	% share to total	Unit	2004-05	2005-06	Variation	(%change)
1	2	3	4	5	6	7	8
1	Japan	12	Q	57832	59785	1953	3.38
		16	V	1202	1156	-46	-3.83
		16	\$	267	263	-4	-1.50
2	USA	11	Q	50045	55817	5772	11.53
		23	V	1556	1639	83	5.33
		23	\$	346	372	26	7.51
3	European Union	27	Q	117742	136842	19100	16.22
		29	V	1819	2134	315	17.32
		29	\$	405	484	79	19.51
4	China	26	Q	124826	137076	12250	9.81
		12	V	693	849	156	22.51
		12	\$	154	192	38	24.67
5	South East Asia	12	Q	63842	60140	-3702	-5.8
		8	V	629	586	-43	-6.84
		8	\$	140	133	-7	-5
6	Middle East	4	Q	16624	22270	5646	33.96
		4	V	244	308	64	26.23
		4	\$	55	70	15	27.27
7	Others	8	Q	30418	40234	9816	32.27
		8	V	502	573	71	14.14
		8	\$	112	130	18	16.07
8	Total	100	Q	461329	512164	50835	11.02
		100	V	6647	7245	598	8.99
		100	\$	1478	1644	166	11.23

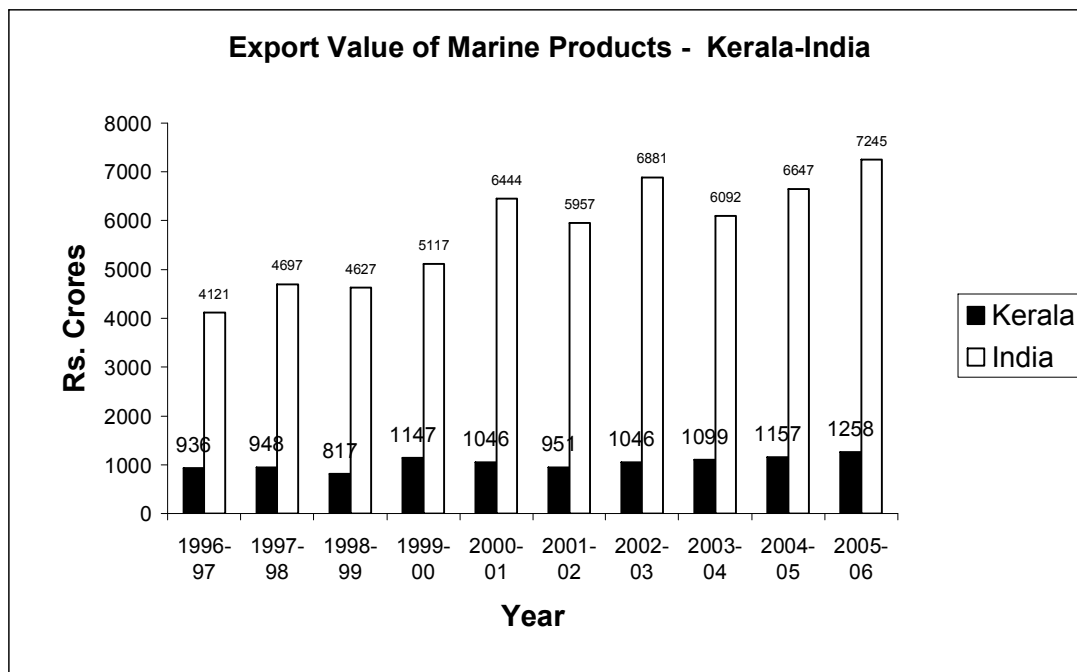
Source: MPEDA

Export of Marine Products from Kerala

16.15 During 2005-06 the export of marine products from Kerala accounted for 97311 ton valued at Rs. 1257.65 crores sharing 19% in quantity and 17.4% in value of marine export from India. Kerala's contribution to Indian export of marine products shows a declining trend both in quantity and value. For the last decade except in 1999-2000 though slight improvement was observed in the share of Kerala to Indian export, after 2002-03 it remains almost constant both in terms of quantity and value as revealed in appendix 16.8. The export trend of marine products from Kerala in value terms during the last 10 years compared to all India is diagrammatically

explained in Fig. 16.4. In the export of frozen squid the share of Kerala to India's marine product export was 31% and frozen shrimp constituted 20.67% in quantity and 14% in value.

Fig 16.4



Source: MPDEA

16.16 A growth rate of 11.42% in quantity and 8.66% in rupee value is observed during 2005-06 in Kerala's marine product exports. The growth rate is much higher in dollar terms, which is 11.2%. Frozen shrimp was the main item of export followed by frozen cuttle fish, squid and frozen fish. Export of Frozen fish almost doubled both in quantity and value compared to the previous year. The export of frozen shrimp increased by 7.14% in quantity and 6.42 % in value during 2005-06. A decline in export was noted only in the case of frozen squid where the quantity exported decreased by 10.4% and value by 2.9%. Details on item wise export of marine products from Kerala is given in Table 16.6.

Table 16.6
Item wise Exports of Marine Products from Kerala during 2004-05 and 2005-06

Sl. No	Item	2004-2005			2005-2006		
		Qty	Val.Rs (Crores)	US\$ (Million)	Qty. (Tons)	Val.Rs. (Crores)	US\$ (Million)
1	2	3	4	5	6	7	8
1	Frozen Shrimp	28011	561.57	125	30012	597.63	135.76
2	Frozen fish	12396	60.28	13	22464	111.46	25.16
3	Frozen Cuttle Fish	19954	251.53	56	193116	251.85	57.38
4	Frozen Squid	17926	195.80	43	16068	190.07	43.32
5	Dried Items	140	2.60	1	148	5.34	1.21
6	Live Items	163	9.00	2	235	15.60	3.54
7	Chilled Items	1029	15.58	4	1291	22.11	4.96
8	Others	7712	61.06	14	7777	63.58	14.45
	Total	87331	1157.42	257	97311	1257.65	285.78

Source: MPEDA

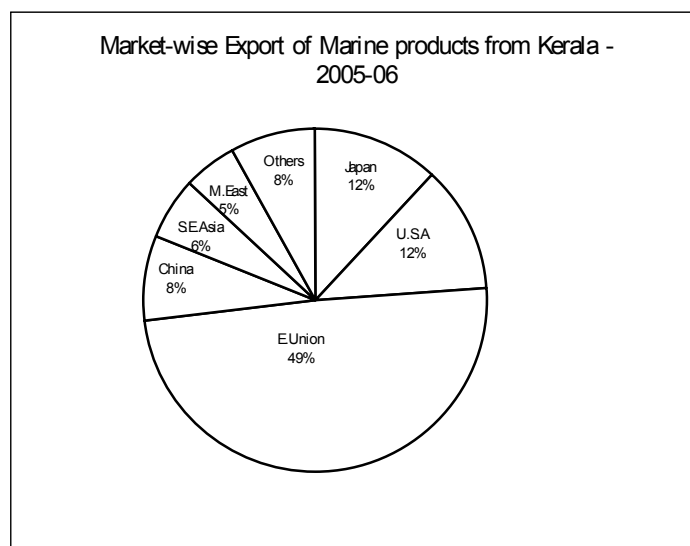
16.17 European Union accounted for the largest market by purchasing 46803 tons valued Rs.632.86 crores of marine products from Kerala. Japan was the single largest market followed by USA. While Japan and USA improved their import of marine products from Kerala/ European Union reduced by 3% during 2005-06 as seen in Fig.16.5 below. Table 16.7 shows the market wise export of marine products from Kerala.

Table 16.7
Export of Marine Products from Kerala to major markets-2004-05 and 2005-06

Sl.No	Country	2004-2005			2005-2006		
		Qty (Tons)	Val.Rs (Crores)	US\$ (Million)	Qty. (Tons)	Val (Rs. Crores)	US\$ (Million)
1	2	3	4	5	6	7	8
1	European Union	44418	572.95	127.16	46803	632.86	143.89
2	Japan	8429	178.23	39.66	6978	147.84	33.58
3	USA	8140	139.00	30.90	8445	145.37	32.99
4	China	6406	74.22	16.48	10977	100.30	22.86
5	South East Asia	9005	59.94	13.30	10846	69.52	15.74
6	Middle East	3745	58.33	13.11	3594	61.12	13.92
7	Others	7188	74.75	16.66	9667	100.63	22.80
	Total	87331	1157.42	257.27	97311	1257.65	285.78

Source: MPEDA

Fig 16.5



Source: MPEDA

Export performance of Indian spice industry

16.18 The spices export during 2005-06 registered a decline of 4.46% in quantity while the value realized increased by 4.33%. Most of the export items, which stood highest during 2004-05 both in quantity and value, lost their position during 2005-06. Export of chilly which enjoyed the position of highest earner in the spices export basket sharing 41% in quantity and 23% in value during 2004-05 registered a decline of 18% in quantity and 19% in rupees value during 2005-06. Though export of turmeric increased by 8% in quantity the value realized decreased by 2.24% due to sharp fall in prices of turmeric. The credit of highest earner was now adorned by mint product export by 25% in value of total spices export from India during 2005-06, followed by oil and oleoresins with 22%. Export of Pepper also gained a better position. Export of most of the items experienced a decline both in quantity and value compared to 2004-05 as revealed in Appendix 16.9.

16.19 As regards vanilla, though export increased by 67% in quantity, value declined by 58% during 2005-06. This was a blow to the vanilla cultivators due to price decline. India exported 72 tons of vanilla valued at Rs, 12.11 crore in 2005-06 as against 43 tons valued at Rs.28.75 crores during 2004-05.

Spices – Kerala Scenario

16.20 The export of spices from Kerala is mainly through Cochin and Trivandrum Ports. Major items of export of spices from Kerala are pepper, cardamom (s), ginger, turmeric, curry powder, spice oils and oleoresins, vanilla, nutmeg and mace. Export of pepper from Kerala showed an increase during 2005-06 both in quantity and value. Kerala's share to total pepper export from India is above 97% both in quantity and value. Export earnings from ginger registered a decline of 20% in value and quantity by 5%. This was mainly due to sharp decline in the unit price of ginger from Rs. 127/kg to Rs. 108/Kg during 2005-06.

16.21 The export value of cardamom (small) improved over 3% and mace by 41% during 2005-06 over 2004-05. Details of export of spices products from Kerala through Cochin and Thiruvananthapuram ports are given in the Table 16.8

Table. 16.8
Export of Spice Products from Kerala – 2001 to 2005-06

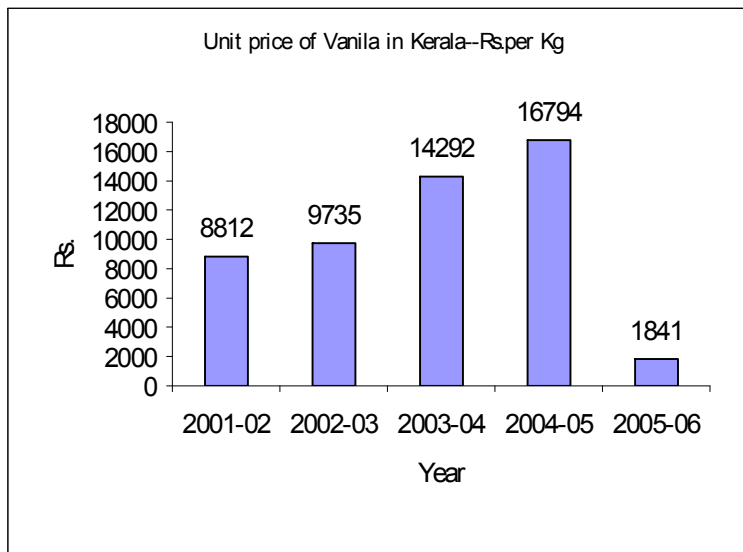
(Qty: MT, Value: Rs. Cores)

Items	2001-02		2002-03		2003-04		2004-05		2005-06	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
2	3	4	5	6	7	8	9	10	11	12
Pepper	21448	187.21	15094	139.90	15710	134.47	13358	114.35	16120	134.78
Cardamom	630	40.32	475	32.78	435	21.62	387	13.99	454	14.46
Ginger	2560	14.14	2415	13.71	2089	14.24	2518	32.12	2382	25.78
Turmeric	4800	17.87	4770	24.09	6667	26.71	5069	29.74	5035	27.91
Curry Powder	1100	10.71	1695	16.99	1685	16.50	1582	17.71	2290	23.00
Spice Oils & Oleoresins	3150	291.62	3496	309.06	4208	320.38	4987	423.30	5389	433.22
Nutmeg & Mace	1225	18.84	1241	25.31	1263	23.54	1106	19.72	1387	27.73
Vanilla	3	2.64	6	5.84	4	5.72	7	11.76	22	4.06

Source: Spices Board

16.22 Kerala exported 22 metric tonne of vanilla and earned Rs. 405.09 lakh during 2005-06 achieving above 200% increase in quantity but in 65% decrease in value compared to 2004-05. The price in the domestic market also declined considerably during this period. Cultivation of vanilla, a new generation crop predominantly cultivated in central Kerala, picked up momentum five years ago. Farmers were attracted to vanilla cultivation due to good prices. Prices of vanilla touched Rs. 3,500 per Kg for raw beans. But today, the market price of vanilla is just Rs. 70 or less. The variation in the export unit price of vanilla for the last five years is diagrammatically represented in Fig. 16.6

Fig. 16.6



Source: Spices Board

Cashew Trade

16.23 The total export of cashew kernels from India during 2005-06 was 114143 MT valued at Rs. 2514.86 crores. Against an increase of 25.63% in quantity and 50.14% in rupee value during 2004-05, India experienced a decline of 9.89% in quantity and 7.17% rupee value of cashew kernels export during 2005-06. Kerala also have the same down ward trend as seen in Table 16.8. The average unit export price realised during 2005-06 was Rs. 220.33 per kg against Rs. 213.89 per kg during 2004-05, an increase of 3.01 percent. There is slight improvement in the share of Kerala to Indian export of Cashew Kernels during 2005-06.

Table 16.9
Export of Cashew Kernels: Kerala and India (2001-02 to 2005-06)
(Quantity in MT and Value Rs. Crore)

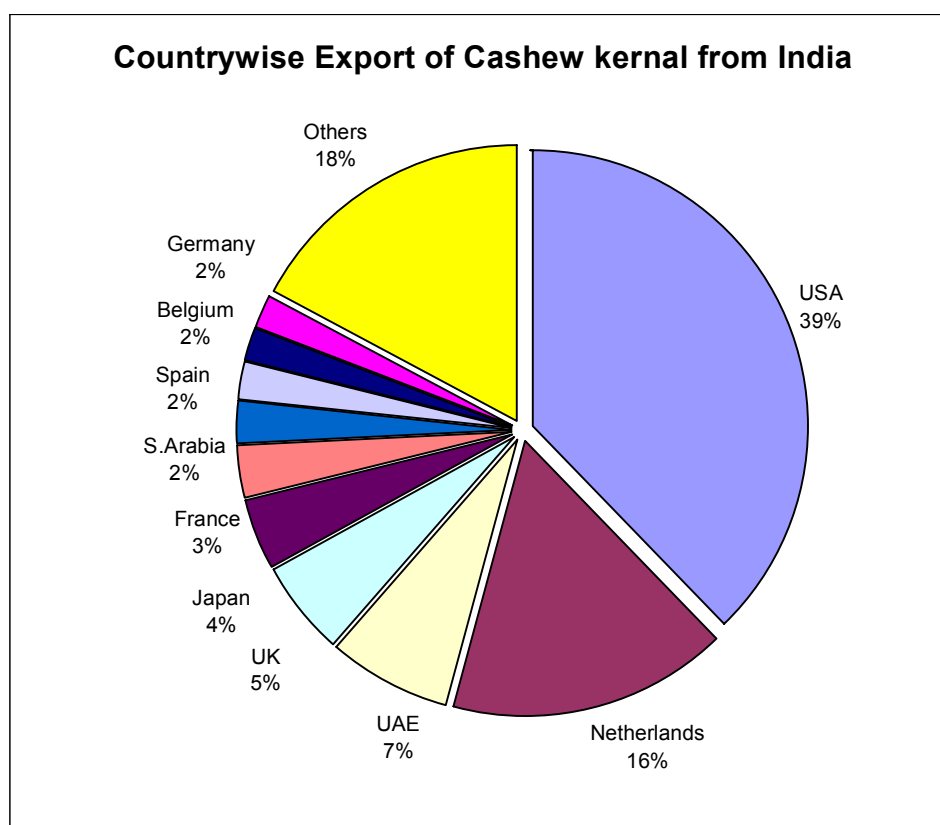
Year	Kerala*		India**		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
2001-02	54717	971.11	98203	1788.70	55.72	62.96
2002-03	66859	1216.96	104137	1933.02	64.20	62.96
2003-04	68119	1204.56	100828	1804.43	67.56	66.76
2004-05	79950	1715.94	126667	2709.24	63.12	63.34
2005-06	74376	1622.82	114143	2514.86	65.16	64.53

Source: The Cashew Export Promotion Council of India

*Export through Cochin Port

16.24 By consuming 38% of total quantity of Cashew Kernels exported during 2005-06 USA continued to be the biggest market of Cashew kernels from India. But a drastic decline of 10% both in value and quantity reported was observed compared to 2004-05. While Netherlands improved its position both in terms of quantity and value UAE over took UK during 2005-06. Exports to Japan, France, Saudi Arabia, Germany etc. registered an increase, export to UK, Russia, Norway etc. decreased. A major export market of cashew kernels from India is shown in Appendix- 16.10. Out of the total quantity of cashew kernels exported during 2005-06, 39.38% were to American Zone and European Zone accounted for 37.93%. There was a decrease of 28.97% in exports to American Zone and increase of 6.06% to European Zone and 19.08% to West Asian Zone compared to previous year. The share of different countries to Indian cashew kernels export is diagrammatically represented in Figure 16.7

Fig. 16.7



Source: Cashew Export Promotion Council of India

16.25 The export of cashew nut shell liquid from India during 2005-06 was 6405 MT valued at Rs. 7.09 crores against 7474 MT valued at Rs. 7.91 crore during 2004-05 a decrease of 14.30% in quantity and 10.37% in value. The unit value realised was Rs. 11.07/Kg in 2005-06 registering an increase of 4.63% over the previous year. USA is the prime market, which shared 91% in quantity and 84% in value during 2005-06. Details are given in Table 16.10

Table 16.10
Country-wise Export of Cashew nut Shell Liquid from India 2004-05 and 2005-06
(Quantity: MT, Value: Rs. Crore)

Sl.No	Countries	2004-05				2005-06			
		Qty	% to Qty	Value	% Value	Qty	% to Qty	Value	% To Value
1	2	3	4	5	6	7	8	9	10
1	USA	6550	88.00	6.45	81.58	5834	91.09	5.97	84.22
2	Korea Rep	125	1.67	0.31	3.93	524	8.18	1.00	14.13
3	Japan	154	2.07	0.24	3.03	31	0.49	0.09	1.26
4	Zimbabwe	0	-	0.00	-	16	0.25	0.03	0.37
5	Indonesia	384	5.14	0.50	6.37	0	-	0.00	-
6	Spain	213	2.84	0.33	4.17	0	-	0.00	-
7	China	32	0.43	0.04	0.52	0	-	0.00	-
8	Mexico	16	0.21	0.03	0.38	0	-	0.00	-
	Total	7474	100.00	7.91	100.00	6405	100.00	7.09	100.00

Source: Cashew Export Promotion Council

16.26 Though the share of Kerala to India's export of Cashew nut shell liquid constitute 91% in quantity and 84% in value during 2005-06, a decrease was observed both in total value realised and quantity exported compared 2004-05. (A decrease of 12.59% in volume and 9.27% in value) Low production has forced many cashew-processing factories to remain closed for a considerable time in recent years. This, points to the need for increasing indigenous production of raw cashew nuts to make the country self-sufficient. The abrupt withdrawal of raw cashew nut from the list of items eligible for the Vishesh Krishi Upaj Yojana (VKUY) has also contributed to lower production. The details of export of cashew nut shell liquid from Kerala and India are furnished in the Table. 16.11

Table 16.11
Export of Cashew nut shell Liquid – Kerala & India (2001-02 to 2005-06)
(Quantity in MT and value in Rs. Crore)

Year	Kerala*		India**	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2001-02	3365	4.56	4178	5.93
2002-03	6424	7.55	7215	9.26
2003-04	6784	6.68	6926	7.03
2004-05	6674	6.58	7474	7.91
2005-06	5834	5.97	6405	7.09

Source: The Cashew Export Promotion Council of India

*Export through Cochin Port, **Various Custom Houses

16.27 The total raw nuts imported to India during 2005-06 declined both in quantity and value. Compared to 2004-05 position, a decrease of 2.33% in volume was experienced while Kerala gained momentum by increasing quantity of import of raw cashew nut by 8.35% and value by 7.56% during 2005-06. The major portion of raw cashew nuts to India came from Ivory Coast. More than 50 per cent of imported raw cashew was utilized by Kerala. Details of import of raw cashew nut by India and Kerala are furnished in Table 16.12

Table 16.12
Import of Raw Cashew nuts: Kerala and India (2001-02 to 2005-06)
(Quantity in MT Value in Rs. Crore)

Year	Kerala*		India**	
	Quantity	Value	Quantity	Value
1	2	3	4	5
2001-02	191579	502.46	355556	950.01
2002-03	249970	772.47	400659	1236.60
2003-04	294552	909.45	452398	1400.90
2004-05	283149	1055.08	578884	2183.26
2005-06	306765	1134.83	565400	2162.95

Source: The Cashew Export Promotion Council of India

*Import through Cochin Port, ** Various Custom Houses, Provisional

Coffee

16.28 Export of Coffee from India in terms of quantity fell from 211765 MT in 2004-05 to 201498 MT during 2005-06 but value increased from Rs. 1224.67 crores to Rs. 1509.57 crores and the unit value realized was Rs. 74916/tonne. It has been observed that though the quantity exported decreased by 4.8%, the value realised increased by 23.3% compared to previous year. Major share of total coffee export from India was to Italy. During 2005-06 Italy imported 53393 tonnes of coffee valued Rs. 365.72 crores showing an increase of 4% compared to previous year. Details of coffee export to major countries given in Appendix 16.11 Export details of coffee from 2001-02 to 2001-2005 given in table 16.13.

Table 16.13
Export of Coffee from India (2001-02 to 2005-06)

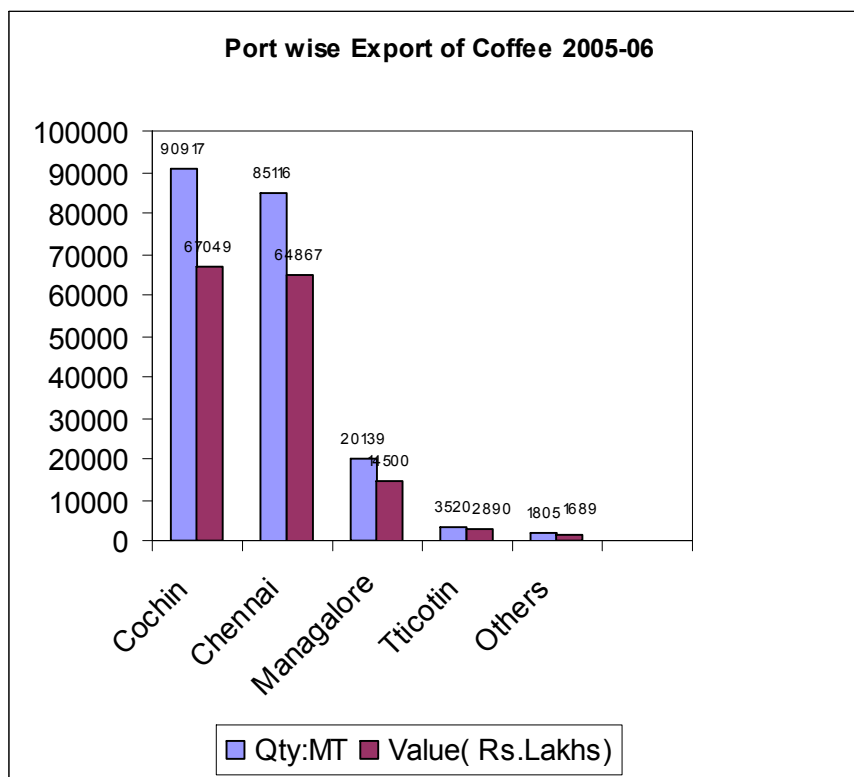
Year	Quantity MT	Value (Rs. Lakhs)	Value (US\$ Million)	Unit Value (Rs./tonne)
1	2	3	4	5
2001-02	213586	1050.36	216.23	49177
2002-03	207333	1051.45	233.89	50713
2003-04	232684	1158.45	262.03	51846
2004-05	211765	1224.67	294.64	57831
2005-06*	201498	1509.57	348.60	74916

Source: Coffee Board

*Provisional

16.29 Out of the total coffee export from India the highest contribution is from Cochin port. During the year 2005-06 90917 MT of coffee valued at Rs.67049 lakhs exported from Cochin port. Details of port wise export of coffee from India and the earnings thereby depicted in fig.16.8

Fig.16.8



Source: Coffee Board

Tea

16.30 During 2005-06, India exported tea valued at US\$368.5 equivalent to Rs. 1632 crores. It stands more than 11% less in value over 2004-05. The quantity of tea export through Cochin Port was 31985 MT and the value realised was Rs. 253.48 crores. Fig. 16.9. explains the pathetic steep falling condition of tea export through Cochin Port.

Fig. 16.9



Coir & Coir Products

16.31 Export of Coir and Coir products from India during the period recorded a all time high level over the last 7 years achieving the target by 103% in rupee value. During the period under review the export value touched Rs. 508.45 crores attaining 7.4% growth in value by exporting 136026.97 MT Coir Products. Quantity wise export also has increased by 11% compared to previous year.

16.32 During 2005-06 export of handloom mats, Tufted mats Power loom mat, coir fibre, coir pith, rubberized coir and coir geo textiles have shown an increase both in terms of value and quantity compared to 2004-05. The items such as handloom mattings, power loom mattings, coir rugs and carpets, coir rope, other sorts of coir and semi finished item has decreased both in value and quantity, Percentage, composition of Export of Coir Products during 2004-05 and 2005-06 detailed below in Table. 16.14

Table 16.14
Percentage Composition of Export of Coir Products

Sl.No.	Name of Item	2004-2005		2005-2006	
		Qty	Value	Qty	Value
1	2	3	4	5	6
1	Handloom Mat	31.26	52.51	32.65	53.08
2	Tufted Mat	14.46	22.83	13.42	20.06
3	Coir Yarn	7.04	5.94	8.94	7.03
4	Coir Pith	39.29	7.62	35.32	6.432
5	Handloom Matting	2.14	3.76	2.86	4.93
6	Geotextile	1.85	2.24	1.89	2.22
7	Coir Rungs & Carpet	0.91	1.44	1.40	2.12
8	Powerloom Mat	1.18	2.02	1.16	1.97
9	Rubberised Coir	0.39	0.74	0.40	0.72
10	Coir Other Sorts	0.09	0.15	0.41	0.42
11	Coir Fibre	1.14	0.39	1.10	0.40
12	Powerloom Matting	0.12	0.23	0.15	0.29
13	Coir Rope	0.13	0.13	0.24	0.25
14	Curled Coir	0.00	0.00	0.06	0.02
	Total	100.00	100.00	100.00	100.00

Source: Coir Board

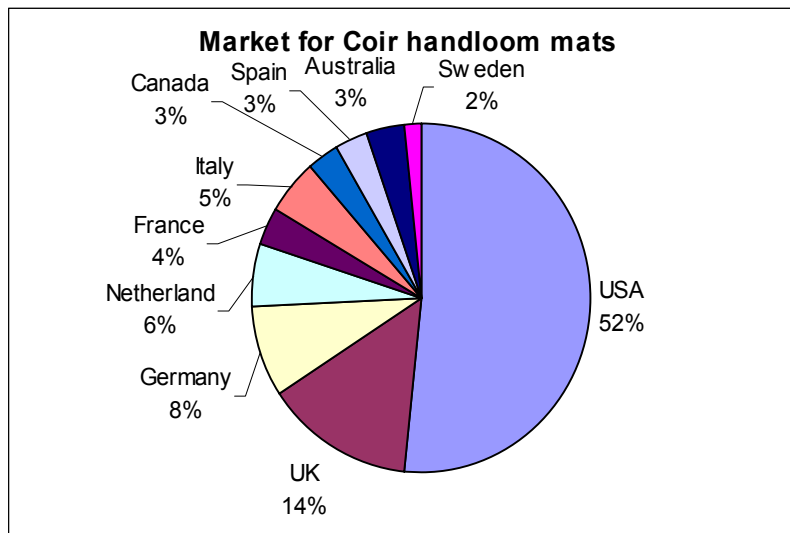
16.33 Handloom mat a major export item has registered an increase of 6% both in quantity and value over the previous year. Export of Powerloom mat achieved an increase of 12% in quantity and 10% in value. The highest achievement in export was recorded for export of coir pith with 23% growth in quantity and 27% in value. Export of Tufted mat has increased from 16502 tones to 19671 tones and the value realised increased from Rs. 94.99 crores to 116.06 crores during 2005-06. The greatest blow in unit item of export was observed in terms of Coir rope. Export of this item fell down from 300 tones to 163 tones during 2005-06, showing 46% decrease. So also the value realised decreased from Rs. 116.91 lakhs to Rs. 70.41 lakhs (40%). With regard to other sorts of coir a decline of 76% in quantity and 63% in value was registered compared to 2004-05 while export of coir rugs & carpets declined by 27% in value and 28% in quantity.

Details of export of coir and coir products from India for the last five years furnished in Appendix. 16.12

16.34 Handloom mats being the major item of export from India constitute 31.26% of the total quantity of coir products exported from India. In value terms its share was beyond 50% of the total value achievement of India followed by tufted mat (23%), coir pith (8%), and coir yarn (6%). Import markets for coir handloom mats with corresponding quantity share % are given in Figure 16.9

16.35 During the period 2005-06, 91 countries imported coir and coir products from India. USA continues to be the major importer with its share of 26.25% in quantity and 40.26% in value. European union imported 43.39% in quantity and 41.16% in terms of value. Major country wise export of coir and Coir Products from India furnished in Appendix 16.13. Among the countries, USA stands first with regard to export of major share of handloom mats, tufted mats, coir yarn, coir geo textiles.

Fig.16.10



Source: Coir Board

CHAPTER 17

INSTITUTIONAL AND BANK FINANCE

The Banking system in India has played a critical role in the growth and development of the Economy. The Indian banking system has been stable without any major crisis. It is relatively transparent in its operations and follows the international best practices of disclosure. Financial sector reforms initiated in the country as a part of the economic reforms since the year 1991, has brought about many changes in the structure of Banking environment. Liberalization has intensified competition in the banking industry by opening the market to new foreign and private sector banks. Declining interest rate and reduced lending margins have thrown up new challenges to banks especially public sector banks. The reforms also resulted in an unwelcome credit squeeze for the petty commodity producing sectors including agricultural sector.

17.2 The RBI emphasises transparency, diversification of ownership and strong corporate Governance practices to mitigate the prospects of systematic risks in the banking sector. Apart from the onerous discipline imposed by regulatory and prudential norms as part of financial sector reforms, there has also occurred a sea change in the role of banks as a result of competitive opportunities thrown up in para banking activities - merchant banking, housing finance, mutual funds, insurance and others, and above all, in the notion of universal banking and project finance.

Institutional Finance

17.3 The flow of credit by Financial Institutions during 2005-06 revealed that NABARD disbursed an amount of Rs.8622.37 crore at all India level against Rs.8577.46 crore during 2004-05. The disbursement of credit by NABARD in Kerala during 2005-06 was Rs. 414.84 crore. Uttarpradesh received the highest assistance of Rs.1548.99 crore (17.96%) followed by Punjab 948.85 crore (11%).

17.4 The State wise disbursements by NABARD during 2005-06 and State wise cumulative disbursement by NABARD (up to March 2006) are given in Appendix 17.1 and Appendix 17.2 respectively.

Increase in Bank Branches

17.5 At the time of bank nationalisation in 1969 there were 8262 bank branches all over India. The number grew to 68116 as on June 2005 and to 68681 as on March 2006 and 69104 as on June 2006. The number of rural bank branches in March 2006 was 30572 (44.5%) semi urban branches 15274 (22.24%) urban branches 11864 (17.27%) and metropolitan branches 10971 (16%). On a comparison with March 2005, the number of rural bank branches and semi urban branches are gradually decreases and urban and metropolitan branches showing increasing trends. The 60471 branches (88.05%) are spread over 15 major states. The largest number of bank branches are in Uttar Pradesh 8347 (12.15%) followed by Maharashtra 6489 (9.45%) and Andhra Pradesh 5437 (7.92%). The State wise distribution of commercial bank branches and population per bank office are given in Appendix 17.3

17.6 The number of bank branches in Kerala as on March 2006 is 3553, an increase of 60 branches as compared to March 2005. Of this 350 are rural branches, 2375 are semi-urban and 828 are urban branches.

17.7 The state wise distribution of rural, semi urban, urban and metropolitan number of scheduled commercial Bank branches and their percentage to all India total are furnished in Table 17.1.

Table 17.1
State-wise distribution of Scheduled Commercial Bank Branches as on March 2006

Sl. No	State	Rural		Semi Urban		Urban		Metropolitan		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhrapradesh	2254	7.4	1283	8.4	1166	9.8	734	6.7	5437	7.9
2	Assam	782	2.6	260	1.7	192	1.6	--	..	1234	1.8
3	Bihar	2352	7.7	726	4.8	314	2.6	190	1.7	3582	5.2
4	Gujarath	1395	4.6	827	5.4	525	4.4	983	9.0	3730	5.4
5	Haryana	647	2.1	325	2.1	664	5.6	90	1.0	1726	2.5
6	Karnataka	2093	6.8	1008	6.6	1016	8.6	885	8.1	5002	7.3
7	Kerala	350	1.1	2375	15.5	828	7.0	--	..	3553	5.2
8	Madhyapradesh	1756	5.7	777	5.1	556	4.7	386	3.5	3475	5.1
9	Maharashtra	2075	6.8	1186	7.8	860	7.2	2368	21.6	6489	9.4
10	Orissa	1585	5.2	328	2.1	369	3.1	--	..	2282	3.3
11	Panjab	1085	3.5	698	4.6	565	4.8	401	3.7	2749	4.0
12	Rajasthan	1718	5.6	820	5.4	604	5.1	285	2.6	3427	5.0
13	Tamil Nadu	1606	5.3	1373	9.0	1066	9.0	835	7.6	4880	7.1
14	Uttar Pradesh	4592	15.0	1440	9.4	1204	10.1	1111	10.1	8347	12.2
15	West Bengal	2256	7.4	506	3.3	687	5.8	1109	10.1	4558	6.6
	Total	26546	86.8	13932	91.2	10616	89.5	9377	85.5	60471	88.0
	All India	30572	100	15274	100	11864	100	10971	100	68681	100

Source: Quarterly Statistics by Reserve Bank of India, March 2006.

Note: Percentage are to All India Total.

Advances by Scheduled Commercial Banks

17.8 According to quarterly banking statistics, March 2006 of Reserve Bank of India, the total advances financed by all scheduled commercial banks at all India level reached to Rs.1517497 crore from Rs.1157807 crore of March 2005, having an increase of Rs.359690 crore. The major chunk of this advance goes to 15 major states. The highest credit was received by Maharashtra 496997 crore (32.75%) in March 2006. The advance during 2006 to Tamil Nadu is Rs.141255 crore (9.31%) and to Karnataka is Rs.103455 crore (6.82%). During this period Kerala received Rs.49153 crore (3.24%) against Rs.39351 crore (3.4%) of March 2005. The increase in advance by all commercial banks is Rs.9802 crore.

17.9 State wise advances financed by scheduled commercial banks during March 2005 and March 2006 with their percentage to all India total are furnished in Table 17.2.

Table 17.2
State-wise Advances Financed by Scheduled Commercial Banks
as on March 2005 and March 2006.

(Rs. crore)

Sl. No.	State	Advances 2005		Advances 2006	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	73987	6.39	96371	6.35
2	Assam	6219	0.54	8763	0.58
3	Bihar	11453	0.99	14062	0.93
4	Gujarath	45643	3.94	59198	3.90
5	Haryana	19163	1.66	28331	1.87
6	Karnataka	81106	7.01	103455	6.82
7	Kerala	39351	3.40	49153	3.24
8	Madhyapradesh	26344	2.28	33315	2.20
9	Maharashtra	365925	31.61	496997	32.8
10	Orissa	16591	1.43	21011	1.38
11	Panjab	30242	2.61	41219	2.72
12	Rajasthan	29892	2.58	38304	2.52
13	Tamil Nadu	108605	9.38	141255	9.31
14	Uttar Pradesh	50137	4.33	63656	4.19
15	West Bengal	59313	5.12	72167	4.76
	Total	963971	83.26	1267257	83.51
	All India	1157807	100	1517497	100

Source: Quarterly Banking Statistics, March 2005 & 2006, RBI.

Note: Percentages are to All India Total.

17.10 As per SLBC (Kerala) statistics of March 2006, State Bank of Travancore disbursed an amount of Rs.10609.66 crore as advance, State Bank of India disbursed Rs.5603.49 crore, Canara Bank disbursed 4932.27 crore and Union Bank of India disbursed Rs.2672.70 crore. Among private sector Banks Federal Bank disbursed 5582.19 crore, ICICI Bank Rs.3792.98 crore, South Indian Bank Rs.2574.36 crore and Catholic Syrian Bank disbursed Rs.1272.30 crore. Regional Rural Banks disbursed Rs.2295.89 crore and cooperative Bank (KSCARDB & KSCB) disbursed Rs.3395.58 crore as on March 2006. The total advances disbursed by banks in Kerala as on March 2006 is 55314.10 crore as against 43997.43 crore of 2004-05 with an increase of 11316.67 crore.

17.11 Advances by scheduled commercial banks from 1985 to 2006 to Kerala as well as India with their percentage of annual growth and incremental advance in Kerala are furnished in Table 17.3.

Table 17.3
Advances by Commercial Banks in Kerala and India (From 1985 to 2006)

(Rs. crore)

Sl. No.	Year	Advance in Kerala		Incremental Advance in Kerala	Advance in India	
		Amount	% of growth		Amount	% of growth
1	2	3	4	5	6	7
1	1985	2181	-	-	48953	-
2	1986	2371	8.7	190	56067	14.4
3	1987	2769	16.8	585	63308	20.1
4	1988	3116	12.5	347	70536	11.4
5	1989	3701	18.8	585	83719	20.1
6	1990	4118	11.3	417	101453	19.8
7	1991	4638	12.6	520	116301	14.6
8	1992	5003	7.9	365	125592	8.0
9	1993	5818	16.3	815	151982	21.0
10	1994	6442	10.4	624	164418	8.2
11	1995	7797	21.0	1355	211560	28.7
12	1996	8961	14.9	1164	254015	20.1
13	1997	10482	17.0	1523	278401	9.6
14	1998	12274	17.1	1793	324079	16.4
15	1999	13577	10.6	1303	368837	13.8
16	2000	15941	17.4	2364	435958	18.2
17	2001	19180	20.3	3239	511434	17.3
18	2002	22062	15.0	2882	589723	15.3
19	2003	27007	22.4	4945	759210	28.7
20	2004	31548	16.8	4541	890866	17.3
21	2005	39351	23.5	7803	1157807	30.0
22	2006	49153	24.91	9802	1517497	31.1
Average						
22	1985-1990	3043	13.6	387	70839	15.7
23	1991-1995	5939	13.7	736	153971	16.1
24	1996-2000	12247	15.3	1629	332258	15.6
25	2001-2006	31384	20.5	5535	904423	23.3

Source: Quarterly Banking Statistics by Reserve Bank of India.

Growth of Bank Deposits.

17.12 As per State level Bankers committee (SLBC) report, the total bank deposit in Kerala as on March 2006 is Rs.77677 crore with an annual growth rate of 11.93 %. The total deposit as on March 2005 was Rs.69396 crore with an annual growth rate of 5.21%. The NRE deposit in Kerala increased to Rs.30671 crore as at March 2006. During the last fiscal there was a declining trend in the NRE deposits (that is Rs.980 crore) where as during 2005-06 NRE deposits posted a modest increase of Rs.1551 crore. Domestic deposits marked an increased growth rate of 16.7 percent (Rs.47006 crore) in March 2006 from 12.3 percent (Rs.40276 crore) in March-05.

17.13 As per RBI statistics, the total deposits by all scheduled commercial banks at all India level in March 06 is Rs.2093042 crore against Rs.1753174 crore of March 2005. The corresponding deposits with respect to Kerala are 79665 crore and Rs.70461 crore respectively. In the case of deposits Maharashtra is far ahead among the states by mobilizing the largest deposit

of Rs. 489794 crore (23.4%) in 2006 and 384389 (21.93%) in 2005. The second place for deposit mobilisation goes to Uttarpradesh with Rs.151462 crore (7.24%) in March 2006 against Rs.135568 crore (7.73%) in March 2005. State wise deposits during 2005-06 and their percentages to all India total are furnished in Table 17.4.

Table 17.4
State-wise Deposits in Scheduled Commercial Banks
as on March 2005 and March 2006.

(Rs. crore)

Sl. No	State	Deposits 2005		Deposits 2006	
		Amount	Percentage	Amount	Percentage
1	2	3	4	5	6
1	Andhrapradesh	98526	5.62	117463	5.6
2	Assam	18081	1.03	20872	1.00
3	Bihar	41206	2.35	46543	2.22
4	Gujarath	97671	5.57	105047	5.02
5	Haryana	36892	2.10	49397	2.36
6	Karnataka	109417	6.24	134699	6.44
7	Kerala	70461	4.02	79665	3.81
8	Madhyapradesh	47522	2.71	55521	2.65
9	Maharashtra	384389	21.93	489794	23.4
10	Orissa	26677	1.52	32220	1.54
11	Panjab	66145	3.77	72808	3.48
12	Rajasthan	43322	2.47	48866	2.33
13	Tamil Nadu	110329	6.29	133418	6.37
14	Uttar Pradesh	135568	7.73	151462	7.24
15	West Bengal	110716	6.32	126100	6.02
	Total	1286206	73.36	1663875	79.50
	All India	1753174	100	2093042	100

Source: Quarterly Banking Statistics, March 2005 & 2006, RBI.

Note: Percentages are to All India Total.

17.14 SLBC statistics of March 2006 shows that, among State Bank Group in Kerala, State Bank of Travancore mobilized Rs.16910.87 crore and State Bank of India Rs.8339.87 crore. Among other nationalised banks, Canara Bank mobilized Rs.7326.50 crore, Union Bank of India mobilized Rs.2943.61 crore, and Indian Overseas Bank mobilized Rs.2659.80 crore. Among private sector Banks in Kerala, Federal Bank, South Indian Bank and Catholic Syrian Bank mobilized Rs.9463.61 crore Rs.5587.19 core and Rs.2957.32 crore respectively. Kerala State Cooperative bank mobilized Rs.2838.22 crore in March 06.

NRE Deposits

17.15 NRE deposits marked a gradual increase in deposit mobilization. As on March 2006, the NRE deposits consists of Rs.30671 crore out of a total deposit of Rs.77677 crore in Kerala. The corresponding figure as on March 2005 were Rs.29121 crore and Rs.69396 crore respectively. The domestic deposits increased to Rs.47006 crore in March 2006 from Rs.40276 crore of March 2005.

17.16 Growth of bank deposit in Kerala (Total, NRE and Domestic) from 1988 to 2006 are furnished in Table 17.5.

Table 17.5
Growth of Bank Deposit in Kerala 1988 to 2006

(Rs. crore)

Year	Total Deposit		NRE Deposit		Domestic Deposit	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
1	2	3	4	5	6	7
1988	4811	-	1369	-	3442	-
1989	5667	17.8	1584	15.7	4083	18.6
1990	6660	17.5	2012	27.0	4608	12.9
1991	7935	19.1	2304	14.5	5554	20.85
1992	9787	23.3	3039	31.9	6632	19.4
1993	12261	25.3	4499	48.0	7613	14.8
1994	15138	23.5	6015	33.7	8926	17.2
1995	17694	16.9	6886	14.5	10572	18.4
1996	20419	15.4	8103	17.7	12068	14.2
1997	23354	14.4	10178	25.6	13176	9.2
1998	27552	18.0	12735	25.1	14817	12.5
1999	31532	14.4	13329	4.7	18203	22.9
2000	38619	22.5	18724	40.5	19895	9.3
2001	44850	16.1	21431	14.5	23419	17.7
2002	51656	15.2	24534	14.5	27122	15.8
2003	59399	15.0	28696	17.0	30703	13.3
2004	65961	9.95	30100	4.89	35861	16.8
2005	69396	5.21	29121	-3.25	40276	12.3
2006	77677	11.93	30671	5.06	47006	16.7

Source: SLBC, Kerala.

Credit Deposit Ratio

17.17 Until the early 1990s, banks in Kerala had maintained credit-deposit ratios of over 60 percent as in the case of the country as a whole. All indicators of banking development have shown how, after the financial sector reforms began in the 1990s, banks began to take a back seat on their goals of diversifying credit portfolios in favour of agriculture, small-scale industries and small borrowers - the vast sections of informal sectors. The average credit-deposit ratio in respect of Kerala dipped from near 63 percent during the period 1985-1992 to 44 percent during 1993-2000. This was partly due to the accelerated growth of NRE deposits and partly due to the all-India pattern of banking policies. All-India C-D ratio itself slipped from over 67 percent in the mid-1980s to around 56-58 percent during most period of the 1990s.

17.18 According to RBI statistics, the credit deposit ratio of all scheduled commercial banks at the all India level as on March 2006 is 72.5% which was 66.3% during March 2005. The highest Credit Deposit Ratio was observed in Tamil Nadu (105.9%) against 98.44 in March 2005. CD

Ratio of Maharashtra (101.5%) against 95.2% in March 05. Considering the case of Kerala as on March 2006, the CD ratio is 61.7% and that of March 2005 was 55.85%. As regards population group wise C.D. ratio of all scheduled commercial banks the metropolitan centres stands the highest C.D. ratio at 87.5 %. The semi urban centres recorded lowest C.D. ratio at 50.0 %. At the bank group level the C.D. ratio was above the all India ratio in respect of Foreign Banks (88.4%) and was lower for State Bank of India and its associates (71.6%), Nationalised banks (71.1%) and Regional Rural Banks (55.9%). Considering the RBI statistics on public sector banks alone, C.D ratio at all India level is 70.58% in March 2006 against 62.44 % in March 2005. Here also Tamil Nadu stands first with 102.44 % in March 2006 against 93.1 % in March 2005. Maharashtra is just behind with 101.57 % in March 2006 and 89.03 % in March 05. The C.D. ratio of Kerala are 65.70 in March 2006 and gradually increases to 66.21 in June 2006 and 59.4 in March-05. State wise deposits, credits and C.D. ratio of June 1969, March, June of 2005 and March, June of 2006 and Public Sector Banks are furnished in Appendix 17.4.

17.19 On analysing the C.D. ratio of major banks operating in Kerala, the Bank of India comes first with 96.64% and Union Bank of India with 90.80 % comes second in March 2006. The performance of other Banks are Syndicate Bank 70.27%, Canara Bank 67.32% State Bank of India 67.19 %, Central Bank of India 66.95%, State Bank of Travancore 62.74 % so on. The State average C.D. ratio is 68.70 for the year 2006 against 61.39 of 2005. C.D. ratio of selected major banks operating in Kerala from 1992 to 2006 are furnished in Table 17.6.

Table 17.6
Credit Deposit Ratios of Selected Major Banks operating in Kerala (as on March 2006)

Name of Bank	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
State Bank of India	59.90	54.20	45.30	44.70	47.00	48.00	47.53	41.95	39.80	46.68	42.64	42.32	45.59	56.45	67.19
State Bank of Travancore	50.60	49.50	44.50	48.00	43.50	45.20	44.82	44.93	45.97	46.00	46.13	48.06	50.89	56.67	62.74
Canara Bank	41.50	37.10	29.00	28.00	30.40	35.10	40.37	39.05	36.95	37.41	42.45	45.84	50.09	59.91	67.32
Indian Overseas Bank	28.00	25.20	21.80	24.00	25.80	25.00	25.22	26.03	26.25	28.00	33.14	32.33	35.68	39.01	43.08
Syndicate Bank	37.30	33.70	27.90	26.40	33.00	29.20	31.25	33.13	34.94	32.79	31.00	34.17	41.27	63.26	70.27
Indian Bank	72.00	69.70	61.00	51.50	61.30	47.50	41.13	34.21	32..59	35.53	29.80	31.78	33.61	35.59	43.67
Bank of India	36.00	39.30	37.30	35.90	39.20	34.00	34.21	28.80	32.83	34.08	31.20	59.31	62.48	80.61	96.64
Central Bank of India	58.00	58.80	46.00	53.00	50.30	44.00	42.38	42.84	35.48	37.03	35.00	35.26	53.79	63.70	66.95
Union Bank of India	57.00	47.60	44.50	45.00	45.70	47.30	47.30	51.47	51.36	45.00	49.97	53.54	61.33	81.57	90.80
Vijaya Bank	46.00	40.30	38.00	35.00	41.60	36.00	38.78	44.89	31.05	44.28	40.51	44.44	56.90	57.06	60.09
State Average	51.00	48.00	43.10	44.70	44.40	45.50	44.88	43.06	41.28	42.77	42.71	45.47	48.31	61.39	68.70

Source: SLBC, Kerala.

17.20 Share of NRE deposits (as percentage) and C.D. ratios of major banks in Kerala as on March 2006 are furnished in Table.17.7.

Table 17.7
Share of NRE Deposit (percentage) and CD Ratio of some
major Banks in Kerala (as on March 2006)

Sl. No.	Name of Bank	Share of NRE Deposit %	CD Ratio
1	2	3	4
1	State Bank of India	13.05	67.19
2	State Bank of Travancore	24.39	67.74
3	Bank of India	0.82	96.64
4	Canara Bank	11.23	67.32
5	Central Bank of India	1.26	66.95
6	Indian Bank	2.39	43.67
7	Indian Overseas Bank	4.43	43.08
8	Syndicate Bank	1.78	70.27
9	Union Bank of India	2.78	90.80
10	Vijaya Bank	0.70	60.09
	Total Nationalized Banks	30.1	66.40
11	Catholic Syrian Bank	0.87	43.02
12	Federal Bank	0.008	58.99
13	South Indian Bank	1.04	46.08
	Total Private Sector Banks	30.09	66.53
	Total Regional Rural Banks	0.65	109.30
	Total State	100.00	68.70

Source: SLBC, Kerala - June 2006.

17.21 Bank group wise total deposits, NRE deposits, advances and C.D ratios from 1990 to 2006 of Kerala are given in Appendix 17.5.

17.22 The District wise details of bank statistics in Kerala, shows that the largest number of bank branches are in Ernakulam (533 Nos.), followed by Thrissur (398 Nos.), and Thiruvananthapuram (367 Nos.). Ernakulam stands first in deposits and advances with Rs.17465 crore and Rs.12561 crore respectively. Wayanad stands last with Rs.455 crore as deposits and Rs. 785 crore as advances. In the case of C.D. ratio Wayanad is far ahead with 172.5% and Idukki comes second with 126.7%. The lowest C.D. ratio is in Pathanamthitta 27.5% C.D. ratio of Kozhikode is 79.8%, Ernakulam 71.9% and Thiruvananthapuram 70.2%. District wise bank group wise banking statistics as on March 2006, Kerala is furnished in Appendix 17.6. Bank wise performance during 2005-06, Kerala is furnished in Appendix 17.7.

17.23 Deposit mobilization by scheduled commercial banks is an important function of the system. With an abundance of NRE deposits, the mobilization of domestic deposits seems to have taken a bank seat. Domestic deposits do flow in, but essentially as a routine flow and not due to any innovative and concerted efforts on the part of banks. Even within the existing interest rate structure, it is possible for the banks to offer deposit products which are attractive different classes of depositors.

17.24 The multiplicity of in-house and independent committees appointed by the Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) have recommended a combination of measures involving sectoral credit targets for agriculture and small and medium enterprises (SMEs), intensive use of microfinance institutions (MFIs), more innovative system of "agency banking", and even embracing the philosophy of "financial inclusion" so that the banks are obliged to provide banking services to all segments of the population on an equitable basis.

Box 17.1

Measures undertaken by Reserve Bank towards Financial Inclusion

In November 2005, banks were advised to make available a basic banking 'no frills' account with low or nil minimum stipulated balances as well as charges to expand the outreach of such accounts to vast sections of the population. Several banks have since introduced such 'no frills' account with and without value-added features. According to the information available with the Reserve Bank, about five lakh no-frill accounts have been opened until March 31, 2006 of which about two-third are with the public sector and one-third with the private sector banks.

In order to ensure that persons belonging to low income group, both in urban and rural areas do not encounter difficulties in opening bank accounts owing to procedural hassles, the know your customer (KYC) procedures for opening accounts has been simplified. The Reserve Bank has directed banks to make available all printed material used by retail customers in English, Hindi and the concerned regional language. More recently, in January 2006, banks were permitted to utilise the services of non-governmental organisations (NGOs / SHGs), micro-finance institutions and other civil society organisations as intermediaries in providing financial and banking services through the use of business facilitator and business correspondent models.

To extend hassle-free credit to bank customers in rural areas, the guidelines on general credit card (GCC) schemes were simplified to enable customers access credit on simplified terms and conditions, without insistence on security, purpose or end-use of credit. With a view of providing hassle free credit to customers, banks were allowed to issue general credit cards akin to Kisan credit cards. A simplified mechanism for one-time settlement of loans with principal amount up to Rs.25,000 which have become doubtful and loss assets as on September 30, 2005 was suggested for adoption. In case of loans granted under Government-sponsored schemes, banks were advised to frame separate guidelines following a state-specific approach to be evolved by the State-Level Bankers, Committee (SLBC). Banks have been specifically advised that borrowers with loans settled under the one time settlement scheme will be eligible to re-access the formal financial system for fresh credit. Banks were advised to give effect to these measures at all branches for achieving greater financial inclusion. Initiatives have also been undertaken towards achieving greater financial inclusion in the North-Eastern region, which had perennially remained under-banked.

The Reserve Bank considers that IT enabled services can meet the challenges which need to be addressed for increasing the scope and coverage of financial inclusion such as lack of adequate infrastructure higher transaction costs and low volumes of transactions. The Reserve Bank has already initiated action in the North-Eastern region.

Housing Loans

17.25 As at the end of March 2006, banks in Kerala issued an amount of Rs. 10073.83 crore to 473442 beneficiaries as housing loans, corresponding figures for 2004-05 were Rs.7466.05 crore to 382490 beneficiaries. During 2005-06, finance through direct housing was Rs. 9967.41 crore and that through indirect housing was Rs.106.42 crore. State bank group disbursed Rs.3413.20 crore to 124180 beneficiaries. Nationalised bank group disbursed Rs.3332.93 crore to 130818 beneficiaries and RRB's disbursed Rs.236.35 crore to 18397 beneficiaries. Private sector banks issued Rs.2349.84 crore to 80157 beneficiaries, Foreign banks issued Rs.41.3 crore to 1004 beneficiaries and Co-operative bank issued Rs. 700.21 crore to 118886 beneficiaries. Taking Bank wise disbursement of house loans for 2005-06, SBT alone issued Rs.2203.05 crore to 85130 beneficiaries, SBI disbursed Rs.1187.91 crore to 38215 beneficiaries, Canara Bank disbursed 853.78 crore to 26493 beneficiaries and Federal Bank disbursed Rs. 971.41 crore to 37345 beneficiaries. In disbursing housing loan SBT is far ahead of other banks in Kerala.

Educational Loans

17.26 During 2005-06, Banking sector in Kerala disbursed an amount of Rs.1312.86 crore as Educational Loans to 109272 beneficiaries. State Bank group disbursed Rs.646.81 crore to 51641 beneficiaries, Nationalised bank group disbursed Rs.507.18 crore to 43087 beneficiaries, RRB's disbursed Rs.24.21 crore to 3772 beneficiaries and private sector banks disbursed Rs.127.99 crore to 10019 beneficiaries. Here also State Bank of Travancore issued Rs.483.01 crore to 43200 beneficiaries, Canara Bank issued Rs.190.19 crore to 16937 beneficiaries and SBI issued Rs.160.68 crore to 8215 beneficiaries. Among private sector banks Federal Bank disbursed Rs.77.77 crore to 5021 beneficiaries and all other banks are disbursing lesser amount of education loan.

Advances to Weaker Section and SC/ST

17.27 During 2005-06 an amount of Rs.7221.57 crore has been disbursed to 2421336 beneficiaries of weaker sections in the state in which Rs.734.53 crore was to 336426 SC/ST beneficiaries. The corresponding advances during 2004-05 were Rs.5323.49 crore and Rs.602.77 crore respectively. State Bank Group disbursed Rs.1979.11 crore to 617793 beneficiaries, Nationalised bank group disbursed Rs.2183.59 crore to 688234 beneficiaries, RRB's disbursed Rs.1260.16 crore to 668216 beneficiaries and Private Sector Bank disbursed Rs. 1012.97 crore to 153004 weaker beneficiaries in 2005-06. SBT alone disbursed Rs.1500.43 crore to 516365 beneficiaries and in SC/ST loan also SBT comes first among all banks (Rs.193.20 crore to 67215 beneficiaries). Weaker section advances of commercial banks in Kerala during 2005-06 is Rs.6436 crore to 2127247 beneficiaries grew by Rs.1610 crore during the last year. (Rs.4826 crore). During 2005-06 advances to SC/ST groups of commercial banks in Kerala is Rs.697 crore against Rs.568 crore of the last fiscal. Almost 96% of the SC/ST advances of the state is contributed by public sector banks including RRB's while the share of private sector banks is about 4.59%.

Micro Finance

17.28 NABARD in 1992 had started the programme of linking SHGs of the rural poor with the banking system. The SHG-bank linkage programme has emerged as the major micro-finance programme in the country. 554 banks are now involved in the operations of this programme. About 90% of the groups linked with banks were exclusively women groups.

17.29 According to RBI statistics during the year 2005-06, Rs.6.2 lakhs new SHGs were provided with bank loans amounting to Rs. 2330 crore and 3.45 lakhs existing SHGs were extended further financial assistance. The total bank loan disbursed during the year 2005-06 amounted to Rs.4499 crore. As on March 31, 2006 at all India level the cumulative number of SHGs linked to banks stood at 2.2 million with total Bank credit to these SHGs at Rs.11398 crore. The union Budget for the year 2006-07 envisages the banking industry to credit link another 3.85 lakhs SHGs in the year 2006-07.

17.30 According to SLBC report during the year 2005-06 about 1.38 lakh SHGs were linked with various banks in the State of these SHGs about 1.11 lakh are exclusive women SHGs (80.43%).

Thrust on Self Help Groups:

17.31 The rural credit system today stands at an important stage of evolution. It needs to meet growing requirements of agriculture which is becoming input intensive and getting diversified. The latest innovations in rural credit delivery, the Self Help Groups which have advantages like peer pressure, reduced transaction without exception. SHGs can usher in new micro finance systems especially in watershed management, allied activities, etc., but with some ceiling on interest rates for the final borrowers.

Box 17.2

The NABARD has suggested the strategy for the SHG-Bank Linkage programme for the year 2006-07 is as follows.

- Credit Linkage of existing SHGs and consolidation of SHG movement;
- Formation of new SHGs to be restricted to areas like tribal belts, settlement colonies of remote areas and fishermen colonies in coastal areas;
- Focus for promotion of SHG-centric micro enterprises in DRIP districts and other districts;
- Kudumbashree approach in promoting micro enterprises to be integrated with NABARD's efforts;
- Evolving appropriate networking mechanism amongst SHPIs for collective resource optimization;
- Capacity enhancement of officials of Govt. agencies, bankers or NGOs through exposure visits to successful models;
- Two-day orientation programme for trainers of NGOs for training of SHG's members and leaders;
- Networking of experienced NGOs and other institutions like RUDSETI, etc., for capacity building in SHG sector;
- State Level Seminar on Micro Credit during 2006-07;
- Promotion of Joint Liability Groups (JLGs) with members of different SHGs, having equal competence or inclination for participating in a m-enterprise without any liability to parent SHGs;
- Two Banks viz. South Malabar Gram Bank (RRB) and Irinjalakuda PCARDB (PLDB) are implementing the Pilot Project on JLG. To extend the approach of JLGs to commercial banks, PCARDBs, DCBs and NMGB;
- To take up with State Government for according priority for SHG products in Government purchases as well on the lines fo that accorded cooperative production institutions;
- Need for concessions like exemption from VAT, etc., to all SHGs in the State on the lines of exemptions granted to Kudumbashree NHGs by the State Government;
- Need for coverage of SHG members under the State Government scheme of micro insurance of poor families being implemented through Panchayats;
- Need for State's legal framework for regulating SHGs formed under various departments/schemes/approaches.

Source : SLB 2006

CHAPTER 18

GENDER AND DEVELOPMENT

Much has been written about the high status of women in Kerala and their central role historically, in social development. However, despite near total literacy and remarkable achievements in education and health, women continue to be in a disadvantageous position in the state, reflected in numerous ways. Little effort has been made to direct literacy towards building up a gender sensitive social environment in the state challenging the survival of feudal-patriarchal attitudes that perpetuate all forms of violence against women. As stated by the Governor of Kerala, Sri R.L.Bhatia, in his Address to the Legislative Assembly (June 16th 2006), “Kerala’s premier position in the country in terms of realising women’s rights is now under challenge. Liberalisation has unleashed ugly forces of exploitation of women. My Government would leave no stone unturned in upholding the status and rights of women and would not hesitate to use all its might to ruthlessly punish the agents and abettors of exploitation of women. Moreover on the development front also gender justice would be ensured. For this purpose gender budgeting would be introduced in phases.”

18.2 A data based review of the status of women in terms of development indicators, helps make gender disparities more visible and facilitates effective policy-making to bring about greater gender equality which we will attempt to do in the following sections.

18.3 Women in Kerala constituted 51.4 percent of the total population of 31.8 million in 2001. The sex ratio (females per thousand males), well above unity, continues to be favourable to women, having 1058, compared to 933 for the country as a whole. Life expectancy at birth for women in 1993-97 is 75.9 years for women while it is 61.8 years at the all India level.

18.4 The proportion of female headed households is significantly high in Kerala, almost double the all India average. It is 23 percent in rural areas and 25 percent in urban areas compared to 11.3 percent and 11.1 percent respectively for the country as a whole. Needless to state, as a number of studies have shown, on several measures of socio-economic status, including income, poverty, housing, and working status, female headed households are disadvantaged and hence need targeted support.

Health

18.5 Health concerns have developed into new dimensions in the state like occupational health, violence-related health issues, mental depression, increasing suicidal tendencies, unattended health problems of ageing women, anaemia among adolescent girls etc.

18.6 The conventional health development indicators over the last few years which are comparatively favourable to Kerala (see Chapter on Health) do not reveal these new health concerns, which are to be addressed with utmost care and urgency both as social and health issues. For instance Table 18.1 shows the proportion of ever-married women and pregnant women who are anaemic. What is more alarming is the fact that the percentages have gone up between 1998-99 and 2005-06.

Table 18.1
Health Indicators

	NFHS-I	NFHS-II	NFHS-III
Ever married women (age 15-49 years) who are anaemic (%)	n.a	22.7	32.3
Pregnant women age 15-49 who are anaemic (%)	n.a	20.3	33.1
Trends in institutional deliveries (%)	89	93	100

Source: National Family Health Surveys; NFHS-I, 1992-93; NFHS-II, 1998-99; NFHS-III, 2005-06. International Institute for Population Sciences, Mumbai and ORC (Macro) USA

18.7 Indirect estimates of maternal mortality for the state have always pegged at figures above 100 per lakh which is extremely high in comparison to other health indicators in the State, (though much lower than the all-India levels) nor do they show a substantial decline; MMR was 110 between 2001-03 compared to 301 for all India. The figures look graver in the light of the near complete institutional deliveries in the State, 100 percent according to the latest NFHS –III (2005-06). One of the evidences pointed out in many studies has been that most of the deaths occur due to postpartum haemorrhage and they occur in transit or delayed entry at the referral centres. This reflects the weaknesses in handling emergency obstetric services at the first referral units which should be upgraded with provision of specialists.

18.8 Occupational health is another issue drawing some attention now. The women in the informal sector doing manual work, working continuously for long hours and in particular positions, or in scavenging work in urban areas, are prone to health hazards like allergy, back pain, respiratory problems and uterus problems. Coupled with the fact that the ‘care’ economy remains their responsibility even if they are engaged in paid employment, it affects the well being of women. Considerable interest has emerged on studying the health conditions of women workers in fish processing units, in cashew industry etc.

Literacy

18.9 Kerala has the highest literacy rates in the country for both males and females, with 94.20% and 87.86% respectively. This is very much higher than the all India averages (Census 2001). There is however, a rural-urban gap of 4 percentage points in the state: female literacy rates are 86.79% in rural as against 90.87% in urban areas. Intra-state variations in female literacy rates are significant. The lowest rate 79.31 % is in Palakkad district and Kottayam district has the highest rate (94.45%) followed by Pathanamthitta (93.71%), Alappuzha (91.14%) and Ernakulam (90.96%).

18.10 Among the scheduled castes and scheduled tribes women of Kerala, literacy is significantly lower when compared to the general female literacy rates- 65.03% and 43.53% respectively. Considering these low levels, special literacy programmes are being implemented in such areas as Palakkad, Wayanad and Idduki districts where tribal population concentration is the highest (Status of Women, KWC).

Education

18.11 There is hardly any gender gap in school enrolment in Kerala as is seen in other states. Girls constituted 49% of the total enrolment in school education in Kerala. (see Table 2).

Table 18.2
Enrolment of students in schools (stage-wise)-2005-06

LPS(I-IV)			UPS(V-VII)			HS(VIII-X)			Grand Total		
Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
921076	904377	1825453	750052	706513	1456565	762147	732141	1494288	2433275	2343031	4776306

Source: Directorate of Public Institution, 2006

18.12 Out of the total 18.25 lakh students enrolled in LPS, 9.04 lakh are girls (50%); in UPS the number of girls is 7.06 lakh (48.5%) and in High School, 7.32 lakh students are girls (49%).

18.13 In Plus two courses out of the total 3.67 lakh students, 1.90 lakh are girls (51.7%) (*Directorate of Higher Secondary Education, Trivandrum*)

18.14 Gender disparity becomes more visible in technical schools. While in Vocational Higher Secondary Schools girls accounted for 52.32% of the students, they constituted only 10% in Polytechnics and Technical High Schools in 2006-07 (see Appendix 11.44 and 11.49). Similarly in the 2-year courses in ITIs and private ITCs, which impart training primarily in engineering/technical trades, intake of girl students is between 7-10 percent in 2001-02 (*Directorate of Technical Education, Trivandrum*). This lower presence of girls in training schools, which equip students with skills, impacts adversely on their employability since the largest proportion of unemployed women are those with no skill acquisition other than the educational level attained (NSSO 2004-05).

18.15 At the graduate level too, in the choice of subjects for which girls and boys enroll we find gendered differences (see Appendix 11.29). In final year BSc, in 2005-06, while girls outnumber boys in general arts and science courses, in the newly emerging areas of learning like bio-chemistry, polymer chemistry, bio-technology, electronics, analytical chemistry etc girls are much less in numbers.

Employment

18.16 The female work participation rate in Kerala has been the lowest in India, a fact which went almost entirely unnoticed as the state ranks first in terms of the Gender Development Index, given the overwhelmingly high levels of (conventional) education and health indicators. In 2004-05, while 33 percent of the rural female population was recorded as economically active at the all India level, the proportion came to only about a quarter in Kerala; WPRs for urban females have generally been higher in Kerala, i.e. 20 percent in 2004-05 compared to 16 percent for all-India, which however constitute much smaller numbers.

18.17 Women constitute a major chunk of the lowest paid categories of workers which includes traditional industries, household labour, Anganwady teachers, micro enterprise units of Kudumbashree etc (Kerala Padhanam, KSSP 2006). Women engaged as shop assistants, assistants in STD booths, petrol bunks, textile shops, IT/ITEs sector and export processing zones/parks are the other growing areas of urban employment which shows an increase according to the latest NSSO Round (2004-05). However, the inferior economic position of women is reflected in persistent gender wage disparities. For instance the average wage of a woman worker

in regular/employment in urban areas was Rs. 170 per day for women, as against Rs. 203 per day for men; in rural areas it was Rs. 120 per day compared to Rs. 164 for men.

18.18 In casual employment wages for women were Rs. 66 per day in rural and Rs. 67 per day in urban areas compared to Rs. 135 and Rs 137 for men. Disparities are much sharper for casual or unorganised labour sector which employs a larger proportion of female workers (NSSO 2004-05).

18.19 If a single fact were to convey the intensity of gender disparities in employment it is the unemployment rate for females, which is 2-3 times higher than that of males in Kerala; 20.1 percent for rural women (5.1 percent for men) and 33 percent for women in urban areas (6 percent for men). Female *educated unemployment* rates are even higher. The educated unemployment rate for urban women is 47 percent (8.2 percent for men).

18.20 Table 3 shows that out of the total number of 37.93 lakh registered job seekers in 2006, (including professional and general work seekers) 21.98 lakh were female job seekers. (57.94%).

Table 18. 3
District-wise Distribution of Work Seekers as on 31-3-2006

Sl. No.	District	General work seekers	Professional/ Technical work seekers	Total	Female	Male
1	Thiruvananthapuram	518516	30673	549189	336074	213115
2	Kollam	381978	16723	398701	234755	163946
3	Pathanamthitta	336259	13071	349330	196764	152566
4	Alappuzha	140422	6420	146842	89197	57645
5	Kottayam	209019	9773	218792	126910	91882
6	Idukki	113933	3419	227352	68236	49116
7	Ernakulam	345932	25944	371876	210786	161090
8	Thrissur	323966	13868	281622	151015	130607
9	Palakkad	250940	30682	281622	151015	130607
10	Malappuram	252782	7027	259809	137322	122487
11	Kozhikode	350798	17081	367879	212054	155825
12	Wayanad	78983	1692	80675	43439	37236
13	Kannur	213221	7748	220969	129087	91882
14	Kasaragod	90021	2292	92313	49927	42386
	Total	3606770	186413	3793183	2198194	1594989

Source: Directorate of Employment

Political Participation of women

18.21 Politically, the exclusion of women from mainstream politics has been rather surprising. Despite a long history of public action (from below) in which women have participated in large numbers in social movements and working class struggles, women's representation in the electoral arena of Kerala has always been small. While in the State Assembly the numbers elected in recent decades have varied between 8 and 13 in a house of 140 legislators, in the Parliament the proportion of women candidates hovered around one to two members since Independence (see Table 4); no woman candidate from Kerala was elected to the Parliament in 1977, 1984 and 1996.

Table18. 4
Women's Representation in Rajya Sabha, Lok Sbha and
Legislative Assembly from Kerala 1954-2006

Year/Type	No. of Women Representatives
Rajya Sabha	
1954-58	1
1958-64	1
1962-68	1
1974-80	1
Lok Sabha	
1952	1
1967	1
1971	1
1980	1
1989	1
1991	1
1991	1
1998	1
1999	1
2004	1
2004	1
Assembly Election	
1957	5
Interim Election	
1960	5
Assembly Election	
1970	1
1977	3
1982	3
1987	2
1991	9
1996	13
2001	8
2006	7
Total	71

Source: Chief Election Officer, Election (General Dept.), Govt. of Kerala.

18.22 Politically, women became visible in the state in large numbers but only *at the local level* with the enactment of the 73rd and 74th Constitutional Amendments which mandated a 33 percent representation of women at all three levels of the local self government institutions (LSGIs), including at the leadership level. Elections to local bodies were held in 1995 in Kerala and the newly elected Left Government in 1996 took a major decision to earmark 35-40 percent of the Ninth Five Year Plan outlay (1997-2002) towards projects and programmes to be drawn up by the local bodies determined by their own priorities. A conscious attempt was made to incorporate gender issues into this *process* of decentralized planning (in each sector), strengthened further by providing for a Women Component Plan (WCP); the LSGIs were advised (later mandated) to set apart 10 percent of the plan grant-in-aid for preparing projects that directly benefit women.

18.23 Kerala's attempt in the Ninth Five Year Plan towards 'gender aware planning', aimed at a more gender equitable outcome within the context of women's political empowerment, appears to be one of the first efforts in the country to engender plans at the local level. The 'feminisation' of political leadership at the local level made possible by the 73rd and 74th Constitutional Amendments, opened up considerable space for addressing women's needs and priorities. Conscious attempts were made to alter the conceptual rationale of planning under the decentralized regime by recognizing women's market and domestic roles, and gender differences in needs and interests.

18.24 However, overall plan performance at the local level in relation to women's issues floundered despite these attempts since such recognition remained largely at the level of rhetoric in policy making and was not translated into appropriate projects at the level of implementation. As Moser (1993) has emphasized, where the purpose is to change attitudes (including social norms and practices), solutions are not simple. Perhaps some lessons from this rich experience, in particular the need to go deeper into structures and institutions which tend to subordinate women, would enable us to make state plans more gender responsive.

Women's Priorities in the Budget

18.25 It is in the context of the slow pace of progress in improvements to women's position that gender sensitive budget auditing has assumed significance. Women all over the world had begun to hold governments accountable to their commitments to International Treaties and UN World Conference goals by linking these commitments to the generation and utilization of public resources, of which budget is a critical instrument.

18.26 There was need for new strategies and "mainstreaming" gained currency. Increased interest and work emerged on gender sensitive analysis of government budgets (GB) which offered a new tool for ensuring a better match between policy commitments and their realization. The impact of the budget on women, in particular tracing the flow of resources to women, is assessed through a probing of the quota beneficiary schemes (generally 30 percent), the women specific programmes (100 percent targeted for women) and the estimated potential for women beneficiaries in the 'general' expenditure stream. It is the unravelling of this bundle of resources, which accounts for over 90 percent of government expenditures, as GB exercises have shown, that is the crux of the problem. What assumptions are made about women's roles as consumers and/or producers in sectors like agriculture, industries, transport, energy, housing, public works?

18.27 Despite the comprehensive framework, the most commonly used tools of gender budgeting in practice have been the gender aware policy appraisal and a gender aware budget analysis of government expenditures. Hence GB has got identified generally with an ex-post analysis of budgetary allocations of the Government.

18.28 However, with the growing awareness of the central role of organizational structure and culture of institutions including the government, in the design and delivery of programmes and projects, the need has been felt to go beyond numbers, that is, to assess the implementation of policies, strategies and programmes not only in 'financial' terms but also in terms of structural biases in the functioning of governance structures/public institutions via their assumptions, working procedures and activities that prevent gender equality objectives being taken forward. The importance of gender *auditing* has been derived from a recognition of this.

18.29 A major achievement of the gender budgeting/auditing framework is the centre staging of the critical contribution of women in the 'care' economy by establishing a link between budget

allocations, public services provided through them and the way in which men, women and children use their time in the household. The manner in which the budget and its underlying policies are in fact relying on women's unpaid labour is revealed starkly by household time use surveys.

Box 18.1

Gender issues pervade the lives of women and men and have economic as well as social implications. Gender shapes our opportunities, access to resources and needs. There is a growing awareness around the world that policies and plans need to be designed accordingly.

(Hedman, Perucci and Sundstrom 1996:13)

18.30 Below (see Table 18.5) we give data on the sector wise WCP for the Local Self Governing Institutions (LSGIs) in the year 2005-06.

Table 18.5
Sector-wise Distribution of Plan Grant under WCP
Category for the year 2005-06 (Rs in lakh)

Sector Type	Formulation		Expenditure	
	No. of Projects	Plan Fund	No. of Projects	Plan Fund
Productive	1082	2146.50	697	1042.86
Service	2658	5767.99	2100	3968.39
Infrastructure	89	131.01	57	66.26
Others	3	1.35	2	3.05
Total	3832	8046.86	2856	5080.57

Source: IKM-2006

18.31 Seventy two percent (72%) of projects formulated were in the service sector followed by 27% of projects in the productive sector and a marginal proportion in infrastructure. However, only about two thirds of the WCP allocation could be spent during the year.

18.32 Work on gender auditing has been initiated in the state since the last (revised) Budget (2006-07) as envisaged by the Governor and the Finance Minister and will be carried further and strengthened during the 11th Five Year Plan. Two flagship programmes, one on 'Gender Awareness' to promote a more gender sensitive social environment, and another on 'Finishing Schools for Women' (for employment skill upgradation) will be initiated in Kerala during the course of the Plan as part of efforts to engender state Plans.

Women Development Agencies

Kudumbashree

18.33 Kudumbashree, the women oriented programme, with a wide net work of 163036 NHGs has a thrift collection of Rs. 717.16 crore up to October 2006. Nearly half of these women groups have been linked to loan facilities and programmes like Lease land Farming. During the last five years, 367270 families have benefited from the farming activities in 57872.14 acres of land.

18.34 The micro enterprises enable poor women in seeking a livelihood. There are altogether 11474 women entrepreneurs up to May, 2006, who have started 1615 group and 802 individual enterprises. Performance improvement programme has benefitted 3060 entrepreneurs up to May 2006. The enterprises in urban areas benefitted 3005 women and 4736 women were trained in entrepreneurial skills. Attempts are also being made to organize certain units into clusters and strengthen common facilities.

18.35 Despite problems like weak accounting systems, marketing issues, inadequate quality upgradation mechanisms, the wide net work of Kudumbashree as a cohesive unit of women has been advantageous to women's confidence building, self reliance and enhancing their self worth. The women force linked to the LSGIs, serve as a supportive group for the training, awareness and social empowerment programmes of the Government.

Box 18. 2

Kollayil Handloom Cluster- A Model Project

In 2004, a Handloom Cluster Development Programme known as "Eco-Tex" was initiated in Kollayil Panchayat (Neyyattinkara, Trivandrum). The project has been implemented with the participation of 625 selected women weavers and other ancilliary workers from 25 women organisations of this panchayat. Nearly 1000 women are employed. The cloth woven from the looms installed in the common workshed have a permanent market (mainly at Trivandrum) and hence these women are fully employed. Each women's organisation gets an assistance of Rs. 12.40 lakh out of which Rs. 8.10 lakhs is grant and 4.30 lakh is bank loan. Each year, textile materials worth Rs. 25 lakh is being manufactured and sold; the main marketing centre is Trivandrum. The consortium received an award for its best performance from the President during this year.

Source: Handlooms and Textile Director, Thiruvananthapuram

Kerala State Women Development Corporation

18.36 The economic empowerment activities of the Kerala State Women Development Corporation, functioning since 1988, are limited to the task of providing loans for self-employment ventures and training to women below the poverty line. The fund for women, belonging to backward, minority communities and physically handicapped classes are from NBCFDC*, NMDFC* and NPHC*, GOI respectively, whereas funds for the general category are met from the budgetary provisions of state government. Beneficiary contribution forms 5% of the loan assistance. While financial assistance to the extent of Rs.164.1 lakh was provided to 254 beneficiaries, with the assistance of NBCFDC during 2005-06, the amount provided to 439 beneficiaries was Rs. 295.1 lakh using the aid of NMDFC. The loan amount of Rs.126.2 lakh with the assistance of the state government benefitted 151 persons (see Table 18.6).

Table 18.6
Details of Physical and Financial Coverage during the Reference Period

(in lakh)

Particulars of women development schemes	Annual coverage of physical targets				Annual financial targets covered			
	2002-03	2003-04	2004-05	2005-06	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9
Loan schemes of NBCFDC, GOI	316	306	188	254	95.315	120.02	98.02	164.1
Loan schemes of NMDFC, GOI	441	345	317	439	129.383	101.28	180.05	295.1
Loan schemes of GOK for other social groups	70	74	130	151	28.239	32	60.25	126.2

Source: Kerala State Women Development Corporation Ltd, 2006

*NBCFDC- National Backward Caste Finance Development Corporation

*NMDFC - National Minorities Development Finance Corporation

*NPHC - National Physically Handicapped Corporation, GOI.

18.37 The Corporation has been functioning as a nodal agency for providing training programme of STEP and NORAD *.

18.38 NORAD- assisted Production-cum-Training Centres conduct a vocational training programme where women are grouped to form co-operative societies for starting production centres. Fifteen centres have been started so far in office management, data processing, garment designing, hosiery, knitting and computer training. Altogether 3070 women benefited from this scheme.

18.39 STEP- Projects (support for training and employment programme)

- Training in food processing unit in collaboration with State Fisheries Department was provided to 200 women in Malappuram and Kozhikode.
- Note Book and Plastic welded items manufacturing unit at Alappuzha and Kasaragode.

(*NORAD-Norwegian Agency for International Development.)

18.40 Fifty women are trained yearly in book making and plastic welded items. Altogether, two hundred women benefited from this programme up to 2006.

18.41 However in the absence of monitoring it is not clear to what extent the programmes have benefited women in seeking a livelihood. This is equally true of the loan schemes which had doubled over the last two years. These training programmes ceased to function from 2006, when the scheme was wound up by GOI, with effect from 1-4-06.

18.42 There are 8 working women's hostels functioning under the administration of KSWDC. Four of them are in own building and the rest in rented buildings. The corporation provided retail outlet facilities in various exhibition-cum-trade fairs for promoting sales of products produced by beneficiaries of their schemes. Thirteen centres are functional at present.

18.43 In order to provide non-traditional employment opportunities to women, KSWDC is operating a scheme known as 'Nagara Sahayi Scheme' in which urban women are provided with technical and financial assistance to drive and manage autorickshaws.

18.44 The corporation has also been assisting NGOs and women's organisations for conducting awareness programmes and training programmes for women. However, since 2006, the activities of KSWDC are confined to loan assistance and efforts to revive the training programmes are being undertaken.

Kerala Women's Commission

18.45 The Women's Commission has been set up for conducting enquiry into unfair practices against women, adopt settlement and counselling methods for solving cases, with however, no legal powers. The commission conducts Forums and Adalaths in every district for the speedy redressal of petitions.

18.46 In 2005-06, 82 adalaths were conducted and 24 DNA tests were carried out since a number of cases were related to the paternity of the child. The commission received 5345 petitions in 2006 which were higher by 144 cases compared to 2005, in which the commission received 5201 complaints (Table 18.7). The severity of these cases and their rising number reiterates the need for the effective implementation of Domestic Violence Act, 2005 as well as the need for separate courts for speedy settlement of such cases.

18.47 Out of the complaints received complaints of harassment by husband stood first (758), followed by property related (472) and beating by husbands (472), abusive language (265), anti social nuisance (201), employment related (191) and 172 cheating cases. A rather detailed Table on subject-wise categorization of petitions regarding offences against women is given below.

Table 18.7
Subject-wise details of petitions received

Sl. No	Category	2004	2005
1.	Harassment of women	785	634
2.	Dowry Harassment	539	156
3.	Harassment by husband	930	758
4.	Cheating	214	172
5.	Divorce	0	73
6.	Suspicious death	103	107
7.	Property related	437	472
8.	employment related	133	191
9.	Threatening to life	158	0
10.	Sexual harassment	146	185
11.	Abusive language	326	265
12.	Neighbours nuisance	86	0

13.	Atrocities	154	0
14.	Against Police	100	92
15.	Theft	9	0
16.	Beating	27	472
17.	Anti-social nuisance	176	201
18.	To get divorce	56	34
19.	Nuisance after drinking	135	0
20.	To get alimony	96	120
21.	To get economic help	41	90
22.	Path problems	160	125
23.	Doctors negligence	10	8
24.	Child marriage	15	7
25.	Miscellaneous	906	1039
	Total	5742	5201

Source: Kerala Women's Commission, November 2006

18.48 Awareness camps for empowerment of women, seminar on women's issues, Domestic Violence awareness camps, seminar on sensitizing against dowry, seminar for journalists etc were also conducted in 2006.

18.49 The Kerala Women's Commission has been reconstituted with effect from January 24th 2007.

Women's Cell

18.50 Women's Cell in the Police Department, deals with cases of atrocities against women registered in the state including action against police in case of any laxity in handling cases. The cell maintains liaison with Women forums and voluntary organizations and organizes sensitization programmes for police men and women. There are altogether 17 District women cells in addition to the State women's cell in Thiruvananthapuram.

18.51 An analysis of its activities reveals that on an average 800 cases are brought before the State and District cells in a month, out of which 97% are settled without much delay. Only 3% of the cases are referred to police stations or courts. (Source: State Women's Cell, TVM.(2006)

Social Welfare Department

18.52 SWD is the major nodal department for implementing programmes for women and children. It was formed on 9-9-1975 for providing needed care and protection and such other services to women, children, physically and mentally challenged, destitute, orphans, aged, infirm and juvenile delinquents. ICDS service has been universalised in the state.

18.53 The department is implementing the Integrated Women Empowerment Programme (*Swayam Sidha*) a 100 percent centrally sponsored scheme under which women will be encouraged to form self-help groups for:

- creating confidence and awareness among women regarding women's status, health and hygiene, legal rights, economic upliftment and other socio-political issues;
- Strengthening and institutionalizing the saving habit of rural women and their control over economic resources;
- Improving access to women in local level planning; and
- Convergence of similar services of different departments.

18.54 The IWEP has been fully implemented in 18 selected ICDS blocks; 2416 SHGs have been formed with 41261 members.

18.55 Apart from the developmental programmes the Social Welfare Department has to discharge some statutory functions for the protection of women and children. The Director of Social Welfare is the Chief Dowry Prohibition Officer responsible for implementing the Dowry Prohibition Act. The Department has arranged awareness programmes against dowry at the Block, District and State level with the participation of LSGIs. Cases have been attended by the dowry prohibition officers in Trivandrum, Ernakulam and Kozhikode.

18.56 Government of India have sanctioned the implementation of 'Kishori Shakti Yojana' in all 163 ICDS blocks in the state which is a 100 percent Centrally Sponsored Scheme meant for the development of adolescent girls. Till date, 634825 girls in the age-group 11-18 years have benefited from this scheme.

18.57 Balika Samridhi Yojana' is also a 100 percent Centrally Sponsored Scheme implemented by the local self-government department since 1997-98 meant to change the negative attitude of the community towards a girl child and improve her enrolment and retention in schools; assist girls in income generating activities. The number of beneficiaries has grown over the years (see Table 18.8).

Table 18. 8
Balika Samridhi Yojana (BSY)-Beneficiaries

2001-02	2810
2002-03	39994
2003-04	57699
2004-05	100000
2005-06	150629

Source: Social Welfare Dept, 2006-07

18.58 There is a scheme of financial assistance for the marriage of physically challenged girls and the daughters of physically challenged couples; Rs. 10,000 per person will be given to those persons whose annual income does not exceed Rs. 36000/-.

18.59 A Special Nutrition Programme, announced by the government has been implemented by the SWD, for unmarried women and widows above 50 years of age. The scheme is being implemented in the 2940 Anganwadi centers of the 18 IWEP Blocks and has benefited 14700 women. Beneficiaries of the programme are provided with rice and green gram (100 gm rice and 20 gm green gram per day).

18.60 Twenty five Welfare Homes are functioning under the department for the welfare and rehabilitation of women. There are special Homes for children (children directed from the juvenile court aged above 5 and below 18 years), Juvenile Home (age above 5 and below 18 years

who need care and protection), Observation Home (age above 5 & below 18 years) temporary residence of juvenile in conflict with law during the pendency of an enquiry, After care home for Adolescent girls (age 16-23 years), and Home for physically handicapped (16-60 years). There are Mahila mandirs and Rescue homes for the age group (13-55 yrs), Day care centre for those aged above 55 years and home for all age groups who are mentally cured patients (Ashabhavan). See Table 18.9 below for details on welfare institutions.

Table 18.9
Welfare Institutions for women: Inmates and Sanctioned Strength

Sl.No.	Institutions	Numbers	Inmates (Nos)	Sanctioned Strength (Nos)
1	2	3	4	5
1	Mahilamandiram	12	221	300
2	Home for physically handicapped	2	45	100
3	After Care Home	2	75	200
4	Rescue Homes	2	32	200
5	Observation Homes	1	10	25
6	Juvenile Homes	1	110	200
7	Special Home	1	5	25
8	Home for mentally cured patients (Ashabhavan)	3	125	150
9	Day care Centre and Old Age Home	1	24	50
	Total	25	647	1250

Source: SWD, 2006-07

18.61 It is essential to examine why these facilities are underutilized, given the growing need for such support.

Violence Against Women

18.62 Gender-based violence, is a clear manifestation of women's inequality. The crime profile of the state as recorded in the state Crime Records Bureau, is a testimony to women's subordination and victimisation in Kerala. Ranking 7th among the states in gender based violence, the women are nonetheless first in suicides, provoked by harassment. (*Source: Crime Records Bureau, 2006*)

18.63 The number of atrocities against women in Kerala, has increased from 7228 in 2003 to 7681 in 2004, and 8087 in 2005. In the nature of offence the number of complaints on cruelty by husband or relatives stood first (3283).

Table 18.10
Atrocities committed against women in Kerala

OFFENCES	2003	2004	2005
Rape	394	480	478
Molestation	1947	2260	2339
Kidnapping & Abduction	102	142	175
Eve-teasing	68	133	129
Dowry death	33	31	21
Cruelty by Husband or Relatives	2930	3222	3283
Others	1754	1413	1662
State Total	7228	7681	8087

Source: State Crime Records Bureau, Trivandrum

18.64 In the district wise analysis, Trivandrum district stood first (Table 18.11) with a total of 1025 complaints followed by Kozhikode (898), Malappuram (869) and Kollam (791).

Table 18.11
Crimes Against Women reported in Kerala during 2005

Sl. No.	Name of District	Rape	Kidnapping	Sexual Harrassment (Eve-teasing)	Dowry deaths	molestation	Cruelty by husband or relatives	Other offences	Total
1	2	3	4	5	6	7	8	9	10
1.	Thiruvananthapuram	47	24	35	2	472	387	58	1025
2.	Kollam	47	19	4	2	321	369	29	791
3.	Pathanamthitta	14	6	2	1	139	120	8	290
4.	Alappuzha	22	7	4	1	165	201	9	409
5.	Kottayam	25	13	16	1	168	150	12	385
6.	Idukki	28	5	10	2	125	107	7	284
7.	Ernakulam	22	6	14	4	168	171	245	630
8.	Trissur	38	11	28	2	161	270	217	727
9.	Palakkad	53	6	4	1	66	279	71	480
10.	Malappuram	50	8	5	0	130	449	227	869
11.	Kozhikode	49	13	16	4	171	339	306	898
12.	Wayanadu	33	2	13	1	60	93	137	339
13.	Kannur	25	5	18	0	121	215	189	573
14.	Kasaragode	25	4	6	0	72	133	147	387
15.	States Total	478	129	175	21	2339	3283	1662	8087

Source: Same as Table 18.10

18.65 Kerala is one of the states, with the highest suicide rate in the country. The numbers reported have increased from 9053 cases in 2004, to 9244 cases in 2005. The highest number of suicides were reported from Trivandrum district (1257) followed by Kollam (1128) and Palakkad (973). See Table 18.12.

Table 18.12
No. of Suicides in Kerala (District wise)

Sl. No	Districts	2004			2005		
		Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	857	340	1197	956	301	1257
2	Kollam	841	244	1085	894	234	1128
3	Pathanamthitta	345	65	410	308	85	393
4	Alappuzha	360	122	482	397	106	503
5	Kottayam	323	126	449	353	109	462
6	Idukki	352	136	488	336	131	467
7	Ernakulam	523	209	732	519	220	739
8	Trissur	675	272	947	697	275	972
9	Palakkad	645	243	888	713	260	973
10	Malappuram	348	140	488	325	145	470
11	Kozhikode	445	188	633	450	218	668
12	Wayanadu	222	80	302	236	84	320
13	Kannur	454	214	668	447	178	625
14	Kasaragode	208	76	284	199	68	267
	States Total	6598	2455	9053	6830	2414	9244

Source: Same as Table 18.10

Table 18.13
Number of Suicides in Kerala (cause wise)

Sl. No	Causes	2004			2005		
		Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8
1	Failure in examination	32	39	71	38	31	69
2	Poverty	5	1	6	9	1	10
3	Love affairs	45	45	90	37	44	81
4	Insanity/Mental illness	971	410	1381	929	466	1395
5	Family problems	1482	546	2028	1982	667	2649
6	Property dispute	9	0	0	0	5	14
7	Dreadful diseases	996	444	1440	934	412	1346
8	Unemployment	158	61	219	108	28	136
9	Bankruptcy/sudden change in eco status	799	89	888	758	73	831
10	Death of dear person	54	36	90	55	39	94
11	Fall in social reputation	11	3	14	10	2	12
12	Dowry dispute	0	15	15	0	17	17
13	Illegitimate Pregnancy	0	6	6	0	1	1
14	Causes not known	909	280	1189	652	200	852
15	Other causes	1127	480	1607	1309	428	1737

18.66 This scenario, underlines the need for the effective implementation of Domestic Violence Act 2005, which came into force in October 2006. The definition of DV has been made wide enough to encompass every possibility of abuse/harm to the woman. It has been welcomed by all since it provides for the first time civil remedies to women by way of protection orders, residence orders and orders for monetary relief in the event of a domestic violence incident.

Box 18.3**Main Features of the Act**

- Definition of Domestic Violence- it includes physical, sexual, verbal, emotional and economic abuse that can harm, cause injury to, endanger the life, limb, health, safety, or well-being, either mental or physical of the aggrieved person.
- Definition of aggrieved person – covers not just the wife but a woman who is the sexual partner of the male irrespective of whether she is his wife or not.
- Any woman residing in the house, mother, widowed relative, daughter who is related in some way to the respondent is also covered by the Act.
- Information regarding an act of domestic violence can be lodged by any person who has reason to believe that such an act has been or is being committed and not necessarily by the aggrieved person
- Magistrate has the powers to permit the aggrieved woman to stay in her place of abode and cannot be evicted by the husband even if she has no legal claim or share in the property
- Allows magistrates to impose monetary relief and monthly payments of maintenance
- Penalty of breach of protection order or an interim protection order is punishable with imprisonment of a period which may extend to one year or with fine which may extend upto Rs.20,000 or both
- Act ensures speedy justice as the court has to start proceedings and have the first hearing within 3 days of the complaint being filed
- Every case has to be disposed of within a period of 60 days of the first hearing.

18.67 For its effective implementation the necessary mechanisms have to be put in place and the modalities of redressal firmed up.

18.68 A campaign on Domestic Violence Act (2005) has already been initiated by the Social Welfare Department, women's organisations, Kudumbashree, LSGIs and NGOs in Kerala and some domestic incident reports have already been filed.

Female Emigration

18.69 Emigration from Kerala is essentially a male phenomenon. There are very few lone female migrants; most of them emigrate as wives or relatives of male emigrants.¹ Besides the Gulf countries, the other major destinations for Kerala emigrants are the USA, England, Singapore, and Maldives Islands. Within the Gulf region, the UAE and Saudi Arabia account for more than two-thirds of all emigrants in the Gulf.

18.70 According to the South Asian Migration Survey (SMS), in 2004 there were 15.29 lakh male emigrants and 3.09 lakh female emigrants. Females constituted 16.8 percent of the total. In 1999, based on the Kerala Migration Survey (KMS) the numbers were 12.35 lakh male emigrants

¹ On the other hand, in Sri Lanka, the situation is just the opposite. While only 17 percent of the emigrants from Kerala were females, as much as 70 percent of the emigrants from Sri Lanka were females (Zachariah and Irudaya Rajan 2005). Most of the information in this section is based on two major studies, the Kerala Migration Survey (KMS) in 1999 and the South Asian Migration Study (SMS) in 2004 undertaken by the Centre for Development Studies, Trivandrum

and 1.27 female emigrants. Female emigrants were 9.3 percent of the total. Thus during 1999-2004 there has been a substantial increase in female emigrants.

18.71 The larger proportion of female emigrants were from Christian community and primarily from Kottayam district; Ernakulam and Pathanamthitta are two other areas of high female emigration. While 32 percent of the emigrants were Christians, the proportion of Muslim women migrants was just 8 percent.

18.72 Among female migrants, nearly three-fourths were married, only 25 percent were unmarried. The number of unmarried female emigrants increased very considerably during 1999-04, the proportion was about 7 percent in 1999. This very large increase in the number of unmarried women leaving Kerala to foreign countries is a relatively new phenomenon and the trend suggests a further acceleration in the emigration of young unmarried women from Kerala in the coming years.

18.73 Female emigrants are very much more educated than their male counterparts. As much as 45 percent of the female emigrants were degree holders compared with only 15 percent among the male emigrants. About 80 percent of female emigrants have a secondary level education or higher, while the corresponding percentage among male emigrants was only 45 percent.

18.74 Emigration has certainly helped women to procure employment, since the proportion unemployed before emigration was very high which declined considerably at the destination point.

18.75 On the whole, conditions in Kerala and across the world favour increased female emigration. First of all, in the Gulf region, and elsewhere in the world the demand is now growing for educated skilled work seekers. The future does appear to be for the emigration of educated and skilled persons, for women largely as nurses, saleswomen, in office support jobs, or live-in care givers (which also mandate a certain level of education in the Western countries) or at higher levels in the legal, art and design, computer or business operations.

18.76 While it is true that certain types of job opportunities do exist for educated/skilled female emigrants, the concern here is the need to recognize the vulnerability of lone female migrants, (for instance the often reported ill treatment and abuse of maids, or trafficking in the name of entertainment industry), and provide security/safety to such women. Efforts should be made to maintain records of all emigrants, with follow up in the destination countries to ensure their well being and eliminate any type of atrocities against them.

18.77 Some sort of a safety net or protection for female (and male) emigrants is essential given the unpleasant problems they often face at the point of destination. Perhaps they could be included under a Welfare Fund and their interface with the local Indian diplomatic authorities could be strengthened.

CHAPTER 19

LABOUR AND EMPLOYMENT

If we can put it in this way, the problem of unemployment is the single largest problem of Kerala economy today. Kerala's unemployment problem is not only about serious problem of educated unemployment but also a substantial portion of this problem is simple unemployment of unskilled workers. This is highest in the country and on the rise, too. The state's population was 318 lakhs in 2001 and 63.4 % of the population was in the 15-59 age group (201.83 lakhs) who constitute the labourforce. The projected size of the labourforce in 2011 is 237.30 lakhs; 2.5% of India's total labourforce lives in Kerala. Agricultural labourers constitute 16.54 lakhs, cultivators constitute 7.40 lakhs and workers in Household Industry constitute 3.65 lakhs of the total workforce.

19.2 One important feature of the Kerala economy, which makes it different from the rest of the country, is net out migration of labour force particularly to Gulf and inflow of huge remittances into the economy. One recent (unpublished yet) study by Centre for Development Studies (CDS), Thiruvananthapuram and Indian Institute of Management (IIM), Kozhikode shows that during 2003 the amount of remittances from Gulf was as high as 22% of the State's Net Domestic Product (NSDP). Moreover, almost 25% of the male labour force is working in Gulf. Apart from that the migration to other countries and to different States within the country is also substantially high. Huge out migration, as has been rightly pointed out, happens because of lack of employment opportunity only.

19.3 As far as the unemployment scenario of the State of Kerala is concerned, it is the worst among all States and UTs (only excepting Lakshadweep and Tripura) in India according the NSS 61st round large sample survey conducted during 2004-05. In spite of the fact that a large section of the population has migrated out to Gulf and elsewhere for jobs, the rate of unemployment here is way above the all India average. Unemployment rates according to usual status (ps) and current daily status among the age group 25-29 years for the state of Kerala and all India for rural, urban, male, female during 2004-05 (latest large sample of 61st round of NSS) are given in Table 19.1 and 19.2.

Table 19.1
Usual Status Unemployment Rates during 2004-05 per 1000 Persons

	Rural			Urban		
	Male	Female	Persons	Male	Female	Persons
Kerala	83	309	158	90	429	199
All India	21	31	25	44	91	53

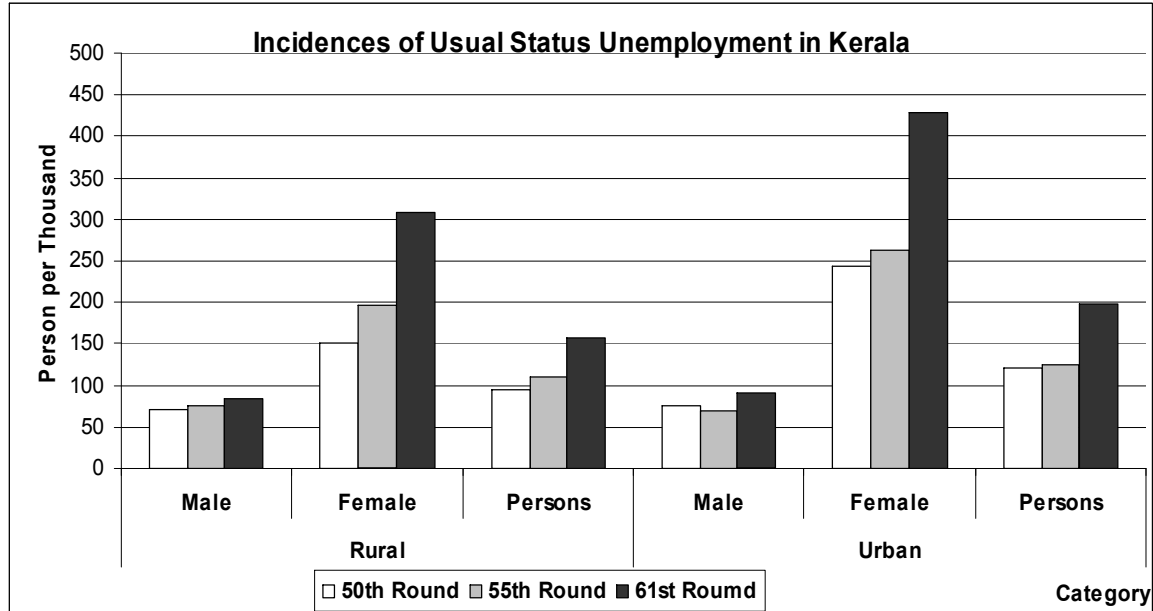
Source: NSS Report No. 515(61/10/1), Employment and Unemployment Situation 61st Round Part I

Table 19.2
Current Daily Status Unemployment Rate among the Age Group 25-29 Years

	Rural			Urban		
	Male	Female	Persons	Male	Female	Persons
Kerala	245	561	360	210	722	386
All India	88	107	94	95	181	112

Source: NSS Report No. 515(61/10/1), Employment and Unemployment Situation 61st Round Part I

Fig. 19.1



Source: NSS Report No. 409, 458 & 515 for 1993-4(50), 1999-2000(55) & 2004-5(61).

19.4 Therefore, it is evident that the unemployment rate in Kerala is abnormally high and this may be demarcated as the single largest problem of Kerala economy. If we consider last three quinquennial rounds viz. 50th, 55th and 61st round for the years 1993-94, 1999-2000 and 2004-05 respectively to see the trend in unemployment in Kerala, we get the above picture. Both rural and urban female unemployment rate increased dramatically during last five years. Incidence of urban male unemployment came down slightly during 1999-2000 as compared to 1993-94, apart from that all other unemployment rates viz. unemployment rates among rural male, rural female, urban female went up. But the rise in unemployment rates after 1999-2000 till 2004-05 is much larger than the rise during the period between 1993-94 and 1999-2000. Therefore, we empirically witness substantially high GSDP growth has been coupled with increasing rate of unemployment in Kerala, which is diametrically opposite to trickle down hypothesis.

19.5 Population in the productive age group (15-59 years) in Kerala in 2001 was 201.83 lakhs and they are the work seekers. The problem of unemployment in Kerala is very acute and has been worsening over time. The current daily status unemployment rate in the state – which is the best measure of open unemployment of both long and short duration – was around 21 % in 1999-2000. This was the highest unemployment rate among all the states in the country and was nearly three times the rate for the country as a whole (which was 7.3 %).

19.6 The worsening unemployment situation is obviously related to the inability of the economy of the state to generate any fresh employment during the last decade or so, particularly after the advent of liberalisation in the country. While this phenomenon of “Jobless Growth” is observable in all the states in the country, the situation Kerala appears to be particularly distressing in this regard. The growth rate in employment during the period 1993-94 to 1999-2000 in Kerala was a meagre 0.07 % per annum.

19.7 The problem of “simple unemployment” (unemployment of simple low skilled labour) is also quite significant in Kerala. The National Rural Employment Guarantee Scheme under the NREG Act, 2005 is aimed at enhancing the livelihood security in the rural areas. National Rural

Employment Guarantee Act (NREGA) is being implemented in Wayanad and Pallakad districts of Kerala, which is a right based constitutional approach. Already registration of rural unemployed has begun in Wayanad and Palakkad districts under the scheme. (See Box 19.1)

Box 19.1
National Rural Employment Guarantee Act 2005

The National Rural Employment Guarantee Act launched on February 2, 2006. The on-going programmes of Sampoorna Grameen Rozgar Yojana (SGRY) and National Food for Work Programme (NFFWP) will be subsumed within the NREGS in the 200 districts identified in the initial state. All the districts in the country will be covered under the scheme with in five years.

The objective of the Act is to enhance the livelihood security of the people in rural areas by generating wage employment through works that develop the infrastructure of that area. The choice of work suggested addresses-the causes of chronic poverty like drought, deforestation and soil erosion. Implementation of the Act Calls for the formulation of NREGSs by the State Governments. Section 4 of the Act provides that with in six month from the date of commencement of the Act. Every State Government shall by notification make a scheme for providing not less than 100 days of guaranteed employment in a financial year to every household in the rural areas covered under the scheme and whose adult members volunteer to do unskilled manual work subject to the conditions laid down in the Act.

19.8 It is clear that the problem of unemployment is not just one of unemployment among the educated youth. Unemployment and underemployment among workers in traditional sectors like agriculture and household industries are indeed major concerns. One of the most important groups of such workers is the traditional agricultural workers. According to the 2001 Census, the number of agricultural workers in Kerala was around 16.20 lakhs and this is more than twice the number of cultivators (7.20 lakhs) and more than four times the number in the household industry (3.70 lakhs). Close to three fourths of workers in the household industry is in rural areas and close to half of them are female workers.

19.9 The unemployment rate among the youth and females is also found to be high. The current daily status unemployment rate among the youth (age 15-29 years) in rural Kerala in 1999-2000 was as high as 36.3 % and in urban areas it was slightly lower at 34.3 %. The unemployment rate among females was high at 45.8 % in rural areas and 50.4 % in urban areas.

19.10 As on 30th September 2006, there were close to 40 lakhs registered job seekers in the Live Register of Employment Exchanges in Kerala. This constituted about 46 % of the population in the age group of 19-29 in the state. Of the total number registered, 58 % are females. Illiterates constitute only a small number. The largest number of jobseekers has qualifications up to 'Matric' level.

19.11 The Employment Department operates about 96 institutions and they provide placement service, vocational guidance, employment market information, self-employment guidance, unemployment assistance and Self-Employment Scheme for the Registered Unemployed. But these services have been considered inadequate to tackle the problem of unemployment in the state, since most of the unemployed does not possess marketable skills and this reduces their employability. This would call for convergent action by the Employment Department and Industrial Training Department.

Workforce in Public and Private Sectors

19.12 Work force in public sector comes to 616, 077 on March 2006. Of this community, social and personal services accounted for 338, 884 (55 %) and transport, storage and communications 97, 277 (29 %). In the private sector the total workforce as on March 2006 was 485, 453 and the largest number 184, 511 among them was in community, social and personal services. See Table 19.3 and 19.4

Table 19.3
Workforce in Public Sector (March 2006)

Sl.No	Sector	Estt.	Women	Total
1	Agriculture, Forestry, Fishing	426	6960	18498
2	Mining and Quarrying	96	379	20682
3&4	Manufacturing	134	24216	36415
5	Electricity, Gas, Water	541	4017	26750
6	Construction	656	4616	20719
7	Wholesale & retail trade, Hostels, Restaurants	128	916	3753
8	Transport, storage, Communication	264	13245	97277
9	Financing, Insurance, Real Estate, Business Services	2635	17702	53119
10	Community, Social, Personal services	6466	115611	338884
	Total	11346	187662	616077

Source: Employment Directorate

Table 19.4
Workforce in Private Sector (March 2006)

Sl.No	Sector	Estt.	Women	Total
1	Agriculture, Forestry, Fishing	273	28131	64705
2	Mining and Quarrying	20	155	456
3&4	Manufacturing	3648	84280	177246
5	Electricity, Gas, Water	14	26	606
6	Construction	31	258	771
7	Wholesale & retail trade, Hostels, Restaurants	974	4107	23709
8	Transport, storage, Communication	127	651	4367
9	Financing, Insurance, Real Estate, Business Services	1111	8684	29082
10	Community, Social, Personal services	3506	112594	184511
	Total	9704	238886	485453

Source: Employment Directorate

Composition of Workers

19.13 The work participation rate for men in 2001 was 50.40, while that for women, it was only 15.30. In 1991, the respective rates were 47.56 for men and 15.90 for women. The labour community in Kerala consists of those who are engaged in the informal sector (such as loading and unloading, casual work, construction work, brick making, self-employment etc), Traditional industries (such as coir, cashew, handloom, beedi etc), Manufacturing sector (small, medium and large industries), IT industry, Export Promotion Zones and those who are unemployed and underemployed. Besides, one should also mention about child labour and migrant labour.

Child Labour

19.14 Child labour in homes and hotels was banned from October 10, 2006. Jail term up to 2 years and maximum fine of Rs. 20,000 were imposed for violations. Children under the age of 14 years are banned from working as domestic servants or at hotels, tea shops, restaurants and resorts. Children working in lower end restaurants and high way food stalls and motor workshops are a common sight in many parts of the country and the state.

Migrant labour

19.15 Migration of workers seeking employment in Kerala from other states like West Bengal, Bihar, Orissa, Chandigarh apart from the workers already present in this state from Tamil Nadu are increasing. These workers are not paid Kerala level wages. At the same time women workers recruited from Kerala for working in the fish processing Centres in the North Indian states particularly in Maharashtra and Gujarat are being exposed to miserable conditions at their work place. The contract system of employment is also increasing in our state. But the local workers are well organised and succeed in getting decent wages and working conditions. Awareness programmes are conducted by the state for the migrant workers.

Industrial Relations

19.16 Industrial relations basically represent the nature of relationship between Labour and Management or employees and employers. Data furnished by the office of the Labour Commissioner indicate the general trend in the number of strikes, lock outs and layoffs. See Table 19.5, 19.6 and 19.7. They show that mandays lost due to strikes became unusually high in 2002 and 2005, but this was due to concentration of long duration strikes in coir and plantation sector.

Table 19.5
Strikes

Items	2001	2002	2003	2004	2005
Pending	1	0	0	1	1
Arose	10	5	19	12	10
Total	11	5	19	12	10
Man-days lost	359175	6456489*	72160	143387	3250553*

Source: Labour Commissionerate

Table 19.6
Lockouts

Items	2001	2002	2003	2004	2005
Pending	20	25	24	20	27
Arose	15	20	17	23	4
Total	35	45	41	43	31
Man-day lost	1286962	1627147	1932465	1881349	1855429

Source: Labour Commissionerate

Table 19.7
Layoffs

Items	2001	2002	2003	2004	2005
Pending	6	9	12	10	9
Arose	26	19	23	9	10
Total	32	28	35	19	19
Man-day lost	529624	729717	888840	11452578	583771

Source: Labour Commissionerate

Conciliation Machinery

19.17 One of the prime functions of the Labour Department is to act effectively as conciliation machinery to redress the grievances of employers and employees. This arrangement is now available in all the 14 district head quarters. Three Regional Joint Labour Commissioners and the Commissionerate provide good support to the conciliation process. The conciliation officer is vested with the power to intervene in industrial disputes, existing or even apprehended with a view to bring about amicable settlements.

Labour Courts and Tribunals

19.18 The adjudication process has become time-consuming and burdensome. The Labour Courts and Tribunals are over-burdened with umpteen numbers of cases. On an average, it takes about 3-5 years for getting a judgement or an award.

Arbitration

19.19 Between adjudication and arbitration, the latter is considered to be more effective, for the reasons that the procedures are simple, the proceedings will not be tardy, and the decision is rendered by a person in whom both parties have confidence. In the report of the National Labour Commission (2002), it is stated that, "We would like the system of arbitration to spread and over time, become the accepted mode of determining disputes which are not settled by the parties themselves."

Industrial Relations Committees(IRC)

19.20 There are about 14 IRCs to prevent or resolve disputes in the traditional sector including plantations. These were very active and result-oriented during the initial stage. The Plantation Labour Committee is considered as a model, thanks to its good track record.

Safety of Workers

19.21 The Factories Act provides for registration and licensing of factories to bring them under its coverage. The Indian Boiler Registration Act provides for the registration of boilers and their inspections. Factories and Boilers Department ensures-safety, Health and welfare of factory workers and the general public living in the vicinity of factories by implementing various labour laws. The department is in the pursuit of prevention of industrial accidents and creation of an environment conducive to industrial Hygiene as well as prevention of occupational diseases by inspection and advisory service.

19.22 In the state there are 16532 establishments which come under Factories and Boilers Act in 2006 as against 16243 in 2005 showing an increase of 289. Details are given in Table.19.8.

Table 19.8
Establishments and workers coming under the purview of various
Acts enforced by Factories and Boilers Department

Year	Establishments	Workers
1	2	3
2004	18207	660687
2005	16243	442460
2006	16532	450479

Source:- Factories and Boilers Dept

The programmes conducted during 2005-06 by Factories and Boilers Department is given in Table.19.9.

Table 19.9
Programms conducted by Factories and Boilers Department

Programms	2005-06	2006-07 up to 31-10-2006
1	2	3
1. Priority inspection at MAH factories	5	9
2. Air Monitoring studies in hazardous factories	7	14
3. Workshop/training Programmes for workers/Managers	6	6
4. Inspection at Hazardous factories by specialist inspections	100	227
5. Medical examination of factory workers	60	269

Kerala Institute of Labour and Employment

19.23 Kerala Institute of Labour and Employment was started in 1978 for conducting training and research in matters related to labour and employment with special reference to Kerala. Conducting training programmes, workshops, lectures for officers of the labour, employment and training department, Welfare fund Boards etc are the activities of institute. Training programmes are also arranged for the trade union leaders and workers and management personnel in industry. Details of training/seminars/ workshops conducted by KILE during the year 2005-06 are given in the Table 19.10

Table 19.10
Training Programmes/Seminars/Workshops conducted by
Kerala Institute of Labour and Employment during 2005-06

Sl. No	Training Programmes/Seminars/Workshops	Participants (Nos)
1	National Seminar on “Long Term social security scheme for fishermen/women in the wake of Tsunami catastrophe	58
2.	Workshop on “Changing role of trade union leaders in the present industrial scenario” for Trade Union leaders.	359
3	Workshop on “Labour Welfare Fund Administration in Kerala- an analysis future plans”.	105
4	Workshop on “MGP initiatives X-ray into Labour laws: reformation”	14
5	Training Programmes on “Role of quasi Judicial authorities and effective Enforcement of labour laws”.	27
6	“Supervisory Development Programme” for officers of Employment Department	51
7	Seminar on Development of Kerala- the role of trade unions”	250
8	“Workshop on Traditional Industries- problems and Remedies”	256

Social Protection Measures

19.24 Labour being a concurrent subject, both the central and state governments have enacted several laws on social protection measures for labour. The most important among them are the ESI, EPF, Gratuity, Maternity benefit, Workmen compensation and special protection for Women, Children and Old.

Employees’ State Insurance Scheme

19.25 This is probably the most comprehensive welfare measure directly administered by the Central Government through the ESI Corporation.

Workmen’s Compensation Scheme

19.26 The Labour Department is administering this scheme more or less satisfactorily except for the delay in taking decisions in some complicated cases. Table-19.11 gives the details of industrial accidents during 2001-05.

Table 19.11
Industrial Accidents 2001-2005

Year	Accident	
	Fatal	Non-fatal
2001	16	889
2002	18	654
2003	18	393
2004	9	254
2005	18	931

Source: Labour Department

19.27 The number of fatal accidents is very low in the State. But, the frequency of non-fatal accidents reported needs the attention of the officers in charge of safety measures in the various establishments. There is no co-ordination between the Department of Labour and the Directorate of Factories and Boilers in handling accidents cases and monitoring the relief and compensation given to the victims. The same can be said about the incidence of occupational diseases and the care support given to the affected employees.

19.28 The Factories Act stipulates that all cases of occupational diseases detected by general medical practitioners should be reported to the Chief Inspector of Factories. It also provides for periodic medical examination of workers especially in hazardous industries.

Labour Welfare Funds

19.29 As on date, there are 28 Labour Welfare Funds/Schemes in the States, covering 48 lakh workers out of total working population of 80 lakhs. An analysis of various schemes shows that there is diversification among them with regard to their legal set-up, source of finance/incomes, nature of contribution, eligibility criteria, benefits provided etc. In majority of welfare funds there is government contribution while in some it is absent.

19.30 Among the schemes the Kerala Head Load Workers Welfare Fund Scheme appears to be unique since the Headload Workers Welfare Board has the status of a deemed employer. The Kerala Building and other Construction Workers Welfare Board is also distinct as its functioning are regulated by a central statute viz, the Building and Other Construction Workers(Regulation of Employment and Conditions of Services) Act 1996. Under this Act, a welfare fund cess is levied on construction works.

19.31 The range of benefits granted to the registered members of these welfare funds/schemes include pension, PF, Gratuity, Medical Benefit, Educational Scholarships to children of workers, grant for marriage of daughters, maternity benefit etc. The list of benefits is impressive. But the coverage of the schemes need to be further enlarged.

Unemployment

19.32 As on December 2004, the number of employment seekers in the live register of employment exchanges in India was 405 lakh. This number decreased to 394 lakh in December 2005 and increased to 400 lakh in April 2006.

19.33 According to live registers of employment exchanges in Kerala, the total number of work seekers in 2004 was 37.56 lakhs. This number decreased to 36.7 lakhs in 2005 registering a decrease of 2.3 per cent. The total number in September 2006 is 39.87 lakhs of which 38.01 lakhs are general work seekers and 1.86 lakhs professional / technical work seekers. Details of work seekers from 1996 to 2006 is given in Appendix 19.1

19.34 The number of work seekers below SSLC decreased from 6.73 lakhs in 2004 to 6.29 lakhs in 2005 and increased to 6.56 lakhs in September 2006. The total number of work seekers who possess SSLC and above decreased from 30.83 lakhs in 2004 to 30.4 lakhs in 2005 and increased to 33.31 lakhs upto September 2006. The percentage of work seekers below SSLC to the total work seekers is decreasing since 1999 and the percentage of work seekers who possess SSLC and above is increasing (Table. 19.12)

Table 19.12
Number of Work Seekers in Kerala

(No. lakh)

Year (at the end of the December)	Below SSLC		SSLC & above		Total Work Seekers
	Persons	Percentage to Total	Persons	Percentage to Total	
2001	9.67	21.8	34.64	78.2	44.31
2002	7.12	19.3	29.68	80.7	36.80
2003	7.46	18.6	32.58	81.4	40.04
2004	6.73	17.9	30.83	82.1	37.56
2005	6.29	17.1	30.41	82.9	36.70
September-2006	6.56	16.5	33.31	83.5	39.87

Source: Directorate of Employment

19.35 The number of graduates registered in employment exchanges stood at 2.4 lakhs in 2004. It decreased to 2.3 lakhs in 2005 and increased to 2.4 lakhs in September 2006. The number of job seekers with Postgraduate degree decreased from 0.61 lakh in 2004 to 0.55 lakh in 2005 and increased to 0.57 lakh in September 2006.

Table 19.13
Share of Employment Seekers according to level of Education –Kerala
(1996, 2000 and 2005)

Sl. No	Level of Education	Share (Percent)		
		1996	2000	2005
1	Below SSLC	25.0	22.6	17.1
2	SSLC	60.4	57.3	59.4
3	PDC or equivalent	8.7	12.6	15.7
4	Degree	4.9	6.1	6.3
5	Post Graduate	1.0	1.4	1.5
	Total Work Seekers	100	100	100

19.36 The share of work seekers in various levels of education is given in Table 19.13. Of the total employment seekers in 2005, 17.1 percent are below SSLC, 59.4 percent SSLC, 15.7 percent PDC or equivalent, 6.3 percent graduates and 1.5 percent postgraduates. The distribution of work seekers according to level of education for the period from 1996 to 2006 is given in Appendix 19.2

19.37 The number of professional and technical work seekers in 2004 was 1.77 lakhs. This number increased to 1.86 lakhs in September 2006. The share of employment seekers with various professional and technical qualifications is given in Table. 19.14. It is seen that more than 93 percent of the technical and professional employment seekers are ITI and Diploma holders in engineering.

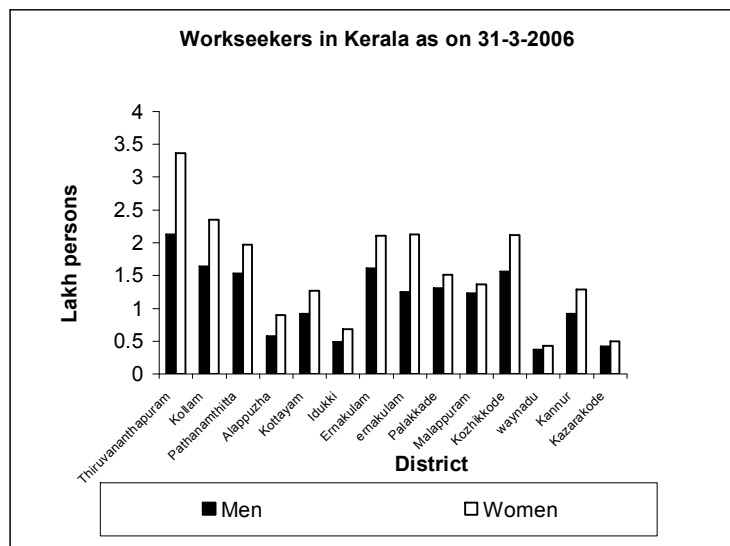
Table 19.14
Share of Professional and Technical work seekers in Kerala

Sl. No	Educational Qualification	Share (Percent)		
		1996	2000	2005
1	Medical Graduates	1.53	1.48	1.93
2	Engineering Graduates	5.64	5.93	3.61
3	Diploma holders in Engineering	22.15	25.87	23.36
4	ITI Certificate holders (NTC)	69.67	65.94	70.31
5	Agricultural Graduates	0.98	0.77	0.45
6	Veterinary Graduates	0.03	0.01	0.34
	Total	100	100	100

19.38 The number of medical graduates who had registered their name in the employment exchanges decreased from 3910 in 2004 to 3428 in 2005 and again decreased to 2724 in September 2006. The number of veterinary graduate work seekers has decreased from 796 in 2004 to 547 in 2005 and increased to 611 in September 2006. The number of job seeking agricultural graduates has sharply decreased from 1662 in 2004 to 803 in 2005 and again to 738 in September 2006. (Appendix 19.3)

19.39 A peculiar feature of Kerala's unemployment situation is that women outnumber men seeking employment through employment exchanges. This position is reflected in all the 14 districts of Kerala. Out of the total number of 37.93 lakh job seekers in March 2006, women number 21.98 lakh. (Fig.19.2)

Fig. 19.2



19.40 Thiruvananthapuram District ranks first in the number of work seekers in both general and professional categories. As on 31.3.2006, the total number of work seekers in Thiruvananthapuram District is 5.49 lakh of which 3.36 lakh are women and 2.13 lakh are men. The second largest number of work seekers is from Kollam district. There are 3.99 lakh job seekers in Kollam District in March 2006, Out of which 2.35 lakhs are women and 1.64 lakhs

men. The lowest number of work seekers is in Wayanad preceded by Kasaragod District. In Wayanad, there are 0.81 lakh work seekers, whereas in Kasaragod the number is 0.92 lakhs in March 2006. Details of district wise distribution of work seekers is given in Appendix 19.4

Unemployment Allowance Scheme (UAS)

19.41 Government of Kerala has introduced an unemployment assistance scheme in 1982 for the unemployment through the Department of National Employment Service. As per the Kerala Panchayat Raj & Municipalities Act 1994, the scheme of unemployment assistance was transferred to the local bodies and the powers for inviting applications for unemployment allowance, processing of applications after the scrutiny of employment officers, sanctioning and the distribution of unemployment allowance are vested with the local bodies. The amount of unemployment allowance provided in the budget is allotted to the Employment Department and the department distributes the amount to local bodies as per their requirements. The annual family income of the applicant should not be above Rs. 12,000 (per annum) and personal income should not be above Rs. 100 per month. The candidates should have passed SSLC and possess three years registration seniority after attaining 18 years of age. The candidates belonging to SC/ST and PH should have appeared the SSLC examination through proper schools. The Physically Handicapped candidates need a registration seniority of two years after attaining 18 years of age. The upper age limit is 35 years. Students are not eligible for applying for unemployment scheme. There are 339879 beneficiaries in the State under the scheme. The monthly rate of unemployment allowance is Rs. 120 w.e.f. 01.04.2000. During 2005 an amount of Rs. 10243.38 lakh was disbursed to 3.87 lakh persons and during 2006 Rs. 3667.71 lakh to 3.40 lakh persons.

Kerala State Self Employment Scheme for Registered Unemployed (KESRU)

19.42 Self-employment scheme called KESRU (Kerala State Self Employment Scheme for the Registered Unemployed) is being implemented since March, 1999. All literates and registered unemployed candidates within the age group of 21 to 40, other than students are eligible to apply under the scheme if their annual family income is below Rs. 24,000 and individual income is below Rs. 500 per month. The maximum loan amount admissible is Rs. 100000 depending upon the requirement of the project. Two or more persons can join together and avail the loan facilities. Twenty per cent of the loan amount is given as subsidy by the State Government. During 2005 an amount of Rs. 44.78 lakh was disbursed to 489 persons and during 2006, Rs. 124.44 lakh to 1040 beneficiaries (Appendix- 19.5).

Employment in the Organised Sector

19.43 In India, the number of persons employed in the organised sector during 1994 was 273.7 lakhs out of the total of 3744.5 lakh persons employed. In 2000, it increased to 281.1 lakh persons constituting 7 per cent of the total 3970-lakh persons employed. In March 2003, the number of persons employed in the organised sector was 270 lakh and it decreased to 264.43 lakh in March 2004. The details of organised sector employment are given in Appendix 19.6. Employment of women in the organized sector (both public and private) as on March 2003 was 49.68 lakhs constituting 18.4 per cent of the total organised sector employment in the country. Their number decreased to 49.34 lakhs in March 2004.

19.44 The organised public and private sector together employ 11.46 lakh employees in Kerala, which constitute 4.3 per cent of the total employees in the organised sector in India in

2004. The private sector accounts for 46.3 percent of the employment in the organised sector in Kerala but this figure is 31.2 per cent for India. Details are given in Table 19.15.

Table 19.15
Employment in Organised (Public & Private) Sector – India & Kerala- 2004
(lakh persons)

Particulars		India	Kerala	Share of Kerala (Per cent)
Public Sector	Male	153.07	4.23	2.8
	Female	28.9	1.87	6.5
	Total	181.97	6.10	3.4
Private Sector	Male	62.02	2.49	4.0
	Female	20.44	2.43	11.9
	Total	82.46	4.93	6.0
Total	Male	215.09	6.72	3.1
	Female	49.34	4.30	8.7
	Total	264.43	11.02	4.2

19.45 The share of female employees in the organised sector in Kerala is about 40 per cent and for India it is 19 per cent. In the private sector, share of female workers is 50 per cent in Kerala but less than 25 per cent in India.

Table 19.16
Share of female employees in the organized sector – India & Kerala (2004)

Sl.No.	Sector	Percentage of Female Employees	
		India	Kerala
1	2	3	4
1	Public Sector	15.88	30.55
2	Private Sector	24.79	50.00
	Total	18.66	39.56

Box 19.2

Analysis of the growth of All India employment by major industry divisions revealed that Manufacturing registered highest decrease of 5.4 percent followed by 4.3 per cent in Electricity, Gas, & Water, 4.0 per cent in Transport, Storage & Communication, 2.6 per cent in Community, Social & Personal Services, 2.0 per cent in Wholesale & Retail Trade and Restaurants & Hotels and 1.5 per cent in Construction during the year ended March 2004. Among other Industry divisions, Mining & Quarrying registered highest increase of 20.0 per cent followed by 3.5 per cent in Financing, Insurance, Real Estate & Business Services and 0.7 per cent in Agriculture, Hunting Forestry & Fishing during 2003-2004.

19.46 In Kerala, the total employment in the organized sector, which had been increasing marginally since 1996, started declining from 2000 onwards. (Appendix 19.7) Total number of persons employed in the organized sector in December 1996 was 11.76 lakh persons. The total number grew to 12.51 lakh persons in December 2000. During 2004 total number of employees in the organized sector came down to 11.46 lakh persons (4.53 lakh women & 6.93 lakh men) of which 6.15 lakh persons (4.27 lakh men and 1.88 lakh women) were in public sector and 5.31 lakh persons (2.65 lakh men & 2.66 lakh women) in private sector. It again decreased to 11.02 lakh persons (4.30 lakh women & 6.72 lakh men) in December 2005 of which 6.10 lakh persons (1.87 lakh women and 4.23 lakh men) are in public sector and 4.92 lakh persons (2.43 lakh women & 2.49 lakh men) are in private sector. Of the total of 6.10 lakh employed in the public sector during December 2005, 0.77 lakh were Central Government employees, 2.79 lakh. State Government employees, 2.29 lakh Quasi Government employees and 0.25 lakh Local government employees. Details on public sector employment are given in Table 19.17. District-wise employment in public and private sectors in Kerala as on 31st March of every year from 2001 to 2006 are included in the Appendix 19.8.

Fig.19.3

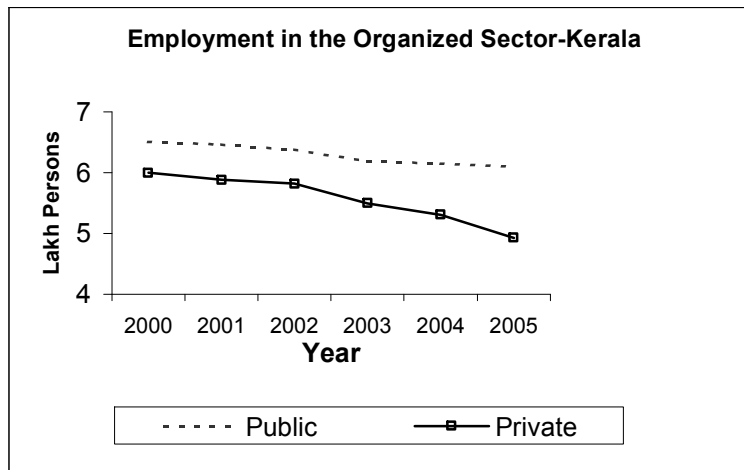


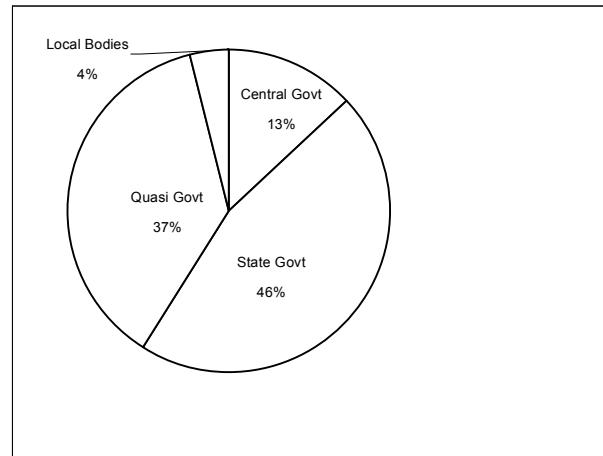
Table 19.17
Employment in Public Sector in Kerala

Year (at the end of December)	Central Govt.	State Govt.	Quasi Govt	Local Bodies	Total
1	2	3	4	5	6
1997	99333	275947	223261	23434	621975
1998	103265	291256	224712	24551	643784
1999	102185	292527	226710	22505	643927
2000	101908	292950	231363	25020	651241
2001	97115	294469	227745	26341	645670
2002	83496	289473	238242	26785	637996
2003	80979	272483	238568	27233	619263
2004	78348	279595	230794	26464	615201
2005	77376	278390	228932	24850	609548

Source: Directorate of Employment

19.47 Branch-wise analysis of the public sector employment data in Kerala revealed that Local Bodies registered highest negative growth of 6.1 per cent in 2005 followed by Central Government, Quasi Government and State Government recording a negative growth of 1.2 per cent, 0.8 per cent and 0.4 per cent respectively.

Fig.19.4
Distribution of Employment in Public Sector



19.48 The EMI data in Table 19.18 gives the sector-wise distribution of employment over the last three decades in Kerala and the All India figures are given in Appendix. 19.9

Table 19.18
Employment in Public and Private Establishments in Kerala as on 31st March

Sl. No	Industry	Number of Persons Employed						
		1971	1981	1991	2001	2004	2005	2006
1	2	3	4	5	6	7	8	9
1	Agriculture and allied Industries	92055	103145	104727	108966	97713	85178	83203
2	Mining and Quarrying	610	1340	3548	3571	3080	11645	21138
3	Manufacturing	188924	323359	307038	321903	310720	254498	213661
4	Construction	23562	25170	19327	25242	26387	26081	27356
5	Electricity, Gas, Water & Sanitary Services	11850	16349	26642	26526	22420	22148	21490
6	Trade, Restaurants & Hotels	23083	13676	21946	25580	29566	31263	27462
7	Transport, Storage & Communication	54212	74422	97299	104596	101656	102584	101644
8	Financing, Insurance, Real Estate & Business Services		47779	78739	86320	86661	96531	82201
9	Community, Social & Personal Services	307470	409358	488598	538990	526220	509845	523375
Total		701766	1017298	1147864	1241694	1204423	1139773	1101530

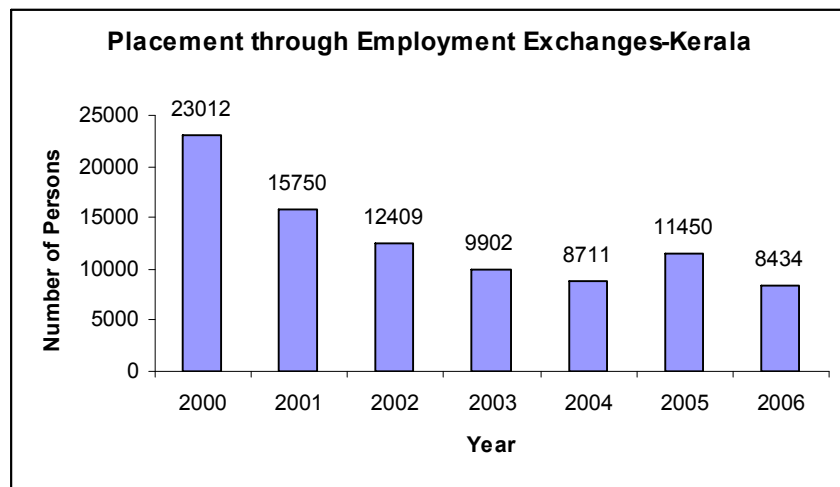
Source: Directorate of Employment and Training

19.49 Analysis of the growth of employment in public and private establishments in Kerala in 2006 revealed that Manufacturing registered highest decrease of 16.1 per cent followed by 14.8 per cent in Financing, Insurance, Real Estate & Business Services, 12.2 per cent in Trade, Restaurants & Hotels, 3 per cent in Electricity, Gas, Water, & Sanitary Services, 2.3 per cent in Agriculture & allied Industries and 0.9 per cent in Transport, Storage & Communication. Among other Industry Divisions, Mining & Quarrying registered highest increase of 81.5 per cent followed by 4.9 per cent in construction and 2.7 per cent in Community, Social & Personal Services.

Placement through Employment Exchanges

19.50 There are 947 Employment Exchanges in India during 2005 and 85 in Kerala. In Kerala total placement through Employment Exchanges had been declining from 2000 to 2004. Total placement in 2000 was 23012. It declined to 8711 in 2004 and increased to 11450 in 2005. In September 2006 it is 8434 (Fig. 19.5). The number of placements through employment exchanges and the average number of employers using employment exchanges are given in Appendix. 19.10

Fig. 19.5



Migration

19.51 Emigration of Keralites remains strong, with a latest study conducted by CDS in 2004 showing that the number of emigrants went up by 35 percent in last five years from 13.6 lakhs in 1999 to 18.4 lakhs in 2004.

19.52 The study shows that among the emigrants from Kerala, Muslims constituted 43.7 percent. Hindus stand next with 31.2 percent and Christians with 25.1 percent. The rate of growth in migration was highest among the Christians at 53.9 percent while it was 17.3 percent among Muslims. The female migration had gone up to 16.8 percent in 2004 compared to 9 percent in 1999.

19.53 The study further shows that migration to the Gulf Countries, which was 95 per cent of the total migration, went down to 90 percent. The migration to the USA, European countries and

Africa went up from 5 percent in 1999 to 10 percent in 2004. Among the Gulf Countries, UAE replaced Saudi Arabia as the most preferred destination.

19.54 During 2005, 1.25 lakh workers from Kerala went abroad in search of job, constituting 22.8 per cent of the 5.49 lakh emigrants from the country. The other leading states are Tamil Nadu (21.3 per cent), Karnataka (13.7 per cent), Andhra Pradesh (8.8 per cent), Gujarat (9.1 per cent), Maharashtra (5.3 per cent), Punjab (4.4 per cent) and Rajasthan (3.9 per cent). More than 80 per cent of the emigrants went to West Asia of which 35.4 per cent went to UAE and 18.2 per cent to Saudi Arabia.

Placement through ODEPC

19.55 The Overseas Development and Employment Promotion Consultants Ltd. (ODEPC) was incorporated in 1977 with the main objective of promoting employment in foreign countries. As part of diversification, ODEPC started travel agency business also. The authorized share capital of the Company is Rs. 1 crore and paid up capital is Rs.65.79 lakhs. During 2004-05, the Company earned Rs.31.27 lakh profit after taxes and proposed dividend of 16% on its paid up share capital.

19.56 ODEPC is the first and the only recruiting agency in the Govt. sector deploying Indian manpower to foreign countries. Till 2005, the company could deploy 4514 personnel to various foreign countries like Saudi Arabia, UAE, Qatar, Oman, Bahrain, Kuwait, Libya, Singapore, Malaysia, Brunei, Cyprus, and Sri Lanka etc. From 1-11-2005 to 31-10-2006, 99 persons were deployed; of them 62 to Saudi Arabia, 11 to UAE, 8 to Sri Lanka, 7 each to Oman and Qatar and 4 to Malaysia. Out of these 99 persons, 67 were nurses, 9 technicians, 7 doctors, 4 sales executives, 4 administrative staff, 3 engineers, 3 foreman and 2 binder. The turn over of travel division was Rs.254.37 lakh during 2004-05 and it increased to Rs.336.51 lakh during 2005-06.

CHAPTER 20

HUMAN DEVELOPMENT AND SOCIO ECONOMIC WELL-BEING IN KERALA

Human Development is the combination of people's entitlements and attainments relating to education, health and livelihood. These three arenas taken together form day to day experience of development for the people as individual and as members of a community, state or nation. Human development also means increased capabilities of people that enable them to access larger opportunities in life. In the context of India, human development implies promoting basic capabilities among those who lack among them. It is now widely accepted that human development, and not economic growth, is the ultimate aim of any society and that economic growth by itself does not ensure human development.

20.2 Amartya Sen viewed that, the standard of living of a society should be judged not by the average level of income but by people's capabilities to lead the life they value. Also, commodities should not be valued in their own right but as ways of enhancing capabilities such as health, knowledge, self respect, and ability to participate actively in community life. Thus Sen sees human beings as the subject, rather than the object, of development. Sen also emphasizes that at the core of human well being is freedom of choice.

Box 20.1

Human rights and Human Development are both about securing basic freedoms. Human rights express the bold idea that all people have claims to social arrangement that protect them from the worst abuses and deprivations - and that secure the freedom for a life of dignity.

Human Development is a process of enhancing human capabilities - to expand choices and opportunities so that each person can lead a life of respect and value. When Human Development and human rights advance together, they reinforce one another - expanding people's capabilities and protecting their rights and fundamental freedoms.

Source: Gujarat Human Development Report, 2004.

The basic concept of human development includes five dimensions. They are:

1. **Empowerment:** Empowerment implies acquisition of capabilities that make free choice possible and participates in decision making. Empowerment allows people to become active agents in their own development.
2. **Co -Operation:** This is a sense of belongs which is an important source of well being. Human development is concerned not just with people as individuals but also with how they interact and co-operate in community.
3. **Equity:** Equity in human development means seeking equity in basic capabilities and opportunities i.e. each individual should have equal access to development opportunities in life.
4. **Sustainability:** This implies not only environmental sustainability, but also sustainability of people's opportunities to freely exercise their basic capabilities.
- 5 **Security:** This implies economic security, food security, health security, personal security, political security and cultural security.

20.3 UNDP measures human development through the indices namely Human Development Index (HDI), Gender related Development Index (GDI), Gender Empowerment Measure (GEM) and Human Poverty Index (HPI).

Human Development Index (HDI)

20.4 The Human Development Index provides a composite measure of three dimensions of human development namely, living a long and healthy life, being educated and having a decent standard of living. Human Development Report published by UNDP in 2006 shows that India has bettered its position from 127th place in 2003 to 126th place in 2004 and is still grouped among the countries with medium Development. The global position on human development Indices of certain countries are given in Table 20.1.

Table 20.1
India's Global Position on Human Development Index

Sl. No	Country	Human Development Index		HDI Rank	
		2003	2004	2003	2004
1	Norway	0.963	0.965	1	1
2	Australia	0.955	0.957	3	3
3	Sri Lanka	0.751	0.755	96	85
4	China	0.755	0.768	85	81
5	Indonesia	0.697	0.711	110	108
6	India	0.602	0.611	127	126
7	Pakistan	0.527	0.539	135	134
8	Bangladesh	0.520	0.530	139	137
9	Nepal	0.526	0.527	136	138
10	Mozambique	0.379	0.390	168	168
11	Niger	0.281	0.311	177	177

Source: Human Development Report, UNDP, 2006

20.5 The different years of performance in the case of human development shows that India has bettered its position. During 1975 the Index in this respect was 0.413 which increased to 0.611 in 2004. The details are given in the Table 20.2.

Table 20.2
Human Development Indices of India (1975-2004)

Years	1975	1980	1985	1990	1995	2000	2004
Index	0.413	0.439	0.477	0.515	0.548	0.577	0.611

Source: HDR.2006, UNDP

20.6 The UNDP in its report comment that the Human Development Index is not in any sense a comprehensive measure of human development. It does not include important indicators such as respect for human rights, democracy and inequality. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well-being.

Gender related Development Index

20.7 While the HDI measures average achievement, the GDI adjusts the average achievement to reflect the inequalities between men and women in the following dimensions.

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge as measured by the adult literacy rate and combined primary secondary and territory gross enrolment ratio.
- A decent standard of living as measured by estimated earned income.

20.8 The Gender Development Index of certain countries is listed in the table 20.3. In the list it can be seen that India is ranked 96th place with index value 0.591.

Table 20.3
Gender Related Development Index

Sl. No	Name of Country	Rank	Index
1	Norway	1	0.962
2	Iceland	2	0.958
3	Australia	3	0.956
4	China	64	0.756
5	Sri Lanka	68	0.749
6	Indonesia	81	0.704
7	India	96	0.591
8	Pakistan	105	0.513
9	Nepal	106	0.513
10	Bangladesh	102	0.524

Source: HDR, 2006, UNDP.

The Gender Empowerment Measure (GEM)

20.9 Giving importance on Women's opportunities rather than their capabilities, the Gender Empowerment measure captures gender inequalities in three key areas:

- i) Political participation and decision making power, as measured by women's and men's percentage shares of parliamentary seats.
- ii) Economic participation and decision making power, as measured by two indicators - Women's and men's percentage share of positions as legislators, senior officials and managers and women's and men's percentage share of professional and technical positions.
- iii) Power over economic resources, as measured by women's and men's estimated earned income.

The Human Poverty Index (HPI)

20.10 The Human Poverty Index (HPI) is spited into two groups by UNDP. One is HPI-1, which is relevant to countries like India.

20.11 The HPI-1 measure deprivation with three basic dimensions of human development captured in the HDI.

- i) A long and healthy life-vulnerability to death at a relatively early age, as measured by the probability at birth if not surviving to age 40.
- ii) Knowledge - exclusion from the world of reading and communications, as measured by the adult illiteracy rate.
- iii) A decent standard of living - lack of access to overall economic provisioning, as measured by the un weighted average of two indicators, the percentage of population without sustainable access to as improved water source and the percentage of children under weight for age.

20.12 The rank position of India in this respect is 55 with percentage value 31.3. Some of the activities in connection with human development are discussed below.

Prosperous States

20.13 'India Today' make a study among the states of India by considering eight parameters such as law and order, agriculture, primary education, primary health, infrastructure, consumer market, investment environment and budget and prosperity and take average score

of these parameters. The states are ranked according to their performance and listed in Table 20.4

Table 20.4
Score and Rank of States in India

Sl. No.	States	2005		2006	
		Score	Rank	Score	Rank
	Big States				
1	Punjab	2.51	1	2.65	1
2	Kerala	2.35	2	2.50	2
3	Himachal Pradesh	2.26	3	2.47	3
4	Tamil Nadu	2.05	4	2.27	4
5	Haryana	1.95	5	2.06	5
6	Maharashtra	1.87	6	1.99	6
7	Gujarat	1.86	7	1.95	7
8	Karnataka	1.80	8	1.93	8
9	Utharanchal	1.66	9	1.84	9
10	Andhra Pradesh	1.58	11	1.73	10
11	Jammu & Kashmir	1.60	10	1.55	11
12	Rajasthan	1.27	12	1.37	12
13	West Bengal	1.18	13	1.32	13
14	Madhya Pradesh	1.15	14	1.30	14
15	Chhattisgarh	0.98	15	1.16	15
16	Assam	0.96	16	1.08	16
17	Uttar Pradesh	0.91	17	1.02	17
18	Orissa	0.87	18	0.96	18
19	Jharkhand	0.74	19	0.82	19
20	Bihar	0.46	20	0.58	20
	Small States				
1	Pondicherry	3.40	3	3.84	1
2	Goa	3.65	1	3.45	2
3	Delhi	3.47	2	3.32	3
4	Sikkim	2.83	5	2.57	4
5	Mizoram	2.91	4	2.43	5
6	Nagaland	1.57	8	1.99	6
7	Manipur	1.65	7	1.75	7
8	Arunachal Pradesh	1.76	6	1.74	8
9	Thripura	1.51	9	1.64	9
10	Meghalaya	1.28	10	1.40	10

Source: India Today Special Issue, September 11, 2006

20.14 From the table it can be seen that Punjab is continuously on the top followed by Kerala among the big states. As far as the small states is concerned Pondicherry is in the top followed by Goa. Score and Rank of various Indicators in Human Development of big states in India are given in Appendix 20.1.

Population and Density of Population

20.15 The population of Kerala is 31.84 million according to the 2001 census. This is 3.10% of the total population of India. In the recent period, Kerala's population has been growing at a much slower rate than the population of India as a whole. The population Growth rate and density of population in Kerala and India from 1961 to 2001 is given in Table 20.5.

Table 20.5
Population Growth Rate and Density of Population in Kerala and India

Year	Annual Growth Rate		Density (Per Square Km.)	
	Kerala	India	Kerala	India
1961	----	---	435	142
1971	2.33	2.22	549	177
1981	1.76	2.26	654	216
1991	1.31	2.13	749	274
2001	0.93	1.95	819	324

Source: Human Development Report 2005, Kerala.

20.16 Kerala's share of land on the other hand, is only 1.1% of the total land area of India. The density of population, which was 435 per sq. km., in 1961 is increased to 819 persons per square kilometer in 2001 with an increment of 88%. The corresponding figures of India are 142 and 324 respectively with an increasing of 127%. Kerala is the third highest densely populated state in India after West Bengal (903) and Bihar (881). District wise Population Growth Rate is given in the Table 20.6.

Table 20.6
District Wise Population Growth Rates and Density of Population in Kerala

District	Area (Square Km.)	Population (In lakhs)		Share of Population 2001	Decadal Growth Rate		Density	
		1991	2001		1981-91	1991-01	1991	2001
1	2	3	4	5	6	7	8	9
Thiruvananthapuram	2192	29.47	32.35	10.2	13.5	9.8	1344	1476
Kollam	2491	24.08	25.84	8.1	10.7	7.3	967	1038
Pathanamthitta	2642	11.88	12.32	3.9	5.6	3.7	450	574
Alappuzha	1414	20.01	21.05	6.6	7.3	5.2	1415	1496
Kottayam	2203	18.28	19.53	6.1	7.7	6.8	830	722
Idukki	5019	10.78	11.29	3.6	11.2	7.0	215	252
Ernakulam	2407	28.17	30.98	9.7	11.1	9.1	1170	1050
Thissur	3032	27.37	29.75	9.3	12.2	8.7	903	981
Paakkadu	4480	23.82	26.17	8.2	16.5	9.9	532	584
Malappuram	3550	30.96	36.30	11.4	28.9	17.2	872	1022
Kozhikkode	2344	26.20	28.78	9	16.7	9.9	1118	1228
Wayanadu	2131	6.72	7.87	2.5	21.3	17.0	315	369
Kannur	2966	22.52	24.12	7.6	16.6	7.1	759	813
Kasaragode	1992	10.72	12.03	3.8	22.8	12.3	538	604
Kerala	38863	290.9	318.39	100	14.3	9.4	749	819

Source: Human Development Report 2005 – Kerala

20.17 The population pressure with respect to land is the highest in Alappuzha followed by Thiruvananthapuram. The lowest population density is in Idukki followed by Wayanadu.

Sex Ratio

20.18 For long, the overall sex ratio in Kerala has been favorable to females and has been the most widely discussed indicator of women's status. It was 102 females for 100 males in 1961 and increased to 106 in 2001. The corresponding ratio in India during 2001 is 93 females per 100 males. In all the districts of Kerala the sex ratio is favorable to females. The highest is observed in Pathanamthitta. Thrissur and Kannur (109 females per 100 males) districts and lowest are in Idukki, Wayanadu and Ernakulam districts.

20.19 As far as the Juvenile Sex ratio is concerned Kerala bettered its position from the census period 1991 to 2001. During these periods the rates are 95.2 and 96.2 females per 100 males respectively. The details of the overall sex ratio and child sex ratio in districts of Kerala is given in Table 20.7.

Table 20.7
Overall Sex Ratio and Child Sex Ratio by Districts of Kerala

District/State	Sex Ratio (Female/Male)		Child Sex Ratio (Female/Male)	
	1991	2001	1991	2001
Thiruvananthapuram	103.6	105.8	96.2	96.2
Kollam	103.5	107.0	93.5	96.2
Pathanamthitta	106.2	109.4	95.2	97.1
Alappuzha	105.1	107.9	94.3	96.2
Kottayam	100.3	102.5	90.1	97.1
Idukki	97.50	99.00	94.3	97.1
Ernakulam	100.0	101.70	95.2	95.2
Thrissur	108.0	109.2	94.3	96.2
Palakkadu	106.1	106.8	98.0	97.1
Malappuram	105.3	106.3	95.2	96.2
Kozhikkodu	102.7	105.3	97.1	96.2
Wynadu	96.60	100.0	95.2	96.2
Kannur	104.9	109.0	97.1	96.2
Kazergodu	102.6	104.7	91.7	96.2
Kerala	103.6	105.8	95.2	96.2

Source: Human Development Report 2005 – Kerala

20.20 In 2001 the Juvenile sex ratio in the most of the Districts in Kerala are 96.2 and above except Ernakulam where the ratio is 95.2.

Age at Marriage

20.21 Among the major states in India, the age at marriage is highest in Kerala for both males and females. According to an estimate from the Reproductive and child Health Survey, the mean age at marriage in Kerala for males is 28.7 years and for females' 22.7 years. In the case of all India, it is 24.9 and 19.7 years for males and females respectively. The mean age at marriage doesn't see to vary among the districts in Kerala. In Malappuram the mean age at marriage for both males and females was the lowest. This means that in Malappuram the youth are getting early married in comparison with other Districts. The details are given in Table 20.8.

Table 20.8
Marriage indicators by Districts of Kerala

District	Mean age of Marriage	
	Male	Female
Thiruvananthapuram	28.0	22.6
Kollam	28.2	22.2
Pathanamthitta	27.6	23.2
Alappuzha	28.1	22.9
Kottayam	28.2	24.4
Idukki	25.8	23.0
Ernakulam	28.5	23.7
Thrissur	29.1	22.4
Palakkadu	27.3	20.9
Malappuram	24.7	18.7
Kozhikkodu	26.7	20.6

Wynadu	25.6	20.5
Kannur	28.4	20.8
Kasargode	27.6	20.6
Kerala	28.7	22.7

*Source: 1) Reproduction and Child Survey (1998-99)
2) HDR 2005 – Kerala*

Health

20.22 Health of the people (of nation) is wealth of the nation and hence it is one of the main indicators of the Human Development. Health Systems are all too often being devised outside the main stream of social and economic development. These systems frequently restrict themselves to medical care, although industrialization and deliberate alteration of the environment are creating health problem whose proper control lies far beyond the scope of medical care.

Box 20.2

Clear water and sanitation can make or break human development. They are fundamental to what people can do and what they can become - to their capabilities. Access to water is not just a fundamental human right and an intrinsically important indicator of human progress. It also gives substance to other human rights and is a condition for attaining wider human development goals.

Source: Human Development Report - 2006, UNDP.

20.23 Health is important in three distinct ways.

- i) It has intrinsic importance
- ii) It has an instrumental importance at personal and social levels.
- iii) It promotes empowerment of people.

20.24 In the intrinsic sense health is important, because it is a direct measure of human wellbeing. It is a fulfillment of life. Better health can have interpersonal benefits. In the case of children better health leads to better attendance in school and to higher level of knowledge attainment. This leads to better paid jobs and longer benefits to future generations.

20.25 By considering factors such as infant mortality rate, male to female infant mortality, percentage of assisted births, percentage of homes with tap water, sex ratio, health spending etc, India toady conducted a study in Primary health of the States in India. Among the states in India, Kerala is in the second position just behind Himachal Pradesh. In the case of small states, Goa is in the top followed by Pondichery. The score and rank of the Big and Small states in India is given in Table 20.9.

Table 20.9
Primary Health (Score and Rank)

Rank - 2006	States	Score	
		2005	2006
	Big States		
1	Himachal Pradesh	2.40	2.80
2	Kerala	2.62	2.70
3	Tamilnadu	2.13	2.38
4	Karnataka	1.90	1.87
5	Punjab	1.62	1.67
6	Maharashtra	1.78	1.62

7	Jammu&Kashmir	1.85	1.58
8	Uttaranchal	1.29	1.54
9	Gujarat	1.45	1.49
10	Andra Pradesh	1.43	1.44
11	West Bengal	1.27	1.39
12	Madhya Pradesh	0.74	0.99
13	Assam	0.70	0.97
14	Rajasthan	0.87	0.95
15	Chandigarh	0.44	0.94
16	Haryana	0.66	0.71
17	Orissa	0.80	0.67
18	Uttar Pradesh	0.45	0.54
19	Jhargand	0.67	0.51
20	Bihar	0.37	0.41
	Small States		
1	Goa	3.79	3.67
2	Pondichery	2.66	3.62
3	Sikkim	3.73	3.57
4	Delhi	2.84	2.90
5	Nagaland	1.79	2.77
6	Mizoram	4.18	2.70
7	Manipur	2.42	2.61
8	Arunachal Pradesh	2.68	1.99
9	Tripura	1.69	1.69
10	Meghalaya	1.43	1.38

Source: India Today special issue, September 11, 2006.

20.26 Some of the health indicator of Kerala and India during 2004 and 2005 are given in Table 20.10.

Table 20.10
Health Indicator - Kerala and India

Rank	Health Indicator	Kerala		India	
		2004	2005	2004	2005
1	Birth Rate (Per 1000 Population)	16.70	15.00	24.80	23.80
2	Death Rate (Per 1000 Population)	6.30	6.40	8.00	7.60
3	Infant Mortality Rate (" ")	12.0*	15.00	60.00	57.00
4	Maternal Mortality (" ")	--	1.10	--	3.01
5	Total Fertility Rate (Per Woman)	1.99	1.9	3.30	2.7
6	Couple Protection Rate (%)	72.10	72.10	--	52.00
7	Expectation of life at Birth				
	Male	71.67	70.90	64.10	61.80
	Female	75.00	76.00	65.80	63.50
	Total	71.00	73.60	64.80	62.70

Source: Directorate of Health Services

** Revised data from SRS Bulletin.*

Birth Rate

20.27 The birth rate of Kerala during 2004 was 16.70 per1000population. This come down to 15.00during 2005. The corresponding all India rates are 24.80 and 23.80 respectively during the same period. This show that Kerala is far below in the rate than the national average.

Box 20.3

"Listen to children and ensure their participation: Children and adolescents are resourceful citizens capable of helping to build a better future for all. We must respect their right to express themselves and to participate in all matters affecting them, in accordance with their age and maturity"

Source: Declaration of 'A World Fit for Children'.

Maternal Mortality Rate (MMR)

20.28 The maternal mortality rate is the number of maternal deaths occurred per thousand live births and still birth. The maternal mortality rate during 2005 is 1.10 per 1000 population. The national average during 2005 is 3.01 are the same as 4.37 maternal death per 1000 population.

Death Rate

20.29 Death rate is defined as the number of death occurred per 1000 population. During 2004 the death rate in Kerala was 6.30 per thousand population and in 2005 this is 6.40 per thousand population. The national averages corresponding to this years are 8 and 7.60 respectively. In Kerala male death rate is higher than the females death rate. The death rate in urban area of Kerala during 2003 and 2004 are 6.1 and 6.4 respectively registering a small increment. During the same period in the rural areas, the death rate are 6.4 and 6.0 respectively showing a decreasing trend. The national average during 2003 and 2004 in the rural areas are more than the Kerala average. But during 2003 and 2004 the death rate in the urban area of Kerala is more than the national average. The details are given in Table 20.11.

Table 20.11
Death Rate by Sex and Residence, 2003 and 2004

SL.No	State	2003									2004								
		Total			Rural			Urban			Total			Rural			Urban		
		T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
1	Andhra Pradesh	8	8.9	7.0	8.8	9.9	7.8	5.4	6	4.8	7.0	8.0	6.1	7.9	8.9	6.8	5.0	5.6	4.3
2	Assam	9.1	9.2	9.1	9.5	9.5	9.5	5.9	6.5	5.3	8.8	9.6	7.9	9.3	10.2	8.4	5.5	6.3	4.7
3	Bihar	7.9	7.6	8.2	8.1	7.8	8.4	6.0	5.8	6.2	8.1	8.5	7.6	8.3	8.8	7.8	5.7	5.8	5.6
4	Gujarat	7.6	8.3	6.9	8.2	9.0	7.4	6.3	6.8	5.8	6.9	7.3	6.3	7.8	8.7	6.9	5.5	5.4	5.5
5	Haryana	7.1	8.0	6.0	7.3	8.4	6.1	6.2	6.7	5.5	6.6	7.2	6.0	7.1	7.8	6.3	5.6	5.8	5.4
6	Karnataka	7.2	7.9	6.5	7.8	8.7	7.0	5.6	6.0	5.2	6.9	7.8	6.0	7.8	8.6	7.0	5.3	6.5	4.1
7	Kerala	6.3	7.2	5.5	6.4	7.3	5.5	6.1	6.8	5.5	6.1	7.2	5.0	6.0	7.1	4.9	6.4	7.4	5.4
8	MadhyaPradesh	9.8	10.2	9.3	10.4	10.8	9.9	7.1	7.5	6.8	9.2	9.3	9.1	10.1	10.2	9.9	6.4	6.4	6.3
9	Maharastra	7.2	7.7	6.7	8.2	8.7	7.6	5.6	6.1	5.0	6.2	6.6	5.8	6.8	7.3	6.4	5.4	5.8	5.0
10	Orissa	9.7	10.3	9.1	10.2	10.8	9.6	6.3	7.1	5.3	9.6	10.3	8.9	10	10.9	9.2	7.2	7.0	7.4
11	Punjab	7.0	7.6	6.4	7.3	8.0	6.7	6.0	6.5	5.4	6.4	6.7	6.2	6.9	7.2	6.6	5.6	5.7	5.4
12	Rajastan	7.6	8.2	6.9	7.9	8.5	7.2	6.2	6.8	5.6	7.0	7.5	6.5	7.3	7.9	6.7	6.1	6.5	5.7
13	Tamilnadu	7.6	8.1	7.0	8.5	9.0	8.1	5.6	6.4	4.8	7.5	8.1	6.9	8.1	8.7	7.4	6.7	7.4	6.1
14	Uttar Pradesh	9.5	9.7	9.4	10.1	10.2	9.9	7.0	7.0	6.9	8.8	9.0	8.7	9.5	9.7	9.3	6.2	6.1	6.3
15	West Bengal	6.6	7.2	6.0	6.8	7.4	6.2	6.2	6.7	5.6	6.3	6.9	5.6	6.4	7.1	5.6	6	6.4	5.6
	All India	8.0	8.4	7.5	8.7	9.1	6.0	6.0	6.4	5.4	7.5	8.0	7.0	8.2	8.7	7.6	5.8	6.1	5.4

Source: S.R.S Bulletin, April 2005 and April 2006

T - Total; M - Male; F - Female.

Infant Mortality Rate

20.30 The infant mortality Rate is the number of infants died per 1000 live birth before attaining the age one. The infant mortality rate in Kerala during 2004 was 12 per thousand live birth and in 2005 this is 15, showing a small increment (see Table 20.10). The national average during these periods are 60 and 58 respectively. This shows that availability of better healthcare in Kerala is remarkable. The Infant Mortality Rate by sex and residence of big states in India during 2003 and 2004 are depicted in the Table 20.12.

Table 20.12
Infant Mortality Rate (IMR) of bigger States in India 2003 and 2004

SL.No.	State	2003			2004		
		Male	Female	Person	Male	Female	Person
1	Andhra Pradesh	59	59	59	59	58	59
2	Assam	69	65	67	76	55	66
3	Bihar	59	62	60	60	63	61
4	Gujarat	54	61	57	50	57	53
5	Haryana	54	65	59	55	68	61
6	Karnataka	51	52	52	49	49	49
7	Kerala	11	12	11	14	11	12
8	Madhya Pradesh	77	86	82	82	75	79
9	Maharashtra	32	54	42	31	42	36
10	Orissa	82	83	83	76	79	77
11	Punjab	46	52	49	37	55	45
12	Rajasthan	70	81	75	66	69	67
13	Tamilnadu	44	41	43	43	38	41
14	UttarPradesh	69	84	76	71	72	72
15	West Bengal	45	46	46	45	34	40
	All India	57	64	60	58	58	58

Source: SRS Bulletin - April 2005, 2006.

Life Expectancy at Birth

20.31 The life expectancy at birth is considered as one of the aspects of human development. The life expectancy at birth in Kerala is 70.90 years for males and 76 years for females in 2005. During the same period, India's Life expectancy at birth is 61.80 for males and 63.50 years for female's. The life expectancy at birth of Kerala males increased from 44.3 years in 1956 to 70.90 years in 2005, an increase of 26.60 years, in a span of 49 years. For females it increased even more from 45.3 years to 76, an increase of 30.70 years in the same period. During the same period India's life expectancy at birth for males increased by 26.30 years and for females by 26.80 years. Because of the natural advantage, women life longer than men. During 2004 in Kerala females live 5.10 years more than men and India this valuation is only 1.70 year.

Total Fertility Rate (TFR)

20.32 The Total Fertility Rate (TFR) is defined as the number of children born to a woman if she follows the current fertility pattern in her reproductive life. During 2004 the ratio was 1.99 which decline to 1.90 in 2005. In India the rate was 3.30 per woman in 2004 and 2.7 in 2005. This shows that Kerala's achievement is better than the national average.

Couple Protection Rate

20.33 The percentage of newly married woman in the age 15 - 49 using of family planning methods is called the couple protection rate. During 2004 and 2005 the rate was same in Kerala (72.10). The national average during 2005 was 52.

Disabilities

20.34 According to 2001 census, the total disabled persons in India are 219.07 lakh. In Kerala the total disabled persons are 8.61 lakh. This is the 3.92% of the India's total disabled persons. In Kerala out of the total disabled persons, 4.58 lakh (53.19%) are males and 4.03 (46.81%) are females. In the urban areas of Kerala has less disabled person than that in the rural areas. In the urban area the total disabled persons are 2.13 lakh (24.74%) and in Rural area this is 6.48 lakh (75.26%). Of the total disabled persons in Kerala 3.35 lakh persons have the disability in sight and this is 38.91 percentage of the total disability followed by movement disability (27.64%). Details are given in Table 20.13.

Table 20.13
Distribution of the disabled by type of disability,
sex and residence 2001 - Kerala

Type of Disability	Sex	Total	Rural	Urban
In Seeing	Person	334622	251284	83338
	Males	167352	124846	42506
	Females	167270	126438	40832
In Speech	Person	67066	51003	16063
	Males	37179	28299	8880
	Females	29887	22704	7183
In Hearing	Person	79713	61066	18647
	Males	36456	28145	8311
	Females	43257	32921	10336
In Movement	Person	237707	178587	59120
	Males	142359	107646	34713
	Females	95348	70941	24407
Mental	Person	141686	105842	35844
	Males	75004	55555	19449
	Females	66682	50287	16395
Total - Kerala	Person	860794	647782	213012
	Males	458350	344491	113859
	Females	402444	303291	99153

Source: Census, 2001

Crime

Box 20.4

Alcohol Consumption

Between 15 and 20 per cent of Indian people consume alcohol and, over the past 20 years, the number of drinkers has increased from one in 300 to one in 20. The per capita consumption of alcohol for India is 4 litres, Kerala stands first in per capita consumption of liquor at 8.3 litres, followed by Punjab 7.9 litres. Fifteen per cent of the population consumes alcohol. Over the years, the age at which youngsters begin to consume liquor has come down in Kerala. In 1986 the age was 19, by 1990 it had dropped to 17, and by 1994, the age was 14. Most drinkers are in the 21 to 40 age group, the same group where the maximum number of suicides also takes place. A study conducted by the Alcohol & Drug Information Centre (ADIC) - India revealed that around 40 per cent of road accidents occurred because the driver was under the influence of alcohol. In the case of accidents on national highways, more than 72 per cent were related to drunken driving. Domestic violence is also on the increase due to high alcohol consumption. Alcohol related diseases are growing leading to high occupancy of hospital beds in hospitals.

Source: Human Development Report 2005 – Kerala.

20.35 During 2004 and 2005 the total crime under Indian Penal Code (IPC) and Special Local Laws (SLL) are 156135 numbers, and 162171 numbers respectively registering an increase of 3.87%. The Table 20.14 shows the details of crimes under IPC and SLL from 1997 to 2005. From the table it can be seen that percentage of crime is increased during the year 2004 (11.62%) and minimum increase is in the year 2003 (0.52%). The district wise details of cases under IPC and SLL are given in Table 20.15.

Table 20.14
Details of Cases under IPC and SLL in Kerala

Year	IPC	SLL	Total	Percentage change over previous year
1997	92523	13507	106030	-
1998	93020	15782	108802	2.61
1999	94448	17825	112273	3.19
2000	99033	23529	122562	9.16
2001	103847	31598	135445	10.51
2002	104200	34954	139154	2.74
2003	98824	41055	139879	0.52
2004	104025	52110	156135	11.62
2005	104350	57821	162171	3.87

Source: State Crime Records Bureau, Typm.

Table 20.15
Details of Cases under IPC and SLL in Kerala - District wise

Sl. No.	Name of District	2004			2005		
		IPC	SLL	Total	IPC	SLL	Total
1	Thiruvananthapuram	14730	8659	23389	14672	10203	24875
2	Kollam	9448	3414	12862	10019	4269	14288
3	Pathanamthitta	4409	2582	6991	4394	1038	5432
4	Alappuzha	7082	1626	8708	7624	1724	9348
5	Kottayam	7919	2134	10053	7949	1340	9289
6	Idukki	4229	870	5099	4504	994	5498
7	Ernakulam	15533	5413	20946	14643	9050	23693
8	Thrissur	10143	6298	16441	9674	11399	21073
9	Palakkad	5668	3129	8797	5542	4197	9739
10	Malappuram	6777	2714	9491	6866	4981	11847
11	Kozhikode	8402	4194	12596	8063	3481	11514
12	Wayanad	2395	1059	3454	2166	1189	3355
13	Kannur	4621	7456	12077	5216	2085	7301
14	Kasaragod	2669	2562	5231	3018	1871	4889
	Total	104025	52110	156135	104350	57821	162171

Source: State Crime Records Bureau, Typm.

20.36 Thiruvananthapuram stand at the top in the case of total crimes committed in the state during 2005 followed by Ernakulam and Thrissur. Least number of crimes were reported by Wayanad during the same period.

Crime Rate

20.37 The crime rate under IPC and SLL and the percentage increase in the total crime rate in the state of Kerala for various years are given in Table 20.16. The crime rate under IPC which was 318.02 in 2004 is decreased to 316.15 in 2005. At the same time the crime rate under SLL in 2004 is 159.31 and is increase to 175.18 in 2005. The total crime rate in 2004

and 2005 are respectively 477.33 and 491.33 registering an increase of 2.93% over the previous year.

Table 20.16
Crime Rate under IPC and SLL in Kerala

Year	Estimate Mid-year Population (Lakh)	Crime Rate			Percentage increase over previous year
		IPC	SLL	Total	
1997	307.13	301.25	43.98	345.23	--
1998	309.91	300.15	50.92	351.07	1.69
1999	312.71	302.03	57.00	359.03	2.27
2000	315.54	313.85	74.57	388.42	8.19
2001	318.39	326.16	99.24	425.40	9.52
2002	321.27	324.34	108.80	433.14	1.82
2003	324.17	304.85	126.65	431.50	(-).38
2004	327.10	318.02	159.31	477.33	10.62
2005	330.06	316.15	175.18	491.33	2.93

Source: State Crime Records Bureau, Tvpym.

Atrocities committed against Women in Kerala

20.38 The atrocities committed against women in Kerala is showing an increasing trend. The number of cases reported during 1992 were 2078 and that in 2005 is 8087 registering an increase of 289% in the span of 14 years. In the same period Rape is increased by 110.6%, Molestation is increased by 347%, Kidnapping and abduction is increased by 103.5% and eve-tearing is increased by 128%. In the case of dowry death, the increase is 75%. During 2004 and 2005 the dowry death reported showing a decreasing trend. The highest increasing is shown in the case of cruelty by Husband or relatives during the period 1992 to 2005 (1032%). The details are given in the Table 20.17.

Table 20.17
Atrocities committed against Women in Kerala (1992 - 2005)

Offences	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Rape (376 IPC)	227	211	197	266	389	588	589	423	552	562	499	394	480	478
Molestation (384 IPC)	523	468	679	810	1166	1561	1773	1643	1695	1942	2123	1947	2260	2339
Kidnapping and Abduction (363 to 369, 371 to 373 IPC)	86	85	120	110	149	160	130	123	89	97	91	102	142	175
Eve teasing (509 IPC)	1	5	3	14	40	70	96	50	69	81	102	68	133	129
Dowry Death (304-B IPC)	12	8	9	21	25	25	21	31	25	27	17	33	31	21
Cruelty by husband or relatives (498-A IPC)	290	380	551	787	1079	1675	2125	2488	2418	2561	2836	2930	3222	3283
Other IPC cases against women	939	737	986	1305	2122	3227	2739	2985	2773	2171	1833	1754	1413	1662
State Total	2078	1894	2545	3313	4970	7306	7473	7743	7621	7441	7501	7228	7681	8087

Source: State Crime Records Bureau, Tvpym

Crime against Children

20.39 The total crimes committed against children during 2004 and 2005 are 361 and 386 respectively registering an increase of 6.92%. The number of murder of children during this period has decreased from 51 to 45. The Rape cases have also decreased during the same period. Kidnapping and abduction of children has decreased from 74 in 2004 to 45 in 2005. Procurement of minor girls increased from 20 in 2004 to 21 in 2005. Other crimes against children increased substantially by 56 to 129 in the years 2004 and 2005 respectively registering 130% increase. The details are given in Table 20.18.

Table 20.18
Crime Against Children

Sl. No	Nature of Crime	2003	2004	2005
1	Murder			
	(a) Infanticide	-	2	-
	(b) Other Murder	31	49	45
	Total Murder	31	51	45
2	Rape	148	159	140
3	Kidnapping and Abduction	91	74	45
4	Exposure and Abandonment	1	-	3
5	Procurement of minor girls	7	20	21
6	Child Marriage Restriction Act	-	1	3
7	Other Crimes against Children	48	56	129
	Total Crime	326	361	386

Suicides in Kerala

20.40 The number of suicides in Kerala due to different cases increased from 9053 in 2004 to 9244 in 2005 registering an increase of 2.11 percentage over the previous year. The number of suicides due to bankruptcy or sudden change in economic status is continuously decreasing. The number of such cases reported in 2004 was 888 and in 2005 it was 831. The number of suicides due to family problems during 2004 and 2005 also registered marginal increase. There is small increment in suicide due to poverty during 2004 and 2005. The number of suicides due to unemployment during 2004 and 2005 are 219 and 136 respectively. This is showing a decline of 37.90% over the previous year. The number of suicides due to unknown cases and others decreased from 2582 in 2004 to 2263 in 2005 registering a decline of 12.35%. The details are given in Table 20.19.

Table 20.19
Suicides by Cases in Kerala during 2004 and 2005.

Sl. No	Causes	2004	2005
1	Bankruptcy or sudden change in Economic status	888	831
2	Suspected/ illicit relation	9	14
3	Cancellation/non-settlement of marriage	51	45
4	Not having children (Barrenness/impotency)	39	43
5	Suicide due to illness		
	a) Aids/STD	2	3
	b) Cancer	86	85
	c) Paralysis	30	35
	d) Insanity/Mental illness	1381	1395
	e) Other prolonged illness	1322	1223
	Sub Total (due to illness)	2821	2741
6	Death of dear person	90	94

7	Dowry Dispute	15	17
8	Divorce	11	14
9	Drug abuse/addiction	80	63
10	Failure in Examination	71	70
11	Fall in social reputation	14	11
12	Family problems	2028	2649
13	Ideological causes/herowrshipping	2	112
14	Illegitimate Pregnancy	6	1
15	Love affairs	90	81
16	Physical abuse (Rape, incest etc.)	3	1
17	Poverty	6	10
18	Professional/career problems	19	24
19	Property dispute	9	14
20	Unemployment	219	136
21	Causes not known	1189	852
22	Other Causes	1393	1411
	State Total	9053	9244

Source: State Crime Records Bureau, Typm

Education

20.41 Education is given a central place in human development. Countries such as India approached education not only as an input in the formation of human capital, but also on a basic tool of all round progress. Education should empower the vast majority of the population in their struggle against deprivation. It is now generally perceived that the basic problem of access to schooling has largely overcome in Kerala. The proportion of literate persons in the population for three census periods are given in the Table 20.20. A comparison with all India figures shows that the difference between male and female achievement levels is much narrower in Kerala than in India as a whole.

Table 20.20
Proportion of Literate Persons in Population, Kerala and India during the census periods 1981 to 2001

Year	Persons		Males		Females	
	Kerala	India	Kerala	India	Kerala	India
1981	81.6	43.6	87.7	56.4	75.7	29.8
1991	89.8	52.2	93.6	64.1	86.1	39.3
2001	90.9	65.2	94.2	75.6	87.9	54.0

Source: Human Development Report 2005 - Kerala

20.42 Depending on the parameters such as literacy rate, percentage of kids with primary education, ratio of girls to boys in primary/middle schools, teachers-student ratio, spending on education, India today conducted a study among the states in India. According to the study Kerala stood second place behind Himachal Pradesh, among the major states in India. Goa the best among the small states followed by Mizoram. Goa has the best primary education system among all big and small states in India. The scores and rank of the big and small states in India are given in Table 20.21.

Table 20.21
Primary Education - Score and Rank (2005 and 2006)

States	2005		2006	
	Score	Rank	Score	Rank
Big States				
Himachal Pradesh	4.26	1	4.34	1
Kerala	3.81	2	4.25	2
Uttaranchal	3.27	3	3.41	3
Tamil Nadu	3.11	4	3.06	4
Maharashtra	3.06	5	3.02	5
Punjab	2.79	6	2.72	6
Karnataka	2.69	9	2.61	7
Assam	2.84	6	2.59	8
Andhra Pradesh	2.37	11	2.42	9
Jammu & Kashmir	2.75	8	2.36	10
Haryana	2.25	9	2.34	11
West Bengal	2.18	12	2.13	12
Gujarat	2.33	11	1.94	13
Orissa	2.41	10	1.83	14
Chhattisgarh	1.75	17	1.77	15
Madhya Pradesh	1.83	15	1.72	16
Rajasthan	1.75	16	1.33	17
Uttar Pradesh	1.28	19	1.28	18
Jharkhand	1.48	18	1.03	19
Bihar	0.64	20	0.68	20
Small States				
Goa	5.57	3	5.42	1
Mizoram	5.63	2	5.03	2
Pondicherry	5.00	4	4.94	3
Sikkim	5.86	1	4.75	4
Manipur	4.16	6	3.87	5
Nagaland	4.25	5	3.60	6
Tripura	3.88	7	3.23	7
Delhi	3.07	9	3.04	8
Meghalaya	2.31	8	2.81	9
Arunachal Pradesh	2.84	10	2.18	10

Source: India Today Special Issue, September 11, 2006.

Enrolment rate

20.43 Enrolment is a flow variable, which is dependent to a considerable extent on the physical access to school. The enrolment of boys and girls in school for different years are given in Table 20.22.

Table 20.22
Enrolment of Boys and Girls in Schools (Std. 1 to 10)

Year	Total	Boys	Boys (%)	Girls	Girls (%)
1960-61	3270301	1778010	54.37	1492291	45.63
1970-71	4795532	2551644	53.21	2243888	46.79
1980-81	5602953	2896774	51.70	2706179	48.30
1990-91	5901101	3012308	51.05	2888795	48.95
2000-01	5219052	2660898	50.98	2558154	49.02
2004-05	4842015	2466408	50.94	2375607	49.06
2005-06	4776306	2433275	50.94	2343031	49.06

Source: i) Directorate of Economics and Statistics
ii) Directorate of Public Instructions.

20.44 The total number of students enrolled in difficult classes during 2005-06 is 47.76 lakh as against 48.94 lakh in 2004-05. This is a decline of 2.41 percentage over the previous year. The percentage share of boys and girls in the total enrolment during 2004-05 and 2005-06 is steady. The gross enrolment ratio of students in different states of India is given in Appendix 20.2.

Teacher Pupil ratio

20.45 Teacher pupil ratio is a better indicator showing the quality of education. In Kerala the teacher pupil ratio is showing a decreasing trend since 1991. In 2005-06 the rate is 27.19 students per teacher as against 27.78 (revised) in 2004-05.

Drop out

20.46 The drop out of students from L.P, U.P and High School are respectively 0.88%, 0.45% and 1.50% respectively during the year 2004-05. The total drop out of students in the state is 0.94% in 2004-05 as against 1.15% in 2003-04. The district wise details are depicted in the Table 20.23.

Table 20.23
District/Stage wise Drop out ratio in schools (2004-05)

Name of District	LP Stage			UP Stage			High School			Total Drop out (%)
	Enrolment	Drop out	% of Drop out	Enrolment	Drop out	% of Drop out	Enrolment	Drop out	% of Drop out	
2	3	4	5	6	7	8	9	10	11	12
Thiruvananthapuram	172533	1729	1.00	136263	533	0.39	143050	908	0.63	0.70
Kollam	121526	442	0.36	108196	294	0.27	114314	1114	0.97	0.54
Pathanamthitta	54908	282	0.51	45694	54	0.12	52978	165	0.31	0.33
Alappuzha	96518	423	0.44	81619	300	0.37	91156	745	0.82	0.55
Kottayam	98826	521	0.53	76614	206	0.27	82622	690	0.84	0.55
Idukki	54857	866	1.58	43142	350	0.81	42545	1004	2.36	1.58
Ernakulam	148377	1459	0.98	119491	463	0.39	126864	1877	1.48	0.96
Thrissur	179593	917	0.51	138052	753	0.55	138366	2802	2.03	0.98
Palakkad	171707	2136	1.24	131286	835	0.64	134673	3412	2.53	1.46
Malappuram	297897	2212	0.74	232136	874	0.38	230548	3739	1.62	0.90
Kozhikode	177204	1973	1.11	143834	406	0.28	148305	1209	0.82	0.76
Wayanad	51710	1258	2.43	36635	450	1.23	37581	1126	3.00	2.25
Kannur	143174	1083	0.76	115690	551	0.48	120622	2171	1.80	1.00
Kasaragod	78243	956	1.23	61349	478	0.78	61317	1972	3.22	1.70
Total	1847073	16267	0.88	1470001	6547	0.45	1524941	22934	1.50	0.94

Source: Directorate of Public Instructions.

20.47 Among the 14 districts in Kerala the drop out is high in Wayanad followed by Idukki. In all the districts, the drop out is high in high school classes and lowest in U.P schools classes.

Infrastructure

20.48 Infrastructure facilities also influence Human Development. India Today made a study on the infrastructure sector by taking the parameters such as percentage of house holds with electricity and LPG, percentage of villages with pucca roads, percapita road length and bank branches, density of post offices and tele-density. Then the Indian States are ranked according to their score and is listed in the Table 20.24. From the table it can be seen that, Punjab is still in the first place followed by Himachal Pradesh among the big states. Kerala whose position in 2005 was 6th improved to 3rd place in 2006 with a score of 3.09. As far as the small states are concerned Delhi is in the top followed by Goa.

Table 20.24
Infrastructure Indices - Score and Rank of States in India

States	2005		2006	
	Score	Rank	Score	Rank
Big States				
Punjab	3.77	1	3.37	1
Himachal Pradesh	3.22	2	3.34	2
Kerala	2.56	6	3.09	3
Maharashtra	2.89	3	2.86	4
Tamil Nadu	2.29	9	2.77	5
Haryana	2.85	4	2.76	6
Karnataka	2.23	10	2.66	7
Uttaranchal	2.80	5	2.66	8
Gujarat	2.53	7	2.65	9
Andhra Pradesh	2.20	11	2.54	10
Jammu & Kashmir	2.40	8	2.44	11
Madhya Pradesh	1.44	13	2.07	12
Rajasthan	1.49	12	2.07	13
Chhattisgarh	0.92	17	1.82	14
West Bengal	1.08	14	1.82	15
Orissa	0.75	18	1.78	16
Assam	1.02	15	1.70	17
Uttar Pradesh	0.97	16	1.68	18
Jharkhand	0.59	19	1.53	19
Bihar	0.30	20	1.31	20
Small States				
Delhi	5.84	1	4.71	1
Goa	5.31	2	4.56	2
Pondicherry	3.58	3	3.22	3
Mizoram	3.12	4	2.98	4
Sikkim	2.64	5	2.83	5
Arunachal Pradesh	2.07	6	2.48	6
Manipur	1.75	7	2.17	7
Nagaland	1.32	8	2.10	8
Tripura	1.27	9	2.09	9
Meghalaya	1.02	10	1.93	10

Source: India Today, Special Issue, September 11, 2006.

Road and Motor Vehicles

20.49 The total road length in Kerala during 2005-06 is 160944 km as against 154679 km in 2004-05 registering an increase of 4.05% over the previous year. The road density in Kerala increased from 398 km/100 sq. km in 2004-05 to 414.13 km/100 sq. km in 2005-06. This registered an increment of 8.98%. The length of road per lakh population increased from 485.77 km in 2004-05 to 505.55 km in 2005-06.

20.50 The number of motor vehicles with valid registration as on 2005-06 is 35.60 lakh against 31.22 lakh in the previous year. This shows that the newly registered vehicle during the year is 4.38 lakh over the previous year. During 2005-06 Kerala had 11179 vehicles per lakh population as against 8769 vehicles in 2004-05. In this period there were 9159 vehicles per 100 sq. km against 7184 vehicles per 100 sq. km.

20.51 The number of road accident happened per day during 2005-06 is 116 as against 112 in 2004-05 registering an increase of 3.57% over the previous year. The number of persons died/injured during 2005-06 is 149 against 140 in 2004-05 with an increase of 6.43 percentage.

Consumption of Electricity

20.52 For the development of infrastructure agriculture and industrial growth, electricity is an essential component. During 2005-06 the total installed capacity of energy in Kerala is 2644 MW as against 2617.20 MW registering an increase of 1.03% over the previous year. The percapita consumption of electricity during 2006 is 427 kwh as against 400 kwh in 2005 with 6.75 per cent increase. In Kerala all villages are electrified.

Growth of Telecom Network

20.53 Kerala has an impressive record in Telecom sector. It is a state where all the telephone exchanges were made automatic for the first time in the whole country, way back in 1990. In 1992, Kerala became the first state to provide public telephone facilities in all Panchayat Head quarters. Kerala is also the first state to provide public telephones in every village. It has the unique status of providing STD facility to all telephone exchanges.

CHAPTER 21

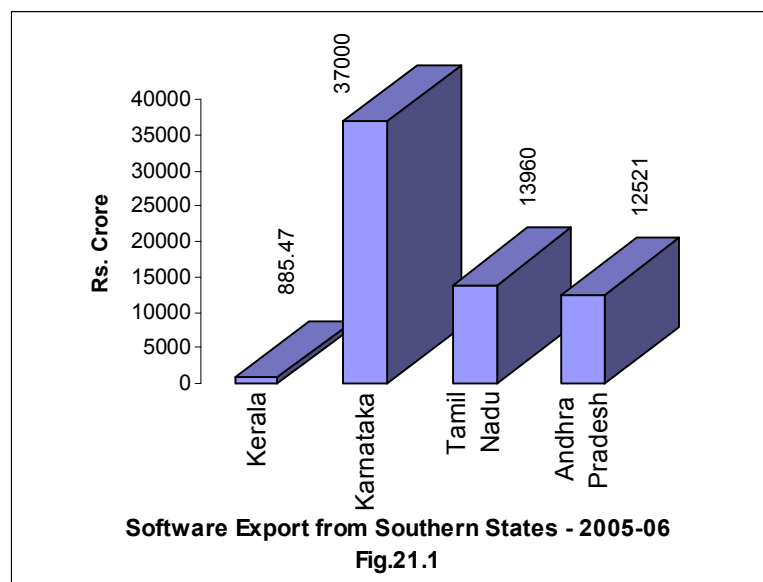
INFORMATION & COMMUNICATION TECHNOLOGY

Good governance and a vibrant democracy are critical for human development. Information and Communication Technology (ICT) has emerged as a key instrument for influencing the process of governance in various ways and in various degrees from improving the current service delivery strategies to bringing about innovations in the mechanisms and nature of service. In the interactive world of electronic governance, India also has a place in the list of ICT leadership and initiatives.

21.2 In developing countries, the application of ICT is intended basically to attain certain key objectives outlining the increased responsiveness of government towards citizens. It enables the citizens to use information as a key resource for betterment of their lives and strive towards socio – economic development. The major objectives of ICT as a part of good governance are to bring about participation, accountability, transparency and reduction of corruption and inefficiency. ICT promotes the acquisition and absorption of knowledge, offering the government and non – government agencies unprecedented opportunities to improve policy formulation and its implementation, enhance educational systems, empower the downtrodden, widen job opportunities, reduce poverty, re-engineer organizations and create new economic institutions.

21.3 The ICT industry, either hardware or software production, is currently a very small segment of Kerala economy although the market for its products and services is relatively large and growing. The State Government has an IT policy and a number of related programmes like setting up of IT parks for attracting ICT – based companies, e-governance projects for the introduction of ICT – based public services and educational programmes.

21.4 Kerala is the most favourable location in India for ICT and ITES industries to flourish. But the performance of Kerala is not spectacular compared to that of other southern States as demonstrated by the graph 21.1. Kerala contributes only a nominal share in the overall software export of India, indicating the extreme low level of IT activity in the State.



Source: IT Mission

21.5 Details on investment, employment, turnover, export etc. in IT sector in Kerala is given in the Table 21.1.

Table 21.1
Important Information on IT Industry in Kerala as on March 06

Sl. No.	Institution	Total Investment (Rs. Crore)	No. of Units	Total Employment (Nos.)	Total Turnover (Rs. Crore)	Total export (Rs. Crore)
1	Technopark	850	104	12500	650	600
2	Infopark	94	32	3514	67.23	66.67
3	Cochin SEZ	17	20	1388	219	219
4	e-pay centres	0.30	100	200	-	-
5	Training Institutes	113.12	4545	22725	-	-

Source: IT Mission

21.6 Kerala's advantages to exploit the possibilities offered by ICT and the major problems with regard to software exports are listed below.

Some Advantages

- Abundance of educated and technically qualified personnel
- Highest telephone density
- 100 per cent digital connectivity
- High P.C penetration
- Better human resource development
- Availability of low - cost IT professionals at the bottom / entry level.
- Presence of International gateway at Kochi
- Significantly lower operational costs compared to other cities

Major problems with regard to software export

- Absence of major Indian and multi national firms
- Shortage of highly skilled and adequately trained manpower in the middle level and top level
- Inadequate language and communication skills and other soft skills essential for the ITES industry
- Lack of interaction between industry, academia and the State
- Non – availability of metropolitan social infrastructure to retain its human resources.
- Lack of associated infrastructure including convenient and frequent national air connectivity to centres of technical and management excellence
- Poor perception of the investors to accept the State as an investment destination due to false image creation

Development of ICT Sector in Kerala

21.7 The Government of Kerala has already taken many steps to exploit the emerging opportunities of ICT applications. As a result of concerted efforts to promote Kerala as a premier investment destination, blue chip companies like Infosys, Wipro, TCS, Ernst and Young etc now have their presence in Kerala. The existing Technopark, Infopark, Software Technology Parks of

India – Thiruvananthapuram (STPI – T), KINFRA IT Parks, IIITM –K, CSEZ etc. have to be strengthened and an integrated IT complex is to be established as part of a growth strategy for the ICT industry in Kerala. The Investment Promotion & Management Cell set up by the State Government through Kerala State IT Mission granted subsidies to the tune of Rs. 25 crore to eligible IT units in the State to enhance the contribution of medium and small investors in IT and to generate employment opportunities.

ICT Infrastructure

State Information Infrastructure

21.8 A State Information Backbone, which links the Data Center at Thiruvananthapuram and networking operating centres at Kochi and Kozhikode has been set up as part of the State Information Infrastructure (DIAMOND), with financial support from Government of India. These centres have server banks to cater to any IT needs of Government Departments / Organisations and function round the clock. All district headquarters are connected to the network centres of the State backbone and Video conferencing between the districts and the Secretariat / Public House / Vikas Bhavan / Advocate General's Office / Kerala House is already commissioned

21.9 The second phase of Kerala State Wide Area Network, which connects all block headquarters to the State backbone and State Data Centre through 2 mbps link is in the advanced stages of implementation, with financial support to the tune of Rs. 78 crore from the Government of India.

21.10 The rural connectivity infrastructure based on wireless technology in Malappuram district is considered to be the biggest IP based outdoor network in the World. All police stations in Malappuram were connected to this network.

Technopark

21.11 Technopark is a rare confluence of the best of IT infrastructure that builds a conducive environment for the development of entrepreneurship activities among the young and educated in Kerala. Technopark is the largest employment generator in the State by providing employment to more than 12500 IT professionals through its 104 IT and ITES companies.

21.12 The total land available with Technopark is about 285.64 acres. Out of this 9.90 acres have been transferred to National Institute for Speech and Hearing (NISH) for 99 years lease. Technopark is now acquiring another 100 acres of land at Attipra, Kazhakoottam for further expansion of the campus (Phase III). As on March 2006, the Government has invested Rs.110.52 crore to build Technopark.

Box 21.1 Technocity

Government of Kerala has accorded administrative sanction for the acquisition of 507 acres of land as phase IV development of Technopark by acquiring land at Pallipuram, Vailoor, Andoorkonam and Melethonnakkal Villages.

21.13 Technopark has created 18,12,000 sq. ft area for industrial modules including an area of 6,00,000 sq.-ft for the new building Thejaswini, which is completed very recently. The industrial modules already created by Technopark are given in Table 21.2. An area of 145.42 acres of land has been given to 14 companies on long lease and most of them have constructed own buildings to the extent of 19,92,200 sq. ft area. Apart from the industrial module buildings, Technopark has created 1,41,500 sq. ft of built – up space for other purposes like Park Centre, Restaurant & Cafeteria, Guest House, Club House, Technomall etc.

Table 21. 2
Industrial Modules Created by Technopark

Sl. No.	Building Name	Area in sq. ft.	Year of Completion
1	Pamba	36000	Jul-94
2	Periyar	36000	Jul-94
3	Nila	450000	Apr-97
4	Chandragiri	60000	Dec-00
5	Gayatri	150000	Mar-02
6	Bhavani	480000	Dec-02
7	Thejaswini	600000	Feb 07
	Total	1812000	

Source: IT Mission

21.14 Other infrastructure facilities available at Technopark are

- Power distribution system to meet the needs of various establishments within the campus
- Water infrastructure including waste water treatment plant
- Telecom/ Datacom infrastructure to provide telecom services for the companies by BSNL through a dedicated 1000 line exchange inside the campus.
- The major internet service providers – STPI, VSNL, BSNL, BPL, Asianet, Kelnet, Bharathi, Idea mobile and Reliance provide internet connectivity to the campus companies.
- STPI operates a dedicated satellite earth station in the campus.

21.15 New initiatives of Technopark are

- Technopark Business Incubation Centre (T – BIC) which provides ready to move in, plug and play facilities for start up companies.
- Technopark Technology Business Incubator (T –TBI) with funding from Department of Science & Technology (DST), Government of India.
- National Centre for Innovation, Incubation & Entrepreneurship (NCIIE) which has been initiated by partnering with the IIITM – K and Entrepreneurship Development Institute of India (EDII), Ahmedabad to impart training to Engineering College faculty and technical and management students in entrepreneurship development in IT and ITES, and to conduct Technopreneurship Development Programme (TDPs) to employees of companies in the campus
- India Co Ventures Pvt. Ltd, through its expertise in venture management helps out companies for overseas marketing and offers several value added services including portfolio management

Box 21.2
SEZ status for Technopark

Government of India has declared Technopark's phase II expansion area as a Special Economic Zone (SEZ) entailing investors in the phase to all the various privileges and concessions granted in similar zones elsewhere in the country. It is granted to the IT sector for the creation of an IT Park in the 86 acres of land acquired for the Phase II expansion. This land has been leased out to Infosys (50 acres) and US Technology (36 acres). Another 31-262 acres that is transferred to TCS (26 acres) and IBS (5.26 acres) has also been sanctioned in principle as IT Special Economic Zone. Another 100 acres of land under the process of land acquisition will also get the same status once the acquisition process is completed.

21.16 Of the 104 companies in Technopark, 30 per cent are US based, 40 per cent from Europe, five per cent from Middle East, 20 per cent from within Kerala, and, the rest five per cent from outside Kerala. A wide range of activities are undertaken in these companies like high speed scientific embedded software, Smart card, Telecom, E-commerce, Networking, Computer Aided Design, Engineering, Software, Business Application Software, ERP Software, IT Enabled Services, BPO facilities, back office facilities etc. Export from the campus was around Rs. 600 crore in 2005-06 and the number of employment generated as on 31st March 2006 is about 12590.

Infopark, Kochi

21.17 The total land available with Infopark, Kochi is 96.90 acres and total built up area is 3.95 lakh sq.ft. Infopark currently has two buildings, viz. Thapasya with 1.40 lakh sq. ft of built up space and Vismaya with 2.55 lakh sq.ft. Currently 32 companies are working in Infopark, providing employment to 3514 professionals as on 1st September 2006. Total investment of these companies is Rs. 94.00 crore and total turnover is Rs. 67.23 crore. Total export from Infopark companies is Rs. 66.67 crore.

21.18 In addition to the existing facilities under Infopark ownership, Leela Group has a built up area of 1.30 lakh sq. ft. with 450 persons working there. Infrastructure providers like L & T, Wipro and Leela group will commence their operations from Infopark shortly by creating an additional built up area of 19.10 lakh sq. ft to provide employment to about 15000 persons.

21.19 Other infrastructure facilities available in Kerala for the development of ICT industry are Kinfra IT parks, Cochin Special Economic Zone etc.

Connectivity Infrastructure

- Kerala State Wide Area Network to connect all District headquarters and block headquarters to the State Information Backbone and State Data Centre through 2 Mbps link
- Rural infrastructure connectivity based on wireless technology covering 3500+ sq. km in Malappuram District
- Around 3000 multi purpose community technology centers called Akshaya Centres across the State to make available the power of networking and connectivity to the common man.
- STPI – T operates a Satellite Earth Station at Technopark Campus, Karivattom to provide high speed point to point Data Circuits and Internet facilities to the Software Exporting Companies under STPI

- There are nine active internet service providers in Kerala as on March 2006
- Optical Fibre Cable connectivity through different agencies like BSNL, Asianet, Reliance, Bharati etc.

21.20 Agency wise OFC infrastructure connectivity is given in Table 21. 3.

Table 21.3
Agency wise OFC Infrastructure Connectivity

Sl. No.	Name of Agency	OFC Laying Achievement (Length in Km)		
		As on March 2005	During 2005-06	As on March 2006
1	BSNL	8602.908	868.887	9471.795
2	Asianet	3075.00	610.00	3685.00
3	Reliance	4685.00	34.00	4719.00
4	Bharti	1009.00	0.00	1009.00
5	VSNL	1036.00	53.00	1089.00
6	VSNL (SE ME WE 3/ SAFE)	72.00	0.00	72.00
7	Power Grid Corporation	0.00	52.84	52.84
8	Tata Tele Services Limited	120.00	50.00	170.00

Source: IT Mission

Software and Hardware Industry

21.21 The Software Technology Park (STP) scheme is a 100per cent export oriented scheme for the development and export of Software and IT Enabled Services. The Software Technology Parks of India – Thiruvananthapuram (STPI – T) has an incubation facility and it has been one of the most favourable location for the small and medium level export oriented companies

21.22 STPI – T has its own Satellite Earth Station at Technopark campus and an office at Infopark, Kochi to extend support and services to the units operating from the Kochi region.

21.23 The total number of companies registered under STPI – T is 387 and 139 companies are exporting software regularly. The total software export during 2005-06 is Rs. 443 crore, which is 47.6 per cent higher than the previous year. There is a steady growth in software exports from Kerala for the past years. Details on software export and number of units registered under STPI – T are given in Table 21.4.

Table 21. 4
Software Export & Number of Units Registered in STPI-T

Sl. No.	During the Year	Software Export (Rs. Crore)	Growth Rate	No. of Units Registered (as on March)
1	2001-02	147.10	...	250
2	2002-03	165.00	12.17	277
3	2003-04	218.00	32.12	300
4	2004-05	300.00	37.61	346
5	2005-06	443.00	47.67	387

Source: IT Mission

21.24 Out of the 41 units registered with STPI – T during 2005-06, only one unit is under EHTP scheme (Hardware).

Human Resource Development for IT /ITES

21.25 In order to sustain the growth of ICT industry, regular supply of fresh stock of human resources with varied skills, experience and exposure is needed. Improving the quality of training in both the formal and informal sectors is a priority requirement for this. A beginning has already been made in the incorporation of ICT in the school curriculum.

21.26 With a view to provide skilled manpower in the growing IT and ITES industries, the ITES Habitat in Kochi and world class training facilities in IIITM-K offer variety of quality training programmes to the students. Currently, there are 4545 ICT training institutes in the State.

Indian Institute of Information Technology and Management – Kerala (IIITM-K)

21.27 The Indian Institute of Information Technology and Management – Kerala (IIITM-K) is an institute of excellence in education, research, development and training in basic and applied information technology and management. The Institute supports HRD for industry, teachers training for colleges, IT ventures incubation, multimedia authoring for faculty and experts and development of IT and IT enabled services for the region.

21.28 Project portals of IIITM-K include Education Grid, Police Portal, Kissan – Kerala, Telehealth etc. Education Grid is an initiative to link 30 colleges helping both teachers and students to design and share scarce educational resources and upgrade standards of instruction. Police Portal is a community interaction portal of the Thiruvananthapuram City Police to identify the problems of crime and disorders. Tele health portal provides practical, socially relevant care and medical education for medical professionals, administrators, educationists and the society at large.

21.29 The Institute was established in March 2001 at Technopark. Four batches of students have successfully completed the PGDIT Course from IIITM-K. Students have been placed in the companies like MindTree, IBM, Oracle, TCS, Vimoksha, Kanbay etc. A project wing at Nila building was established in 2003. The Institute hosts a unique library which includes Digital Library, lending services, online search and other services and has been extending the services to other units in and outside Technopark.

Malayalam Language Computing

21.30 KSITM is spearheading the research and development projects in Malayalam language computing for the State Government. The Centre for Linguistic Computing Kerala (Click) is jointly set up by KSITM and C-DIT. The following areas have been addressed in the past years.

1. Communicate with Unicode / MIT regarding issues pertaining to Malayalam language on a regular basis.
2. Regular interaction with other agencies in language and technology.
3. Development of tools and applications in Malayalam for common users. NILA software is freely available for users.
4. Popularization of the applications in Malayalam Language.

E – Governance Initiatives

21.31 Kerala has been selected by India Tech Foundation as the second best State in India in the implementation of e-governance in 2005. The following are some major e-governance initiatives of the State that promises delivery of services in a more simple, efficient, accountable, responsive and transparent manner.

21.32 **FRIENDS** (Fast Reliable Instant Efficient Network for Disbursement of Services) is a single window delivery of Government services which simplifies interaction between the citizens and the departments. It is now operational in 14 district Head Quarters serving 35 lakh families in the State. The counters are equipped to handle around 1000 types of bills in various combinations, originating out of various departments. Collection and transaction of FRIENDS is increasing day-by-day. The collection through the 14 centres increased from Rs. 5.20 crores (2000-01) to over Rs. 250 crores in the current year. FRIENDS has received the ISO certification during the past year as a recognition of its uniqueness in the service delivery process. Government now decided to roll out Friends Janasevana Kendrams to all municipalities.

21.33 The Citizen Call Centre, set up in the State Capital provides information on transactions pertaining to various Government departments, which are required by common citizens, over a local call (155300) from anywhere in Kerala. The information, which can be ascertained, includes details of Government schemes, programmes, entitlements, welfare benefits etc. The Call Centre is equipped with full-fledged database having details of more than 2000 Government processes and with key search facilities incorporated in the software for speedy access.

E – Pay

21.34 E – Pay is an online system for collecting various taxes and fees due to the Government through Akshaya e- kendras in Malappuram. Presently, facility for remitting KSEB and BSNL (Mobile and landline) bills are available in e-pay facility. State Bank of India is the Banking Solution Provider of this online transaction platform. The details of bills remitted by Akshaya entrepreneurs are communicated to KSEB / BSNL through the Malappuram Friends Centre. At present there are 100 e-payment centres providing employment to 200 persons and total investment is Rs. 30.00 lakh.

ICT for Development Projects

Akshaya

21.35 By rolling out the Akshaya project, it is intended to set up around 3000 multipurpose Community Technology Centres called Akshaya Centres across the State. Run by private entrepreneurs, each Akshaya centre is set up within two to three kilometers of every household and will cater to the information, communication and education needs of around 1000 families and to make available the power of networking and connectivity to the common man. Akshaya is envisaged as a social and economic catalyst focussing on the various facts of e-learning, information dissemination, e-transaction, e-governance and communication facilities to the common man.

21.36 Some important ICT based services offered to the public through the Akshaya e-centres include e-payment facility, online courses for preparation for competitive examinations, District Collector online, e-krishi, Intel learn programme, health mapping etc. Akshaya project offers a number of entry level course programmes through the centres. Some of the packages are the Basic Computer Literacy e-vidya, Arabic Typing Tutor, Spoken English, Multimedia etc. All these course programmes has an online evaluation tool to certify the students. Other initiatives

carried out through Akshaya centres include e-governance programme, content development, Computer Aided Learning, Capacity Building Programmes to citizens etc. Akshaya is now rolled out to seven other districts viz. Kasaragod, Kannur, Kozhikkode, Thrissur, Ernakulam, Pathanamthitta and Kollam, so as to reach out to 34 lakh families. Around 3.5 lakh citizens have completed the e-literacy programme. 1300 Akshaya centres are set up in these districts. The successful initiatives shall be replicated to other districts as soon as the e-literacy programme concludes in these districts.

21.37 The implementation in the remaining six districts has also been decided in the State level meeting of Akshaya. After completion of the programme in 2007, State would have a minimum of one e-literate in every household totalling 6.4 million and Kerala would become the first e-literate State in the country.

21.38 The second stage of Akshaya project in Malappuram is also being launched. This project titled “ Internet to the people” aims at familiarizing the common mass to internet and to achieve global knowledge, easy and low cost communication through e-mail, internet telephony, and use of internet in all welfare and economical activities. Wireless communication towers were installed at all panchayaths and 400 Akshaya Centres were connected.

IT @ School

21.39 IT @ School project is one of the major schemes imparting computer education to high school students for the qualitative improvement in the conventional learning systems and also to equip teachers to use computers as an educational tool. The project was implemented in all State high schools and effective training to teachers have also been given.

E – Krishi

21.40 Market driven agricultural initiative through IT enabled Agri Business Centres addresses the existing gap in agriculture information flow and transaction management. The project envisages facilitating and enabling farmers and other stakeholders through Agri-Business Centres to interact with Agricultural Service Providers in the private, government and non-government sectors. The project will provide a web-based solution enabling the small and medium farmers.

Content Management

21.41 This is an ongoing activity of KSITM to promote development of digital content in Malayalam. Content in agriculture, health, and career are already available. Similar customized IT course content and courses in Learn English, Arabic, Typing Tutor are also developed.

Knowledge Archive Project

21.42 A Knowledge Bank Archive System (K-BASE) which has digitized around 43,000 Government Orders and important circulars is an important component of the above project. These orders and circulars are now available in public domain for enabling access to the common man and decision-makers in Government. With the establishment of K-BASE, major policy and administration decisions became easier. The knowledge repository decision support mechanism improved the speed, transparency, objectivity and consistency in decision making process within the Secretariat.

Introduction of MESSAGE Software

21.43 The workflow management package for Secretariat named MESSAGE is to be piloted in Higher Education Department and Information Technology Department. A Decision Support system for the office of the Chief Minister is also implemented as a part of the project.

Service & Payroll Administrative Repository for Kerala (SPARK)

21.44 National Informatics Centre (NIC) developed an application named SPARK to implement the Integrated Payroll and Payroll Management Package in all Government departments and offices in Government. NIC has given training to all the agencies identified for data entry and over 8000 service books have been digitized. In the first phase, Government Secretariat, District Collectorates and Kerala High Court are covered.

Department Projects in e-governance

SMART Move Project

21.45 The Motor Vehicles Department has implemented the Smart Move Project in three districts, viz. Thiruvananthapuram, Ernakulam and Kozhikkode. It offers fast processing for learner's license, selection of test date by the applicant, issue of license immediately on passing the test, issue of computer generated certificates, randomly generated registration numbers, accurate tax and fee calculation and many such citizen friendly facilities.

TRIMS

21.46 To streamline the working of all treasuries in the State (187 treasuries) Treasury Information System (TRIMS) is implemented and all treasuries have been computerized. All activities from bill submission to payment and accounting is automated.

Thozhil

21.47 Out of the 94 Employment Exchange Offices in the State, Thozhil is implemented in seven offices as part of the total computerization of Employment Exchanges. This project provides facilities for online renewal of registration, addition of experience certificate, addition of personal details, search for vacancies posed by private employers etc.

PEARL

21.48 Package for Effective Administration of Registration Laws (PEARL) is implementing in the Registration Department. Feature of PEARL include automation of Sub Registrar Offices, registration of a document in 15 minutes, computerized encumbrance certificates, stamp duty and fee worked out automatically, prevention of the loss and damage of documents etc.

SWIFT

21.49 There are about 25 types of certificates issued from Taluk Offices. With the implementation of SWIFT, a common application form is designed for all the certificates. Benefits of the project include, one point solution for issue of all the 25 certificates, availability of application forms in Malayalam and in English, Single application form, Speedy processing, provision of data back up etc. SWIFT is now implemented in 63 Taluk Offices in Kerala.

AIMS

21.50 Agriculture resources are monitored by the Directorate of Agriculture using the automated application software called AIMS (Agriculture Information Management System) networked 1500 offices spread across the State. Farmers can access the database in the Krishi Bhavans to know about the soil conditions and get details of Government schemes, relief measures and other beneficial data.

CHAPTER 22

LOCAL GOVERNMENTS AND DECENTRALISED DEVELOPMENT IN KERALA

Decentralisation is prominent on the reform agenda of many developing countries. The degree of decentralisation varies vastly across countries, with South Asia, represented by India, topping the list and Sub-Saharan Africa coming last in the order. Followed by OECD countries, Europe and Central Asian countries, Latin America and Caribbean countries and East Asian and Pacific countries in declining order of sub-national shares of expenditure (World Development Report 2004).

22.2 After the enactment of 73rd and 74th Constitutional Amendment Acts, Govt. of Kerala enacted the Kerala Panchayati Raj Act and Municipality Act 1994. These Acts have been amended during the years 1995, 1999, 2000 with a view to empower the local bodies to ensure peoples participation in the planning and development process and remove the restrictions and control upon the local bodies by the State Government. The Kerala Acts provide powers, authorities and responsibilities wider in some respects than those envisaged under the above provisions of the Indian Constitution. A peculiar feature of the Act is the predominant role given to the 'grama sabha' through which the common people get a direct participation in the development administration of local bodies. The important landmarks in Kerala's decentralisation, inter alia, include the transfer of powers, functions, institutions and staff to local self governments (LSGIs), adoption of separate budget documents for LSGIs, decision to devolve 35 to 40% of the Annual Plan funds to LSGIs, launching of People's Campaign in August 1996, institution – building at different tiers and levels, restructuring of the relevant state level Acts and Rules and submission of State Finance Commission Reports.

22.3 In 2002-03, the peoples Campaign Programme was renamed "Kerala Development Plan". The important features of Kerala development Plan are

- 1) Institutionalisation and building sustainable capacity in LSGIs
- 2) Catalysing economic development through these institutions and
- 3) Improving the quality of Services

Decentralisation During Xth Plan Period (2002-07)

22.4 During Xth Plan Local Government's Plan would have a Reform Plan consisting of updating of records, completion of Asset Register, preparation of Road Register, Preparation of benefit register including supply of benefit cards to all beneficiaries, increasing local resource mobilisation through taxes, user charges and contributions, innovative means of financing through cess, Built, Operate and Transfer, Community contribution and borrowings and performance standards for institutions and officers.

22.5 Anti-poverty Sub Plans are being prepared by the grama panchayats and each anti poverty plan have an obligatory component for destitutes. Grama panchayats were compelled to earmark five per cent of the resources for the children, aged and the disabled. The Annual Plan of Grama Panchayats contain Women Component Plan, Poverty alleviation, handicapped, aged and children and SCP/TSP schemes.

22.6 The core objectives of decentralised planning during the Xth Plan at the district level are as follows:

- a. Promote local economic development by increasing production and productivity of agriculture and allied sectors and the traditional and small scale industries with emphasis on employment generation and reduction of poverty.
- b. Move towards greater social justice and reduction in gender disparities.
- c. Focusing on Watershed development and integrated area development.
- d. Upgrade the quality of basic services provided by the LSGIs with special emphasis on health, education, water supply, sanitation including solid waste management and care of the disabled.
- e. Improve governance particularly with reference to responsibility, transparency, people's participation and management.
- f. Achieve improved efficiency of resource use.

22.7 In the process of realising these objectives the LSGIs are expected to play a proactive role by actuating synergies between various stakeholders in local development. As a result solutions will arise through self-help and joint community action with public funds being spent only for the most critical purposes.

22.8 The general priorities of Xth Plan:

- 1) Local economic development with emphasis on productive sectors to generate more jobs for poverty reduction.
- 2) Rehabilitation of existing assets to ensure optimum utilisation.
- 3) Upgradation of traditional industries and promotion of micro enterprises.
- 4) Development of agriculture on watershed basis and shift to participatory irrigation management.
- 5) Rational medium term spatial planning for infrastructure development.

22.9 During Xth Plan period several novel ideas have been introduced. They include the preparation of a Vision document by a working Group consisting of Experts and its functions are: to make analysis of the development sector(s)/area(s), evaluate the performance, identifying the existing problems, suggest an action plan to realise the vision with priorities, with draft projects along with spillover projects, updation of development reports and monitoring of projects. It is also decided to have a stock taking of IXth Plan like identification of spillover and incomplete works, listing out of incomplete deposit works, verification of assets created, quick evaluation of physical and financial targets and achievements and resources mobilised.

22.10 The distinctive features of decentralization during Xth Five Year Plan are:

- 1) The introduction of Five Year Plans for local governments.
- 2) Forms and Proforma were introduced in preparation of Projects
- 3) Anti-poverty Sub Plan was introduced as a part of Local Self Government Plan. As a part of this specific projects for destitutes are also being prepared (Ashraya Projects).
- 4) Tenth Plan insists that the Local Self Governments should earmark 5% of the plan allocation for the benefit of children, disabled and the aged.
- 5) Reform measures to improve the efficiency of LSGIs and strengthening accounting system introduction of bill system for treasury transactions and audit.

Institutionalisation Efforts

22.11 Kerala Development Plan was launched in 2002 to take decentralisation to a new trajectory of growth and maturation. The objectives of the programme are:

- 1) To make Government's policy commitments to decentralisation unambiguously clear.
- 2) To change decentralisation from the campaign mode to a phase of institutionalisation to make it sustainable.
- 3) To focus attention on the needs, opportunities and concerns arising out of experiences so far and devise clear strategies and action plans to address them.
- 4) Motivate and guide LSGIs to concentrate on local development and improve delivery of services avoiding waste and inefficiencies.
- 5) To bring about an organic relationship between transferred departments and local governments and bring in role clarity.
- 6) To launch a comprehensive capacity building programme going beyond plan formulation and implementation and stressing management, governance and long term development issues.
- 7) As part of this programme, steps have been initiated.
 - To conduct model Gramasabhas, develop an operationable social audit methodology, publish model Citizen's Charters, update accounts, introduce IT enabled services and developing a transparent and norm based priority list of BPL families.
 - To involve departments to motivate their staff and facilitate them to develop a proper relationship with local governments.
 - To link up with academic and research institutions.

22.12 In short decentralised planning in Kerala, aimed at rejuvenating the State's stagnant Productive Sector, had the specific objectives of improving the quality of investment by allocating resources to local priorities, facilitating local level solutions to development problems, exploiting local production possibilities, enabling people's participation and contribution in planned development and bringing about convergence of services.

Table 22.1
Plan assistance under IXth & Xth Plan period (1997-2007)
Share of LSGIs in the State's Plan

(Rs. Crore)

Year	State Plan Outlay	Grant-in-Aid to Local Govts	%
1997 – 98	2855.00	749.00	26.23
1998 – 99	3100.00	950.00	30.65
1999 – 00	3250.00	1020.00	31.38
2000 – 01	3535.00	1045.00	29.56
2001 – 02	3015.00	850.00	28.19
2002 – 03	4026.00	1342.00	33.33
2003 – 04	4430.25	1317.00	29.73
2004 – 05	4800.00	1350.00	28.13
2005 – 06	5369.81	1375.00	25.61
2006 – 07	6210.00	1400.00	22.54

Table 22.2
Allocation to Local Governments under Tenth Plan

(Rs. Crore)

Category of funds	2002-03	2003-04	2004-05	2005-06	2006-07
I. General Sector	1073.50	1009.23 (- 64.27)	1016.67 (+ 7.44)	990.36 (- 26.31)	936.50 (- 53.86)
II. SCP	268.50	263.33 (- 5.17)	285.20 (+ 21.87)	334.47 (+ 49.27)	403.00 (+ 68.53)
III. TSP	--	44.44 (+ 44.44)	48.13 (+ 3.69)	50.17 (+ 2.04)	60.50 (+ 10.33)
Total (I+II+III)	1342.00	1317.00 (- 25.00)	1350.00 (+ 33.00)	1375.00 (+ 25.00)	1400.00 (+ 25.00)

* *Figures in the brackets show the deviation in allocation (Rs. crore) from the previous year.*

Approach to Decentralised Planning

22.13 Kerala now has an experience of a decade in decentralised planning by Local Governments. The People's Plan Campaign launched at the beginning of the Ninth Five Year Plan succeeded in evolving a working methodology for participatory planning by local governments. This methodology has earned wide acclaim.

22.14 Decentralisation has ensured equitable flow of funds to all the regions of Kerala. Decentralised Planning has enhanced local capacity in understanding matters related to development and in identifying strategies and programs to meet them. It has succeeded in improving the understanding of elected representatives to a wide range of development issues and has enhanced their capability to relate them to their local situation. It has succeeded in motivating several experiments in local level development covering all sectors of development. It has enhanced the participation of people as well as experts from different walks of life in the process of local level planning. It has made local governance more responsive and transparent.

22.15 Decentralised planning has resulted in significant achievements in provision of basic minimum needs in terms of housing, sanitation, water supply, power connection and physical connectivity. It has considerably improved infrastructure in public institutions. It has had a very positive effect in reducing poverty especially through the Kudumbashree approach.

22.16 After the phase of experimentation and iterations decentralisation is now in the institutionalisation stage.

22.17 The budgetary provision for grant-in-aid to the local bodies has three components; Tribal Sub Plan (TSP), Special Component Plan (SCP) and General Sector Plan. Between rural and urban local bodies, funds were distributed on the basis of the population share. As for the rural LSGIs, the total general sector allocation is apportioned among the Grama, Block and District Panchayats in the ratio of 70:15:15. For the Special Component Plan the share of 20 per cent each was fixed for the higher tiers. The following table gives a comprehensive picture on the allocation of grant-in-aid among the three tiers of local bodies.

Table 22.3

Tier-wise and sector wise allocation of Plan Funds during 1997-98 to 2006-07

(Rs. Crore)

Local Body	No. of local bodies	General	SCP	TSP	Total
1997 – 98					
Grama Panchayats	990	307.02	105.85	7.62	420.49
Block Panchayats	152	65.79	35.28	7.62	108.7
Dist. Panchayat	14	65.79	35.28	22.87	123.94
Municipalities	55	49.54	12.15	0.65	62.34
Corporations	3	27.86	5.44	0.24	33.53
Total	1214	516.00	194.00	39.00	749.00
1998 - 99					
Grama Panchayats	990	426.02	108.21	15.31	549.54
Block Panchayats	152	91.29	36.07	7.66	135.02
Dist. Panchayat	14	91.29	36.07	15.31	142.67
Municipalities	55	71.18	10.17	0.54	81.90
Corporations	3	36.22	4.48	0.18	40.87
Total	1214	716.00	195.00	39.00	950.00
1999 - 2000					
Grama Panchayats	990	464.10	111.03	19.88	595.01
Block Panchayats	152	99.45	37.01	7.95	144.41
Dist. Panchayat	14	99.45	37.01	11.93	148.39
Municipalities	55	77.51	10.38	0.24	88.13
Corporations	3	39.49	4.57	--	44.06
Total	1214	780.00	200.00	40.00	1020.00
2000 – 2001					
Grama Panchayats	990	467.08	120.47	21.37	608.91
Block Panchayats	152	100.09	40.16	8.55	148.79
Dist. Panchayat	14	100.09	40.16	12.82	153.06
Municipalities	55	78.00	11.26	0.26	89.53
Corporations	3	39.75	4.96	0.00	44.70
Total	1214	785.00	217.00	43.00	1045.00
2001 - 2002					
Grama Panchayats	991	384.84	98.59	--	483.43
Block Panchayats	152	82.46	32.86	--	115.32
Dist. Panchayat	14	82.46	32.86	--	115.32
Municipalities	53	64.85	9.56	--	74.41
Corporations	5	53.39	8.13	--	61.52
Total	1215	668.00	182.00	--	850.00
2002 – 2003					
Grama Panchayats	991	618.84	142.00	--	760.84
Block Panchayats	152	132.61	47.33	--	179.94
Dist. Panchayat	14	133.61	47.33	--	180.94
Municipalities	53	105.38	17.22	--	122.60
Corporations	5	83.06	14.62	--	97.68
Total	1215	1073.50	268.50	--	1342.00

2003 – 2004					
Grama Panchayats	991	580.42	139.26	22.02	741.70
Block Panchayats	152	124.37	46.42	8.81	179.60
Dist. Panchayat	14	125.38	46.42	13.21	185.01
Municipalities	53	100.15	16.89	0.40	117.44
Corporations	5	78.91	14.34	--	93.25
Total	1215	1009.23	263.33	44.44	1317.00
2004 – 2005					
Grama Panchayats	991	584.84	150.50	23.83	759.17
Block Panchayats	152	125.32	50.17	9.53	185.02
Dist. Panchayat	14	126.32	50.17	14.30	190.79
Municipalities	53	100.88	18.56	0.47	119.91
Corporations	5	79.31	15.80	--	95.11
Total	1215	1016.67	285.20	48.13	1350.00
2005 – 2006					
Grama Panchayats	991	574.75	177.50	24.80	777.05
Block Panchayats	152	123.16	59.17	9.92	192.25
Dist. Panchayat	14	124.16	59.17	14.88	198.21
Municipalities	53	93.75	20.80	0.57	115.12
Corporations	5	74.54	17.83	--	92.37
Total	1215	990.36	334.47	50.17	1375.00
2006 – 2007					
Grama Panchayats	999	544.11	213.87	29.91	787.89
Block Panchayats	152	116.60	71.29	11.96	199.85
Dist. Panchayat	14	116.60	71.29	17.94	205.83
Municipalities	53	88.70	25.06	0.68	114.44
Corporations	5	70.50	21.49	--	91.99
Total	1223	936.51	403.00	60.49	1400.00

22.18 Within the different tiers of local bodies the distribution of the grant in aid during 1997 - 98 was made using population criteria alone. From the next year a major change was introduced with respect to the intra - tier distribution. Instead of a mere population criterion a composite index of entitlement was evolved, taking into consideration, in addition to population, the geographical area of the local body, area under paddy and a composite index of backwardness based on houses without latrines and houses without electricity. The details are presented below.

Indicators	Weightage (percentage)			
	Grama Panchayat	Block Panchayat	District Panchayat	Municipalities / Corporation
1. Population (excluding SC/ST)	60	60	50	70
2. Tribal population	5	5	5	5
3. Geographical area excluding area under forests	5	10	15	5
4. Area under paddy	5	--	--	--
5. Own Income of Grama Panchayat	10	--	--	--

6. Composite Index of Agricultural Labourers, Persons Engaged in Live Stock, Fisheries etc. and Marginal Workers.	15	25	20	
7. Composite index of backwardness/ houses without latrine and houses without electricity.	--	--	10	20
Total	100	100	100	100

Finance Commission Awards

Eleventh Finance Commission Awards to Local Governments during X Plan Period

Year	Village Panchayat	Municipality	Corporation	Total
1	2	3	4	5
2002-03	6455.10	836.87	663.50	7955.47
2003-04	6455.10	836.87	663.50	7955.47
2004-05	6547.32	840.38	664.62	8052.32
Total	19457.52	25141.12	1991.62	23963.26

Criteria used by EFC and TFC for allocation of grants among states

22.19 Rs. 985 crore has been granted to Panchayats and Rs. 149 crore to Municipalities in Kerala by the 12th Finance Commission. Thus a total of Rs. 1134 crore has been granted to the Local Bodies of Kerala by the Twelfth Finance Commission for the period 2005-10. The changes there in the criterion used for inter-se allocation of grants among states by the EFC and TFC are as follows.

The criterion used by EFC & TFC are given below.

<i>Criterion</i>	<i>Weight (percent)</i>	
	<i>XI</i>	<i>XII</i>
1. Population	40	40
2. Geographical Area	10	10
3. Distance from highest percapita income	20	20
4. Index of decentralization	20	10
5. Revenue Effort	10	20
of which		
(a) With respect to own revenue of states		10
(b) with respect to GSDP		10

22.20 Both the Finance Commissions attach equal weightage to the criterion of population, geographical area and distance from highest percapita income. The EFC attached 20% weightage to the index of decentralization. For the purpose of arriving at the index of decentralization EFC

had selected 10 parameters. These parameters among others include enactment/ amendment of the State/Panchayats/Municipal legislation assignment of functions to the local bodies by State legislation, constitution of the SFC's and the submission of action taken on their reports. The TFC found that as almost all the states have enacted legislation and took action for the implementation of 73rd and 74th amendment most of these parameters have lost relevance. Thus TFC dropped the index of decentralization from the criterion. In this place an index of deprivation with a weight of 10% is used by the TFC as a criteria. Drinking water and sanitation are identified as the two core services. Number of households fetching water from a distance of over 100 meters in the case of urban households and 500 meters in the case of rural households and households with no latrines and no drainage facilities for the flow of waste water have been used to construct the Deprivation index. 20% weight is given to Revenue Effort of which 10% weight is to own revenue of states and 10% with respect to GSDP. While the weight attached to revenue effort by EFC was only 10%.

22.21 Twelfth Finance Commission Recommendations regarding the use of its award to Local Bodies.

22.22 The LSGIs should be encouraged to take over the assets relating to water supply and sanitation and utilize the grants for repairs/rejuvenation as also the O&M costs. The LSGIs should however recover at least 50% of the recurring costs in the form of user charges.

22.23 Of the grants allocated for Panchayats priority should be given to expenditure on the O&M costs of water supply and sanitation. At least 50% of the grants-in-aid provided to each state for the urban local bodies should be earmarked for the scheme of solid waste management through public private partnership. The municipalities should concentrate on collection, segregation and transportation of solid waste. The cost of these activities whether carried out in house or other sources could be met from the grants. Local bodies would continue to need funding support for building data base and maintenance of accounts. States may assess the requirement of each local body in this regard and earmark funds accordingly out of the total allocation.

Box 22.1

Decentralised planning approach during XIth Plan in Kerala

- Kerala's unique experiment in democratic decentralization involved the transfer of around a third of the plan funds to the Local Self-Governing Institutions during the ninth plan period. This was given a statutory basis by the second State Finance Commission. During the tenth plan when the fiscal problems faced by the state led to a curtailment in the plan outlay compared to what was envisaged, the proportion of plan funds transferred to the LSGIs also went down. Also the third State Finance Commission has fixed the devolution in each year instead of the percentage allocation. In the eleventh plan which envisages a step-up of plan outlays, the proportion of plan funds transferred to the LSGIs should also show an increase. What is more, starting with this plan, the district level plan of the LSGIs will be fully worked out and shown separately along with the state plan document.
- Decentralized planning, pioneered by Kerala, marks a point of departure for the country as a whole. It has made the composition of plan projects much more attuned to the wishes of the people. And even though it may not have done away with the level of corruption compared to the earlier years, it has had a favourable impact. These are major achievements. At the same time however serious lacunae remain in the functioning of decentralized planning. One is the failure of many LSGIs in the submission of proper accounts in time. The other is the tendency of the LSGIs to simply replicate small local

projects. The vigour of decentralized planning should have by now led to submission of imaginative schemes by more than one LSGI to implement supra- LSGI level projects. In such a case there would be a plethora of schemes, of a new orientation, all planned from below. This unfortunately is yet to happen. One reason for this may be change in recent years in the concept and norms on which local level planning was based ten years ago. Without the patronage and sufficient transfer of personnel from the state, LSGIs and their leadership were at a disadvantage. This state of affairs must change if democratic decentralization is to live up to the original dream underlying its inception.

- At the administrative level, two issues in particular need to be addressed urgently. One relates to greater integration between the LSGIs and the institutions transferred to their jurisdiction. The current level of integration is woefully inadequate. The second concerns the link between the sectoral plans drawn up for the state as a whole and the district plans drawn up by the LSGIs of the type mentioned above. If this is to be achieved, there has to be an initiative from the State to prepare its plan at the district level in consonance and in consultation with the district plan of LSGIs and to ensure that its offices actively cooperate in the implementation of the integrated district plan of the LSGIs and the State.

Box 22.2			
Time Line			
Milestones in the Evolution of Local Government since Independence			
Towards first generation panchayats		Constitutionalisation of Panchayati Raj	
1948-49	Constituent Assembly debates on the role of Panchayati Raj in Indian polity	1986	L.M.Singhvi Committee submits its report on 27 November; recommends constitutional status for panchayats
1950	The Constitution of India comes into force on 26 January; Directive Principles of State Policy mention village panchayats as 'units of self-government' (Art.40)	1988	Parliament Consultative Committee appoints a sub-committee under chairpersonship of P.K. Thungan to consider Constitutional Amendment.
1952	Community Development Programme starts off on 2 October.	1989	64 th Constitutional Amendment Bill is introduced in Parliament on 15 May; is defeated in Rajya Sabha on 15 October.
1957	Balvant Rai Mehta Committee, appointed in January, submits its report on 24 November.		
1958-60	Several state governments enact new Panchayat Acts bringing in three-tier panchayat system.		
1959	Jawaharlal Nehru inaugurates the first generation panchayat at Nagaur in Rajasthan on 2 October	1991	73 rd (Panchayats) and 74 th (Municipalities) Amendment Bills are introduced in Parliament; referred to the Parliament's Joint Select Committee in September.
1964-77	Kerala District Council Bill is introduced in Kerala Assembly; lapses after Assembly is dissolved. Decline of first generation Panchayati raj Institutions.		

Growth and decline of second generation panchayats		1992	Lok Sabha passes both the Bills on 22 December; Rajya Sabha passes them on 23 December
1978	Panchayat elections were held in West Bengal on party basis on 4 June – marking the beginning of second generation of Panchayati Raj Asoka Mehta Committee on working of panchayats, appointed on 12 December 1977, submits its report on 21 August 1978.	1993	73 rd Amendment Act, 1992 comes into force on 24 April. 74 th Amendment Act, 1992 comes into force on 1 June.
		1993-94	All state governments pass conformity Acts between 30 May 1993 and 23 April 1994.
1979	In Kerala the District Administration Bill was passed. Karnataka government enacts new PR Act	1994	Madhya Pradesh holds panchayat elections under the 73 rd Amendment dispensation on 30 May.
1983			
1984	Hanumantha Rao Committee on district level planning, appointed by Planning Commission in September 1982, submits its report in May. Karnataka PR Act receives President's assent in July; comes into force on 14 August. G.V.K. Rao Committee on administrative aspects of rural development, appointed by Planning Commission on 25 March, submits its report in December.	1996	Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996, extending 73 rd Amendment Act to Scheduled Areas, comes into force on 24 December. Kerala launches People's Plan Campaign on 16 August 1996.
1985			
1986	Andhra Pradesh follows West Bengal and Karnataka Panchayati Raj model. Karnataka holds Panchayat elections in January. Kerala District Council Bill passed. District Councils formed. Panchayats are dissolved and brought under administrators in Karnataka	2001	Bihar holds panchayat elections after 23 years (11 th to 30 th April).
1987			
1991		2001	83 rd Constitution Amendment Act, 2000 amends Art. 243-M to dispense with reservations for Scheduled Castes in Arunachal Pradesh – paving way for panchayat elections in the only state yet to hold them under the new dispensation
1990-92			

Source: Panchayati Raj update

Box 22.3						
Status of District Planning Committees						
Sl. No.	State/UT	DPC constituted	Total No. of districts	No. of districts where DPC constituted	Who is chairperson	Remarks
1.	Andhra Pradesh	No	23	Nil		As per legislation, ZP president is to be DPC chairperson
2.	Arunachal Pradesh	No	16	Nil		
3.	Assam	Yes	27	10	ZP president	
4.	Bihar	Yes	39	38	ZP president	

5.	Chhattisgarh	Yes	16	16	Minister	
6.	Goa	Yes	2	2	ZP president	
7.	Gujarat	No	25			Gujarat has nominated District Planning Boards, instead of DPCs
8.	Haryana	No	19	Nil	Divisional Commissioner	
9.	Himachal Pradesh	Yes	12	12	Appointed by state government	
10.	Jharkhand	No	18			Elections not held
11.	Karnataka	Yes	27	26	ZP president	
12.	Kerala	Yes	14	14	ZP president	
13.	Madhya Pradesh	Yes	48	45	Minister	
14.	Maharashtra	No	35			(i) Maharashtra has a district-level body with equal number of representation from elected representatives and nominated persons. (ii) Legislation for DPCs passed, but not implemented
15.	Manipur	Yes	9	4	ZP president	
16.	Orissa	Yes	30	30	Minister	
17.	Punjab	No	17	Nil		Legislation for DPCs exists
18.	Rajasthan	Yes	32	32	ZP president	
19.	Sikkim	Yes	4	4	ZP president	
20.	Tamil Nadu	Yes	30	29	ZP president	
21.	Tripura	No	4	Nil		
22.	Uttar Pradesh	No	70	Nil		(i) Legislation on DPCs enacted in 1999, but notification not issued. (ii) The state has nominated bodies as DPCs.

23.	Uttaranchal	No	13	Nil		Legislation for DPCs exists, but notification not issued.
24.	West Bengal	Yes	18	18	ZP president	
25.	A & N Islands	Yes	2	2	ZP president	
26.	Chandigarh	No	1	Nil		
27.	Dadra & Nagar Haveli	Yes	1	1	ZP president	
28.	Daman & Diu	Yes	2	2	ZP president	
29.	Lakshadweep	Yes	1	1	District Collector	

Source: Union Ministry of Panchayati Raj

Box 22.4

Kerala Grama Panchayat Arranges Loan for BPL Families

Mangattidom Grama Panchayat near Koothuparamba in Kannur district has accomplished a novel task by providing subsidised micro finance from a leading bank to people living below the poverty line for renovating their old houses or building new low-cost houses. The scheme also provides micro financial assistance for building small grocery shops, and dairy and tailoring sheds through self-help groups, known as 'Kudumbashree' units, to enhance the earning capacity of those belonging to weaker sections.

The scheme, which has been launched in 23 panchayats in Kannur district and four panchayats in Kasaragod district, was inaugurated at Mangattidom Grama Panchayat on 24 July last year by granting 75 loans through the Mattannur branch of the State Bank of Travancore (SBT). Under the SBT 'Bhavanashree' scheme, 1,345 houses have been constructed – 1,061 in Kannur and 284 in Kasaragod – with the bank sanctioning Rs.424 lakh for Kannur and Rs.108 lakh for Kasaragod, Mangattidom Grama Panchayat, which won the Swaraj trophy for the best grama panchayat last year, tops with 178 beneficiaries, Keezhur-Chavassery Grama Panchayat comes next with 116 beneficiaries and the third place goes to Kodom-Belur Gram Panchayat in Kasaragod district with 103 beneficiaries.

With the repayment of instalment spreading over a period of 15 years, the beneficiaries can pay back the loans in weekly or monthly instalments of Rs.75 to Rs.400. The interest amount of nearly Rs.10,000 will be borne by the panchayats. The SBI Life Insurance Company has covered the beneficiaries under its home loan insurance policy.

Box 22.5

Canara Bank adopts village Panchayat

As part of its centenary celebrations, Canara Bank has decided to adopt Vengappalli Grama Panchayat, one of the backward panchayats of Wayanad district. S. Pavithran, manager of the bank's district office, said that the bank would give all possible assistance for infrastructure development and would also increase its lending volume in the panchayat area. The construction of a school building, drinking water projects for two tribal colonies, a community hall, a library and a computer-learning centre are among the activities envisaged by the bank. In order to provide special attention to the farming sector, the bank proposes to form farmers' clubs in the panchayat.

Box 22.6
Kole land development at Karuvoduchira in Meppayyur Grama Panchayat – Kozhikode District Panchayat

The Karuvoduchira kole land extending over an area of more than 370 hectares is water logged due to inadequate drainage facility. A study conducted by CWRDM, Kozhikode, recommended mainly to do the deepening and widening of the main drain and connected lateral drains for adequate drainage of water from ayacut area. In the light of its recommendation, a portion of high yielding paddy pocket have been selected. A Tractor Cross bund connecting Nambichankandy and west bank of chira and also a foot path bund of length 1.50 metre to protect the area from water logging are proposed in the scheme. A water regulating structure to regulate water acrossing tractor bund is also included in the scheme.

The Kozhikode District Panchayat has proposed to undertake this scheme as multiyear project earmarking Rs.23 lakhs in 2006-07 and Rs. 22 lakhs in 2007-08 and expects to be completed by March 2008.

By completion of this scheme an area of not less than 370 hectares can be brought under paddy cultivation which will be a significant achievement in the agricultural sector as far as Kozhikode District is concerned.

Box 22.7
Special funds for panchayats in backward regions

The union government is going to set up a Backward Region Grant Fund (BRGF). A sum of Rs.50,000 crore would be sanctioned every year for this. The money would go to the states' consolidated funds, from where it would be directed to panchayats. The BRGF would cover 250 districts across the country, which have been identified as backward areas. The fund is aimed at removing regional disparities and inequalities among various income groups by catalysing development in backward areas through providing infrastructure, promoting good governance and making agrarian reforms. Giving an outline of the BRGF, Union Minister of Panchayati Raj Shri.Mani Shankar Aiyar stated, "We will track the fund to ensure that it is not diverted or misused. The fund would be provided only if there are proper district plans and there is active participation of PRIs. The plans would have to be approved at the state level by high powered committees headed by Chief Secretaries."

The draft guidelines for the implementation of the BRGF have been finalised. However, they would be adopted for implementation after some union government ministries and state governments have been consulted.

Special plans: The scheme has special plans for Bihar and KBK (Kalahandi-Balangir-Koraput) districts of Orissa. The total annual allocation under this head is Rs.1,000 crore for Bihar and Rs.250 crore for the KBK districts. The funds would be provided on a 100 per cent grant basis and allocated as additional central assistance to state plans.

Box 22.8

Initiative to make Panchayat – Karakulam and Nellanadu as ‘litigation free’

Elected representatives, voluntary activists and women’s representatives along with legal experts and judicial personals are sitting together as sworn members of the Grievance and Dispute Redressal body of the Karakulam – Nellanadu Panchayats. In addition to this there is a Vigilance Cell, with the support of official / non – official members such as sub – inspector of police, doctors, ICDS officers etc. so as to deal with status and dignity of women.

These two grama panchayats with effective support of the Grameena Patana Kendram, Karakulam have evolved their own guidelines for the constitution, structure, functions, powers and mechanism for these two bodies.

They have evolved a mechanism to deal with the individual and institutional or joint petitions, complaints and suggestions on public administration, service delivery and other day to day functions of LSG institutions within the panchayats.

Complaints shall be sorted and registered at the institution level which have to be resolved at the office level itself if it is so possible. Otherwise the same shall be referred to the G-R/DR body at the panchayat level and they shall sit together to hear and dispose of the matters amicably.

In Nellanad Panchayat the Samithy will meet twice in a month and in Karakulam such meeting shall be held fortnightly to deal with matters.

Now these two panchayats are constantly making efforts to develop a panchayat level dispute resolution system known as Grama Nyayalaya with the concurrence of Lok Adalat and Legal Service Authority respectively so as to consider civil dispute of individual citizens and establish a litigation free panchayat under the leadership and guidance of the LSG.

Box 22.9

Identifying Scattered Tribal Families – Through Genealogy Method

An analysis of fund utilization under different projects during 2005-06 reveals that it is very difficult to spent plan outlay under TSP due to non-traceable of tribal people. The Panchayat Committee felt that there exist disparity in the number of Scheduled Tribe families (scattered) in the Panchayat. Hence they decided to seek the support of experts in finding a solution to this. Identification of Scheduled Tribe families through a detailed survey in the area was initiated with the help of an Anthropological expert. The expert made use of ‘**Genealogy method**’, generally used in Anthropological studies. In the beginning, the available list of tribal families at each GP was verified. Then, by using the genealogy method, location of other tribal families in the area was gathered. After identifying all tribal families in the area, their details were gathered using a detailed questionnaire. Then, a panchayat wise settlement map of the Scheduled Tribe families was prepared. The study reveals that there were 137 Scheduled Tribe families in all the six panchayats as against 36 families recorded in official records.

The Panchayat Committee decided to approach Kerala Institute for Research, Training and Development Studies (KIRTADS), Calicut for initiating a verification of these tribal families; since they lack identity certificate to prove their caste. It is expected that this intervention will result in making definite improvement in fund utilization under TSP by the GPs of Ettumanoor Block. This intervention has set up an example for employing Genealogy method for finding out scattered tribal families in several other parts of the state as well.

Box 22.10
A New Approach on Tax Collection Through Grameena Patana Kendram

The rapid urbanization and the increase in the building and professional taxes, which are the main sources of the own resource of the LSGs, has made the tax collection a hectic task for the limited number of functionaries of LSGs. Karakulam Grama Panchayath, a semi urban Panchayath in the outskirts of Thiruvananthapuram city, has come out with a remarkable example of people's participation in own resource mobilization. Financial Standing Committee of the Panchayath took the leading role for the efforts.

November 2006 was declared 'Total Tax Collection Month' by the Panchayath. Creating awareness on tax payment among people was found a necessity. It was decided to mobilize people's support for the campaign and education on tax payment. The assistance of Kudumbashree, women's self help group, in the Panchayath was sought for the same. The discussion on tax payment was held in all the 360 units. Notices for collection of the taxes were distributed by the Kudumbashree members. This attempt paved way for a serious discussion on citizen's duty to pay tax.

The special efforts helped the Panchayath to collect 5 lakhs rupees, which is estimated to be the half of its arrears, within a short period. Now the Panchayath is making an attempt to prepare ward wise '**Tax Payer's Charter**'. The work has partially completed. Once the Charter is ready, it will be made available for **Gramasabhas** to discuss on it.

Local Governments – Sector wise Performance – During – 2005-06

22.24 Total grant-in-aid provided to all the LSGIs in Kerala during 2006-07 is Rs.1396.65 Crore as against an outlay of Rs.1370.65 Crore during 2005-06. Out of this Rs.1370.65 Crore 986.01 Crore (71.94 %) was allocated to General Sector Schemes; 334.47 Crore (24.40 %) was for SCP projects and the renaming 50.17 Crore (3.66 %) was earmarked for TSP Schemes. At the same time the allocation for General Sector schemes during 2006-07 is reduced to 933.15 Crore (66.81 %) while it has increased to Rs.403 Crore (28.85 %) in SCP sector schemes and to TSP Sector the amount is Rs.60.50 Crore (4.33 %) which is an increased allocation from the previous year. The details can be available from Table No.22.4 & 22.9.

22.25 Local Government wise expenditure under General Sector, SCP and TSP during 2005-06 is seen in Table 22.5. Among the local Governments, Municipalities rank first with an expenditure of 88.91 % of their plan outlay and village Panchayats came second (76.02) and the last among them is District Panchayats (54.40 %).

22.26 Table 22.6 shows Sector wise expenditure and its percentage during 2005-06 among different local governments. All local governments spent more in Service Sector followed by infrastructure sector. The percentage of expenditure in Productive Sector by all local government is very low. Against the state average of 16.24 % in Productive Sector it is low as 9.77 % in Municipalities and about 12 % in Corporations, Block Panchayats and District Panchayats. One peculiar feature during 2005-06 is that the LSGI's affinity to expend more plan funds for infrastructure sector has dwindled. None of the local Government has exceeded the maximum stipulated for expenditure in infrastructure sector Local Governments – Budgeted outlay, Release Expenditure and percentage of expenditure is available in Appendix 22.1.

Table 22.4
Budget provision of Grant in aid distributed to LSGs and
its percentage during 2005-06 (Kerala)

(In lakhs)

Sl.No	Type of Local body	General	SCP	TSP	Total
1	District Panchayat	12316.05 (62.45)	5916.77 (30)	1487.97 (7.55)	19720.79
2	Block Panchayat	12266.05 (63.97)	5916.77 (30.86)	991.98 (5.17)	19174.80
3	Municipality	9325.03 (81.36)	2079.84 (18.15)	57.09 (0.50)	11461.96
4	Corporation	7453.98 (80.69)	1783.29 (19.31)	0.00	9237.27
5	Grama Panchayat	57239.89 (73.89)	17750.33 (22.91)	2479.96 (3.20)	77470.18
Grand Total		98601.00 (71.94)	33447.00 (24.40)	5017.00 (3.66)	137065.00*

Source: I.K.M.

*Figure in brackets denotes percentage of distribution

* Besides Rs.435 lakh was kept undistributed for giving awards to best local governments and concurrent monitoring.

Table 22.5
Plan Expenditure by LSGs during the year 2005-2006 (Kerala)

(In lakhs)

Sl.No	Type of Local body	General	SCP	TSP	Total
1	District Panchayat	6752.57 (62.95)	3006.50 (28.03)	968.39 (9.03)	10727.46
2	Block Panchayat	8307.17 (65.43)	3764.62 (29.65)	624.80 (4.92)	12696.58
3	Municipality	8968.30 (88.00)	1203.42 (11.81)	19.56 (0.19)	10191.27
4	Corporation	5000.71 (89.51)	585.95 (10.49)	0.00	5586.66
5	Grama Panchayat	46437.05 (78.85)	10729.05 (18.22)	1725.67 (2.93)	58891.76
Grand Total		75465.80 (76.93)	19289.53 (19.66)	3338.41 (3.40)	98093.74

Source: I.K.M.

* Figure in brackets denotes percentage of expenditure

Table 22.6
Local self government wise and sector wise expenditure of plan grant by LSGs during 2005-06 (Kerala)

(In lakhs)

Sl.No.	Type of Local body	Productive Sector	Service Sector	Infrastructure Sector	Not included in any Sector	Total
1	District Panchayat	1134.40 (12.44)	5859.79 (54.62)	3268.32 (30.47)	264.96 (2.47)	10727.46
2	Block Panchayat	1567.26 (12.34)	6722.59 (52.95)	3185.89 (25.09)	1220.85 (9.62)	12696.58
3	Municipality	995.99 (9.77)	5579.20 (54.74)	3169.41 (31.10)	446.68 (4.38)	10191.27
4	Corporation	671.40 (12.02)	2693.77 (48.22)	1960.95 (35.10)	260.54 (4.66)	5586.66
5	Grama Panchayat	11357.69 (19.29)	32338.58 (54.91)	11441.53 (19.43)	3753.97 (6.37)	58891.76
Total		15926.73 (16.24)	53193.91 (54.23)	23026.09 (23.47)	5947.00 (6.06)	98093.74

Source: I.K.M.

* Figure in brackets denotes percentage of expenditure

Table 22.7
Sector wise Plan Grant Expenditure of Local Governments during the year 2005-2006 (Kerala)

(in lakhs)

Sl.No	Project Category	Productive Sector	Service Sector	Infrastructure Sector	Not included in any Sector	Total
1	General	14726.06 (19.50)	36456.00 (48.31)	18479.98 (24.49)	5803.76 (7.69)	75465.80
2	SCP	1134.64 (5.88)	13689.38 (70.97)	4337.93 (22.49)	127.58 (0.66)	19289.53
3	TSP	66.04 (1.98)	3048.53 (91.32)	208.18 (6.24)	15.66 (0.47)	3338.41
Total		15926.73 (16.24)	53193.91 (54.23)	23026.09 (23.47)	5947.00 (6.06)	98093.74

Source: I.K.M.

* Figure in brackets denotes percentage of expenditure

Table 22.8
Local Self Government wise total plan outlay Expenditure and percentage of expenditure during 2005-06

(In Lakhs)

Sl No.	Type of local body	General			SCP			TSP			Total		
		Budget Provision	Expenditure	% of Expenditure	Budget Provision	Expenditure	% of Expenditure	Budget Provision	Expenditure	% of Expenditure	Budget Provision	Expenditure	% of Expenditure
1	District Panchayat	12316.05	6752.57	54.83	5916.77	3006.50	50.81	1487.97	968.39	65.08	19720.79	10727.46	54.40
2	Block Panchayat	12266.05	8307.17	67.72	5916.77	3764.62	63.63	991.98	624.80	62.99	19174.80	12696.58	66.21
3	Municipality	9325.03	8968.30	96.17	2079.84	1203.42	57.86	57.09	19.56	34.26	11461.96	10191.27	88.91
4	Corporation	7453.98	5000.71	67.09	1783.29	585.95	32.86	0.00	0.00	0.00	9237.27	5586.66	60.48
5	Grama Panchayat	57239.89	46437.05	81.13	17750.33	10729.05	60.44	2479.96	1725.67	69.58	77470.18	58891.76	76.02
Total		98601.00	75465.80	76.54	33447.00	19289.53	57.67	5017.00	3338.41	66.54	137065.00	98093.74	71.57

Source: I.K.M.

Table 22.9
Sector wise distribution of grant in aid to LSGIs and its percentage during the year 2006-07 (Kerala)
(In lakhs)

Sl.No	Type of Local body	General	SCP	TSP	Total
1	District Panchayat	11659.43 (56.65)	7129.07 (34.64)	1794.34 (8.72)	20582.84
2	Block Panchayat	11609.43 (58.24)	7129.07 (35.76)	1196.23 (6.0)	19934.73
3	Municipality	8820.42 (77.40)	2505.99 (21.99)	68.85 (0.60)	11395.26
4	Corporation	7050.08 (76.64)	2148.66 (23.36)	0.00	9198.74
5	Grama Panchayat	54175.64 (68.97)	21387.21 (27.23)	2990.58 (3.81)	78553.43
Total		93315.00 (66.81)	40300.00 (28.85)	6050.00 (4.33)	139665.00*

Source: I.K.M.

Figure in brackets denotes percentage

* Besides Rs.335 lakh was kept undistributed for giving awards to best local governments

Table 22.10
Sector wise total plan grant utilised for preparation of LSGI's Annual Plan 2006-07 and its percentage.

(In lakhs)

Sl.No	Local Body Type	General	SCP	TSP	Total
1	District Panchayat	9470.93 (55.12)	6273.68 (36.51)	1436.88 (8.36)	17181.49
2	Block Panchayat	10992.66 (56.21)	7345.99 (37.56)	1217.11 (6.22)	19555.75
3	Municipality	7589.38 (73.21)	2688.34 (25.93)	88.71 (0.86)	10366.43
4	Corporation	6739.24 (73.66)	2410.14 (26.34)	0.00	9149.38
5	Grama Panchayat	53386.42 (66.75)	23505.98 (29.39)	3092.16 (3.87)	79984.57
Total		88178.63 (64.72)	42224.13 (30.99)	5834.86 (4.28)	136237.62

Source: I.K.M

* Figure in brackets denotes percentage of expenditure

Physical achievements 2005-06

22.27 Physical achievement of Local Governments during 2005-06 in Selected Sectors are analysed below.

22.28 In the state as a whole an area of 17706 hectares of land were brought under cultivation. In agriculture 436925 cultivators received 161202 kgs of pesticides and 3421454 kgs of manures and 679231 kgs seeds distributed under integrated agricultural development programme. Planting materials were distributed to 106876 beneficiaries and 10517 pumpsets also given to farmers. Under removal of diseased coconut trees 1.64 lakh diseased coconut trees have been removed. In animal husbandry 16663 poultry/egg rearing units were started and 10020 cattle sheds were constructed. 419 new industrial units; 2115 micro enterprises, and 2490 self employed units were also started. One peculiar feature is that 390 destitutes and 2816 poor people were assisted to start self employment units. Computer training was given to 160923 persons. 38186 new houses were constructed. Details of physical achievements of Local Governments during 2005-06 are furnished in Appendix 22.2.

22.29 In the Service Sector 5813 drinking water projects and 754 drinking water projects with beneficiary contribution were completed. 689 Auganwadi buildings were newly constructed. Similarly 599 solid waste disposal projects were started.

Modernising Government Programme – LSG Initiatives

22.30 The Government of Kerala began the Modernising Government Programme in 2002 in a Mission mode to bring about basic reforms in the administrative and governance machinery and to improve basic services to the citizens particularly to the poor and the marginalized.

Government recognises that public services have to be delivered in a manner that is people centred, efficient, effective, equitable, affordable, sustainable and accessible to all. Most of the departments and institutions that provide services to the public focus more on the management of various inputs (spending budgetary allocations, distribution and utilisation of physical resources etc) and less on the actual outcomes, results and benefits to the people. It is in this context and in wake of a breakdown in performance of the public system and a poor picture of the fiscal structure that the MGP was designed with the basic objective of, 'All Round Sustainable Development'. The MGP framework revolves around 5 main themes: one of the five themes identified under MGP is building on Decentralisation for Efficient, Effective and Accessible Local Self Governments.

22.31 Those issues which need sustained long-term efforts and inputs have been taken under the umbrella of the MGP general initiatives and tackled in the form of Detailed implementation Plans (DIPs).

22.32 List of General Initiatives under Implementation in LSGD is given below.

- Community Rehabilitation Plans for Physically and mentally challenged
- Spatial Plan with focus on connectivity
- Replication of Best Practices
- New Office Management Systems
- Management Manuals
- Procurement Manual
- Public Works manual for LSGs
- Budgeting and Accounting in LSGs
- Resource mobilisation by LSGs
- Training needs assessment for elected members and officials and action plan with resource requirements produced
- Propagation of holistic waste management systems with emphasis on incentives mechanisms
- Regulation for management of institutional waste change

Service Delivery Project

22.33 The Service Delivery Project is a fast track project covering 22 categories of institutions in 8 Departments. The number of institutions targeted for improvements is 2587. The Service Delivery Project (SDP) seeks to improve the quality of services in 103 Grama Panchayats, 14 municipalities and 5 Municipal Corporations under LSGD. The objective is to make them models in terms of Service Delivery.

22.34 Administrative sanction has been given for Rs.247.998 Crore for implementing Service Delivery Project in 22 categories of Institutions in 8 Departments. An amount of Rs.103.13 Crore have expended under Service Delivery Project during 2005-06 and the cumulative expenditure upto 31st December 2006 is Rs.118.84 Crore.

Asraya – The Destitute Plan

22.35 The destitutes are the poorest of the poor who constitute less than 2% of the total population in any local body.

22.36 They are the outliers of the development Scenario in the negative extreme. They live at the margins of the economy society and polity. They face the worst forms of deprivation and lack of access to the basic minimum services.

22.37 The Government of Kerala through State Poverty Eradication Mission has designed an innovative programme to address the varying problems of the destitute families in the state. The programme is known as 'Ashraya'. At present 391- local self governments-385 Grama Panchayats and 6 municipalities – have prepared projects that benefitting 30192 families at a total cost of Rs.159.27 Crore.

Akshaya

22.38 Akshaya is a programme for bridging the digital divide, promoting digital literacy, connecting communities, providing access points in an effort to establish a knowledge society in Kerala. The project intended to set up around 3000 multipurpose Community Technology Centres across the state. The project has implemented in Eight districts in the state. Around 3.5 lakh people have completed the e-literacy programme and about 1300 Akshaya centres have been set up in Eight districts. Government have announced that Akshaya shall be implemented in the remaining 6 districts also.

Information Kerala Mission

22.39 The Information Kerala Mission (IKM), established in June 1999, for computerising the local bodies in the state had been pursuing one among the most ambitious e-governance programmes in the country. Visualised as a sequel to the decentralised plan campaign which has been acclaimed as one of the most deep-rooted and extensive initiatives in strengthening grassroots level democratisation, the Mission during its initial phase, had put in considerable efforts in building up its perspectives and strategies.

22.40 The starting point of the Mission's programme was an extensive study of the local body systems which helped it formulate an elaborate framework encompassing seven volumes namely plan monitoring systems, systems for accounting and financial management, revenue systems, systems for public services, establishment and general administration systems, statutory systems for local governance, and systems for public works and procurement.

22.41 The object of the mission was to computerise all local governments in the state, which now counts to 1223. This holistic and human centred Information Communication Technology project aimed at strengthening decentralised planning and local democracy through good governance, improved service delivery, sharing of best practices and building up community knowledge bases for decentralised planning and local area development. Participatory software development, developing learner centred, locale specific training and handholding strategies, and networking of local level small and medium enterprises for employment generation and sustenance are components of the project. Today, the IKM provides the much required database support for

better decision making in development projects, offers improved public services and responsive local administration and imparts necessary skills to the community to use Information Communication Technologies (ICT) for transparency, participation and judicious decision-making in several local governments. The project aims at building convergence and synergies with the various other developmental initiatives taken up in the context of decentralisation like 'Akshaya', and Kumbashree. The project strives for strengthening the citizen charters of the local governments and helps them implement the citizen charters for fairness and equal opportunity cutting across barriers of religion, class, creed caste, colour and gender. By helping local government initiatives, promoting holistic resource management perspectives and strengthening local governments it aims at building up sustainability from both economic and environmental point of view.

22.42 The new processes of participatory developmental planning increased the workload of local government personnel substantially. Additional workload of the local government personnel was sought to be balanced by automating various local government processes.

22.43 Decentralisation had created a unique paradox in the matter of expertise. It was at the grass root level that the largest chunk of plan resources was made available for planning and resolution of citizen problems through decentralisation. However the staff in the civil service available at this level were the junior most, who lacked the experience of planning and developmental administration. Building up Expert Support Systems and Decision Support System was looked upon as a possible mechanism for tackling the lack of talent in the short run. The relevance of application of ICT in the context of decentralisation had emerged from these concrete necessities.

22.44 The task of the mission was to arrive at an appropriate choice of Information Communication Technology to meet the multifarious requirements, viz

- (i) Evolving a comprehensive database on participatory planning and monitoring.
- (ii) Simplification of administration to make it more responsive, efficient and citizen friendly.
- (iii) Handling additional workload in local governments without additional manpower.
- (iv) To tackle lack of expertise in developmental planning and administration through Decision Support Systems and Administrative System.

22.45 The mission is actively backed by the 1223 local governments. In Corporations, Municipalities and District Panchayats specific intervention programmes, local body wise were planned as their own projects. Total computerisation in pilot Grama Panchayats were also implemented as local government programmes. Apart from these, state level programmes have also been implemented like:

- (1) Implementation of Janasevanakendrams in 58 urban local governments.
- (2) Implementing hospital kiosks in 182 hospitals in 5 Corporations.
- (3) Fast track programme for computerisation of 53 Municipalities and 5 Corporations.
- (4) Fast track programme for first phase computerisation of 541 Grama Panchayats having computers already.

Services provided

22.46 A scheme of prioritisation for improving the delivery of services offered by local governments to citizens has been done based on parameters like benefits to the citizen, ease in applying Information Communication Technologies to improve service delivery, complexities in management of related services etc. An action plan to improve delivery of these services with commensurate changes in the backend processes has been initiated by the Mission.

22.47 Given the fiscal crisis faced by the state, the local governments would soon start facing serious challenges in finding resources for strengthening their infrastructure as well as in improving public services. Confidence in the service offerings in return of the taxations has to be created to improve local resource mobilisation. This would require quantum leaps in financial management, accountability, service delivery and infrastructure management performance. Devising performance benchmarks, monitoring them and ensuring information flows are critical among these tasks. The mission would have to address these also in their governance tools and information systems.

Capacity Building:- Kerala Institute of Local Administration (KILA)

22.48 Kerala Institute of Local Administration (KILA), an autonomous institute under the Department of Local Self Governments, Govt. of Kerala is the nodal agency of training, research and consultancy in the area of local governance. Apart from training and policy oriented research activities, KILA organizes seminars, workshops and discussions on various issues of local governance and development.

22.49 Apart from training the elected representatives and officials in Kerala, the activities include programmes for participants from other states in India and abroad. The national and international programmes are developed based on the Kerala experience in decentralisation and poverty alleviation.

22.50 The Ministry of Panchayati Raj, Government of India has initiated steps to declare KILA as a SAARC Centre for Local Governance and Development.

22.51 During the last one year, the Institute has diversified its activities from conventional training programmes to a number of other activities like sensitisation of political party leaders, media persons, NGOs, training to N.S.S. programme officers, national and international courses in decentralized governance and poverty reduction, action research programmes, preparation of customer satisfaction surveys, replication of best practices etc.

22.52 KILA has trained a pool of 550 district level trainers to function as extension faculty members in all the districts. An online monitoring system has been devised for the regular monitoring of decentralized training programmes.

22.53 In order to meet the training needs of the functionaries from other Indian states, courses are offered in regional languages as well. With this purpose, KILA has translated several documents on Kerala's decentralisation into English and other regional languages like Hindi, Tamil, Kannada and Bengali.

22.54 During 2005-06 KILA has trained 15168 newly elected members of Grama Panchayat's, 780 presidents of grama panchayats in Decentralised Planning. It has trained 235 implementing officers from LSGI's. Training was imparted to 350 performance auditors and 201 local fund auditors. Trainer's training was given to 90 stakeholders.

22.55 In addition to this specialised training in certificate course to 58 elected representatives of rural local bodies have been conducted. International course in decentralised governance and poverty alleviation to 125 persons; other 90 N.S.S programme officers and 150 media persons have also been conducted. In short KILA is a link between Panchayat Raj Institutions and the government.

Decentralisation Support Programme

22.56 The Decentralisation Support Programme was a project of Local Self Government Department implemented on a mission mode. The project aimed to facilitate the process of institutionalisation of decentralisation initiatives in Kerala. The project was implemented in two phases. During the phase I, the Decentralisation Support Programme documented and analysed the experience of decentralisation in Kerala through literature survey, stakeholder consultation and case studies. The phase II sought to address the needs, concerns and opportunities identified during phase I. The phase II was started in August 2004 and completed in November 2006. The activities taken up under phase II was confined in three main categories namely; (i) Gender and Development issues in Local Governments; (ii) Improving Planning Process in Local Governments for Sustainable and Equitable Management; and (iii) Institutional and Staffing Policy.

22.57 The major Initiatives of the Phase II programme are given below:

Initiative	Outputs
Gender and Development Issues in Local Governments	
1.1 Strengthening Women Component Plan	(i) Identified a pool of State Level Trainers
1.2 Capacity Building for Gender Planning, Gender Budgeting and Gender Auditing.	(ii) Training Module and Hand Book on Women Component Plan (iii) Comprehensive Manual of Gender and Development
2. Improving Planning Process in Local Governments for Sustainable and Equitable Management	
2.1 Planning for Sustainable and Integrated Development and preparation of comprehensive planning manual	(i) Methodology for sectoral planning (ii) Methodology for Stakeholder consultations, Grama Sabha, Working Groups, Development Seminar (iii) Strategy for strengthening District Planning Committees] (iv) Draft Rules for plan formulation by Local Governments
2.2 Management of Educational Institutions	(i) Management Manual for Local Governments (ii) Draft Education Rules for Local Governments
2.3 Action Plan for Micro Enterprises Development	Guidelines for Planning for Micro Enterprises Development in Local Government
2.4 Environmental Implications of Decentralised Governance	(i) State of the Environment Report on selected Local Governments (ii) Guidelines for preparing Bio Diversity Register in Local Governments
2.5 Planning for Disadvantaged Groups	Guidelines for Planning for Disadvantaged Groups
2.6 Evolving Methodology for Grievance Handling in Local Governments	Framework for Grievance Handling in Local Governments

2.7 Asset Management in Local Governments	Asset Registers in all Local Governments
2.8 Developing Framework for Citizen Satisfaction Survey in Local Governments using Citizen Card Methodology	Guidelines and Handbook
2.9 Evolving a scalable model of Local Health Services	Health Plan for selected Local Government
2.10 Compendium of Design Options and Appropriate Technology for Construction	Compendium of Design Options
2.11 Developing a system for forging strategic links with transferred institutions in Grama Panchayats	(i) Handbook (ii) Training Plan
2.12 Developing Guidelines for Linking the Youth with Local Self Government Institutions	Guidelines for Linking Youth with Local Governments
2.13 Extending Jagratha Samithies to all Local Governments	(i) Handbook (ii) Training Plan (iii) Jagratha Samithi established in all Grama Panchayats
2.14 Developing District Level Database for Planning	(i) Database for Local Planning (ii) Guidelines for strategically using data base
2.15 Developing IEC and Training Materials for Integrated Solid Waste Management	(i) IEC Materials (ii) Training Module
3. Institutional and Staffing Policy	
3.1 Staffing Issues	(i) Report on Method Study and Man Power Assessment in 11 Local Governments (ii) Report on Organisation Analysis (iii) Report on Performance Management System (iv) Report on Recruitment, Placement and Promotion Policy (v) Disciplinary Manual
3.2 Multiple Institutions and Schemes	(i) Responsibility Matrix (ii) Source Books on:- (a) R & D Institutions and Local Governments (b) Academic Institutions and Local Governments (c) NGOs and Local Governments (d) Report on Parallel Institutions (iii) Roles and Responsibilities of Elected Representatives (iii) Roles and Responsibilities of Committees

22.58 Besides the above major initiatives, the following management manuals were also prepared. These are in the process of finalization after expert consultation.

- (i) Management Manual for Krish Bhavan
- (ii) Management Manual for Veterinary Institutions
- (iii) Management Manual for Ayurveda Institutions
- (iv) Management Manual for Prematric Hostels
- (v) Procurement Manual for Local Governments
- (vi) Office Management Manual for Urban Local Governments.

CHAPTER 23

SCIENTIFIC SERVICES AND RESEARCH

In consonance with the Science and Technology Policy 2002, several activities of the erstwhile STEC have been revamped, several new programme initiated and a few more are on the anvil. The programmes directly implemented by the Council Head Quarters are primarily intended towards promotion and popularisation of Science and Technology, both fundamental and applied research, primarily along the Academic and R & D institutions in Kerala. The key strategy will be to identify focussed areas and target groups to ensure maximum beneficitation.

23.2 The Council interfaces with the Government in implementing the Science policy of the Government. The main functions of the State Council are:

- Plan, formulate and implement the Science and Technology Promotion and other related programmes
- Provide overall guidance to the programmes and the development of R & D centres of the Council
- Disburse the grant – in – aid funds from the Government and sponsoring agencies to R & D centres and other grant –in – aid institutions

23.3 The six R & D centres functioning under the Council have specific objectives. The Kerala Forest Research Institute (KFRI) is established to undertake research in areas like Forestry, biodiversity etc., that are vital to the development of the Kerala State. The Center for Water Resources Development and Management (CWRDM) was established by recognising the need for catering to the R& D needs in the filed of water management. The Centre for Earth Science Studies (CESS) is established to promote modern scientific and technological research and development studies in earth sciences. CESS pursues multidisciplinary approach in problems related to land, sea and atmosphere, Research & Development activities in basic and applied fields, User training and academic programs, Consultancy, Science popularization. The Rajiv Gandhi Centre for Biotechnology (RGCB) is exclusively devoted to Biotechnology, focusing precisely on transnational research. The Centre has a Regional Facility for Genetic Fingerprinting, which provides DNA analysis services for forensic & criminal investigations, paternity disputes, identification of wild life remains, authentication of plants and seeds besides a battery of molecular diagnostics for genetic and infectious diseases. RGCB is also a major provider of laboratory and infrastructure services to other academic and research institutions. National Transportation Planning and Research Centre (NATPAC) is undertaking research and consultancy works in the fields of traffic engineering and transportation planning, highway engineering, public transport system, inland water transport, tourism planning, rural roads, environmental impact assessment and transport energy. Tropical Botanic Garden and Research Institute (TBGRI) is established with the vision of Conservation and sustainable utilization of the plant biodiversity of India, particularly of Kerala for the well being of people.

23.4 The activities of the Council as well as R & D centres and the achievements made during the year2006 are detailed below.

1. Achievements Of Council Headquarters

23.5 The major programmes and projects of Council Headquarters are given below:

1.1 Engineering & Technology Programmes (ETP)

23.6 ETP is to encourage and promote research talents in the field of engineering and technology and to bring out high quality research projects.

23.7 Research Council for Engineering and Technology programmes was constituted during February 2006 and its first meeting had considered seven proposals and four out of these were approved in principle

1.2 Grass root Innovations Augmentation Network (GIAN) / Rural Technology Programme (RTP)

23.8 This scheme envisages promoting and augmenting innovations, resulting in technological advancements in our State. A Technical Committee is constituted to oversee the proposals under GIAN/RTP. Financial assistance is offered to the innovators to perfect their technologies. The Ist meeting of the Committee has considered sixteen proposals and thirteen out of these were approved in principle, subject to norms

1.3 Science Popularization Programmes

23.9 The Scheme is launched with the objective to provide technical and financial support for the implementation of project / programmes which are focused to popularize science and technology.

23.10 The activities under Science Polarization are as follows:

1. National Science/Technology Day Celebrations 2006
2. Science Literature Award
3. Scheme for Promotion of Young Talents in Science (SPYTiS)
4. Promotions S&T Seminar / Symposia / Workshop
5. Science Popularization Project

1.4 Patent Information Centre, Kerala (PIC)

23.11 KSCSTE has established Patent Information Centre, Kerala functioning as the Satellite Centre for Patent Facilitating Centre for TIFAC, Government of India. It aims to increase the Intellectual property output of the State. The following are the achievements during the 2006.

- Organized 3 workshops on Intellectual Property Rights, in different parts of the States
- Received 16 applications for patent filling. Database search was carried out to prove the novelty and taking into consideration the novelty and usefulness, 9 out of these were sent to Patent Facilitating Centre for further procedures
- Answered 200 queries related to Intellectual Property Rights from Public
- Financial grant was released to Kerala Agricultural University for the implementation of the project entitled 'Documentation & Characterization of Palakkadan Matta Rice as GI
- Organized 3 workshops on Intellectual Property Rights awareness at Thiruvananthapuram, focussing the students, faculty, scientists etc
- Conducted 3 workshops on intellectual Property Rights awareness an Thiruvananthapuram, focussing the students, faculty, scientists etc.
- Conducted 3 workshops on Geographical Indications at Ernakulam and Idukki, targeting the farmers and grass root innovators
- Patent Information Centers Kerala received 9 patent applications for patent filling. In order to prove the novelty, patent database search was

carried out. Three out of these were sent to Patent Facilitating Centre, TIFAC for patent filling procedures

- Answered more than 50 queries on Intellectual Property Rights from public. Brochure on Patent Information Centre, Kerala is distributed freely in the workshops and for the visitors to PIC
- Malayalam booklet on Intellectual Property Rights is prepared and printing procedures are progressing. Also more copies of brochure on PIC, Kerala is published.

1.4 Environment and Ecology Programme

23.12 Research Committee on Ecology and Environment Organized two meetings of Research Committee on Ecology and Environment during the year 2005-06 and financial assistance were provided for taking up nine R & D projects.

- **World Environment Day:** World Environment Day 2006 was inaugurated by the Hon'ble Chief Minister Shri. V.S. Achuthanandan and released the book on 'Impact of Tsunami in the Kerala Coast'
- **International Day for Preservation of Ozone Layer:** 16th September The State Council has observed the day by organizing the programme at Government College, Kasaragod and University of Cochin during 2006.
- **Water Quality Monitoring Project:** The Council has initiated the programme on Water Quality Monitoring in 3 river basins in different agroclimatic regions

1.6 State of Environment Reporting (SoER) – I & II Phase

23.13 The Ministry of Environment and Forests, Government of India has launched a scheme during the 10th Five-year Plan to assist State Governments to bring out on a regular basis a status report on the environment in their respective states. The first phase was completed in 2005-06 with the following topics (a) Air Quality and Noise Levels. (b) Climatic Changes and Ozone Depletion, (c) Water Resources (d) Marine and Coastal Environment, (e) Solid, Hazardous and Biomedical Wastes, (f) Nature and Biodiversity etc are covered in the report. The report has been released on 5th June 2005 by the Hon'ble Chief Minister, Government of Kerala.

23.14 The II phase consists of report on (1) Land Environment, (2) Wetlands (3) Corporate Environment, (4) Environment Health and (5) Natural Hazards. The indicators on the subjects covered in I phase will also be brought out during 2006-07.

1.7 ENVIS Centre

23.15 The Minister of Environment and Forests has sanctioned a project to the Kerala State Council for Science, Technology and Environment (KSCSTE) for setting up to ENVIS (Environment Information System) Centre.

1.8 Implementation of National Green Corps Programme in the State

23.16 The Ministry of Environment and Forests has selected Kerala State Council for Science, Technology and Environment (KSCSTE) as the Nodal agency for implementation of NGC programmes in the state. The KSCSTE has implemented the programme in 2100 schools in 2005-06 with the financial assistance of Rs. 12,24,800/- . The programme will be implemented in another 1400 schools during 2006-07.

23.17 The Council has trained the teachers –in-charge of eco clubs (NGC programme) in all the schools where it is implemented.

1.9 Science Research Scheme

23.18 In tune with Science Education and research Centre (SERC) of Department of Science and Technology (DST) council has implemented SRS – Science Research Scheme for promotion of R & D activities in the State both in fundamental and applied research. An expert committee called ‘Research Council for Science and Engineering’ (RCSE) has been constituted to review and recommend projects for funding. More than 250 SRS projects were approved and grant is released during Xth Plan.

1.10 Selective Augmentation of R & D Activities (SARD)

23.19 In tune with FIST programme of DST, Council has implemented a Selective Augmentation of R & D activities (SARD) to strengthen S&T infrastructure primarily in the university departments, colleges and R & D institutions. SARD envisages modernization of laboratories by way of acquisition of essential equipments and the upgrading of existing facilities for teaching as well as R & D activities. Altogether 22 laboratories / departments were augmented under this scheme so far:

1.11 Sastraposhini

23.20 Sastraposhini is a programme aimed towards strengthening of science education in the schools of Kerala. During the pilot phase of two years, one model laboratory each in Physics, Chemistry and Biology has been set up in one school in every educational district of the state. Sastraposhini model laboratories were established in 108 Government High Schools in the State including the entire Government High Schools of Palakkad district.

1.12 KSCSTE Research Fellowship

23.21 KSCSTE had implemented Research Fellowship Programme in the year 2002, to do research work leading to Ph.D. in the eleven disciplines – Agricultural Science, Biotechnology, Chemical Sciences, Earth System Sciences, Engineering Sciences, Environmental Sciences, Life Sciences, mathematical Sciences, Physical Sciences, Taxonomy – Botany and Taxonomy – Zoology. The first five rank holders in M.Sc / M. Tech programme alone are eligible to apply for a total of 24 fellowships available every year. The following amount is in par with that of the national agencies.

2. Research and Development Institutions

2.1 Centre for Earth Science Studies (CESS)

23.22 CESS, an autonomous Research institute was constituted by Government of Kerala in 1978 to promote and establish modern scientific and technological research and development studies in earth sciences. CESS pursues multidisciplinary approach in problems related to land, sea and atmosphere, Research & Development activities in basic and applied fields, User training and academic programmes, Constancy, Science popularization etc.

23.23 In order to cater to the R & D activities in the thrust areas identified by CESS such as studies on geodynamics, natural management, hazard management, natural resources management, environmental studies, integrated coastal zone and climate studies, R&D laboratory infrastructure facilities are being upgraded. To undertake sophisticated analysis of geologic, water and air samples for studies in geodynamics, placer deposits, pollution and biogeochemistry, Cloud physics and seismology coastal laboratories are being upgraded.

23.24 The following are the major programmes / projects undertaken by CESS during 2006.

1. Geodynamics and Crustal evolution

23.25 To study the Paleomagnetism and Geochemistry of different location of the country and to understand the protozoic geodynamic evolution of southern granulite terrain

2. Natural hazard management

23.26 To study the natural hazards like earthquakes, landslides, lightning and coastal erosion.

3. Natural Resources Management

23.27 Natural resources evaluation at the level of natural regions like river basins and watersheds and administrative units like district and panchayat.

4. Integrated coastal zone management

23.28 Study the coastal process and systems and evolve integrated coastal zone management plan (ICZMP) for locations of Kerala and Lakshadweep island.

5. Environmental Studies

23.29 Evaluation of different environmental systems of Kerala and to conduct Environment Impact Assessment (EIA) studies of selected development activities.

6. Establishment of Sophisticated Analytical Facility (SAF)

23.30 To establish modern geoscientific analytical facilities

2.2 Centre For Water Resources Development And Management (CWRDM)

23.31 Recognising the need for catering to the R & D needs in the field of water management, the Centre for Water Resources Development and Management (CWRDM) was established as an autonomous research organisation by the Government of Kerala, under its Science and Technology Policy in February 1978.

23.32 During the period under report, 30 small research schemes, 13 large research schemes, 17 externally funded projects and 8 transfer of technology schemes of relevance to Kerala were carried out at CWRDM. Around 25 research papers were published.

Major Projects

23.33 The 13 major research projects utilizing the Plan funds are being implemented under the following major areas

- Standardizing practices for soil and water conservation for the humid tropics
- Urban hydrology with special reference to the midland region
- Management of water resources in the coastal belt
- Estimation of spatial and temporal water availability in typical river basins of Kerala
- Plans for Integrated management of wetlands
- Water quality monitoring and modeling
- EIA of select water resources projects

23.34 The 17 externally funded projects are being implemented under the following major areas of study:

- Hydrology of small watersheds in the semi-arid and humid tropical zones
- Evolving models for participatory irrigation management
- Application of isotope techniques for detecting seepage in dam structures and migration of pesticide
- Bacteriological contamination of ground water vis – a- vis poor sanitation in residential areas

2.3 National Transportation Planning And Research Centre (NATPAC)

23.35 NATPAC undertakes Research & Development, project Planning and Extension activities in the areas of Traffic and Transportation. It has the unique distinction of working in multi-modal system of transportation covering road, rail, water, seaport and airport. It offers technical advice and implementable solutions to traffic and transportation problems of different regions. It has a regional Centre at Kozhikode, which undertakes R & D programmes and extension activities in the northern parts of Kerala.

23.36 Broad area of activities of NATPAC include Urban Transport Planning, Rural Roads Planning, Highway Engineering Traffic Engineering and Management, Inland Water Transport, Road Safety Training and Extension programmes. The thrust areas of research are:

- Transport Infrastructure Development
- Use of locally available materials for road construction
- Road Safety
- Inland Water Transport System

23.37 The following are the studies/programmes conducted during the year 2006:

- Safe Road to School – An action plan for promoting Road safety among school children
- Development of Hill highway in Kerala – Selection of alignment for phase II from Palakkad to Thiruvananthapuram districts
- Study of Benefits of streamlining of Pedestrian Flows on Busy Roads
- Impact of Digging by Public Utility Departments on Urban Roads – A Case Study of selected roads in Thiruvananthapuram city
- Evaluation of traffic management measures in urban centres using GIS technique
- Study on navigability of feeder canals in Kerala (Kollam – Trivandrum Region)
- Suitability of locally available materials for Road Construction in Kerala – use of waste plastics
- Suitability of locally available materials for Road Construction in Kerala – use of coir
- Waste and rice husk ash for subgrade soil stabilization
- Computerized inventory of Roads at Panchayath level
- Periodic updation of Price Index for Stage Carriages Operation in Kerala
- Pavement Maintenance Management System for Selected Roads in Kerala – Phase II
- Implementation of Road safety action plan – pre and post campaign studies
- Installation and supervision of tourism signages in Thiruvananthapuram district
- Refresher Training course for heavy vehicle drivers in unorganized sector in Kerala
- Traffic studies for developing Ponani Port in Malappuram district

- Development of waterway between Ezhimala and Neeleswarm
- Revival of TS canal in Varkala Region
- Biannual traffic census for National Highways in Kerala
- Study of Rubber Modified Bitumen for road Construction in Kerala
- Destination development plan for Vagamon in Kerala
- Traffic studies and Engineering surveys for 5 city Corporation in Kerala under Kerala Sustainable Urban Development Projects
- Traffic and Transportation Plan for Kochi City
- Comprehensive Tourism Signage Scheme for Kerala
- Extension activities in Road Safety education and awareness programme for various target groups in the State

2.4 Rajiv Gandhi Centre For Biotechnology (RGCB)

23.38 Rajiv Gandhi Centre for Biotechnology (RGCB) is undoubtedly Kerala's flagship for Biotechnology Research & Development. Its vision is to translate biotechnology to deliver improvement in human health and well being, safer and more globally competitive spices & nutraceuticals, industrial growth through biotechnology and Human resource development

23.39 **Research Programs:** The major research programmes include

- Bioprospecting for anticancer, anti viral, anti microbial, nutraceutical bioactive molecules from the rich biodiversity of Kerala
- Cancer Vaccines against specific cancers such as cervical carcinoma caused by human papillomavirus will help in successful prophylaxis against one of the most prevalent cancers among Indian women
- Clinical Proteomics program aims to identify protein based diagnostics for clinical diseases; Nanobiotechnology for development of specific drug delivery systems for treating diseases using nano particles
- Protein Engineering program utilizes synthetic and combinatorial chemistry based methods for developing novel peptide antigen for diagnostics
- Programs in Infectious Diseases including molecular biology of tuberculosis, viral hepatitis & cholera, strains of TB.
- Programme in Neurobiology
- Programme in stemcell biology
- Programme in genetic Epidemiology of diseases in tribal populations
- Programmes in genetic Engineering of Plants
- Programmes in Molecular Endocrinology
- Programmes in Molecular Reduction
- Visiting scientists programme to encourage interested scientists of eminence who are working elsewhere to bring in projects and conduct research activities

2.5 Tropical Botanic Garden and Research Centre (TBGRI)

Objectives

- To advance knowledge, enjoyment and conservation of plants through excellence in biodiversity research management, horticultural displays and educational programmes.
- To do research on all aspects of plant science, to facilitate sustainable utilization of plant wealth.

Achievements during 2005-2006

- 72 research projects, funded by international agencies and State Government Departments such as the Kerala Forest Department, State Planning Board, State Biodiversity Board and Thenmala Eco-Tourism Promotion Council were in operation during the period. Besides the externally funded projects, 60 in-house programmes/projects funded by Kerala State Council for Science, Technology and Environment (KSCSTE) were also implemented.
- Over 550 accessions belonging to trees, medical plants, palms, bamboos, orchids, ferns etc. were introduced to the Garden during 2005.
- Beautification activity of the garden and landscaping of new areas continued
- During this period, 10 bamboo offsets were planted. A bamboo museum was established.
- 90 species of medicinal and aromatic plants were added. Landscaping and beautification of Itty Achuthen Vaidyan Garden was completed. Initiated development of a Model Medicinal Garden, supported by Botanic Garden Conservation International
- Succeeded in seed cryopreservation of 13 Western Ghats orchids. Seed biology studies on 7 endemic species completed. Hairy root culture was established in *Decalepis aryalpathra* and *Ophiorrhiza mungos* for bio-production of plant specific compounds. Molecular characterisation was carried out for analysis of genetic diversity. Commercial Tissue culture Unit focussed on mass production of in vitro generated plants. Anthuriums, Vanilla, Banana, and *Nepenthus* were multiplied.
- Bioinformatics unit developed a web portal site for Department of Biotechnology, Government of India. It also developed two databases on Micro fungi and Sacred Groves.
- As a part of the ongoing project on Mushroom Flora of Western Ghats, 2200 collections were added. 5 genera, 80 species and 15 varieties of micro fungi were described as new to science. Studies on antimicrobial property of 20 medicinal plants were carried out. 15 possible edible mushrooms were identified and sent to CFTRI for further analysis. Conducted eight training and extension programmes for popularizing mushroom cultivation and over 750 persons got training through these programmes.
- 6 species of flowering plants were described as new to science. 3 new records for the country and 10 rediscoveries were also made. 2350 specimens were accessioned to the herbarium. Taxonomic studies on climbers were initiated. The project on rescue and restoration of endemic medicinal plants was completed. Over 7000 seedlings of 15 endemic plants were restored in 6 Medicinal Plant Conservation Areas inside Western Ghat forests. Construction of the new Herbarium building is almost completed.
- A study on the preparation of status report of RET species of Western Ghats was initiated. Reproductive biology of *Thottea barberi* was initiated. Database on Biosphere Management of Nilgiri and Gulf of Mannar Biosphere were completed. Work on preparation of database for Agasthyamala Biosphere was initiated.
- Completed the chemical investigation and prepared monographs on standards for 4 important medicinal plants.
- Conservation biology studies on the rare tree species of Western Ghats were continued. A comprehensive volume on Flowering Plants of Kerala was completed.
- One patent was filed. A novel process for sustainable production of bamboo seeds through combined in vitro flowering and ex vitro seeding.

2.6. Kerala Forest Research Institute (KFRI)

23.40 KFRI undertakes research in areas like forestry, biodiversity, wildlife management, wood science and technology, etc. which are vital to the development of Kerala State, KFRI's mission is to provide technical support to facilitate scientific management and utilization of forests for social benefits. It envisages to:

- Conduct inter/multidisciplinary research on priority areas of tropical forestry, including wildlife management, socio-economics, indigenous knowledge, value addition of forest products, participatory forest management and livelihood improvement of forest dwellers by scientific management of forest resources.
- Provide technical advice and solution to practical problems related to forest conservation, rehabilitation of degraded forests, productivity improvement, conservation and sustainable utilization of forest resources and environmental health through quality research, extension and training for overall economic prosperity of the State.
- Disseminate knowledge and information in forest related matters to end-users, farmers and general public and transfer of technology to stakeholders for social benefits.

Achievements

23.41 During the period, the information and technologies pertaining to pest and disease management in Eucalyptus were transferred to the Kerala Forest Department. A simple and economical technology developed for increasing the service life of Bamboo used as a prop in the banana plantations was transferred to farmers. Another major achievement was the transfer of technology for the preservation and value addition of canes through oil curing technology which was highly economical was transferred to stakeholders in Kerala as well as the North Eastern states, as most of the canes were imported from the north eastern states into Kerala.

2.7. Kerala School of Mathematics

23.42 Kerala School of Mathematics (KSM) is a joint initiative of Department of Atomic Energy (DAE), Government of India and Kerala State Council for Science, Technology and Environment (KSCSTE).

23.43 The main objective of the institute is to promote Mathematical research in the country and in particular Kerala. The School will be the meeting ground for Mathematicians from home and abroad with a core group specializing in select areas. The main activities will be doctoral and post doctoral research in Mathematics with advanced level thematic workshops. The Academic programmes are expected to commence next year.

3. Kerala State Pollution Control Board

23.44 Kerala State Pollution Control Board is functioning under Government of Kerala in the Health and Family Welfare Department but receives assistance from the S & T Departments for its scientific programmes. The main achievements of the Kerala State Pollution Control Board during the X plan period are as follows

- Special thrust was given to strengthening of the Board. Board established District Offices at Idukki, Wayanad and Kasaragod and thus the Board now has Offices in all districts
- Power to issue /renew clearance to all green category industries has been delegated to the Heads of District Offices
- Action has been taken to speed up and issue, within 15 days, consent of the Board for establishing new industrial units
- For the benefits of entrepreneurs the procedure for obtaining Board's consent is being simplified by integrating the different applications and clearances of the Board
- Board has been able to improve waste management in hospitals by brining about 1500 hospitals under the ambit of the Bio-Medical Wastes (Management and Handling) Rules. A common Bio-medical Waste Treatment Facility could be got implemented at Palakkad by Indian Medical Association for disposal of bio-medical wastes generated in hospitals

- Board could resolve pollution problems through technical advice in respect of Phillips Carbon Black Limited, Merchem Limited, Cochin Mineras and Rutlies Limited and Hindustan Newsprint Limited. Effective steps have been taken against the Hindustan Coca-Cola Limited which was disposing hazardous waste improperly
- Network of stations for monitoring quality of ambient water and ambient air has been strengthened and the various parameters are being constantly monitored from these stations spread through out the State
- A Model plant for collection , treatment and disposal of municipal solid waste is being set up at Kozhikode with technical and financial assistance of the Board. The Board is giving full support and co-operation to the activities of the Clean Kerala Mission
- An amount of Rs. 18.45 crore has been released by the Government of India to the Government of Kerala for cleaning Pamba River and this is based on the Action Plan prepared by the Board
- Training programmes on scientific disposal of hazardous wastes, municipal wastes and bio-medical wastes were organized for the benefit of user agencies and general public
- In compliance with the Supreme Court Order a common hazardous waste Treatment Storage and Disposal Facility (common TSDF) is being got established at Ambalamugal, Kochi for the disposal of hazardous waste generated in the State
- Scheme is under preparation to clean up Kuzhikandam thodu at Eloor which has been contaminated by Industrial wastes. Supply of drinking waster to residence along the Kuzhikandam thodu is entrusted to Kerala Water Authority (with Water from FACT) for which the Board has paid an advance of Rs. 35 lakhs.
- Arrangements were made to supply drinking water to residents around Kerala Minerals and Metals Limited, Kollam, Hindustan News Print Limited, Kottayam, Binami Zinc, Ernakulam and Hindustan Coca-coal Beverages Limited, Palakkad
- Environmental Surveillance Centre at District Office Level has started functioning at Udyogamandal to give special attention to pollution control in the Eloor-Edayar Industrial belt.
- An environmental awareness campaign called “ paristhitheeyam” has been launched.

4. Regional Cancer Centre, Thiruvananthapuram

23.45 Regional Cancer Centre, Thiruvananthapuram was established in the year 1981 as an institution registered under the TC Literary Scientific and Charitable Societies Registration Act 1955. It is one of the Regional Cancer Centres sponsored and formed jointly by the Government of India and Government of Kerala. It also receives financial assistance from S & T Department for its developmental programmes. Patients from all over the state and from adjoining areas are referred to Regional Cancer Centre for treatment. The number of newly registered cancer patients annually comes to 10000.

23.46 Existing facilities of RCC

- Inpatient bed strength is 300
- For providing special care to incurable patients, a palliative care unit is functioning in the centre
- The top – floor of the multistoried building is set apart for scientific and research activities. The research laboratories occupy an area of 15000 sq. Ft.
- A library with local area network & digital library with internet access is available
- There is an active cancer registration programme, which provides data on cancer pattern and trends which are useful for cancer control activities and cancer treatment
- With the assistance of Government of India a telemedicine net work had been set up

CHAPTER 24

GOVERNANCE

Governance is an exercise of economic, political and administrative authority to manage a country's affairs at all levels. It is a compound of mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences.

Box 24.1 Governance

Etymologically, governance can be traced back to the Greek verb 'Kubernan' (to pilot or steer) and was used by Plato with regard to how to design a system of rule. The Greek term gave rise to the medieval Latin ' gubernare', which has the same connotation of piloting, rule making or steering. The term has been used as synonymous with Government, as the definition in the concise Oxford Dictionary implies. Here, governance is 'the act or manner of governing; the office or function of governing'. To govern is ' to rule or control with authority; to be in Government'.

Source: ' Governance', Author: Anne Mette Kjaer.

24.2 Good Governance means providing opportunities and proper delivery of goods and services to the people in a fair, just, effective, responsible and open way. Among other things, Good Governance has transparency and accountability. Transparency is openness in the laws, rules and procedures and the decision-making processes of Government and its public institutions. Accountability means Government and its institutions must be duty bound to honestly account to the public and the media, in relation to their performance in carrying out their responsibilities. The National Planning Commission, in the Approach to the 11th Five Year Plan, emphasises on improving Governance. For, all our efforts to achieve rapid and inclusive development will come to naught, if we cannot ensure good governance both in the manner public programmes are implemented and in the way of government interacts with the ordinary citizen. The document is of the view that corruption is now seen to be endemic in all spheres and this problem needs to be addressed urgently. It re-iterates that better design of projects and implementation mechanisms and procedures can reduce the scope for corruption. The centre and the states need to reduce the discretionary power of the government, ensure greater transparency and accountability and create awareness among citizens.

24.3 The Right to Information Act empowers the people to demand improved governance. Quick and inexpensive dispensation of justice is an aspect of good governance which is of fundamental importance in a successful civil society. The legal system in India is respected for its independence and fairness but it suffers from notorious delays in dispensing justice. Delays result in denial of justice. Delays cost money and therefore it is difficult for the poor in India to affirm justice. Fundamental reforms are needed to give justice two attributes; speed and affordability.

24.4 Draft Approach Paper for Kerala's XI Plan is of the view that a major hurdle to progress is the quality of plan administration and plan implementation. Administrative delays, duplication of projects and schemes, the insertion of ever increasing numbers of layers between the initial

spending authority and the ultimate beneficiary, an insatiable demand for quite avoidable “studies” and training programmes” before the launching of any public project and a perpetual tendency to repackage the existing schemes into more and more apparently novel innovations which only create confusion all around constitute formidable obstacles to any meaningful planning.

24.5 The Task Force on Government Spending formulated for XI Five Year Plan of Kerala, in their draft report cites the complex administrative structures and procedures involved, as a reason for shortfall in Government Spending. The procedures involved in implementation of the schemes are very complex and often resulted in delays. For instance, departments need to get administrative sanction before starting of any scheme. In many cases, there is delay in applying for administrative sanction and further delay in receiving it. In quite a few cases administrative sanction is issued close to the end of the financial year. Similarly, there is sometimes delay in obtaining and printing the utilisation certificate even though the funds have actually been utilised. This results in delay in release of subsequent installments of funds. This is not a problem of Kerala, it afflicts the country as a whole. A way out of it must be found if planning is to serve its basic objectives. The need for carrying out reforms in the administrative system to make it serve the people better cannot be over emphasised.

24.6 Good governance and strong institutions are necessary to foster economic growth. The efficiency and effectiveness of institutions depends, in turn, on their adopted delivery mechanism and the supportive framework of rules and procedures each of which has to work in harmony with the other to discharge the functions for which the institutions have been created.

24.7 Government of Kerala gives much importance to governance reform. Basic objective of reforms is to help Government overhaul and improve its services to the people of the state. The governance initiatives of the State Government will be keeping in line with the recommendations of the Administrative Reforms Commission. An important feature of governance reform in the State is the thrust given to devolution of powers, responsibilities and resources to the Local Governments. Another area of priority will be that of E-governance.

E-Governance

24.8 Electronic Governance or Digital Governance is the effective use of Information Technology (IT) to improve the system of Governance that is in place and thus provide better services to the citizens. Introduction of E-Governance is considered as a high priority agenda in India, as it is the only means of taking Information Technology to the 'common Public'. Developments in E-Governance provide opportunities to harness the Power of Information Technology to make the business of Governance inexpensive, qualitatively responsive and truly encompassing.

24.9 Digital Governance is a popular term to focus on the new, evolving forms of Governance – Electronic Governance. Good Governance rests on the pillars of knowledge by the decision-makers. Digitisation of this entire set of knowledge within a network which links every individual including decision makers and gives democratic freedom to everyone to access and make use of this knowledge paves the way for Digital Governance. The widening use of Information and Communication Technology is leading to distributed knowledge and power structures. It is changing. It is changing the political scenes as it is reshaping democracy and the way citizens interact with the Government. With the emergence of pro-active knowledge societies, Governments will have no choice but to constantly improvise to bring in greater efficiency, accountability and transparency in their functioning. E-Governance is part of the

Government's policy for social inclusion, part of its strategy to enhance information technology and to help enhance people's lives.

Box 24.2
Emerging Digital Economy

Development economy has witnessed industrial Revolution, Agricultural Revolutions (Green-foodgrain White-milk, Yellow-edible oil, blue-fish and now rainbow), Information Technology Revolution and Bio-Technology Revolution. Information Technology and BioTechnology have now become the "drivers" of globalisation of the economy with their complementarities of liberalisation, privatisation and tighter intellectual property rights. Developments in Information Technology are bringing about a second Industrial Revolution but the drivers are information, data, computers and connectivity and not iron and coal as it used to be earlier. A global economic transformation is now intensifying and leading to a rapid economic growth. Unlike ,most developing countries, India is expected to gain from the "emerging digital economy" , as it has

- (a) affordable access to core information resources, cutting edge technology and too sophisticated telecommunication systems and infrastructure.
- (b) The capacity to build, operate, manage and service the technologies involved.
- (c) Policies that promote equitable public participation in the information society as both producers and consumers of information and knowledge.
- (d) A work-force trained to develop, maintain and provide the value-aided products and services required by the information economy.

Source: Planning Commission's Working Group on "Convergence and E-Governance", 10th Five Year plan.

24.10 Draft approach paper to Eleventh Five Year Plan of India reiterates the importance of Information Technology in the development of the economy. The paper is of the view that the Information and Communication Technology revolution has made it easy to provide services all over the world and Indian Professionals have made a mark in many fields leading India to being recognised all over the world as an important player in the knowledge economy. India has attained a large share of the offshore market in this area with a 65% share of global offshore Information Technology Services and 46% of global business process offshoring industry. This was made possible by an unparalleled export performance with annual growth rate of 28% over a decade. The scope for future expansion continues to be large as only 10% of the potentially addressable global Information Technology market has been realised. The remaining 90% of the global potential market of approximately \$300 billion still remain to be realised.

24.11 E-Governance is one of the spheres where Government of Kerala focus thrust. The initiatives of the Government is for transparency, speed and correctness in governance resulting in improved quality of life of the common man. Computerisation is underway in a majority of the State Government Department.

Box 24.3
E-Governance is beyond the Scope of e-government.

While e-government is defined as a mere delivery of Government Services and information to the public using electronic means, e-governance allows direct participation of constituents in Government activities.

E-Governance is not just about Government website and e-mail. It is not just about service delivery over the Internet. It is not just about digital access to Government information or electronic payments. It will change how citizens relate to Governments as much as it changes how citizens relate to each other. It will bring forth new concepts of citizenship, both in terms of needs and responsibilities.

Source/: www.iadb.org/ict4dev/governance.htm.see

FRIENDS

24.12 FRIENDS Janasevenakendrams are currently operational in all the district head quarters of the state with a single window 'no queue' integrated remittance centre where the citizens can pay utility payments to the Government under one roof at no extra cost.

D.C. Suite

24.13 Pilot phase of DC Suite was launched in District Collectorate, Palakkad on 26th October 2004. DC Suite is an integrated suite of applications for the Collectorate. 21 Functional areas have been identified including workflow based File Management System, Public Grievances Monitoring System and Revenue Recovery Management etc. Following Palakkad, Ernakulam and Kannur Commissioned the suite recently. In all other Collectorates Work is in progress.

Smart Move

24.14 The Motor Vehicles Department has implemented a software-namely 'Smart Move' that enables them to offer test on any working day, issue of license immediately on passing the test and selection of the test date by the applicant. It avoids scope of manipulation and helps in accurate tax and fee calculation.

TRIMS

24.15 In order to streamline the working of all treasuries the E-Governance Project TRIMS is implemented in the state. All activities from bill submission to payment can be done in a speedy manner.

THOZHIL

24.16 This project of Employment Exchanges provides for online renewal of registration, addition of experience certificate, search for vacancies etc.

PEARL

24.17 This is a package implemented in the Registration Department, that provides for automation of Sub Registrar Offices, registration of document within 15 minutes, computerised encumbrance certificates, stamp duty and fee worked out automatically, prevention of loss and damage of document etc.

SWIFT

24.18 This is a system of a common application form designed for all the certificates issued from Taluk Offices.

AIMS

24.19 The automated software AIMS used for monitoring agriculture resources by Directorate of Agriculture.

AKSHAYA

24.20 This project in the Universal e-literacy programme piloted in Malappuram District during 2002-03. The project involves setting up of around 5000 multi-purpose community technology centres called Akshaya-e-Kendras across the state. Each e-Kendra caters to the requirements of around 1000-3000 families. The wireless broadband connectivity infrastructure that has been established at the Akshaya-e-Kendras has enabled the provision of several value added e-services to the common man. The project that started in the district of Malappuram has now been rolled out to all other districts.

Treasury Network

24.21 All treasuries in Kerala are inter connected using Dial up Net working. The network is used for data transfer from treasuries to the Directorate where a Central Database Server, Web Server and a router are established. The daily transaction data received from all the treasuries are consolidated in the Central Server and the data is made available in the internet through the network made from Directorate to Data Centre at Co-Bank Towers. There is a plan for connecting all the treasuries through Wide Area Network and for setting a Centralised Server for budgetary allocation, control and monitoring of funds and for centralised data base for savings bank/deposits, ATM facility etc. Other Major initiatives in the state include e-pay, Information Kerala Mission (IKM), Sec. WAN K-BASE, Citizen's Call Centre, IT @ School, KISSAN, e-Krishi, Collaborative Content Management, Tele medicine, Education Grid etc.

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Appendix 3.1
Gross Domestic Product at Factor Cost - All India
1999-2000 to 2005-06

(Rs. crore)

Year	At Current Prices			At Constant Prices (1999-2000)		
	Amount	% change	Per Capita GDP (Rs)	Amount	% change	Per Capita GDP (Rs)
1999-2000	1792292		17905	1792292		17905
2000-01	1930184	7.69	18942	1870387	4.36	18355
2001-02	2097446	8.67	20207	1978055	5.76	19056
2002-03	2255574	7.54	21380	2052586	3.77	19456
2003-04	2543396	12.76	23704	2226041	8.45	20746
2004-05*	2843897	11.81	26091	2393671	7.53	21960
2005-06**	3209397	12.85	28992	2595339	8.43	23445

Source: - Central Statistical Organisation

*- Quick Estimates

** - Revised Advance Estimate

Appendix 3.2
Net Domestic Product at Factor Cost - All India,
1999-2000 to 2005-06

(Rs. crore)

Year	At Current Prices			At Constant Prices (1999-2000)		
	Amount	% change	Per Capita NDP (Rs)	Amount	% change	Per Capita NDP (Rs)
1999-2000	1605643		16040	1675643		16040
2000-01	1727452	7.59	16952	1675632	4.36	16444
2001-02	1876285	8.62	18076	1775951	5.99	17109
2002-03	2019972	7.66	19147	1841931	3.72	17459
2003-04	2286826	13.21	21312	2004703	8.84	18683
2004-05*	2549139	11.47	23387	2158718	7.68	19805
2005-06**	2885310	13.19	26064	2349311	8.83	21222

Source: - Central Statistical Organisation

*- Quick Estimates

** - Revised Advance Estimate

Appendix 3.3
Gross National Product at Factor Cost - All India

Year	At Current Prices			At Constant Prices (1999-2000)		
	GNP (Rs.Crore)	% change	Per Capita GNP (Rs.)	GNP (Rs. Crore)	% Change	Per Capita GNP (Rs.)
1999-2000	1776861		17751	1776861		17751
2000-01	1907451	7.3	18718	1847842	4.1	18134
2001-02	2077378	8.9	20014	1957384	5.9	18857
2002-03	2238884	7.8	21221	2033781	3.9	19278
2003-04	2525146	12.8	23533	2208196	8.6	20580
2004-05*	2825981	11.9	25926	2376729	7.6	21804
2005-06**	3182949	12.6	28753	2571310	8.2	23227

Source: Central Statistical Organisation

* Quick Estimate

** Revised Advance Estimate

Appendix 3.4
Net National Product at Factor Cost -

Year	At Current Prices			At Consta
	NNP (Rs.Crore)	% change	Per Capita NNP (Rs.)	NNP (Rs. Crore)
1999-2000	1590212		15886	1590212
2000-01	1704719	7.2	16729	1653087
2001-02	1856217	8.9	17883	1755280
2002-03	2003282	7.9	18988	1823126
2003-04	2268576	13.2	21142	1986858
2004-05*	2531223	11.6	23222	2141776
2005-06**	2858862	12.9	25825	2325282

Source: Central Statistical Organisation

* Quick Estimate

** Revised Advance Estimate

All India**nt Prices (1999-2000)**

% Change	Per Capita NNP (Rs.)
	15886
4.0	16223
6.2	16910
3.9	17281
9.0	18517
7.8	19649
8.6	21005

Appendix 3.5

Gross Domestic Product (Kerala) at Factor Cost by Industry of Origin from 1999-00 to 2005-06 (At Current Prices)

(Rs. Lakh)

Sl. No	Industry of Origin	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
							Provisional	Quick
1	2	3	4	5	6	7	8	9
1	Agriculture	1227625	1059796	1063077	1161179	1272149	1407869	1477897
2	Forestry and Logging	122446	124183	135883	129467	144239	133886	130224
3	Fishing	152648	155234	161836	146996	149058	181422	248196
4	Mining and Quarrying	14290	19852	19185	19964	20758	21876	23112
	Sub Total: Primary	1517009	1359065	1379981	1457606	1586204	1745053	1879429
5	Manufacturing	666673	703530	683061	733902	819054	868067	917035
5.1	<i>Registered</i>	396969	406715	386250	408701	453728	470992	489339
5.2	<i>Un-registered</i>	269704	296815	296811	325201	365326	397075	427696
6	Electricity, Gas & Water Supply	113309	167416	187143	184649	219996	263039	296553
6.1	<i>Electricity</i>	103979	155158	172810	166962	197965	236315	263665
6.2	<i>Gas</i>	1251	1322	1542	1888	2238	2592	3068
6.3	<i>Water Supply</i>	8079	10936	12791	15799	19793	24132	29820
7	Construction	619458	761798	791859	908122	1213290	1414509	1670733
	Sub Total : Secondary	1399440	1632744	1662063	1826673	2252340	2545615	2884321
8	Transport, Storage & Communication	593602	682254	757769	829902	958737	1074893	1191903
8.1	<i>Railways</i>	36271	34579	38016	45249	49045	55079	60035
8.2	<i>Transport by other means</i>	433688	502507	532680	581134	654882	718559	792735
8.3	<i>Communication</i>	118754	139960	181899	198270	249518	295833	333196
8.4	<i>Storage</i>	4889	2208	5174	5249	5292	5422	5937
9	Trade, Hotel & Restaurants	1492556	1546410	1648087	1868646	2133734	2440638	2793005
10	Banking and Insurance	319748	348730	428254	550743	594672	610092	696773
11	Real estate ownership, Business, legal	514891	632798	722673	818224	928606	1070558	1218792
12	Public Administration	343606	346900	349008	407126	430965	454065	479399
13	Other Services	631648	676347	697295	748386	803078	849949	912817
	Sub Total: Tertiary	3896051	4233439	4603086	5223027	2849792	6500195	7292689
	Gross State Domestic Product	6812500	7225248	7645130	8507306	9688336	10790863	12056439
	Mid Year Population('000)	31432	31699	31968	32357	32711	33072	33425
	Per capita Income (Rs.)	21674	22793	23915	26292	29618	32628	36070

Source : Department of Economics & Statistics

Appendix 3.6
Gross Domestic Product (Kerala) at Factor Cost by Industry of Origin
for the Years From 1999-00 to 2005-06 (At Constant Prices)

Base year 1999-2000

(Rs. Lakh)

Sl.No	Industry of Origin	1999-2000	2000-01	2001-02	2002-2003	2003-04	2004-05	2005-06
							Provisional	Quick
1	2	3	4	5	6	7	8	9
1	Agriculture	1227624	1233404	1227179	1233367	1195510	1259708	1271239
2	Forestry and Logging	122446	118340	124750	133502	146691	146637	146623
3	Fishing	152648	149746	154723	153429	154532	153553	144184
4	Mining and Quarrying	14290	13043	12573	12894	13320	13857	14547
	Sub Total: Primary	1517008	1514533	1519225	1533192	1510053	1573755	1576593
5	Manufacturing	666673	681491	650861	681425	720030	716881	728836
5.1	Registered	396969	393973	368043	379478	398435	389151	389266
5.2	Un-registered	269704	287518	282818	301947	321595	327730	339570
6	Electricity, Gas & Water Supply	113309	162164	178288	171416	193148	217032	235248
6.1	Electricity	103979	150297	164663	155024	173840	194965	209153
6.2	Gas	1251	1280	1466	1750	1961	2140	2434
6.3	Water Supply	8079	10587	12159	14642	17347	19927	23661
7	Construction	619458	692544	720757	813775	1081066	1219465	1422739
	Sub Total : Secondary Sector	1399440	1536199	1549906	1666616	1994244	2153378	2386823
8	Transport, Storage & Communication	593602	669997	743116	817794	931286	1039056	1155598
8.1	Railways	36271	35470	37107	42494	44748	47989	50818
8.2	Transport by other means	433688	480805	506779	532719	574702	613566	652497
8.3	Communication	118754	148740	194344	237887	307329	373002	447548
8.4	Storage	4889	4982	4886	4694	4507	4499	4735
9	Trade, Hotel & Restaurants	1492556	1474897	1546546	1663929	1812509	2018011	2229791
10	Banking and Insurance	319748	341660	387224	478646	475783	520740	575573
11	Real estate ownership, Business, Legal	514891	605430	685662	742385	803542	893807	985652
12	Public Administration	343606	331644	328850	363408	366311	377036	383918
13	Other Services	631648	649600	664384	683700	701708	722628	749432
	Sub Total: Tertiary	3896051	4073228	4355782	4749862	5091139	5571278	6079964
	Gross State Domestic Product	6812499	7123960	7424913	7949670	8595436	9298411	10043380
	Population ('000)	31432	31699	31968	32357	32711	33072	33425
	Per capita Income (Rs.)	21674	22474	23226	24569	26277	28116	30048

Source : Department of Economics & Statistics

Appendix 3.7
Net Domestic Product (Kerala) at Factor Cost by Industry of Origin
for the Years from 1999-2000 to 2005- 06 (At Current Prices)

(Rs. Lakh)

Sl.No	Industry of Origin	1999- 2000	2000- 01	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
							Provisional	Quick
1	2	3	4	5	6	7	8	9
1	Agriculture	1180006	1011434	1017766	1112642	1220926	1351181	1418390
2	Forestry and Logging	121613	123277	134919	128441	143133	132852	129218
3	Fishing	138406	140450	145249	128471	127462	150684	206144
4	Mining and Quarrying	11203	15855	15230	16763	17295	16954	17912
	Sub Total: Primary	1451228	1291016	1313164	1386317	1508816	1651671	1771664
5	Manufacturing	573897	600834	562054	606284	680206	721980	763596
5.1	Registered	332270	334960	298606	316560	354923	368428	382779
5.2	Un-registered	241627	265874	263448	289724	325283	353552	380817
6	Electricity, Gas & Water Supply	63514	108928	102720	130987	153356	183592	207130
6.1	Electricity	57699	100446	94085	117835	137251	164093	183170
6.2	Gas	1251	1322	1542	1888	2238	2592	3068
6.3	Water Supply	4564	7160	7093	11264	13867	16907	20892
7	Construction	602437	741763	771498	885336	1187397	1384322	1635078
	Sub Total : Secondary	1239848	1451525	1436272	1622607	2020959	2289894	2605804
8	Transport, Storage & Communication	425196	497007	560889	622643	733066	821916	911608
8.1	Railways	25623	22661	25711	32268	34091	37165	40292
8.2	Transport by other means*	312674	369236	394698	431108	491703	539513	595207
8.3	Communication	82104	100145	135774	154454	204116	242004	272568
8.4	Storage	4795	4965	4706	4813	3156	3234	3541
9	Trade, Hotel & Restaurants	1467394	1518706	1617945	1837289	2099147	2401076	2747731
10	Banking and Insurance	315556	344088	422888	544301	587535	601934	687465
11	Real estate ownership, Business, legal	413256	521911	596226	680022	775131	893622	1017357
12	Public Administration	300821	301241	303126	340119	358634	377857	398939
13	Other Services	590133	630694	645492	690917	739082	782218	840076
	Sub Total:Tertiary	3512356	3813647	4146566	4715291	5292595	5878623	6603176
	Net State Domestic Product	6203432	6556188	6896002	7724215	8822370	9820188	10980644
	Population('000)	31432	31699	31968	32357	32711	33072	33425
	Per capita Income (Rs.)	19736	20683	21572	23872	26971	29693	32852

Source : Department of Economics & Statistics

Appendix 3.8
Net Domestic Product (Kerala) at Factor Cost by Industry of Origin for the years from
1999-2000 to 2005-06 (At Constant Prices)

Base year 1999-2000

(Rs. lakh)

Sl. No	Industry of Origin	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
							Provisional	Quick
1	2	3	4	5	6	7	8	9
1	Agriculture & Allied Activities	1180005	1185819	1184400	1188961	1150190	1212998	1224102
2	Forestry and Logging	121613	117445	123841	132563	145708	145648	145634
3	Fishing	138406	135544	139710	136665	135541	132038	123982
4	Mining and Quarrying	11203	9169	8953	10048	10338	9704	10187
	Sub Total: Primary	1451227	1447977	1456904	1468237	1441777	1500388	1503905
5	Manufacturing	573897	583891	541414	567909	600912	599130	609836
5.1	Registered	332270	325958	288692	297146	312558	305275	305365
5.2	Un-registered	241627	257933	252722	270763	288354	293855	304471
6	Electricity, Gas & Water Supply	63514	105597	101135	123694	135810	152584	165426
6.1	Electricity	57699	97452	92815	111420	121704	136493	146426
6.2	Gas	1251	1280	1466	1750	1961	2140	2434
6.3	Water Supply	4564	6865	6854	10524	12145	13951	16566
7	Construction	602437	673556	702289	793333	1058319	1193806	1392803
	Sub Total : Secondary	1239848	1363044	1344838	1484936	1795041	1945520	2168065
8	Transport, Storage & Communication	425136	493290	561701	629550	730337	819481	1002277
8.1	Railways	25623	23970	25462	30578	32572	35549	38075
8.2	Transport by other means*	312674	354571	379805	395831	427003	455879	484805
8.3	Communication	82104	109997	151971	198837	268127	325423	476629
8.4	Storage	4795	4752	4463	4304	2635	2630	2768
9	Trade, Hotel & Restaurants	1467394	1448676	1519210	1635822	1782743	1984870	2193172
10	Banking and Insurance	315556	337256	382369	472903	469628	514172	568389
11	Real estate ownership, Business, legal	413256	498710	572843	622597	676541	752540	829868
12	Public Administration	300821	287046	286222	303001	303035	311907	317601
13	Other Services	590133	605848	617058	632269	646903	666189	690900
	Sub Total: Tertiary	3512356	3670826	3939403	4296142	4609187	5049159	5602207
	Net State Domestic Product	6203431	6481847	6741145	7249315	7846005	8495067	9274177
	Population('000)	31432	31699	31968	32357	32711	33072	33425
	Per capita Income (Rs.)	19736	20448	21087	22404	23986	25687	27746

Source : Department of Economics & Statistics

Appendix 3.9
Districtwise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2003-2004 (at Current Prices)

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IKI	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	92485	92485	68569	50886	123780	105843	103807	85997	102662	134085	91849	55847	83707	80145	1272149
2	Forestry and Logging	6650	10861	20701	0	1086	34797	1083	13819	18172	13793	5520	10508	6500	750	144239
3	Fishing	9912	29439	358	28410	1088	51	18617	18662	2191	7672	25280	12	6693	672	149058
4	Mining and Quarrying	1117	1034	444	693	747	247	2103	1509	1198	2279	3714	305	4060	1308	20758
	Sub Total: Primary	110164	133819	90072	79989	126701	140938	125610	119987	124223	157829	126363	66672	100960	82875	1586204
5	Manufacturing	102903	37546	9734	48670	36155	19468	264211	77873	104294	36155	40327	6953	31983	2781	819054
5.1	Registered	57005	20799	5392	26962	20029	10785	146364	43139	57775	20029	22340	3852	17718	1541	453728
5.2	Unregistered	45898	16747	4342	21709	16126	8683	117847	34734	46519	16126	17987	3101	14266	1240	365326
6	Electricity, Gas & Water supply	38094	20615	10623	18349	19670	17514	26186	19848	13825	7676	15951	1482	7009	3153	219996
6.1	Electricity	30784	19698	9938	16787	18173	17342	23142	18351	13204	6612	13996	1326	5939	2673	197965
6.2	Gas	230	193	97	164	149	85	223	214	180	211	197	49	170	75	2238
6.3	Water Supply	7080	724	588	1397	1348	87	2821	1283	441	853	1758	107	901	406	19793
7	Construction	130186	77529	37005	72797	69036	22931	228220	128851	66974	94637	134675	14074	100096	36277	1213290
	Sub Total : Secondary	271183	135690	57362	139817	124862	59913	518616	226572	185093	138468	190953	22509	139089	42212	2252340
8	Transport, Storage & Communication	122444	75684	46326	65633	66550	15494	164988	99502	57033	73521	83158	9195	53577	25631	958737
8.1	Railways	4502	4296	368	3355	2987	0	4708	3482	7327	5037	4380	0	4257	4345	49045
8.2	Transport by other means	86450	52719	31633	45777	41149	9275	117445	67433	36457	55561	59288	5844	32482	13369	654882
8.3	Communication	31015	18140	14272	15919	21409	6113	42094	28370	12825	12601	19437	3144	16393	7785	249518
8.4	Storage	476	529	53	582	1005	106	741	217	423	323	53	206	445	132	5292
9	Trade, Hotel & Restaurants	200358	156403	62732	150002	144667	50143	271198	237271	163657	171552	227883	33713	187555	76601	2133734
10	Banking and Insurance	61192	37108	34015	41211	46979	19803	86168	63689	46147	36870	46801	13202	40616	20873	594672
11	Real estate ownership, business & legal	104004	82460	43552	68253	61009	39280	93696	87939	74939	80324	76981	22751	62495	30923	928606
12	Public Administration	102397	36503	19092	29263	31762	7154	46501	33443	28401	23358	33874	5042	27883	6292	430965
13	Other Services	71344	57783	37009	50316	50171	34617	76470	76152	59159	93811	73837	19368	72647	30394	803078
	Sub Total:Tertiary	661738	445940	242725	404677	401139	166491	739022	597996	429335	479437	542534	103270	444774	190714	5849792
	GSDP	1043086	715449	390159	624483	652702	367341	1383249	944557	738651	775733	859849	192452	684823	315801	9688336
	Mid year Population('000)	3324	2655	1265	2163	2006	1160	3183	3057	2689	3729	2957	808	2479	1236	32711
	Per capita Income (Rs.)	31380	26947	30843	28871	32537	31667	43457	30898	27469	20803	29078	23818	27625	25550	29618

Population are based on the reports of Census and Department of Economics & Statistics

Appendix 3.10

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2003-2004 (at Constant Prices)

Base Year 1999-2000

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	87272	86794	64438	48538	115964	98390	98032	81773	96956	126246	86196	52483	77708	74719	1195510
2	Forestry and Logging	6763	11046	21053	0	1104	35388	1102	14054	18481	14027	5613	10686	6610	763	146691
3	Fishing	10276	30520	371	29454	1128	53	19301	19347	2272	7954	26209	12	6938	697	154532
4	Mining and Quarrying	717	663	285	445	480	159	1349	968	769	1463	2383	196	2605	839	13320
	Sub Total: Primary	105028	129023	86146	78436	118676	133990	119784	116143	118477	149689	120401	63377	93862	77018	1510053
5	Manufacturing	90462	33006	8557	42786	31784	17114	232268	68458	91685	31784	35451	6112	28117	2445	720030
5.1	Registered	50058	18264	4735	23676	17588	9470	128527	37882	50735	17588	19617	3382	15559	1353	398435
5.2	Unregistered	40404	14742	3822	19110	14196	7644	103740	30576	40950	14196	15834	2730	12558	1092	321595
6	Electricity, Gas & Water Supply	33439	18101	9327	16110	17271	15379	22989	17427	12139	6739	14004	1301	6153	2768	193148
6.1	Electricity	27032	17297	8727	14742	15959	15228	20322	16115	11595	5806	12290	1165	5215	2347	173840
6.2	Gas	202	169	85	144	131	75	195	188	157	185	173	43	149	65	1961
6.3	Water Supply	6205	635	515	1225	1181	76	2472	1124	387	748	1540	94	789	356	17347
7	Construction	115998	69080	32973	64864	61513	20432	203349	114809	59675	84323	119998	12540	89188	32324	1081066
	Sub Total : Secondary	239899	120187	50857	123760	110567	52926	458605	200694	163499	122846	169454	19954	123458	37537	1994244
8	Transport, Storage & Communication	118580	72978	45720	63337	66061	15759	159839	97482	54836	69149	80011	9177	52960	25398	931286
8.1	Railways	4108	3920	336	3061	2725	0	4296	3177	6685	4596	3996	0	3884	3965	44748
8.2	Transport by other means	75866	46264	27760	40172	36111	8140	103066	59177	31993	48758	52029	5129	28505	11732	574702
8.3	Communication	38201	22343	17579	19608	26369	7530	51846	34943	15797	15520	23941	3872	20192	9589	307329
8.4	Storage	406	451	45	496	856	90	631	185	361	275	45	176	379	113	4507
9	Trade, Hotel & Restaurants	170195	132857	53288	127419	122888	42594	230370	201551	139019	145726	193576	28638	159320	65069	1812509
10	Banking and Insurance	48958	29689	27215	32972	37587	15844	68941	50956	36921	29499	37444	10562	32496	16700	475783
11	Real estate ownership, business & legal	89997	71355	37686	59060	52793	33990	81077	76095	64846	69506	66614	19687	54078	26758	803542
12	Public Administration	87035	31027	16228	24873	26997	6081	39525	28426	24140	19854	28792	4286	23700	5348	366311
13	Other Services	62339	50489	32337	43965	43838	30248	66818	66539	51692	81970	64517	16923	63477	26557	701708
	Sub Total:Tertiary	577104	388393	212473	351626	350164	144515	646570	521050	371453	415703	470953	89273	386031	165831	5091139
	GSDP	922031	637604	349477	553822	579408	331431	1224960	837887	653430	688239	760808	172604	603351	280386	8595436
	Mid year Population('000)	3324	2655	1265	2163	2006	1160	3183	3057	2689	3729	2957	808	2479	1236	32711
	Per capita Income (Rs.)	27739	24015	27627	25604	28884	28572	38484	27409	24300	18456	25729	21362	24338	22685	26277

Population are based on the reports of Census and Department of Economics & Statistics

Appendix 3.11

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the year 2004- 05 (at Current Prices) (Provisional)

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	108124	110940	77151	56596	145292	114319	116008	97565	119669	127131	91652	79545	94609	69267	1407869
2	Forestry and Logging	6173	10082	19215	0	1008	32299	1006	12828	16868	12803	5123	9753	6033	696	133886
3	Fishing	11587	34592	495	34180	1384	49	22787	23828	3532	8636	32202	13	7495	642	181422
4	Mining and Quarrying	1177	1089	468	731	788	260	2216	1590	1262	2402	3914	322	4279	1378	21876
	Sub Total: Primary	127061	156703	97329	91507	148472	146927	142017	135811	141331	150971	132892	89632	112415	71984	1745053
5	Manufacturing	109061	39793	10317	51583	38319	20633	280022	82533	110535	38319	42740	7369	33897	2948	868067
5.1	Registered	59174	21590	5598	27988	20791	11195	151933	44780	59974	20791	23190	3998	18392	1599	470992
5.2	Unregistered	49887	18202	4719	23595	17528	9438	128089	37752	50561	17528	19550	3371	15505	1348	397075
6	Electricity, Gas & Water Supply	45646	24620	12692	21933	23510	20906	31322	23718	16508	9178	19079	1770	8384	3772	263039
6.1	Electricity	36747	23513	11863	20040	21694	20701	27625	21906	15762	7893	16707	1583	7089	3190	236315
6.2	Gas	267	223	113	190	173	99	258	248	208	245	229	57	197	87	2592
6.3	Water Supply	8632	883	717	1704	1643	106	3439	1564	538	1040	2143	130	1098	495	24132
7	Construction	15177	90387	43143	84871	80486	26734	266069	150221	78081	110332	157010	16408	116697	42294	1414509
	Sub total : Secondary	306484	154799	66152	158387	142314	68274	577413	256472	205124	157828	218830	25547	158979	49013	2545615
8	Transport, Storage & Communication	137172	84719	52097	73466	74917	17533	184819	111759	63870	81890	93070	10352	60313	28914	1074893
8.1	Railways	5056	4825	413	3767	3354	0	5288	3911	8229	5657	4919	0	4781	4880	55079
8.2	Transport by other means	94856	57845	34708	50228	45150	10177	128865	73990	40002	60963	65052	6413	35641	14669	718559
8.3	Communication	36772	21507	16922	18874	25382	7248	49907	33636	15206	14940	23045	3727	19436	9230	295833
8.4	Storage	488	542	54	596	1030	108	759	222	434	331	54	211	455	136	5422
9	Trade, Hotel & Restaurants	229176	178899	71755	171577	165475	57355	310205	271399	187197	196227	260660	38562	214532	87619	2440638
10	Banking and Insurance	62778	38070	34897	42279	48197	20316	88402	65341	47343	37826	48014	13544	41669	21414	610092
11	Real estate ownership, business & legal	119902	95066	50209	78686	70336	45285	108019	86394	86394	92603	88749	26229	72049	35650	1070558
12	Public Administration	107886	38459	20115	30831	33465	7537	48994	29923	29923	24610	35690	5313	29378	6629	454065
13	Other Services	75508	61155	39169	53253	53099	36638	80934	80596	62612	99286	78147	20498	76887	32168	849949
	Sub Total: Tertiary Sector	732423	496368	268243	450092	445489	184664	821373	665712	477339	532443	604330	114497	494828	212394	6500195
	GSDP	1165968	807870	431724	699986	736275	399865	1540802	1057995	823795	841242	956052	229677	766222	333391	1.1E+07
	Mid year Population('000)	3361	2684	1279	2187	2029	1172	3218	3091	2718	3770	2990	817	2506	1250	33072
	Per capita Income (Rs.)	34691	30099	33755	32007	36288	34118	47881	34228	30309	22314	31975	28112	30575	26671	32628

Populations are based on the report of Census and Department of Economics & Statistics

Appendix 3.12
District wise Distribution of Gross State Domestic Product and Per Capita Income of
Kerala at Factor Cost by Industry of Origin for the year 2004-2005 (at Constant Prices)(Provisional)

Base Year 1999-2000

(Rs.Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IDK	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	97123	99769	69032	51270	129246	101029	104178	87550	107579	114507	82007	71048	83645	61726	1259708
2	Forestry and Logging	6760	11042	21045	0	1104	35375	1101	14049	18474	14022	5611	10682	6608	763	146637
3	Fishing	9807	29278	419	28929	1172	41	19286	20168	2990	7309	27256	11	6343	544	153553
4	Mining and Quarrying	746	690	297	463	499	165	1404	1007	800	1521	2479	204	2710	873	13857
	Sub Total: Primary	114437	140779	90793	80662	132020	136610	125969	122774	129843	137360	117353	81944	99306	63905	1573755
5	Manufacturing	90067	32862	8520	42599	31645	17040	231252	68158	91284	31645	35296	6086	27994	2434	716881
5.1	Registered	48892	17839	4625	23124	17178	9250	125533	36999	49552	17178	19160	3303	15196	1321	389151
5.2	Unregistered	41175	15023	3895	19475	14467	7790	105719	31159	41731	14467	16136	2782	12798	1113	327730
6	Electricity, Gas & Water Supply	37665	20313	10472	18097	19398	17248	25844	19570	13620	7573	15742	1461	6918	3112	217032
6.1	Electricity	30317	19399	9787	16533	17898	17079	22791	18073	13004	6512	13784	1306	5849	2632	194965
6.2	Gas	220	184	93	157	143	82	213	205	172	202	189	47	162	71	2140
6.3	Water Supply	7128	729	592	1407	1357	88	2840	1291	444	859	1770	108	907	409	19927
7	Construction	130849	77924	37194	73168	69388	23048	229381	129507	67314	95118	135361	14146	100606	36462	1219465
	Sub total : Secondary	258580	131099	56186	133864	120430	57336	486477	217235	172219	134336	186399	21692	135518	42008	2153378
8	Transport, Storage & Communication	132170	81164	51378	70464	74334	17919	178198	109181	60859	76095	88934	10351	59483	28527	1039056
8.1	Railways	4405	4204	360	3282	2923	0	4607	3407	7170	4928	4285	0	4165	4252	47989
8.2	Transport by other means	80996	49393	29637	42889	38553	8690	110036	63179	34157	52055	55547	5476	30433	12525	613566
8.3	Communication	46364	27117	21336	23798	32004	9139	62925	42410	19172	18837	29057	4700	24506	11638	373002
8.4	Storage	405	450	45	495	855	90	630	184	360	274	45	175	378	112	4499
9	Trade, Hotel & Restaurants	189491	147920	59330	141866	136821	47423	256489	224403	154781	162248	215524	31885	177383	72447	2018011
10	Banking and Insurance	53584	32494	29786	36087	41138	17341	75455	55771	40409	32286	40982	11560	35567	18278	520740
11	Real estate ownership, business & legal	100106	79370	41920	65695	58723	37808	90185	84644	72130	77314	74097	21898	60153	29764	893807
12	Public Administration	89584	31935	16703	25601	27788	6259	40682	29258	24847	20435	29635	4411	24394	5505	377036
13	Other Services	64197	51994	33301	45276	45145	31149	68810	68523	53233	84413	66440	17428	65369	27349	722628
	Sub Total: Tertiary	629133	424877	232417	384989	383949	157899	709820	571779	406259	452792	515612	97533	422349	181870	5571278
	GSDP	1002150	696755	379395	599515	636399	351844	1322266	911788	708320	724488	819365	201169	657173	287783	9298411
	Mid year Population('000)	3361	2684	1279	2187	2029	1172	3218	3091	2718	3770	2990	817	2506	1250	33072
	Per capita Income (Rs.)	29817	25960	29663	27413	31365	30021	41090	29498	26060	19217	27403	24623	26224	23023	28116

Population are based on the reports of Census and Department of Economics & Statistics

Appendix 3.13

District-wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2005-06 at Current Prices (Quick Estimate)

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IKI	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSKD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	112911	116754	80693	57638	153258	121188	121927	99906	126065	132715	96063	85718	100201	72860	1477897
2	Forestry and Logging	6004	9806	18689	0	980	31416	978	12477	16407	12452	4983	9487	5868	677	130224
3	Fishing	15182	45537	774	46065	1968	55	31248	34070	6329	10896	45966	15	9382	710	248196
4	Mining and Quarrying	1243	1151	495	772	832	275	2341	1680	1334	2538	4135	340	4521	1456	23112
	Sub Total: Primary	135341	173247	100651	104475	157038	152933	156494	148133	150134	158601	151147	95559	119972	75704	1879429
5	Manufacturing	115213	42037	10899	54493	40480	21797	295818	87188	116770	40480	45151	7785	35810	3114	917035
5.1	Registered	61479	22431	5816	29078	21601	11631	157851	46525	62310	21601	24093	4154	19108	1662	489339
5.2	Unregistered	53734	19606	5083	25415	18880	10166	137966	40664	54460	18880	21058	3631	16701	1452	427696
6	Electricity, Gas & Water Supply	51982	27590	14255	24689	26440	23345	35377	26668	18498	10381	21560	1994	9500	4273	296553
6.1	Electricity	41000	26235	13236	22359	24204	23097	30822	24442	17586	8806	18641	1767	7910	3559	263665
6.2	Gas	316	264	133	225	205	117	306	294	246	290	271	67	233	102	3068
6.3	Water Supply	10667	1091	886	2105	2031	131	4249	1932	665	1285	2648	161	1357	611	29820
7	Construction	179270	106760	50957	100244	95065	31577	314265	177432	92224	130317	185451	19381	137835	49955	1670733
	Sub total : Secondary	346465	176387	76111	179426	161985	76719	645460	291288	227492	181179	252162	29160	183145	57342	2884321
8	Transport, Storage & Communication	152110	93892	57860	81431	83183	19510	204972	124018	70702	90610	103144	11504	66921	32046	1191903
8.1	Railways	5511	5259	450	4106	3656	0	5763	4262	8969	6166	5361	0	5211	5319	60035
8.2	Transport by other means	104648	63816	38291	55413	49811	11228	142168	81628	44131	67256	71768	7075	39320	16183	792735
8.3	Communication	41416	24223	19059	21258	28588	8163	56210	37884	17126	16826	25956	4198	21891	10396	333196
8.4	Storage	534	594	59	653	1128	119	831	243	475	362	59	232	499	148	5937
9	Trade, Hotel & Restaurants	262263	204727	82114	196348	189366	65636	354991	310582	214223	224558	298293	44129	245505	100269	2793005
10	Banking and Insurance	71698	43479	39855	48286	55045	23203	100962	74624	54070	43200	54836	15468	47590	24457	696773
11	Real estate ownership, business & legal	136505	108229	57161	89581	80075	51555	122976	115420	98357	105426	101038	29860	82025	40586	1218792
12	Public Administration	113905	40605	21237	32551	35332	7958	51727	37201	31592	25983	37681	5609	31017	6999	479399
13	Other Services	81093	65678	42066	57192	57026	39348	86920	86558	67243	106630	83927	22014	82574	34547	912817
	Sub Total:Tertiary	817574	556611	300294	505389	500027	207208	922549	748403	536186	596407	678919	128586	555631	238904	7292689
	GSDP	1299380	906245	477057	789290	819050	436860	1724503	1187824	913813	936187	1082228	253305	858748	371950	12056439
	Mid year Population ('000)	3397	2713	1293	2210	2050	1185	3254	3123	2747	3810	3022	826	2532	1263	33425
	Per capita Income(Rs.)	38251	33404	36895	35714	39954	36866	52996	38035	33266	24572	35812	30666	33916	29450	36070

Population are based on the reports of Census and Department of Economics & Statistics

Appendix 3.14

District wise Distribution of Gross State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin for the Year 2005-06 (at constant prices) (Quick Estimate)

Base Year 1999-2000

(Rs. Lakh)

Sl.No	Industry of Origin	TVM	KLM	PTA	ALPA	KTM	IKI	EKM	TSR	PLKD	MLPM	KKD	WYD	KNR	KSD	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Agriculture & Allied Activities	97504	100936	69283	50214	131065	102589	105640	86317	109072	115047	82503	73732	84919	62418	1271239
2	Forestry and Logging	6760	11041	21043	0	1104	35372	1101	14048	18473	14021	5611	10681	6607	763	146623
3	Fishing	11145	32441	216	28419	880	159	17403	11218	822	10208	20272	29	9185	1788	144184
4	Mining and Quarrying	783	724	311	486	524	173	1474	1058	839	1597	2602	214	2845	916	14547
	Sub Total: Primary	116192	145143	90853	79118	133572	138293	125618	112640	129206	140873	110989	84656	103556	65885	1576593
5	Manufacturing	91569	33410	8662	43309	32173	17324	235108	69295	92806	32173	35885	6187	28460	2475	728836
5.1	Registered	48906	17844	4626	23131	17183	9253	125570	37010	49567	17183	19166	3304	15201	1322	389266
5.2	Unregistered	42662	15566	4036	20178	14990	8071	109539	32285	43239	14990	16719	2883	13260	1153	339570
6	Electricity, Gas & Water Supply	41237	21886	11308	19585	20974	18519	28064	21155	14674	8235	17103	1582	7536	3390	235248
6.1	Electricity	32523	20811	10499	17736	19200	18322	24450	19388	13951	6986	14787	1401	6275	2824	209153
6.2	Gas	250	210	106	178	162	93	242	233	195	230	215	53	185	81	2434
6.3	Water Supply	8464	866	703	1670	1611	104	3372	1533	528	1020	2101	128	1077	485	23661
7	Construction	152660	90913	43394	85364	80954	26890	267617	151095	78535	110974	157924	16504	117376	42540	1422739
	Sub total : Secondary	285466	146209	63364	148259	134100	62732	530790	241545	186015	151382	210912	24273	153372	48405	2386823
8	Transport, Storage & Communication	146857	89989	57546	78161	83393	20301	198060	121876	67299	83467	98521	11647	66577	31904	1155598
8.1	Railways	4665	4452	381	3476	3095	0	4879	3608	7592	5219	4538	0	4411	4502	50818
8.2	Transport by other means	86135	52527	31517	45610	40999	9241	117018	67187	36324	55358	59072	5823	32364	13320	652497
8.3	Communication	55630	32537	25600	28554	38400	10965	75501	50886	23004	22601	34864	5639	29404	13963	447548
8.4	Storage	426	474	47	521	900	95	663	194	379	289	47	185	398	118	4735
9	Trade, Hotel & Restaurants	209377	163444	65556	156754	151180	52400	283406	247953	171025	179275	238142	35231	195999	80049	2229791
10	Banking & Insurance	59226	35916	32923	39887	45470	19167	83401	61644	44664	35686	45298	12778	39312	20203	575573
11	Real estate ownership, business & legal	110393	87526	46227	72445	64757	41693	99452	93341	79542	85259	81711	24148	66334	32822	985652
12	Public Administration	91219	32518	17008	26068	28295	6373	41425	29792	25300	20808	30176	4492	24839	5605	383918
13	Other Services	66578	53923	34537	46955	46819	32305	71362	71065	55207	87545	68905	18074	67794	28364	749432
	Sub Total: Tertiary	683651	463315	253796	420271	419915	172239	777107	625670	443038	492040	562752	106370	460855	198948	6079964
	GSDP	1085308	754667	408012	647648	687587	373263	1433514	979855	758259	784295	884652	215298	717783	313237	10043380
	Mid year Population('000)	3397	2713	1293	2210	2050	1185	3254	3123	2747	3810	3022	826	2532	1263	33425
	Per capita Income(Rs.)	31949	27817	31555	29305	33541	31499	44054	31375	27603	20585	29274	26065	28348	24801	30048

Population are based on the reports of Census and Department of Economics & Statistics

Appendix 3.15

Population of States/Union Territories by sex and percentage share of population in total population - 2001

Sl.No.	India/State/Union Territory	Total population			Percent-age share in total population	Populat-ion density (per sq.km.)
		Persons	Males	Females		
1	2	3	4	5	6	7
	INDIA	1027015247	531277078	495738169	100	324
1	Andaman & Nicobar Islands	356,265	192,985	163,280	0.03	43
2	Andhra Pradesh	75,727,541	38,286,811	37,440,730	7.37	275
3	Arunachal Pradesh	1,091,117	573,951	517,166	0.11	13
4	Assam	26,638,407	13,787,799	12,850,608	2.59	340
5	Bihar	82,878,796	43,153,964	39,724,832	8.07	880
6	Chandigarh	900,914	508,224	392,690	0.09	7903
7	Chatisgarh	20,795,956	10,452,426	10,343,530	2.03	154
8	Dadra & Nagar Haveli	220,451	121,731	98,720	0.02	449
9	Daman & Diu	158,059	92,478	65,581	0.02	1411
10	Delhi	13,782,976	7,570,890	6,212,086	1.34	9294
11	Goa	1,343,998	685,617	658,381	0.13	363
12	Gujarat	50,596,992	26,344,053	24,252,939	4.93	258
13	Haryana	21,082,989	11,327,658	9,755,331	2.05	477
14	Himachal Pradesh	6,077,248	3,085,256	2,991,992	0.59	109
15	Jammu & Kashmir	10,069,917	5,300,574	4,769,343	0.98	99
16	Jharkhand	26,909,428	13,861,277	13,048,151	2.62	338
17	Karnataka	52,733,958	26,856,343	25,877,615	5.14	275
18	Kerala	31,838,619	15,468,664	16,369,955	3.1	819
19	Lakshadweep	60,595	31,118	29,477	0.01	1894
20	Madhya Pradesh	60,385,118	31,456,873	28,928,245	5.88	196
21	Maharashtra	96,752,247	50,334,270	46,417,977	9.42	314
22	Manipur	2,388,634	1,207,338	1,181,296	0.23	107
23	Meghalaya	2,306,069	1,167,840	1,138,229	0.22	103
24	Mizoram	891,058	459,783	431,275	0.09	42
25	Naagaland	1,988,636	1,041,686	946,950	0.19	120
26	Orissa	36,706,920	18,612,340	18,094,580	3.57	236
27	Pondicherry	973,829	486,705	487,124	0.09	2029
28	Punjab	24,289,296	12,963,362	11,325,934	2.37	482
29	Rajasthan	56,473,122	29,381,657	27,091,465	5.5	165
30	Sikkim	540,493	288,217	252,276	0.05	76
31	Tamil Nadu	62,110,839	31,268,654	30,842,185	6.05	478
32	Tripura	3,191,168	1,636,138	1,555,030	0.31	304
33	Uttar Pradesh	1,66,052,859	87,466,301	78,586,558	16.17	689
34	Uttaranchal	8,479,562	4,316,401	4,163,161	0.83	159
35	West Bengal	80,221,171	41,487,694	38,733,477	7.81	904

Source: Census of India - 2001

Appendix 3.16

District-wise Population, Decadal Growth Rate, Sex-ratio and Population Density

Sl.No.	State/District	Population 2001			Percentage decadal growth rate		Sex-ratio (No.of females per 1000 males)		Population density per sq.km.	
		Persons	Males	Females	1981-91	1991-01	1991	2001	1991	2001
1	2	3	4	5	6	7	8	9	10	11
	Kerala	31838619	15468664	16367955	14.32	9.42	1036	1058	749	819
1	Kasaragod	1203342	587763	615579	22.78	12.3	1026	1047	538	604
2	Kannur	2412365	1154144	1258221	16.63	7.13	1049	1090	759	813
3	Wayanad	786627	393397	393230	21.32	17.04	966	1000	315	369
4	Kozhikode	2878498	1398674	1479824	16.69	9.87	1027	1058	1118	1228
5	Malappuram	3629640	1759479	1870101	28.87	17.22	1053	1063	872	1022
6	Palakkad	2617072	1265794	1351278	16.52	9.86	1061	1068	532	584
7	Thrissur	2975440	1422047	1553393	12.2	8.7	1085	1092	903	981
8	Ernakulam	3098378	1535881	1562497	11.42	9.09	1000	1017	963	1050
9	Idukki	1128605	566405	562200	10.45	6.96	975	999	236	252
10	Kottayam	1952901	964433	988468	7.71	6.76	1003	1025	828	884
11	Alappuzha	2105349	1012572	1092777	7.28	5.21	1051	1079	1415	1489
12	Pathanamthitta	1231577	588035	643542	5.6	3.72	1062	1094	450	467
13	Kollam	2584118	1248616	1335502	10.68	7.33	1035	1070	967	1038
14	Thiruvananthapuram	3234707	1571424	1663283	13.5	9.78	1036	1058	1344	1476

Source: Census of India - 2001

Appendix 3.17
Age Group Population of Kerala 2001.

Sl. No.	Age Group	Population (In Lakhs)			Percentage			All India Percentage
		Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9
1	0-4	27.65	14.09	13.56	8.7	9.1	8.3	12.2
2	5-9	25.44	12.96	12.49	8	8.4	7.6	13.3
3	10-14	29.87	15.24	14.63	9.4	0.9	8.9	11.8
4	15-19	29.85	14.85	14.99	9.4	9.6	9.2	9.4
5	20-24	29.84	14.4	15.44	9.4	9.3	9.4	8.9
6	25-29	27.86	12.97	14.89	8.7	8.4	9.1	8.3
7	30-34	25.16	11.86	13.31	7.9	7.7	8.1	7
8	35-39	24.66	11.55	13.12	7.7	7.5	8	6.2
9	40-44	19.51	9.6	9.9	6.1	6.2	6	5.1
10	45-49	19.26	9.52	9.74	6.1	6.1	5.9	4.3
11	50-54	14.38	7.25	7.13	4.5	4.7	4.4	3.7
12	55-59	11.3	5.42	5.8	3.6	3.5	3.6	2.7
13	60-64	10.32	4.8	5.52	3.2	3.1	3.4	2.6
14	65-69	9.02	3.99	5.02	2.8	2.6	3.1	1.5
15	70-74	6.13	2.73	3.4	1.9	1.7	2.1	1.3
16	75-79	3.99	1.74	2.26	1.3	1.1	1.4	0.5
17	80+	3.89	1.57	2.32	1.2	1	1.4	0.8
18	Age not stated	0.26	0.14	0.12	0.1	0.1	0.1	0.4
	All Ages	318.41	154.68	163.73	100	100	100	100

Source : Census of India 2001

Appendix 4.1
Number of Operational Holdings and Area Operated by Size Class in Kerala
(1995-96)

Sl. No.	Size of Holding (ha)	Number	Area (ha)	Average Size (ha)
1	2	3	4	5
1	Below 0.50	5453211	587542	0.11
2	0.50-1.00	464714	324907	0.70
	<i>Marginal (1+2)</i>	5917925	912449	0.15
3	1.00 to 2.00 (Small)	262291	349541	1.33
4	Above 2.00	118173	450233	3.81
	Total	6298389	1712223	0.27

Source: Directorate of Economics and Statistics

Appendix 4.2
District wise Number & Area of Individual

Sl. No.	District	Number	Area(ha)	Area per holdings
1	2	3	4	5
1	Thiruvananthapuram	760288	90975	0.12
2	Kollam	546414	89510	0.16
3	Pathanamthitta	287574	79397	0.28
4	Alaouzha	438628	81235	0.19
5	Kottavam	385874	136212	0.35
6	Idukki	282238	128886	0.46
7	Eranakulam	601603	119569	0.2
8	Thrissur	599637	133368	0.22
9	Palakkad	484996	18565	0.39
10	Malappuram	559581	142893	0.26
11	Kozhikode	516569	106805	0.21
12	Wavanad	151771	84253	0.56
13	Kannur	416845	152160	0.37
14	Kasaragod	198408	93088	0.47
	State	6230426	1626916	0.26

Source: Directorate of Economics and Stat

Appendix 4.3
Percentage Distribution of Main Workers

Sl.No.	Item	1991	2001
1	2	3	4
1	Cultivators	12.24	7.20
2	Agricultura	25.55	16.07
3	Househol d industry workers	2.58	3.54
4	Livestock, Forestry, Fishing, Plantation , Mining, Quarrying and allied sectors	10.23	} 73.19
5	Other workers	49.40	

Source: Census Reports.

Appendix 4.4

District-wise Actual and Normal Rainfall (mm) with Percentage Departure from Normal rainfall for 2006

District	South West Monsoon			North East Monsoon		
	Actual Rainfall	Normal Rainfall	Percentage Departure	Actual Rainfall	Normal Rainfall	Percentage Departure
	(mm)	(mm)	(%)	(mm)	(mm)	(%)
Alappuzha	1655.6	1836.0	-10	728.7	586.6	24
Kannur	2493.5	2713.2	-8	366.6	325.2	13
Ernakulam	2239.8	2348.1	-5	876.0	622.1	41
Idukki	2409.7	2584.5	-7	665.5	637.5	4
Kasaragode	2440.5	2990.8	-18	330.0	321.1	3
Kollam	1329.6	1379.2	-4	886.5	361.7	58
Kottayam	2003.2	1967.9	2	880.2	626.9	40
Kozhikode	2712.2	2775.5	-2	393.0	472.8	-17
Malappuram	2242.3	2033.4	10	531.8	453.3	17
Palakkad	1712.0	1687.1	1	392.8	446.9	-12
Pathanamthitta	1520.2	1662.3	-9	734.1	580.4	27
Thiruvananthapuram	1029.0	969.9	6	832.0	515.3	61
Thrissur	2225.5	2196.7	1	548.8	442.5	24
Wayanad	1790.9	2756.0	-35	251.1	334.7	-25

Source : IMD website

Appendix 4.5
Area, Production and Productivity of Principal Crops

Sl. No.	Crops	Area (Ha.)			Production (MT)			Productivity (Kg./Ha.)		
		2003-04	2004-05	2005-06#	2003-04	2004-05	2005-06#	2003-04	2004-05	2005-06#
1	Rice	287340	289974	275742	570045	667105	629987	1984	2301	2285
2	Jowar	2129	2566	2500	1087	1309	1275	511	510	510
3	Ragi	1504	1383	800	1217	1119	728	809	809	910
4	Other Cereals	1233	955	700	960	746	560	779	781	800
5	Pulses	5998	8428	8000	4930	8390	8080	822	995	1010
6	Sugarcane	3535	1921	2200	29098	15430	17670	8231	8032	8032
7	Pepper	216440	237669	240551	69015	74980	75704	319	315	315
8	Chilies	682	823	825	679	775	777	996	942	942
9	Ginger	8516	9991	9285	32972	45305	38747	3872	4535	4173
10	Turmeric	2774	2881	3000	5652	6244	6477	2037	2167	2159
11	Cardamom	41332	41378	38865	8875	8616	9329	215	208	240
12	Arecanut	102504	107572	108208	105490	110340	110641	1029	1026	1022
13	Banana	55906	58866	62141	442220	475371	488061	7910	8075	7854
14	Other Plantains	53496	54612	55460	399717	416115	421415	7472	7619	7599
15	Cashewnut	86376	81547	80727	65655	60584	57624	760	743	714
16	Tapioca	94297	88486	94982	2540790	2400043	2585096	26945	27123	27217
17	Sweet Potato	1002	836	1000	11981	10013	11991	11957	11977	11991
18	Groundnut	2687	1346	3162	1988	996	2811	740	740	889
19	Sesamum	1204	883	821	285	260	287	237	294	350
20	Coconut *	898498	899267	899943	5876	6001	6013	6540	6673	6575
21	Cotton **	2949	1472	2655	4748	2370	4275	1610	1610	1610
22	Tobacco	76	40	43	423	223	90	5666	5575	2093
23	Coffee	84684	84644	84644	63850	54300	60175	754	642	711
24	Tea	38327	35040	35043	57553	49508	56384	1502	1413	1609
25	Rubber	478402	480661	494400	655134	590778	739225	1369	1437	1495

#Area, Production and Productivity for 2005-06 are provisional except Paddy, Cardamom, Coffee, Tea and Rubber

* Production of Coconut in million numbers and productivity in No's/ha

** Production of Cotton in No. of bales of 170 kg.

Appendix 4.7

Season-wise Area, Production and Productivity of Rice in Kerala (2002-03 to 2004-05)

Season	Area (Ha)			Production (MT)			Productivity (kg/ha)		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	2	3	4	5	6	7	8	9	10
Virippu	112438	102770	105349	233217	220132	241824	2074	2142	2295
Mundakan	157004	147384	148893	343792	266674	335529	2190	1809	2253
Puncha	41079	37186	35732	111850	83239	89752	2723	2238	2512
All Seasons	310521	287340	289974	688859	570045	667105	2218	1984	2301

Source : Directorate of Economics & Statistics

Appendix 4.6
Index of Area, Production and Productivity of Crops in Kerala
Base - Average of Triennium ending 1993-94

Sl.No.	Crops	2003-04	2004-05	2005-06
1	2	3	4	5
	AREA			
A	All Crops	92.87	93.17	93.68
B	Food Grains (1+2)	55.24	54.08	51.31
1	Cereals	56.46	54.76	51.95
2	Pulses	26.89	37.78	35.86
C	Non-Food Grains (3to8)	103.69	103.82	105.24
3	Oil Seeds	100.56	100.20	100.47
4	Fibres	23.33	11.64	20.10
5	Plantation Crops	110.31	108.42	110.90
6	Condiments & Spices	119.04	127.80	127.43
7	Fruits and Vegetables	87.06	84.77	88.13
8	Other Crops	56.65	30.77	65.96
	PRODUCTION			
A	All Crops	108.75	96.84	102.15
B	Food Grains(1+2)	54.30	63.48	59.91
1	Cereals	54.30	63.49	59.92
2	Pulses	30.45	51.82	49.90
C	Non-Food Grains	103.86	100.59	106.90
3	Oil Seeds	115.10	118.29	118.77
4	Fibres	23.26	11.59	20.96
5	Plantation Crops	165.87	169.72	182.79
6	Condiments & spices	143.60	151.53	148.61
7	Fruits & Vegetables	101.51	97.71	104.22
8	Other Crops	61.23	32.47	36.84
	PRODUCTIVITY			
A	All Crops	117.10	103.93	109.04
B	Food Grains (1+2)	98.3	117.38	116.76
1	Cereals	96.17	115.94	115.34
2	Pulses	113.24	137.16	139.15
C	Non-Food Grains (3to8)	100.16	96.89	101.58
3	Oil Seeds	114.46	118.05	118.21
4	Fibres	99.7	99.57	104.28
5	Plantation Crops	150.37	156.54	164.80
6	Condiments & spices	120.63	118.49	116.17
7	Fruits and Vegetables	106.6	115.26	118.28
8	Other Crops	108.08	105.52	55.86

Source: Directorate of Economics and Statistics

Appendix 4.8
Season-wise Coverage of HYV of Rice in Kerala

Year	Coverage of HYV (Ha.)				Total Area under Rice (Ha)				% of HYV over Total Area under Rice			
	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total	Virippu (Autumn)	Mundakan (winter)	Puncha (Summer)	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1995-96	71027	51602	41247	163876	186676	224643	59831	471150	38.05	22.97	68.94	34.78
1996-97	61532	54725	37072	153329	163893	210309	56624	430826	37.54	26.02	65.47	35.59
1997-98	69306	50693	48680	168679	144743	180701	61678	387122	47.88	28.05	78.93	43.57
1998-99	62346	66338	48414	177098	120217	174714	57700	352631	51.86	37.97	83.91	50.22
1999-00	70948	85936	54106	210990	121525	170228	58021	349774	58.38	50.48	93.25	60.32
2000-01	83868	89927	52892	226687	129752	162445	55258	347455	64.64	55.36	95.72	65.24
2001-02	78753	102714	40621	222088	110556*	161978	43850	316384	71.23	63.41	92.64	70.20
2002-03	98381	112271	40152	250804	112438	157004	41079	310521	87.50	71.51	97.74	80.77
2003-04	92667	109316	36563	238546	102770	147384	37186	287340	90.20	74.20	98.30	83.00
2004-05	97559	115630	35306	248495	105349	148893	35732	289974	92.60	77.70	98.80	85.70
2005-06	90995	110954	21662	223611	98256	155629	21857	275742	93.00	71.00	99.00	81.00

Source : Directorate of Economics & Statistics

Appendix 4.9
District wise Area , Production and Productivity of Rice in Kerala

Sl. No.	District	Area (Ha)			Production (MT)			Productivity (kg/ha)		
		2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	5371	5196	4705	11278	12356	11034	2100	2378	2345
2	Kollam	10187	8949	7218	22419	20646	16063	2200	2307	2225
3	Pathanamthitta	5262	4339	3291	12641	10784	7518	2402	2485	2284
4	Alappuzha	32083	32158	28768	63008	78491	71748	1964	2441	2494
5	Kottayam	11502	13161	12557	26195	32789	31261	2277	2491	2490
6	Idukki	3228	3166	2932	7526	7782	7500	2331	2458	2558
7	Ernakulam	29495	28145	24934	54044	54501	48033	1832	1936	1926
8	Thrissur	34158	36351	31073	79842	87463	72951	2337	2406	2348
9	Palakkad	105131	111029	113919	189443	260118	266634	1802	2343	2341
10	Malappuram	17671	16749	14886	36744	36539	31377	2079	2182	2108
11	Kozhikode	5185	4623	4703	7579	6727	6314	1462	1455	1343
12	Wayanad	12343	11331	11503	28421	29206	28385	2303	2578	2468
13	Kannur	9461	9102	9223	16518	17098	17383	1746	1878	1885
14	Kasaragod	6263	5675	6030	14387	12605	13786	2297	2221	2286
	State	287340	289974	275742	570045	667105	629987	1984	2301	2285

Source : Directorate of Economics & Statistics

Appendix 4.10

District-wise and Season-wise Area, Production and Productivity of Rice for 2005-06

Name of District	Autumn			Winter			Summer			Total		
	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)
1	2	3	4	5	6	7	8	9	10	11	12	13
Thiruvananthapuram	2178	5232	2402	2513	5778	2299	14	24	1714	4705	11034	2345
Kollam	2571	5713	2222	4644	10345	2228	3	5	1667	7218	16063	2225
Pathanamthitta	772	1549	2006	1564	3550	2244	955	2460	2576	3291	7518	2284
Alappuzha	8643	16555	1915	15660	43429	2773	4465	11764	2635	28768	71748	2494
Kottayam	3937	9138	2321	6109	15823	2590	2511	6300	2509	12557	31261	2490
Idukki	850	2093	2462	1844	4758	2580	238	649	2727	2932	5500	2558
Ernakulam	9976	19168	1921	12146	23564	1940	2812	5301	1885	24934	48033	1926
Thrissur	7420	14563	1963	17776	38899	2188	8877	19489	3316	31073	72951	2348
Palakkad	49411	112132	2269	64190	153728	2395	318	774	2434	113919	266634	2341
Malappuram	3606	7732	2144	9774	18809	1924	1506	4836	3211	14886	31377	2108
Kozhikode	353	431	1221	3666	4558	1243	684	1325	1937	4703	6614	1343
Wayanad	0	0	-	9271	22032	2376	2232	6353	2846	11503	28385	2468
Kannur	5302	9980	1882	3839	7314	1905	82	89	1085	9223	17383	1885
Kasaragode	3237	8234	2544	2633	5188	1970	160	364	2275	6030	13786	2286
State	98256	212520	2163	155629	357734	2299	21857	59733	2733	275742	629987	2285

Source : Directorate of Economics & Statistics

Appendix 4.11

Area, Production and Productivity of HYV of Rice (2003-04 to 2005-06)

District	Area (Ha)			Production (MT)			Productivity (Kg/Ha)		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	4426	4715	4121	9427	11361	9657	2130	2410	2343
Kollam	6015	5917	4172	13603	14142	9293	2262	2390	2227
Pathanamthitta	4900	3776	2793	11774	9547	6517	2403	2528	2333
Alappuzha	30333	31464	27959	60771	77564	71019	2003	2465	2540
Kottayam	11104	13040	12391	25449	32604	30974	2292	2500	2500
Idukki	2835	2941	2446	6528	7201	6180	2303	2448	2527
Ernakulam	26529	25761	22898	49662	51055	44406	1872	1982	1939
Thrissur	26980	28175	24921	66989	70862	61999	2483	2515	2488
Palakkad	92758	100971	90412	171180	243401	219498	1845	2410	2428
Malappuram	11385	11660	10181	26701	27717	23584	2345	2397	2316
Kozhikode	1744	1454	1436	3070	2836	2599	1760	1950	1810
Wayanad	9473	8703	9117	22608	23557	23670	2387	2707	2596
Kannur	6463	6580	7172	12248	13182	14200	1895	2003	1980
Kasaragode	3601	3336	3592	9113	8251	9140	2531	2473	2545
State	238546	248493	223611	489123	593280	532736	2050	2388	2382

Source : Directorate of Economics & Statistics

Appendix 4.12

Plantation Crops - Area, Production and Productivity (2001-2002 to 2005-06)

	2001-02		2002-03		2003-04		2004-05		2005-06*	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
1	2	3	4	5	6	7	8	9	10	11
AREA (Ha.)										
Tea	36899	438000	37068	511940	38327	512000	35040	-	35043	-
Coffee	84795	347000	83113	355102	84684	327941	84644	327941	84644	327941
Rubber	475039	566558	476047	569667	478402	573980	480543	578000	494400	594000
Cardamom	41336	72000	41412	73125	41332	73237	41378	73725	41367	73795
PRODUCTION (MT)										
Tea	66090	854000	55348	837602	57553	850490	49508	800000	56384	-
Coffee	66690	300600	63322	275275	63850	270500	54300	275500	60175	281900
Rubber	580350	631400	594917	649435	655134	711650	690711	749665	739225	802625
Cardamom	8380	11365	8680	11920	8875	11580	8616	11415	9765	12540
PRODUCTIVITY (kg/ha)										
Tea	1791	1950	1493	1636	1502	1661	1413	-	1609	-
Coffee	786	866	762	775	754	825	642	840	7109	860
Rubber	1222	1114	1250	1140	1369	1240	1437	1297	1495	1351
Cardamom	203	158	210	163	215	158	208	155	236	170

Source : DES, UPASI

*Provisional

Appendix 4.13
Import of Rubber (1990-91 to 2005-06)

Year	Import (MT)		
	Natural Rubber	Synthetic Rubber	Total
1	2	3	4
1990-91	49013	51715	100728
1991-92	15070	39210	54280
1992-93	17884	47362	65246
1993-94	19940	64338	84278
1994-95	8093	73860	81953
1995-96	51635	71735	123370
1996-97	19770	91050	110820
1997-98	32070	86389	118459
1998-99	29534	97548	127082
1999-00	20213	104842	125055
2000-01	8970	106923	115893
2001-02	49590	111323	160913
2002-03	26229	124475	150704
2003-04	44199	173784	217983
2004-05	68718	113095	181813
2005-06	45285	132118	177403

Source: Rubber Board, Kottayam.

Appendix 4.14
Consumption of Rubber in Kerala & India (1994-95 to 2005-06)

(in MT)

Sl.No	Year	Kerala			India		
		N.R	S.R	R.R	N.R	S.R	R.R
1	2	3	4	5	6	7	8
1	1994-95	64660	18984	6100	237440	70035	38215
2	1995-96	75200	22727	6232	525465	134085	65775
3	1996-97	67144	24575	5968	561765	142810	66585
4	1997-98	68542	27825	6270	571820	160915	70085
5	1998-99	77583	29074	6245	591545	156395	63095
6	1999-00	86849	31068	6820	628110	167220	63450
7	2000-01	88221	32978	6773	631475	170670	62260
8	2001-02	100163	32114	6583	638210	174530	63875
9	2002-03	126100	36438	6861	695425	194850	67320
10	2003-04	124630	46921	7367	719600	210200	70460
11	2004-05	6878	113095	18183	755405	224650	72905
12	2005-06				801110	237495	76535
NR- Natural Rubber			SR-Synthetic Rubber		RR- Reclaimed Rubber		

Source: Rubber Board, Kottayam.

Appendix 4. 15
Production, Consumption, Export and Auction Price of Tea

Year	Production			Consumption (^{'000} MT)	Exports		Cochin Auction Price (Rs/kg)
	India (^{'000} MT)	Kerala (^{'000} MT)	% of Kerala		India (^{'000} MT)	Percentage of Production	
1	2	3	4	5	6	7	8
1980	569.00	54.00	9.49	346.00	224.00	39.37	13.14
1981-85	600.00	50.00	8.33	387.00	214.00	35.67	20.50
1986-90	679.00	57.00	8.39	464.00	204.00	30.04	27.54
1991-95	740.00	65.00	8.78	567.00	174.00	23.51	38.14
1996	780.10	61.60	7.90	618.00	162.00	20.77	44.42
1997	810.00	69.80	8.62	633.00	203.00	25.06	61.57
1998	874.10	65.90	7.54	664.00	210.00	24.02	73.39
1999	824.40	67.80	8.22	650.00	192.00	23.29	62.04
2000	846.50	69.30	8.20	653.00	207.00	24.45	51.34
2001	853.70	66.10	7.70	673.00	183.00	21.44	52.21
2002	826.20	59.70	7.20	693.00	198.00	23.98	47.21
2003	857.10	56.60	6.60	714.00	173.70	20.27	45.78
2004	820.20	49.70	6.06	735.00	183.60	22.38	52.14
2005	928.00	67.00	7.22		173.77	18.73	

Source : Association of Planters of Kerala

Appendix 4.16

Average Market Price of Natural Rubber in Domestic (Kottayam) and international (Bangkok) Markets

Year	Kottayam (RSS - 4)	Bangkok (RSS - 3)
1	2	3
1992-93	2550	2608
1993-94	2569	2510
1994-95	3638	4171
1995-96	5204	5016
1996-97	4901	4509
1997-98	3580	3221
1998-99	2994	2885
1999-00	3099	2704
2000-01	3036	2958
2001-02	3228	2793
2002-03	3919	4111
2003- 04	5040	5278
2004-05	5570	5751
2005-06	6699	7398
2006-07*	9102	9702

Source: Rubber Board, Kottayam

* Upto December 2006

Appendix 4.17
Price Trend of Rubber

Month & Year		India (Rs. per 100 kg. of RSS 4) (Kottayam)	World (Rs. per 100 kg. of RSS 3) (Bangok)
1		2	3
2005	April	5840	5768
	May	6214	5824
	June	6173	6384
	July	6562	6881
	August	6084	7053
	September	6034	7447
	October	6555	7644
	November	6566	7366
	December	6886	7666
2006	January	7360	8287
	February	8045	9211
	March	8069	9246
	Average 2005-06	6699	7398
	April	8634	9695
	May	9841	10998
	June	10692	12484
	July	9821	11710
	August	9182	10303
	September	8169	8480
	October	8709	8463
	November	8260	7426
	December	8609	7811
	Average 2006-07*	9102	9702

Source: Rubber Board, Kottayam

*upto December 2006

Appendix 4. 18

Monthly Average Farm Price of Important Agricultural Commodities

Commodities	Unit	2005						2006					
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Paddy	Qtl.	604.94	602.44	588.61	581.35	651.63	612.14	612.06	611.74	620.71	618.88	613.33	611.55
Coconut with husk	100 Nos.	539.40	522.80	510.70	594.60	506.10	509.80	493.60	487.60	480.10	472.80	465.50	455.70
Arecanut	100 Nos.	45.80	40.80	40.20	38.70	37.10	35.02	33.70	36.45	41.85	49.11	59.61	66.41
Pepper	Qtl.	5344.69	5510.33	5567.95	5612.78	5896.36	6271.13	5963.46	6284.26	6385.38	6355.19	6254.81	6303.76
Tapioca	Qtl.	410.75	420.39	420.75	429.17	435.63	440.51	433.92	434.71	434.58	447.16	445.20	438.79
Ginger - dry	Qtl.	9135.06	8717.76	9534.38	9123.08	9026.92	7378.57	8680.26	4836.90	4169.57	3964.58	3810.00	3975.00
Banana	Qtl.	1133.18	1367.67	1518.64	1273.62	1077.41	1098.00	1118.38	1193.21	1230.42	1279.70	1251.88	1431.58
Cashewnut	Qtl.	-	-	-	-	-	-	3200.00	3193.94	3203.92	3109.43	2474.55	2215.38

Appendix 4.19
Index Number of Prices Received and

Year	Prices received by Farmers	Farm Cultivation Cost	Domestic Expenditure	Price Paid by Farmers	Parityas Col.2 to 5
2002	1999	6684	2542	4122	49
2003	2454	7056	2615	4295	57
2004	2651	7360	2705	4459	59
2005	2440	7703	2795	4640	53
2006*	2383	7761	2891	4737	50

** Indicates Average upto April 2006*

Appendix 4.20
Consumption of Fertilizers/Ha. of Gross Cropped Area in Kerala
(1995-96 to 2004 - 05)

(in Kg.)

Year	N	P	K	Total (N+P+K)		N:(P+K)% (Kerala)
				Kerala	India	
1	2	3	4	5	6	7
1995-96	28.62	14.15	24.11	66.88	74.38	75
1996-97	28.33	13.59	19.60	61.52	75.49	85
1997-98	29.29	15.23	29.40	73.92	84.98	66
1998-99	29.50	14.58	18.14	62.22	87.08	90
1999-00	29.85	15.08	27.54	72.47	93.81	70
2000-01	28.43	12.66	20.82	58.32	86.34	85
2001-02	25.54	12.44	21.21	59.19	90.12	76
2002-03	29.18	13.53	26.19	68.90	86.00	73
2003-04	28.92	13.20	22.93	65.05	89.80	80
2004-05	29.87	14.14	24.2	68.21	-	78

Source: Directorate of Agriculture and CMIE.

Appendix 4.21
Selected Indicators of Agricultural Development in Kerala
(2004-05 & 2005-06)

Sl.No	Particulars	Unit	2004-05	2005-06
1	2	3	4	5
1	Fertilizer consumption			
	a) Nitrogen	MT	88252	88485
	b) Phosphorus	MT	41783	44243
	c) Potash	MT	71488	75728
	Total	MT	201523	208456
2	Plant protection measures			
	a) Fungicide (Liquid& Solid) in terms of technical grade	MT	433.17	481.238
	b) Insecticides (Liquid& Solid) in terms of technical grade	MT	94.048	140628
	c) Weedicide (in terms of technical grade)	MT	21.363	34.561
	d) Rodenticides(in terms of technical grade)	MT	0.3551	0.0696
	e) Area under Plant Protection coverage	Lakh Ha.	21.50	25.36
	f) Rodent control operation	Lakh Ha.	0.005	0.00098
	g) Biological control of Nephantic Serinopa-parasites liberated	Lakh No.	43.52	40.66
	h) Weed control	Lakh Ha.	0.420	0.68
3	High Yeilding Varieties of paddy seeds	MT	895	4085.1
4	Quality planting materials distributed			
	a) Coconut seedings	Lakh No.	4.1226	4.23981
	b) Rooted pepper cuttings	Lakh No.	112.10895	107.1715
	c) Cashew grafts	Lakh No.	4.34759	4.31922
5	Soil testing			
	Soil samples analysed	No.	201523	275315

Source: Directorate of Agriculture

Appendix 4.22
Average Price of Agricultural Inputs (2004-05 & 2005-06)

Sl. No	Item	2004-05	2005-06
1	2	3	4
I	Fertilizer (Price/MT)		
a	Urea	Rs. 4830.00	4830+ST
b	Ammonium sulphate	0	
c	Super Phosphate	Not fixed	3455.00
d	Muriate of Potash	Rs. 9351.00	4455+ST
II	Paddy Seed		
a	Average NSC Price (per Qtl)		1500.00
b	State Seed Farm Price (per	Rs. 1200.00	1200.00
III	Green manure seed(per Kg.)		
a	Daincha		
b	Sannhemp		
IV	Coconut Seedlings (Per seedling)		
a	WCT	Rs. 20.00	22.00
b	Hybrids	Rs. 25.00	27.00
V	Cashew grafts	Rs. 20.00	20.00
VI	Rooted pepper cuttings(p	Rs. 1.50	1.50
VII	Pesticides (price per litre/kg)		
a	Phosphamidon (per lit)	Na	
b	Quinal phos (per lit)	215	275.00
c	Monocrotophos (per lit)	240	260.00
d	Copper sulphate (per kg)	59.88	71.38

Source: Directorate of Agriculture

Appendix 4.23

Composition of Cattle Population (1977 to 2003)

(No.in 000's)

Year	Composition		Male		Female		Total	
			Nos.	%	Nos.	%	Nos.	%
1	2	3	4	5	6	7	8	9
1977	Crossbred	No	217	16.01	1138	83.99	1355	100
		%	28.82	-	50.51	-	45.08	-
	Indegenous	No	536	32.47	1115	67.53	1651	100
		%	71.18	-	49.49	-	54.92	-
	Total	No	753	25.05	2253	74.95	3006	100
		%	100	-	100	-	100	-
1982	Crossbred	No	217	14.93	1236	85.07	1453	100
		%	32.93	-	50.70	-	46.92	-
	Indegenous	No	442	26.89	1202	73.11	1644	100
		%	67.07	-	49.30	-	53.08	-
	Total	No	659	21.28	2438	78.72	3097	100
		%	100	-	100	-	100	-
1987	Crossbred	No	199	11.69	1503	88.31	1702	100
		%	39.17	-	51.54	-	49.71	-
	Indegenous	No	309	17.94	1413	82.06	1722	100
		%	60.83	-	48.46	-	50.29	-
	Total	No	508	14.84	2916	85.16	3424	100
		%	100	-	100	-	100	-
1996	Crossbred	No	232	10.14	2055	89.86	2287	100
		%	60.42	-	68.23	-	67.34	-
	Indegenous	No	152	13.73	957	86.27	1109	100
		%	39.58	-	31.77	-	32.66	-
	Total	No	384	11.31	3012	88.69	3396	100
		%	100	-	100	-	100	-
2000	Crossbred	No	144	7.36	1813	92.64	1957	100
		%	66.98	-	79.69	-	78.59	-
	Indegenous	No	71	13.32	462	86.68	533	100
		%	33.02	-	20.31	-	21.41	-
	Total	No	215	8.63	2275	91.37	2490	100
		%	100	-	100	-	100	-
2003	Crossbred	No	135	8.00	1600	92.00	1735	100
		%	74	-	82	-	82	-
	Indegenous	No	47	12.00	340	88.00	387	100
		%	26	-	18	-	18	-
	Total	No	182	9.00	1940	91.00	2122	-
		%	100	-	100	-	100	-

Source : Livestock Census Report

Appendix 4.24
Livestock and Poultry Population in India and Kerala - a Comparison

Species	1987			1996			2000			2003		
	India	Kerala	% share of Kerala	India (1992)	Kerala	% share of Kerala	India (1997)	Kerala	% share of Kerala	India *	Kerala	% share of Kerala
Cattle	1958.70	34.24	1.75	2045.16	33.96	1.61	1988.82	24.91	1.25	1873.80	21.22	1.13
Buffalo	769.70	3.29	0.43	842.39	1.65	0.20	899.18	1.11	0.12	966.20	0.65	0.07
Goats	994.10	15.81	1.59	1162.81	18.61	1.61	1227.21	15.98	1.30	1201.00	12.13	1.01
pigs	107.60	1.37	1.27	127.88	1.43	1.12	132.91	0.88	0.66	141.40	0.76	0.54
Poultry	2583.40	170.92	6.62	2840.25	256.46	9.03	3476.11	149.13	4.59	NA	109.92	
Ducks	234.90	8.46	3.60	220.86	11.87	5.37		10.43			6.61	

Source: Livestock Census -All India and Livestock Census-Kerala
Conference of State Ministers of AH and DD, December 2004

*Provisional

Appendix 4.25

Trend in Livestock Population of Kerala, Over the Census Periods 1966 to 2003

(No. lakh)

Year of Census	Cattle		Buffaloes		Goats		Pigs		Poultry**		Duck		Livestock	
	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation	No.	% variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1966	28.57	0	4.71	0	11.89	0	1.12	0	95.87	0	3.19	0	46.41	0
1972	28.56	-0.04	4.72	0.21	14.68	23.47	1.29	15.18	118.44	23.54	3.62	13.48	49.36	6.36
1977	30.06	5.25	4.54	-3.81	16.83	14.65	1.72	33.33	129.56	9.39	4.3	18.78	53.19	7.76
1982	30.97	3.03	4.09	-9.91	20.04	19.07	1.27	-26.16	145.19	12.06	5.3	23.26	56.45	6.13
1987	34.24	10.56	3.29	-19.56	15.81	-21.11	1.37	7.87	170.92	17.72	8.46	59.62	55.01	-2.55
1996	33.96	-0.82	1.65	-49.85	18.6	17.65	1.43	4.38	269.46	57.65	11.87	40.31	55.77	1.38
2000	24.91	-26.65	1.11	-32.73	15.98	-14.09	0.88	-38.46	149.13	-44.66	10.43	-12.13	42.94	-23.01
2003*	21.22	-14.81	0.65	-41.44	12.13	-24.09	0.76	-13.64	122.16	-18.08	6.61	-36.63	34.81	-18.93

Source: Livestock Census report 1966, 1972, 1977, 1982, 1987, 1996, 2000 & 2003

*Provisional

** Excluding Broiler and including ducks etc.

Appendix 4.26

Sex-wise Classification of Bovine Population and Trend over the previous Census (1956 to 2003)

(Nos. In '000s)

Year		Cattle Population			Buffaloe Population			Total Bovine Population		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1956	No.	954	1556	2510	302	185	487	1256	1741	2997
1961	No.	973	1713	2686	320	165	485	1293	1878	3171
Variation	%	1.99	10.09	7.01	5.96	(-)10.81	(-)0.41	2.95	7.87	5.81
1966	No.	913	1943	2856	295	177	472	1208	2120	3328
Variation	%	(-)6.17	13.43	6.33	(-)7.81	7.27	2.68	(-)6.57	12.89	4.95
1972	No.	780	2075	2855	269	203	472	1049	2278	3327
Variation	%	(-) 14.57	6.79	(-) 0.04	(-)8.81	14.69	..	(-)13.16	7.45	(-) 0.03
1977	No.	753	2253	3006	254	200	454	1007	2453	3460
Variation	%	(-)3.46	8.6	5.29	(-)5.58	(-)1.48	(-)3.81	(-)4.00	7.68	4
1982	No.	659	2438	3097	217	192	409	876	2630	3506
Variation	%	(-)12.48	8.21	3.03	(-)14.57	(-)4.00	(-) 9.91	(-)13.01	7.22	1.33
1987	No.	508	2916	3424	131	198	329	639	3114	3753
Variation	%	(-)22.91	19.61	10.56	(-)39.63	3.13	(-)19.56	(-)27.05	18.4	7.05
1996	No.	384	3012	3396	67	98	165	451	3110	3561
Variation	%	(-)24.41	3.29	(-) 0.82	(-) 48.85	(-) 50.51	(-) 49.85	(-) 29.42	(-) 0.13	(-) 5.12
2000	No.	215	2275	2490	57	54	111	272	2329	2601
Variation	%	(-)44.01	(-)24.47	(-)26.55	(-)14.93	(-)44.89	(-)32.73	(-)39.69	(-)25.11	(-)26.96
2003	No.	182	1940	2122	24	40	64	206	1980	2186
Variation	%	(-) 15.34	(-) 14.73	(-) 14.78	(-) 14.93	(-) 25.93	(-) 42.34	(-) 24.26	(-) 14.98	(-) 15.96

Source : AH. Department - Livestock Census Reports of Various Years.

Appendix 4.27

Trend in Poultry Population over Census Periods from 1982 to 2003

(No. in Lakhs)

Category	1982	1987		1996		2000		2003	
	No	No	% variation	No	% variation	No	% variation	No	% variation
1	2	3	4	5	6	7	8	9	10
Broiler Fowls	1.11	4.63	317.00	38.79	738	34.71	(-)10.52	21.97	(-) 36.70
Desi Fowls	65.65	153.35	134	134.93	(-)12.01	110.24	(-)18.29	77.36	(-) 29.83
Improved Fowls	79.53	17.57	(-) 77.91	121.53	592	24.13	(-)80.14	32.56	34.94
Total Fowls	145.18	170.92	17.12	256.46	50.05	134.37	(-)34.07	109.92	(-) 18.20
Ducks	5.30	8.46	59.53	11.87	40.35	10.43	(-)12.13	6.61	(-) 36.63
Other Poultry(Turkey)	0.22	0.58	167.43	1.12	93.69	4.33	286.61	5.63	30.32
Total-Poultry	151.81	184.59	21.59	308.24	66.99	183.84	(-)31.77	144.13	(-) 21.60

Source: Livestock Census Reports

Appendix 4.28

Distribution of Working Bullocks* and Male Calves over the Five Census Periods and Percentage Variation over Previous Census from 1982 to 2003

(In ' 000 Nos)

Category	1982	% variation	1987	% variation	1996	% variation	2000	% variation	2003	% variation
1	2	3	4	5	6	7	8	9	10	11
Working Bullocks Indegenous	240.94	-29.96	120.66	-49.92	57.50	-52.35	17.46	-69.63	11.14	(-) 36.20
Cross bred	14.33	-26.89	18.70	30.50	63.88	241.60	17.13	-73.18	7.54	(-) 55.98
Total	255.27	-29.79	139.36	-45.41	121.38	-12.90	34.59	-71.50	18.68	(-) 46.00
Male calves Indegenous	135.30	8.04	112.14	-17.12	52.36	-53.31	29.63	-43.41	17.91	(-) 39.55
Cross bred	165.55	21.26	132.76	-19.81	111.30	-16.10	89.99	-19.15	92.79	3.11
Total	300.85	14.93	244.90	-18.60	163.66	-33.17	119.62	-26.91	110.70	7.46

Source: Livestock Census Report -1996 & 2000

* Includes bullocks used for work & those used for work and breeding

Appendix 4.29

**Trend in Distribution of Adult Female Cattle over the Census Periods from 1982 to 2003,
their Percentage Distribution and Percentage Variation over the Previous Census**

(In' 000 numbers)

Category	1982		1987			1996			2000			2003 <i>(provisional)</i>		
	No.	% distri- bution	No.	% distri- bution	% variation	No.	% distri- bution	% variation	No	% distri- bution	% variation	No	% distri- bution	% variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cattle in Milk Indegenous	392.79	45.45	451.80	44.51	15.02	329.66	29.57	-27.03	195.66	20.56	-40.64	106.64	14.94	(-) 45.49
Cross bred	471.48	54.55	563.17	55.49	19.45	785.36	70.43	39.45	756.01	79.44	-3.74	607.37	85.06	(-) 19.66
Adult Female Cattle Indegenous	785.71	51.94	812	47.73	3.35	569.53	31.71	-29.86	340.56	22.36	40.2	173.29	16.57	(-) 49.12
Cross bred	726.91	48.06	889.33	52.27	22.34	1226.4	68.29	37.89	1182	77.63	-3.62	872.54	83.43	(-) 26.18

Source: Livestock Census Reports - 1996

Appendix 4.30
Production of Milk and Egg in the Major States of India
(2002-03 to 2004-05)

State	Milk					Egg				
	Production(000' MT)			% increase over 2002-03		Production(Million Nos)			% increase over 2002-03	
	2002-03	2003-04	2004-05	2003-04	2004-05	2002-03	2003-04	2004-05	2003-04	2004-05
Andhra Pradesh	6584	6959	7252	5.70	10.15	14862	14993	15804	0.88	6.34
Assam	705	727	739	3.12	4.82	510	514	522	0.78	2.35
Bihar	2869	3180	2974	10.84	3.66	737	740	789	0.41	7.06
Gujarat	6083	6421	6745	5.56	10.88	385	444	503	15.32	30.65
Haryana	5124	5221	5222	1.89	1.91	1251	1280	1482	2.32	18.47
Jammu & Kashmir	1389	1414	1422	1.80	2.38	622	637	611	2.41	-1.77
Karnataka	4539	3857	3917	-15.03	-13.70	1993	1728	1772	-13.30	-11.09
Kerala	2419	2111	2025	-12.73	-16.29	1347	1278	1197	-5.12	-11.14
Madhya Pradesh	5343	5388	5506	0.84	3.05	784	896	902	14.29	15.05
Maharashtra	6238	6379	6567	2.26	5.27	3295	3376	3436	2.46	4.28
Orissa	941	997	1283	5.95	36.34	910	931	1216	2.31	33.63
Punjab	8173	8391	8554	2.67	4.66	3131	3068	3680	-2.01	17.53
Rajasthan	7789	8054	8310	3.40	6.69	636	672	693	5.66	8.96
Tamil Nadu	4622	4752	4784	2.81	3.50	3622	3784	6395	4.47	76.56
Uttar Pradesh	15288	15943	16512	4.28	8.01	748	874	902	16.84	20.59
West Bengal	3600	3686	3790	2.39	5.28	2749	2820	2888	2.58	5.06
All India	86159	88082	90715	2.23	5.29	39823	40403	45200	1.46	13.50

Source: Animal Husbandry Department of States

Appendix 4.31

Per Capita Availability of Milk in Major States of India (gms/day) (1994-95 -2004-05)

State	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Andhra Pradesh	167	167	173	170	185	192	194	209	231	238	250
Assam	81	80	80	79	79	71	69	70	71	71	72
Bihar	96	96	96	94	121	119	80	88	92	100	92
Gujarat	278	282	290	289	290	297	280	317	321	330	344
Haryana	628	611	618	627	623	631	614	645	647	643	631
Jammu & Kashmir	210	277	308	353	353	362	348	367	365	363	364
Karnataka	174	182	195	220	233	241	233	249	229	190	194
Kerala	194	199	203	209	221	227	219	234	203	173	169
Madhya Pradesh	197	196	195	197	262	261	211	240	236	233	233
Maharashtra	157	160	161	160	168	168	162	172	172	172	176
Orissa	48	53	55	53	58	66	64	69	68	71	92
Punjab	795	807	834	869	883	902	854	892	895	898	917
Rajasthan	295	307	323	348	356	367	353	376	368	371	376
Tamale Nadu	176	178	185	187	199	210	211	219	198	198	204
Uttar Pradesh	208	214	218	222	238	243	223	241	245	250	254
West Bengal	125	126	125	125	125	123	116	120	120	120	124
All India	195	198	203	208	213	217	220	225	230	231	229

Source: National Statistics, NDDB

Appendix 4.33
Index of Milk and Egg production in Kerala & India (1984-85 to 2005-06)
(Base Year 1984-85)

Year	Index of Milk Production		Index of Egg Production	
	Kerala	India	Kerala	India
1	2	3	4	5
1984-85	100.00	100.00	100.00	100.00
1985-86	105.16	106.02	103.66	113.16
1986-87	109.34	111.08	106.48	121.46
1987-88	116.89	112.53	109.76	124.86
1988-89	124.02	116.63	111.89	133.17
1989-90	131.15	123.85	114.41	141.76
1990-91	138.52	129.88	118.14	148.06
1991-92	146.31	134.22	130.34	154.24
1992-93	154.84	141.20	135.21	160.88
1993-94	164.02	146.02	140.55	169.56
1994-95	173.61	153.73	146.04	182.25
1995-96	179.67	159.76	151.45	191.44
1996-97	186.08	164.58	154.27	192.90
1997-98	192.05	169.88	154.95	199.27
1998-99	198.36	181.20	155.79	206.82
1999-00	206.97	188.19	156.56	213.64
2000-01	213.52	193.75	155.03	257.04
2001-02	222.79	202.88	152.59	271.74
2002-03	198.36	208.41	102.67	279.42
2003-04	173.03	211.78	97.33	283.49
2004-05	164.34	222.36	91.23	317.16
2005-06	167.42	233.41	91.15	332.18

Source: Animal Husbandry Department & Economic Survey

Appendix 4. 32

Details of milk production in the state - Results of Integrated Sample Survey (1997-98 to 2005-06)

Particulars		1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1		2	3	4	5	7	8	9	10	11
Estimated no. of animals in milk (lakh)	ND*	3.105	2.927	2.496	2.132	1.698	1.892	1.428	1.159	1.122
	CB*	8.346	8.557	8.942	9.297	9.688	8.293	7.236	7.052	7.034
	Total	11.451	11.484	11.438	11.429	11.386	10.185	8.664	8.211	8.156
Estimated no. of milch animals (lakh)	ND	5.057	3.995	3.385	2.841	2.216	2.455	1.885	1.544	1.491
	CB	11.877	12.241	11.793	12.388	12.698	10.778	9.769	9.359	9.295
	Total	16.934	16.236	15.178	15.229	14.914	13.233	11.654	10.903	10.786
Average milk yield/animal in milk (kg.)	ND	2.282	2.552	2.502	2.506	2.527	2.547	2.608	2.573	2.641
	CB	6.201	6.234	6.433	6.556	6.733	6.901	7.007	7.007	7.164
	Total	5.138	5.295	5.575	5.800	6.106	6.092	6.300	6.379	6.54
Average milk yield of milch animal/day (kg.)	ND	1.401	1.869	1.845	1.879	1.936	1.963	1.976	1.932	1.988
	CB	4.357	4.358	4.878	4.920	5.137	5.310	5.190	5.28	5.422
	Total	3.474	3.746	4.201	4.353	4.662	4.683	4.683	4.806	4.948
Annual milk production in the State (lakh tonnes)	ND	2.586	2.726	2.280	1.950	1.566	1.759	1.363	1.088	1.087
	CB	18.889	19.471	20.996	22.247	23.810	20.889	18.557	18.036	18.39
	Total	21.475	22.197	23.276	24.197	25.376	22.648	19.920	19.124	19.477
	Buff.	0.7405	0.7481	0.7003	0.635	0.630	0.480	0.398	0.379	0.36
	Goat	1.2140	1.2557	1.2772	1.221	1.173	1.062	0.788	0.749	0.79
	Grand Total	23.430	24.200	25.253	26.053	27.179	24.200	21.106	20.252	20.627
Per capita per day availability of milk (gm)		209	214	214	220	234	203	173	169	170

Source: Animal Husbandry Department

* ND - Non-descript, CB - Cross bred

Appendix 4.34
Activities in the Animal Husbandry Sector (2001-02 to 2005- 2006)

Sl.No	Activities	Unit	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8
1	Cases treated	Nos.	4161	4925	4629	4879	5028.75
2	Operations Performed	Nos.	123	145	136	138	125
3	Castration done	Nos.	6	6	6	6	5
4	Vaccination done						
	1. Livestock	Nos.	524	1211	4414	1334	1931
	2.Poultry	Nos.	1995	3194	4554	6170	9603
5	Anti Rabies Vaccinations done in Dogs	Nos.	65	116	132	113	101
6	Artificial Inseminations done	Nos.	1249	1369	1231	1176	1174
7	Calvings recorded	Nos.	333	402	354	358	355
8	Chicks hatched out in Department Poultry Farms	Nos.	566	707	977	747	521
9	Vaccines produced in Veterinary Biologicals						
	1. Poultry	Doses	5410	8318	17967	13488	10948
	2. Livestock	Doses	230	203	534	329	184

Source: Animal Husbandry Department.

Appendix 4.35
Production and Distribution of Frozen Semen in Kerala
(1995-96 to 2005-2006)

(In lakh doses)

Year	Production of Frozen Semen	Distribution Inside the State	Distribution Outside the State	Total Distribution
1	2	3	4	5
1995-96	14.93	16.27	6.61	22.88
1996-97	24.78	15.39	7.83	23.22
1997-98	24.49	15.04	7.95	22.99
1998-99	25.57	15.75	7.70	23.45
1999-00	26.17	15.74	6.80	22.54
2000-01	20.13	15.83	7.60	23.43
2001-02	28.94	15.52	5.50	21.02
2002-03	23.79	15.32	6.45	21.77
2003-04	24.33	15.05	1.24	16.29
2004-05	22.71	14.99	4.2	19.21
2005-06	27.1	15.89	15.14	31.03

Source: KLD Board

Appendix 4.36

Artificial Insemination Centres in the State, as on 31.03.2006

Sl.No	Department/ Institutions	No.of A.I Centres
1	2	3
1	Department of Animal Husbandry	2445
2	Department of Dairy Development	10
3	Other Voluntary Organisations (Private)	230
4	APCOS	250
5	Tata Tea	26
	Total	2961

Source: Animal Husbandry Department & KLD Board

Appendix 4.37
Other Important Activities of KLD Board During 2004-05 and 2005-06

Sl.No	Name of Programme	Achievement	
		2004-05	2005-06
1	2	3	4
1	Liquid Nitrogen (Lakh litres)*	2.18	1.19
2	Quantity of basic fodder seeds produced (kg.)	902	592.3
3	Quantity of fodder seed supplied (MT)	10.88	24.363
4	No. of kids produced		
	(I) Malabari	184	165
	(ii)Boer	80	185
5	No. of Malabari kids distributed:	129	83
6	No. of personnel trained	1079	1099
7	No. of embryos collected	94	128
8	Premium bull semen distributed (Doses)	11749	16463
9	No. of pigs distributed:		
	For breeding and rearing	6723	7058
	For meat	232	375

Source: KLD Board.

*Production in LN Plant at Puduppady only

Appendix 4.38

**Average Price of Livestock Products and Feeds in the State
(2001-02 to 2005-2006)**

Item	Unit	2001-02	2002-03	2003-04	2004-05	Percentage increase over 2003-04	2005-06	Percentage increase over 2004-05
1	2	3	4	5	6	7	8	9
Meat								
Chicken (Broiler)	Kg.	55.6	55.25	55.04	58.63	6.52	60.5	3.19
Chicken (Desi)	Kg.	70.92	71.03	74.59	84.64	13.47	88.62	4.70
Mutton	Kg.	113	113.06	126.82	137.54	8.45	145.66	5.90
Beef	Kg.	51	51.31	55.37	58.18	5.07	69.98	20.28
Pork	Kg.	63	62.58	64.34	66.70	3.67	73.65	10.42
Egg								
Fowl (White)	100Nos.	140	137	146	155.00	6.16	143	-7.74
Fowl (Brown)	100Nos.	210	207	224	242.00	8.04	232	-4.13
Duck	100Nos.	252	266	295	310.00	5.08	297	-4.19
Milk								
Cow	Litre	12.70	12.84	13.13	13.81	5.18	14.71	6.52
Buffalo	Litre	15.10	16.31	16.73	17.80	6.40	19.03	6.91
Feeds (price)								
Groundnut cake	Kg.	12.20	11.11	12.49	13.29	6.41	12.62	-5.04
Coconut cake	Kg.	9.84	10.16	12.57	11.76	-6.44	11.06	-5.95
Gingely oil cake	Kg.	11.45	12.43	13.56	12.53	-7.60	11.63	-7.18
Straw	Kg.	3.61	3.49	3.54	3.81	7.63	4.66	22.31
Grass	Kg.	2.96	2.18	2.52	2.96	17.46	3.26	10.14

Source: Animal Husbandry Department.

Appendix 4.39
Dairy Cooperatives of India at a Glance

(in numbers+)

State	1980-81	1990-91	2002-03	2003-04*	2004-05*
North					
Haryana	505	3,229	3,963	4,219	5172
Himachal Pradesh		210	235	283	387
Jammu & Kashmir		105	**	**	**
Punjab	490	5,726	7,108	6,892	6893
Rajasthan	1,433	4,976	8,364	9,643	10852
Uttar Pradesh	248	7,880	17,429	18,104	18272
Sub Total	2676	22126	37099	39141	41576
East					
Assam		117	54	65	66
Bihar	118	2,060	4,008	4,657	5023
Jharkhand				80	80
Nagaland		21	77	76	76
Orissa		736	1,483	1,654	1896
Sikkim		134	185	189	194
Tripura		73	84	84	84
West Bengal	584	1,223	2,012	2,287	2367
Sub Total	702	4364	7903	9092	9786
West					
Chhattisgarh				424	445
Gijarat	4,798	10,056	11,112	11,400	11615
Goa		124	164	169	174
Madhya Pradesh	441	3,865	4,911	4,699	4815
Maharashtra	718	4,535	17,376	18,349	19192
Sub Total	5957	18580	33563	35041	36241
South					
Andhra Pradesh	298	4,766	5,007	5,072	4561
Karnataka	1,267	5,621	9,050	9,293	9619
Kerala		1,016	3,114	3,208	3238
Tamil Nadu	2,384	6,871	7,452	7,631	8031
Pondicherry		71	93	96	100
Sub Total	3949	18345	24716	25300	25549
All India	13284	63415	103281	108574	113152

Source: NDDDB Annual Reports

+ Organised (Cumulative)

* Provisional, includes conventional societies and Taluka unions formed earlier
Chattisgarh and Jharkhad reported separately from 2003-04

** Not reported

Appendix 4.40
Performance of Kerala Co-operative
Milk Marketing Federation (2001 to 2006)

Sl. No	Particulars	2001	2002	2003	2004	2005	2006*
1	2	3	4	5	6	7	8
1	No. of Apcos registered (Cumulative)	2424	2464	2535	2590	2648	2669
2	No. of Apcos functional (Cumulative)	2130	2250	2308	2354	2399	2404
3	No. of members in apcos (Cumulative) (Lakh Nos)	6.53	6.79	6.97	7.32	7.45	7.63
4	No. of Women in Apcos (Lakh Nos)	1.03	1.09	1.15	1.25	1.31	1.39
5	No. of SC/ST members in Apcos (Lakh Nos)	0.42	0.40	0.40	0.44	0.44	0.44
6	Average milk marketed/day by KCMMF (MT)	659	699	737	774	839	899
7	Average milk procured per day (MT) - Apcos	714	708	6.72	7.33	8.4	9.08
8	Direct employment generated (No. of persons)	7060	7210	7484	7586	7807	7901
9	No. of Veterinary routes.	18	13	13	10	14	13
10	No. of cases treated (Lakh Nos)	0.05	0.04	0.03	0.03	0.03	0.25
11	No. of emergency veterinary routes	20	38	39	37	38	31
12	No. of cases treated (Lakh Nos)	0.31	0.40	0.42	0.47	0.5	0.31
13	Cattle feed sold (Lakh MT)	1.17	1.03	1.04	1.12	1.13	0.82
14	Quantity of ghee produced (MT)	1709	1832	2299	2606	2673	1914
15	Quantity of ghee sold (MT)	1786	1934	2258	2438	2605	1914

Source: KCMMF

* as on August 2006

Appendix 4.41

Performance of the Dairies under Kerala Co-operative Milk Marketing Federation (2002 to 2006)

Sl.No	Dairy	Capacity lakh ltr./day	Procurement (Lakh Ltrs)					Sales (Lakh Ltrs)				
			2002	2003	2004	2005	2006*	2002	2003	2004	2005	2006*
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	2.00	428.55	356.54	371.04	377.04	265.38	552.11	551.31	595.07	640.79	456.79
2	Kollam	1.00	431.68	281.83	209.49	253.62	193.35	340.95	407.19	432.22	474.72	342.24
3	Alappuzha	0.60	91.51	68.33	61.81	74.95	57.35	193.91	206.15	226.93	245.37	170.87
4	Kottayam	0.40	79.82	67.38	79.98	102.41	78.94	119.02	124.22	136.70	151.72	108.59
5	Ernakulam	1.50	377.62	353.34	413.43	517.55	381.82	381.14	401.10	452.13	506.38	367.13
6	Thrissur	0.60	149.82	137.69	109.90	93.18	67.6	121.92	122.15	120.50	121.86	85.13
7	Palakkad	1.00	342.23	331.8	386.99	396.1	267.72	160.24	165.00	237.35	193.60	138.79
8	Kannur	1.00	336.67	343.66	384.94	446.33	328.61	284.64	238.85	254.75	271.96	192.37
9	Kozhikode	1.50	169.64	156.4	170.81	201.82	153.27	309.03	331.81	325.32	330.07	238.62
10	Kasaragod	0.30	4.47	23.61	29.77	45.43	34.82	15.69	102.71	107.53	110.53	76.85
	Total	9.90	2412.01	2120.58	2218.16	2508.43	1828.86	2478.65	2650.49	2888.50	3047.00	2177.38

Source : KCMMF

* as on August 2005

Appendix 4.42

Average Quantity of Milk Procured per day by APCOS (1997 to 2006)

Year	No. of Societies (Functional)	Total Procurement/ day (ltr.)	Procurement per Society/day (ltr.)
1	2	3	4
1997	1826	464998	255
1998	1985	566247	285
1999	2040	629114	308
2000	2092	688864	329
2001	2130	714301	335
2002	2250	708137	315
2003	2308	671720	291
2004	2354	732615	311
2005	2399	839977	350
2006*	2404	907800	378

Source: KCMMF

* As on August 2006

Appendix 4.44
Price Spread of Milk (1993-94 to 2005-06)

(Average price per lit.in Rs.)

Year	Producer	Society	Consumer	Difference in price between producer & consumer
1	2	3	4	5
1993-94	6.14	6.56	9	2.86
1994-95	7.44	7.8	10	2.56
1995-96	8.31	8.81	11	2.69
1996-97	9.42	9.91	12	2.58
1997-98	9.22	9.64	12	2.78
1999-00	9.93	10.33	13	3.07
2000-01	9.93	10.33	13	3.07
2002-03				
TRCMPU&MRCMPU	10.71	10.33	14	3.29
ERCMPU	10.15	10.33	14	3.85
2005-06				
TRCMPU &MRCMPU	11.42	NA	15	3.58
ERCMPU	11.07	NA	15	3.93

Source: KCMMF

Appendix 4.43
Price Revision Details of Milk (2000-01 onwards)

Date of Revision/ Region	FAT(Rs./Kg)	SNF(Rs/Kg)	Purchase Price(Rs./kg) (Average rate)	Sales price(Rs/ltr) Toned Milk
1	2	3	4	5
TRCMPU				
01/04/01	95.70	78.30	9.73	13.00
01/07/01	91.30	74.70	9.09	13.00
11/08/01	95.70	78.30	9.73	13.00
01/11/01	95.70	79.55	9.71	13.00
21/11/03	103.34	85.90	10.40	14.00
21/04/05	110.21	91.61	11.09	15.00
ERCMPU				
11/05/00	95.70	78.3	9.23	13
11/07/01	91.30	74.7	9.09	13
21/11/03	98.99	80.99	9.85	14
21/04/05	107.97	88.34	10.75	15
MRCMPU				
21/05/00	95.7	78.3	9.23	13
11/10/00	95.7	78.3	9.23	12.5
21/05/01	95.7	78.3	8.63	12.5
01/10/01	95.7	79.55	9.21	12.5
21/11/03	103.34	85.9	10.4	14
21/04/05	110.21	91.61	11.09	15

Source : KCMMF

Appendix.4.45

Sale of Milk and Milk Products by KCMMF (2003-04 to 2005-06)

Sl. No	Product	2003-04	2004-05	% change over 2003-04	2005-06
1	2	3	4	5	6
1	Milk(Lakh Litr)	2675	2913	8.90	3100
2	Ghee (MT)	2256	2459	9.00	2628
3	Butter (MT)	296	295	-0.34	222
4	Ice-cream (Lakh Ltrs)	3.11	2.37	-23.79	3.26
5	Peda (000' Kg.)	65.304	65.36	0.09	66.004
6	Refresh/Trays	24080	15839	-34.22	39474
7	Sambharam (lakh PKts.)	72.99	13.50	-81.50	78.35
8	Curd (lakh ltr.)	116.37	132.07	13.49	150.01
9	Lassy (Ltr.)	2076	0	-100.00	
10	Kulfi (Cups)	12563	0	-100.00	
11	Sip up (lakh nos.)	26.05	23.36	-10.33	25.79
12	Cream (Kg.)	10.11	158526	1567911.87	430344
13	Dairy Whitener (MT)	16	19	18.75	16.11
14	Cream Roll (Nos.)	0	0		
15	Palada (Kg.)	2709	1411	-47.91	1330
16	Milma Plus (Bot.) (Lakh Nos)	7.56	8.89	17.59	9.92
17	Chocolik (Lakh No.)	0	1.66		2.68
18	Water Sip up (Lakh No)	0	0	7.15	

Source: KCMMF – Annual Reports

)

% change over 2003-04
7
15.89
16.49
-25.00
4.82
1.07
63.93
7.34
28.91
-100.00
-100.00
-1.00
4256517.21
0.69
-50.90
31.22

Appendix 4.46
Outbreaks, Attacks and Deaths due to Major Contagious Diseases

(unit in Nos)

SI.No.	Disease	2001	2002	2003	2004	2005	2006
1	Anthrax						
	Outbreaks	2	3	2	4	9	6
	Attacks	6	4	4	7	6	8
	Deaths	5	4	4	7	10	10
2	Black Quarter						
	Outbreaks	1	1	1	0	0	1
	Attacks	1	1	1	0	0	160
	Deaths	1	1	0	0	0	0
3	Hemorrhagic Septicemia						
	Outbreaks	4	8	4	2	8	6
	Attacks	170	23	17	41	79	132
	Deaths	31	12	0	0	4	6
4	Foot & Mouth Disease						
	Outbreaks	49	470	2383	132	19	94
	Attacks	1026	9918	19207	1890	446	772
	Deaths	344	814	1302	92	66	48
5	Rinderpest						
	No outbreak reported after 1994						

Source: Animal Husbandry Dept.

Appendix 4.47
District-wise Distribution of Fishermen Population in Kerala (2005-06)

Sl. No.	District	Marine				Inland				Marine & Inland Total
		Male	Female	Children	Total	Male	Female	Children	Total	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	67070	59258	52683	179011	462	535	457	1454	180465
2	Kollam	41714	35279	20677	97670	14545	13692	8782	37019	134689
3	Alappuzha	46393	42348	28693	117434	26982	25859	13911	66752	184186
4	Pathanamthitta	-	-	-		1086	943	439	2468	2468
5	Kottayam	-	-	-		10547	10012	6239	26798	26798
6	Idukki	-	-	-		319	322	202	843	843
7	Ernakulam	30824	28896	18043	77763	25608	25045	18088	68741	146504
8	Thrissur	30479	30709	17483	78671	3566	7832	4938	16336	95007
9	Palakkad	-	-	-		934	918	943	2795	2795
10	Malappuram	33467	27213	24873	85553	1983	1727	934	4644	90197
11	Wayanad	-	-	-		94	101	97	292	292
12	Kozhikode	40982	35748	27373	104103	4475	3666	12856	20997	125100
13	Kannur	22132	20112	17190	59434	2659	2812	1511	6982	66416
14	Kasaragod	18375	17349	10725	46449	425	402	187	1014	47463
	State	331436	296912	217740	846088	93685	93866	69584	257135	1103223

Source: Directorate of Fisheries

Appendix 4.48
Species wise composition of Marine fish landings in Kerala
(2003-2004 to 2005-06)

Sl. No	Species	2003-04	2004-05	2005-06
1	Elasmobranchs	3066	3044	3160
2	Eels	147	148	168
3	Cat Fish	154	154	168
4	Chirocentrus	258	258	265
5(a)	Oil Sardine	174464	172754	149949
(b)	Lesser Sardine	99539	98303	65267
(c)	Anchovilla	35869	35312	30168
(d)	Trissoels	2320	2308	3176
(e)	Other Clupeids	13024	12791	15533
6	Saurida & Saurus	6021	5916	5552
7	Hemirhamphus & Belone	647	642	692
8	Flying fish			
9	Perches	31020	30437	30400
10	Red Mullet	1584	1616	1676
11	Polynemids	22	21	67
12	Sciaenids	9056	8992	9888
13	Ribbon fish	18815	18657	15679
14 (a)	Caranx	25721	25419	26988
(b)	Chorinemus	1051	1049	985
(c)	Other Carangids	24618	24171	20764
15	Leiognathus	5186	5136	5305
16	Lactrius	3938	3907	3524
17	Pomfrets	1412	1393	1503
18	Mackerel	43551	43017	44202
19	Seerfish	2389	2371	2477
20	Tunnies	11314	11208	11924
21	Sphyraena	1610	1582	2095
22	Mugil	28	29	42
23	Soles	8174	8061	13951
24 (a)	Penaid Prawn	53361	53402	1738
(b)	Non Penaid Prawn	3370	3315	1738
(c)	Lobsters	344	0	398
(d)	Crabs	3446	3418	4516
(e)	Stomatopods		332	9542
26	Cephalopods	16147	15939	14203
27	Miscellaneous	6859	6761	11815
	Total	608525	601863	558913

Source: Directorate of Fisheries

Appendix 4.49
Species-wise Inland Fish Production in Kerala (2002-03 to 2005-06)

(In MT)

Sl. No	Species	2002-03		2003-04		2004-05		2005-06	
		Production	%	Production	%	Production	%	Production	%
1	2	3	4	5	6	7	8	9	10
1	Prawns	16178	21.6	16136	21.15	16334	21.37	14812	19
2	Etroplus	4394	5.9	4510	5.91	4458	5.83	4626	5.9
3	Murrels	4460	5.9	3657	4.79	4133	5.41	4287	5.5
4	Tilapia	7449	9.9	7739	10.15	7490	9.80	7965	10.2
5	Catfish	4367	5.8	4359	5.71	4740	6.20	4922	6.3
6	Jew Fish	2677	3.6	2795	3.66	2765	3.62	2871	3.7
7	Others	35511	47.3	37083	48.61	36531	47.78	38497	49.4
Total		75036	100	76279	100.00	76451	100.00	77980	100

Source: Directorate of Fisheries

Appendix 4.50
District wise Fishing Crafts

Sl.No.	Districts	Trawlers	Purse-seiners	Gill-netters	Liners	Ring seiners	Others
1	Trivandrum	0	0	41	6	0	8
2	Kollam	1,259	0	0	2	11	0
3	Alappuzha	0	0	1	0	62	73
4	Ernakulam	1,403	50	320	0	67	58
5	Thrissur	47	0	2	0	92	118
6	Malappura	219	0	16	1	105	100
7	Kozhikode	663	4	46	1	101	219
8	Kannur	208	0	2	0	5	11
9	Kasaragod	183	0	0	0	0	0
	Total	3982	54	428	10	443	587

Source: Marine Fisheries Census 2005, CMFRI

Total Mechanised	Motorised	Non- motorised	Total
55	3,063	5,005	8,123
1,272	605	425	2,302
136	3,947	1,010	5,093
1,898	1,104	1,190	4,192
259	456	306	1,021
441	1,607	361	2,409
1,034	1,976	641	3,651
226	503	290	1,019
183	890	294	1,367
5504	14151	9522	29177

Appendix 4.51
Details on Fishery Harbours in Kerala

(Rs. Lakh)

Sl.No.	Name of Fishing Harbour	Total Estimated Cost		Year of Starting	Year of Completion targeted	Expenditure up to March 2005 Progressive Total	Expenditure up to March 2006	Amount Released by GOI	Amount sanctioned by GOI
		Original	Revised						
1	2	3	4	5	6	7	8	9	10
1	Vizhinjam	704.00	1583.00 *	1987 - stage II	2004	1538.66	1538.81	690.50	704.00
2	Muthalapozi	1366.00	-	2000	2005	718.29	904.28	509.49	1366.00
3	Thangassery	1980.50	4385.50 *	1991	Commissioned in 2001	4086.77	4123.59	990.25	1980.50
4	Neendakara	585.00	622	1982	Commissioned in 1988	836.97	836.97	311.00	622.00
5	Kayamkulam	624.60	1970.32	1994	2005	1205.95	1280.84	300.00	624.60
6	Munambam	1167.20	1952	1998	Commissioned in 2000	1792.94	1792.94	683.60	1167.20
7	Puthiyappa	527.00	962.5	1988	Commissioned in 1996	1161.29	1161.29	481.25	962.50
8	Chombal	556.00	975.00 *	1992	Commissioned in 1999	902.66	902.66	370.00	556.00
9	Mopla bay	564.00	816	1992	Commissioned in 1999	1070.50	1070.50	408.00	816.00
10	Ponnani	2759.40	-	2001	2008	550.981	712.82	350.00	2759.40
11	Thalai	1370.00	1970*	-	-	53.47	59.48	-	-
12	Thottappally	1458.30		2004	2009	4.29	204.10	100.00	1458.30

Source : Harbour Engineering Department

* Revised Estimate submitted to Government for sanction

Appendix 4.52
Details of Revenue Collection
in various Fishing Harbours/Fish Landing Centres

(Rs.lakh)

Sl.No.	Name of Harbour or Landing Centre	2004-05	2005-06
1	2	3	4
I	FISHING HARBOURS		
1	Neendakara	102.39	102.96
2	Puthiyappa	34.19	52.92
3	Munambam	13.68	16.42
4	Mopla Bay	5.13	6.01
5	Chompal	9.83	9.30
6	Azheekal	1.78	0.15
7	Bey pore	6.41	5.29
8	Thangassery	26.83	18.59
9	Vizhinjam	9.19	8.29
II	FISH LANDING CENTRES		
1	Munakkadavu	0.45	0.71
2	Thottappaly		1.54
3	Neeleswaram	0.50	0.1
4	Dharmadam	0.60	0.69
5	New Mahe	1.12	0.96
6	Vellayil Beach	0.93	0.46
7	Cheruvathoor	1.38	1.05
8	Chalilgopalapettah	0.11	0.05
9	Quilandy	0.20	0.35
10	Chettuva	2.30	2.28
11	Palacode		0.62
12	Arthungal	0.53	0.06
13	Punnappa	0.14	
14	Ponnani	0.00	0.01
15	Kattoor	0.11	0.35
16	Ettikkulam		0.17
17	Thikkodi		0.07
	Total	217.80	229.40

Source: Harbour Engineering Department

Appendix 4.53
Welfare Activities of Fisheries Department (2002-03 to 2005-06)

Sl.No	Particulars	2002-03		2003-04		2004-05		2005-06	
		Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)	Financial (Lakh Rs.)	Physical (No.)
1	2	3	4	5	6	7	8	9	10
1	NFWF Housing	177.87	445	600	1500	600	1500	600	1500
2	Group Accident Insurance Scheme for fishermen	57.9	128	66.15	220279	68.39	220592	75.00	226642
3	G.A.Is for allied workers	5.64	22	50.00		8.50	45000	8.00	45000
4	Fishermen Oldage Pension	472.19	27,240	512.25	27240	462.03	27979	656.25	27979
5	Pension for wives of deceased fishermen	22.57	1,380	-	-	22.23	3274	78.93	3247

Source: Fisheries Directorate

Appendix 4.55

Activity-wise Cumulative Sanction/Release of Funds to Kerala by NCDC

(Rs. Crore)

Sl. No	Scheme	Total Release from 1962-63 to 2000-01	% to Toal release	Total release 2001-02	% to Toal release	Total release during 2002-03	% to Toal release	Total release during 2003-04	% to Toal release	Total release during 2004-05	% to Toal release	Total release during 2005-06	% to Toal release
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Mktg. & Input Distribution	40.57	9.17	8.75	16.95	14.98	29.85	2.08	2.16	57.99	53.08	52.23	27.35
2	Agro- Processing												
	a) Sugar	1.39	0.31	-	-	-	-	-	-	-	-	-	-
	b) Spinning Mills	10.05	2.27	-	-	-	-	8.04	8.33	13.77	12.60	23.52	13.32
	c) Oil Processing	74.25	16.79	-	-	-	-	-	-	-	-	-	-
	d) Powerlooms	18.53	4.18	0.95	1.85	2.46	4.90	-	-	-	-	0.45	0.23
	e) Rubber/others	34.30	7.75	0.55	1.07	1.57	3.13	5.80	6.00	7.06	6.46	2.83	1.48
3	Storage	13.54	3.06	0.81	1.57	2.41	4.80	0.02	0.02	0.33	0.30	0.21	0.11
4	Rural consumer / Student stores	20.68	4.67	1.96	3.8	10.67	21.26	1.69	1.75	1.11	1.02	0.65	0.35
5	ICDP	66.19	14.95	20.95	40.58	7.63	15.21	16.10	16.67	10.77	9.86	2.07	1.08
6	Weaker Section												
	a) Fisheries	88.92	20.08	16.59	32.15	5.63	11.22	15.21	15.75	16.27	14.89	5.49	2.89
	b) Handloom	15.72	3.55	0.72	1.39	1.11	2.21	-	-	0.05	0.05		
	c) Coir	48.75	11.01	0.09	0.18	1.23	2.45	-	-	1.57	1.44		
	d) SC-ST Co-ops.	2.18	0.49	-	-	0.09	0.18	-	-	0.16	0.15	0.12	0.06
	e) Poultry	0.10	0.02	-	-	-	-	-	-	-	-	-	-
	f) Dairy	0.03	0.01	-	-	-	-	-	-	-	-	-	-
7	Promotional/Development Projects	4.76	1.08	-	-	-	-	-	-	-	-	0.03	0.2
9	Credit to Co-operative Development	-	-	-	-	-	-	46.55	48.20	0.02	0.02	103.38	52.93
10	Computerisation	2.71	0.61	0.24	0.46	2.40	4.79	1.08	1.12	0.14	0.13		
	Total	442.67	100	51.61	100	50.18	100	96.57	100.00	109.24	100	190.98	100

Source: NCDC

Appendix 4.54

Details of Welfare Relief Schemes implemented by The Kerala Fishermen's Welfare Fund Board, 2005-06

(Amount in Rs.)

Sl. No	Details of Schemes	No of beneficiaries	Amount spent
1	2	3	4
1	Group Insurance Scheme		
a)	Accident Death (started on 10.09.1996)	28	2795000.00
b)	Permanent total disability		
c)	Permanent partial disability	2	100000.00
d)	Medical Expenses (Hospitalisation)		
2	Death while fishing or immediately there after not due to accident	43	785000.00
3	Financial assistance for the marriage of daughters of fishermen	1331	1996500.00
4	Financial assistance for the death of dependents	1018	610800.00
5	Old age pension	27979	65625317.00
6	Temporary disability	903	387946.00
7	Financial assistance to the dependents for the death of fishermen	510	2550000.00
8	SSLC cash award to the students who score highest marks	17	39356.00
9	Family welfare schemes	720	359750.00
10 a)	Financial assistance for treatment of fatal diseases	248	2008351.00
b)	Invalid pension	7	12000.00
11	Widow pension	3247	7892837.00
12	Chairman's Relief Fund	78	90000.00
13	Special cases sanctioned by the Board	104	149159.00
14	Maternity benefit scheme	1081	846000.00
15	Matsya Board Guidance Centre	5	15000.00
16	Cash award for Higher Education	15	58738.00
17	Extension		
18	Insurance Premium		7448454.00
	Total	34517	70685149.00
	Allied Workers Welfare Scheme		
1	Financial assistance to the dependents for the death of allied workers	58	295000.00
2	Maternity benefit scheme	53	39000.00
a)	Accidental death		
4	Old age pension	656	1506815.00
5	Medical Expenses (Hospitalisation)		
6	SSLC cash award to the students who score highest marks	15	37141.00
7	Special cases sanctioned by the Board		
8	Fatal disease	45	152937.00
9	Marriage assistance	105	157500.00
10	Sterilisation Operation	20	10000.00
11	Insurance Premium		1672538.00
	Total		3920931.00
	Grand Total	38289	109822899.00

Source: National Fishermen's Welfare Fund Board

Appendix 4.56
NCDC Release of Fund for Kerala
(1999-00 to 2005-2006)

(Rs. Lakh)

Sl.No.	Name of Schemes	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9
1	Marketing Co-operatives							
	(a) Margin Money to Federation	203.000	-	300.000	1090.000	-	700.00	50.00
	(b) Share Capital to PAMS	134.270	53.630	413.130	260.060	140.000	81.29	144.00
	(c) Agro Custom Hiring-cum-service Centre of RAIDCO (Margin Money)	70.000	-	-	-	-	-	-
	(d) Farmers Service Centre	142.400	544.400	161.850	99.400	58.530		20.00
	(e) Agricultural Implements/ Organic manure	-	-	-	49.080	8.940	17.88	8.93
	(f) Working Capital						5000.00	5000.00
2	Processing Unit							
	(a) Rubber	319.025	1967.06	55.145	156.530	580.300	390.00	
	(b) Spices Powdering Unit	58.800	49.055	-	-	-	-	
	© Fruit and Vegetables						286.00	283.32
	(d) Cattlefeed						30.00	
3	Storage	79.000	36.407	81.276	241.071	2.175	33.270	20.61
4	Credit for Co-operative Development	-	-	-	-	4655.325		10338.31
5	Fisheries							
	(a) Marine	1335.484	1143.72	1659.36	562.500	1521.430	1619.63	546.37
	(b) Inland	208.466	-	-	-	-	-	-
	(c) Fish marketing cell	42.200	-	-	-	-	6.50	2.6
6	Coir Co-operatives	397.826	1057.087	9.320	123.349	-	156.66	
7	Handloom Co-operatives	264.173	74.140	71.593	111.250	-	5.41	
	(a) Spinning Mills - SC	150.000	107.990	-	-	804.020	1377.00	2352.56
	(b) Powerloom	382.850	551.555	95.620	245.630	-	-	45.61
8	SC/ST Co-operatives	51.965	68.310	-	8.890	-	15.75	11.61
9	Sugar Factory	-	-	-	-	-	-	-
10	Computerisation	249.660	270.520	23.730	240.130	107.589	13.75	
11	Tech/Promo Cell	-	-	-	-	-	-	-
12	Project Reports Study etc. Others	-	-	-	-	-	-	-
13	EEC-Coconut Development Project (KERAFED Project)	120.850	-	-	-	-	0.34	
14	INTE-Co-operative Development Project (I.C.D.P)	945.517	773.632	2094.527	763.063	1610.198	1077.64	207.28
15	Consumer Schemes	443.130	205.050	188.800	1066.580	169.390	110.77	65.46
16	Student Stores	7.140	1.500	7.130	0.650	-	-	
17	Animal Husbandry Department	-	-	-	-	-	-	-
	Poultry Co-operatives	-	-	-	-	-	-	-
18	Godown to dairy	2.500	-	-	-	-	-	-
19	Industrial Co-operatives	-	-	-	-	-	2.44	2.88
	Total	5608.256	6904.056	5161.481	5018.183	9657.897	10924.33	19099.60

Source: NCDC

Appendix 4. 57

Selected Indicators of Performance of the Primary Agricultural Credit Societies

SI.No.	Indicators	Unit	2004	2005	2006
1	2	3	4	5	6
1	Average membership per society	No.	14430	15966.7	17149
2	Average Share Capital per Society	Lakh Rs.	24	29.59	49.56
3	Average deposit per society	Lakh Rs.	579	771.88	968.66
4	Average deposit per member	Rs	4012.27	4834.3	5648.179
5	Average working capital per society	Lakh Rs.	772.5	1039.19	1418.4
6	Average loan per member	Rs	3788.38	4181.3	5301.5
7	Percentage of borrowing members to total	%	40.15	40.15	63.54
8	Average loan advanced per advancing society	Lakh Rs.	546.28	667.62	909.21
9	Average loan advanced per borrowing members	Rs	9037.1	7543.07	8342.94
10	Percentage of overdue to demand	%	34.8	19.78	38.45
11	Percentage of overdue to outstanding	%	28.73	23.74	25.52

Source: Registrar of Co-operative Societies, Kerala.

Appendix 4.58
Selected Indicators of the Credit Operations of
Primary Agricultural Credit Societies

Sl.No.	Indicators	Unit	2004	2005	2006
1	2	3	4	5	6
1	No.of Societies	Nos.	1600	1594	1587
2	No.of Members	No. in crores	2.35	2.54	2.72
	(i) of which SC	No. in lakhs	17.629	17.95	12.35
	(ii) of which ST	No. in lakhs	1.22155	2.51	1.69
3	Paid up share capital	Rs. in crores	394.677	471.10	785.98
4	Reserves	Rs. in crores	481.188	720.60	1023.81
5	Deposits	Rs. in crores	9228.24	12288.00	15372.65
6	Working Capital	Rs. in crores	12321.4	16544.00	22510.58
7	Loans Issued	Rs. in crores	8713.29	10628.00	14429.11
	(i) Short-term	Rs. in crores	5570.21	7012.00	10244.91
	(ii) Medium-term	Rs. in crores	2765.1	3183.00	3455.55
	(iii) Long - term	Rs. in crores	377.979	433.20	728.64
8	Loan Outstanding	Rs. in crores	7528.1	9919.00	15360.01
9	Loan Overdue	Rs. in crores	2163.25	2354.00	3922.78
10	S.T Loan for agricultural purpose alone	Rs. in crores	1791.25	1912.00	2797.91
11	S.T Loan for non-agricultural purpose	Rs. in crores	3391.99	5100.00	7447.01
12	M.T loan for Agricultural purpose	Rs. in crores	634.92	881.80	948.80
13	M.T loan for non-Agricultural purpose	Rs. in crores	1438.66	2302.00	2506.75
14	L.T. Loan for Agricultural purpose alone	Rs. in crores	122.77	231.90	168.71
15	L.T. Loan for non-agricultural purpose alone	Rs. in crores	281.48	201.30	559.93
16	Value of Fertilizers Sold	Rs. in crores	195.144	273.80	312.65
17	Value of Agricultural Produce Marketed	Rs. in crores	85.768	118.20	456.63
18	Dormant Societies	No.	26	24	22
19	Societies on Profit	No.	703	722	721
20	Profit Amount	Rs. in crores	140.523	235.90	247.20
21	Societies on loss	Nos.	884	828	828
22	Loss Amount	Rs. in crores	439.49	338.20	426.27
23	Societies without profit or loss (U/L)*	No.	13	20	16
24	Societies having paid Secretaries	No.	1506	1539	1550
25	Societies having own Godowns	No.	1298	1288	1243
26	Societies having Hired Godowns	No.	218	147	188
27	Viable Societies	No.	1424	1421	1425
28	Computerised societies	No.	540	717	766
29	Self Help Group Formed by PACS	No.	2968	18188	11845
30	State Contribution to SHGs through PACS	Rs. in Lakhs	0	236.40	222.31
31	State Contribution to agri Credit		40.3	558.00	256.39
32	Assistance for insurance	Rs.in Lakhs		1	21.27

Source: Registrar of Co-operative Societies, Kerala.

*U/L: Under Liquidation

Appendix 4.59
Important Activities of Major Co-operatives (2002-03 to 2005-06)

Schemes	Unit	2002-03	2003-04	2004-05	2005-06
Procurement of Natural Rubber by RUBCO	MT				
		12805	4847	365	18018.09
	Lakh Rs.	5089	2435	200	7724.62
Sales of Natural Rubber					
a) Domestic	MT	1048	253	269	19827.97
	Lakh Rs.	355	256	144	7013.63
b)Export	MT	13415	4478	95	
	Lakh Rs.	4434	1778	46.58	
Hawai Chappel Sales Turnover	Lakh Rs.	440.69	-	449.84	385.82
Cycle Tyre and tubes	MT	-	-	827	439.87
	Lakh Rs.	-	-	441.77	223.86
Matresses	MT	-	-	1470	2060.8
	Lakh Rs.	-	-	1703	2371.67
Furniture	Lakh Rs.		1551	1434	1584.44
Rubber Mark					
a) Rubber procured marketed	MT	-	-	13509	42597
	Lakh Rs.	-	-	7907	27478
b)Sales Turnover	Lakh Rs.			8899	27266

Source : Annual reports of major co-operatives

Appendix 5.1

Water Resources Potential of the River Basins of India

Sl. No.	Name of the River Basin	Average annual potential in river (BCM)	Utilisable Surface flow (BCM)	Replenishable Ground flow (BCM)
1	Indus (up to border)	73.31	46.0	26.49
2	a) Ganga	525.02	250.0	170.99
	b) Bhramaputra Barak & Others	585.60	24.0	26.55
3	Godavari	110.54	76.3	40.65
4	Krishna	78.12	58.0	26.41
5	Cauvery	21.36	6.8	12.30
6	Pennar	6.32	6.9	4.93
7	East Flowing Rivers Between Mahanandi & Pennar	22.52	13.1	18.84
8	East Flowing Rivers Between Pennar and Kanyakumari	16.46	16.7	18.22
9	Mahanadi	66.88	50.0	16.46
10	Brahmani & Baitarni	28.48	18.3	4.05
11	Subernarekha	12.37	6.8	1.82
12	Sabarmati	3.81	1.9	..
13	Mahi	11.02	3.1	8.52
14	West Flowing Rivers of Kutch, Sabarmati including Luni	15.10	15.0	11.23
15	Narmada	45.64	34.5	10.83
16	Tapi	14.88	14.5	8.27
17	West Flowing Rivers from Tapi to Tadri	87.41	11.9	
18	West Flowing Rivers from Tadri to Kanyakumari	113.53	24.3	17.69
19	Minor River Basin Drainage into Bangladesh & Burma	31.00	..	..
	Total	1869.37	690.3	431.42

Source: Ministry of Water Resources

Appendix 5.2

Central Loan Assistance Released under AIBP to States from 1996-97 to 2005-06

(Rs. Crore)

Sl. No	State	CLA Released during										
		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Total
1	Andhra Pradesh	35.25	74	79.67	65.015	95.02	281.66	33.186	205.53	87.54	17.89	974.76
2	Arunachal Pradesh	0	0	0	7.5	7.5	15	1.5	20	10	0	61.50
3	Assam	5.23	12.4	13.95	14.54	24.077	14.521	16.274	19.2015	16.93	14.95	152.07
4	Bihar	13.5	5.15	36.185	129.695	148.44	3.42	14.481	74.644	37.21	10.76	473.49
5	Chhattisgarh	0	4.5	9.5	10.52	13.93	48.2	104	74.63	2.93	0	268.21
6	Goa	0	5.25	0	3.5	61.65	58	0	2	0.65	0	131.05
7	Gujarat	74.773	196.9	423.82	272.7	421.85	581.69	1000.33	650.359	530.5	0	4152.92
8	Haryana	32.5	12	0	0	0	0	18	7.735	11.13	162	243.37
9	Himachal Pradesh	0	6.5	5	11.047	18.015	3.244	8.15	14.692	3.69	3.34	73.68
10	Jammu & Kashmir	1.3	0	0	4.68	10.46	11.07	34.999	21.545	12.71	7.01	103.77
11	Jharkhand	0	8.89	11.64	14.345	9.05	10.82	9.67	1.833	21.29	16.65	104.19
12	Karnataka	61.25	90.5	94.5	157.14	171	492.5	620.85	266.478	396.29	0	2350.51
13	Kerala	3.75	15	0	0	22.4	11.275	5.665	31	49.44	100.68	239.21
14	Madhya Pradesh	63.25	110	81.25	95.325	151.328	215.41	220	568.44	516.7	0	2021.70
15	Maharashtra	14	55	50.86	49.875	97.02	39.1	133.134	164.395	529.29	13.45	1146.12
16	Manipur	4.3	26	10.78	21.81	1.5	9.36	19.5	15.5	13	23.51	145.26
17	Meghalaya	0	0	0	2.694	5.512	4.47	1.5	1.088	1.74	18.38	35.38
18	Mizoram	0	0	0	1.433	1.433	2	0.75	9.3	5	9.32	29.24
19	Nagaland	0	0	0	2.73	5	5	2.659	8	4	2.7	30.09
20	Orissa	48.45	85	71.5	90.25	100.32	168.475	179.57	154.685	24.23	71.92	994.40
21	Punjab	67.5	100	0	42	55.62	113.69	36.66	0	0	4.7	420.17
22	Rajasthan	2.675	42	140.05	106.665	78.467	96.315	174.385	499.837	352.9	33.25	1526.54
23	Tripura	3.773	5.1	3.975	34.653	13.883	21.063	13.395	13.377	11	10.5	130.72
24	Tamilnadu	20	0	0	0	0	0	0	0	0	0	20.00
25	Uttar Pradesh	43.5	78	76.5	286	315.9	354.69	359	274.785	175.92	59.87	2024.17
26	Uttaranchal	0	0	0	0	0	0	25.163	25.5525	38.99	37.87	127.58
27	West Bengal	5	20	10	25	26.825	38.608	28.133	3.144	13.46	0	170.17
28	Sikkim	0	0	0	1.36	0	2.4	0.75	0.75	0.76	0.68	6.70
	Total	500.001	952.19	1119.18	1450.477	1856.2	2601.981	3061.704	3128.501	2867.3	619.43	18156.96

Appendix 5.3

Physical Achievements under Minor Irrigation Schemes

(Area in Ha.)

Sl.No.	Name of Schemes	Physical Achievement (net area)			
		2002-03	2003-04	2004-05	2005-06
1	2	5	6	7	8
1	Minor Irrigation - class -I	1630	2947	2609	2778
2	Minor Irrigation - class -II	834	1758	353	566
3	Lift Irrigation	458	181	95	251
4	Jaladhara Padhathy	557	--	--	--
5	Repairs to MI Structures	--	--	16	16
	Total	3479	4886	3073	3611

Source : Department of Water Resources

Appendix 5. 4

Ground Water Resources of Kerala as on 31.03.2004 (GEC-1997 Methodology)

(Figures in MCM)

Sl. No.	District	Total Annual Ground Water Recharge	Natural Discharge during Non-Monsoon Season	Net Annual Ground Water Availability	Gross Ground Water draft for Irrigation	Gross Ground Water for Domestic and Industrial uses	Gross Ground Water draft for all uses	Allocation for domestic and industrial water supply for next 25 years	Net Ground Water Availability for future irrigation development	Stage of Ground Water Development (%)
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	308.51	30.48	278.03	84.20	94.59	185.77	111.58	82.25	66.82
2	Kollam	495.61	47.36	448.25	114.03	88.75	205.40	111.94	222.28	45.82
3	Pathanamthitta	347.00	30.44	316.55	49.66	42.03	100.50	58.05	208.84	31.75
4	Alappuzha	466.08	46.62	419.46	61.06	67.46	128.64	92.37	266.03	30.67
5	Kottayam	521.06	50.20	470.83	62.89	67.43	133.60	92.52	315.42	28.37
6	Idukki	269.04	22.72	246.32	41.77	41.64	92.32	57.08	147.47	37.18
7	Ernakulam	618.42	50.59	567.83	197.59	86.44	293.80	112.21	258.03	51.74
8	Thrissur	774.93	72.18	702.75	228.27	101.36	326.44	130.24	344.24	46.45
9	Palakkad	823.88	73.55	750.33	140.47	159.85	327.75	191.81	418.05	43.67
10	Malappuram	557.29	49.66	507.64	165.45	115.23	307.85	156.50	185.69	60.65
11	Kozhikod	366.41	21.60	344.81	104.86	86.80	213.38	112.63	127.32	61.88
12	Wayanad	325.03	32.44	292.59	34.40	28.67	71.93	40.40	217.79	24.58
13	Kannur	591.89	51.27	540.62	107.29	76.52	261.18	101.38	331.95	48.31
14	Kasargod	376.18	32.64	343.53	204.08	40.59	271.64	43.08	96.37	79.07
	Total	6841.33	611.75	6229.54	1596.02	1097.36	2920.20	1411.79	3221.73	46.88

Source: CGWB

Appendix 5.5

Physical Achievements under Ground Water Development Schemes

Sl.No	Items	Unit	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
1	Detailed hydrological survey(Site selection)	No.	3058	5423	...	3590
2	Siting and providing technical assistance for open wells	No.	850	882	5048	468
3	Siting and construction of different types of drilled wells	No.	510	934	1119	999
4	Creation of additional irrigation facilities	ha.	1027	2637	2000	539
5	Training of personnel	No.	108	41	71	45
6	Water sample analysis	No.	2160	2545	2648	3443

Source: Water Resources Department (GWD)

Appendix 5.6

Physical Achievements Under Command Area Development Prog

SI No.	Item	Achievement		
		Unit	2002-03	2003-04
1	2	3	4	5
1	Construction of field channels	ha.	776	2170
2	Construction of field drain	ha.	15580	8368
3	Warabandhi works	ha.	678	-
4	Training Programme for farmers	No.	298	64
5	Adaptive Trials	ha.	635	122
6	Large scale demonstration	ha.	8045	1994
7	Subsidy to small & marginal farmers	No.	456	-
8	Beneficiary farmers associations organised and registered	No.	5	64
9	Detailed Soil survey conducted	ha.	1320	-
10	Land levelling & shapping	ha.	52	23
11	Bench mark and Evaluation Survey conducted	ha.	1167	1793
12	Crop Estimation Survey	ha.	-	-
13	Yield Estimation survey on Principal Crops	No.	1111	775
14	Evaluation Reports published	No.	4	3
15	Reclamation of water logged areas	ha.	3462	4409

Source : CADA

ramme

it	
2004-05	2005-06
6	7
1998	1614
6156	3275
-	-
83	117
10	9
-	12
-	-
35	64
-	-
-	-
2306	1741
-	-
651	505
3	1
1133	258

Appendix 5.7
Major Physical Cumulative Achievements under CAD Programme
as on March 2006

(in Ha.)

Sl. No.	Name of Project	Total CCA	Physical Achievements			
			Field Channel	Field drain	Warabandhi	Reclamation
1	2	3	4	5	6	7
1	Mangalam	3639.00	3639.00	3490.00	3639.00	378.67
2	Peechi	18623.00	18623.00	18623.00	18623.00	3001.89
3	Vazhani	5182.00	5182.00	5182.00	5182.00	281.70
4	Cheerakuzhy	1619.00	1349.00	1188.00	1619.00	
5	Chalakudy	19696.00	19696.00	14910.81	19696.00	1045.83
6	Neyyar	12013.00	12013.00	7853.72	11655.00	2085.18
7	Chitturpuzha	15700.00	15700.00	15638.00	10975.00	1389.38
8	Kuttiyadi	15540.00	15249.40	14214.00	12776.00	2450.00
9	Periyar Valley	32800.00	32800.00	24000.00	32800.00	1281.00
10	Pamba	21135.00	6504.00	145.00	13348.00	864.00
11	Malampuzha	21732.00	21732.00	18969.00	21732.00	2216.00
12	Walayar	4122.00	4122.00	2387.00		506.00
13	Pothundy	5466.00	5466.00	5185.00	5466.00	382.00
14	Gyathri	5466.00	5466.00	4902.00	5466.00	432.00
15	Kanhirapuzha	8467.00	4809.00	5527.00		1218.00
16	Pazhassi	11530.00	554.75	1769.00		382.00
	Total	202730.00	172905.15	143983.53	162977.00	17913.65

Source: CADA

Appendix 5.8
Storage levels in reservoirs of completed projects in Kerala

Sl.No	Name of Reservoir	Storage (Mm ³)					
		01.06.2005	01.10.2005	01.01.2006	01.06.2006	01.10.2006	01.01.2007
1	Malampuzha	18.703	218.875	138.276	75.599	218.01	148.617
2	Neyyar	80.452	94.401	102.664	57.107	103.9	94.401
3	Kallada	110	459.6	485.04	183.2	447	410.03
4	Kanhirapuzha	15.807	61.051	64.683	48.601	59.1	83.008
5	Kuttiyadi	15.088	100.45	108.605	69.764	95.42	104.223
6	Pothundy	5.381	43.405	25.938	12.707	43.41	25.938
7	Mangalam	0.327	25.22	11.665	10.897	25.14	12.452
8	Vzhazni	1.29	16.49	7.59	2.01	16.5	10.95
9	Peechi	8.492	77.359	60.141	10.803	78.04	65.587
10	Walayar	1.584	17.014	13.2	8.371	18.3	12.66
11	Meenkara	6.654	10.775	10.775	6.994	10.46	8.54
12	Chulliyar	5.605	13.7	10.477	5.918	13.7	8.311
13	Chimoni	56.25	134.32	122.85	50.38	144.82	125.8
14	Malankara	31.32	34.4	31.88	24.2	28.08	32.8
	Total	356.953	1307.06	1193.784	566.551	1301.88	1143.317

Source : Water Resource Department

Appendix 5.9
District-wise population covered by Water Supply Schemes as on 1/4/2006

Sl.No	District	Rural Population covered	% to Total Rural population	Urban population covered	% to Total Urban Population	Total Population covered	% to Total population
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	1505503	70.26	958617	87.81	2464120	76.19
2	Kollam	1141060	53.84	453781	97.38	1594841	61.69
3	Pathanamthitta	698640	62.92	107700	87.00	806340	65.34
4	Alappuzha	1182805	79.00	521854	83.97	1704659	80.82
5	Kottayam	944058	57.09	292663	97.62	1236721	63.3
6	Idukki	584608	54.33	55262	95.95	639870	56.66
7	Ernakulam	1487368	91.32	1343990	90.99	2831358	91.16
8	Thrissur	1628740	76.29	785387	93.56	2414127	81.17
9	Palakkad	1374796	60.81	340964	95.62	1715760	65.55
10	Malappuram	1735083	53.07	344860	96.82	2079943	57.37
11	Kozhikode	629783	35.42	795762	72.27	1425545	49.51
12	Wayanad	623847	83.07	14835	50.10	638682	81.82
13	Kannur	596796	49.90	708332	58.40	1305128	54.18
14	Kasaragod	658692	67.88	143298	61.32	801990	66.61
	Total	14791779	62.74	6867305	83.07	21659084	68.02

Source: Kerala Water Authority.

Appendix 5.10

District - wise and Category-wise Number of Water Supply Schemes in Operation as on 1/4/2006

Sl. No.	Name of District	No. of Urban Water Supply Schemes	Rural Water Supply Schemes	Total
1	2	3	4	5
1	Thiruvananthapuram	6	122	128
2	Kollam	3	90	93
3	Pathanamthitta	3	56	59
4	Alappuzha	6	78	84
5	Kottayam	5	150	155
6	Idukki	1	188	189
7	Eranakulam	13	140	153
8	Thrissur	9	240	249
9	Palakkad	4	165	169
10	Malappuram	5	135	140
11	Kozhikode	2	184	186
12	Wayanad	0	58	58
13	Kannur	6	149	155
14	Kasaragod	2	120	122
	Total	65	1875	1940

Source: Kerala Water Authority.

Appendix 5.11

District-wise details of service connections and street taps as on 1/4/2006

Sl.No	Name of District	Water Supply Connections				Street taps		
		Domestic	Non-Domestic	Industrial	Total	Panchayat	Cor'/Mun'	Total
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	204963	24186	60	229209	11448	4346	15794
2	Kollam	68554	4051	154	72759	13795	3427	17222
3	Pathanamthitta	22975	2379	13	25367	6560	1501	8061
4	Alappuzha	64440	3001	73	67514	16197	4920	21117
5	Kottayam	69416	5250	44	74710	16672	2108	18780
6	Idukki	13775	1480	5	15260	4553	506	5059
7	Eranakulam	242676	18021	300	260997	28221	9180	37401
8	Thrissur	85163	3497	38	88698	22369	4788	27157
9	Palakkad	58520	4092	94	62706	12551	2967	15518
10	Malappuram	37324	2545	9	39878	6956	3117	10073
11	Kozhikode	44211	3267	38	47516	4963	2894	7857
12	Wayanad	6298	917	2	7217	4153	247	4400
13	Kannur	12725	738	10	13473	2969	291	3260
14	Kasaragod	27297	3666	51	31014	4152	1623	5775
	Total	958337	77090	891	1036318	155559	41915	197474

Source: Kerala Water Authority

Appendix 5.13
Details of Income from Water Charges (2000-01 to 2005-06)

(Rs. Lakh)

Year	Urban Schemes			Rural Comprehensive Schemes			Rural Single Panchayat Schemes			Grand Total
	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	Domestic, Non-domestic & Industrial	Street Taps	Total	
1	2	3	4	5	6	7	8	9	10	11
2000-01	4389	1393	5782 (61.83)	1097	1030	2127 (22.74)	549	894	1443 (15.43)	9352 (100)
2001-02	5184	1011	6195 (64.96)	1296	748	2044 (21.44)	648	649	1297 (13.60)	9536 (100)
2002-03	5633	1190	6823 (64.50)	1408	880	2288 (21.60)	704	763	1467 (13.90)	10578 (100)
2003-04	6030	1370	7400 (63.97)	1520	1012	2532 (21.89)	759	877	1636 (14.14)	11568 (100)
2004-2005	8132	133	8625 (71.73)	2051	98	2149 (18.65)	1023	86	1109 (9.62)	11523 (100)
2005-06	7695	986	8681 (52.12)	1930	4052	5982 (35.91)	979	1015	1994 (11.97)	16657 (100)

Source:- Kerala Water Authority.

Note:- Figures in brackets denote percentage to total

Appendix 5.14
Receipts of Kerala Water Authority from various sources from
1999-00 to 2005-06

(Rs. Lakh)

Year	Revenue from Water/ Sewerage rates	State Govt.		Govt. of India	Loan from LIC/ HUDCO	Others	Total
		Plan	Non-Plan				
1	2	3	4	5	6	7	8
1999-00	7794	15181	5513	3668	3621	313	36090
2000-01	9354	11460	4780	3846	2777	304	32521
2001-02	9537	9699	6186	5695	100	299	31516
2002-03	10580	10400	6186	6204	5029	302	38701
2003-04	11568	9738	6124	4341	1000	375	33146
2004-05	11523	7621	9626	5885	300	385	35340
2005-06	16657	17499	8000	6170	4251	395	52972

Source: Kerala Water Authority

Appendix-5.15
Plan & Non Plan Expenditure of Kerala Water Authority from 1996-97 to 2005-06

(Rs. Lakh)

Items	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11
I. Plan Expenditure										
State Plan Schemes	7139	12138	12140	5381	5748	3965	5105.87	5162.58	9589.63	5459.59
ARP Schemes	2875	3916	3533	4228	4383	4233	4331.71	4197.43	4157	6667.55
LIC/HUDCO	2473	673	2930	6437	3346	4140	3706.07	3360.64	1500	2634.98
Others (AUWSP-Central share, JBIC and PMGY)	288	171	132	0	0	0	1416.21	1337.04	2060.82	1486.30
Sub Total	12775 (50.32%)	16898 (53.63%)	18735 (52.88%)	16046 (40.53%)	13477 (35.22%)	12338 (31.89%)	14559.86 (37.36%)	14057.69 (31.91%)	17307.45 (35.7%)	16248.42 (33.4%)
II. Non Plan Expenditure										
Salary & Establishment	4742	5153	5950	9520	10069	9561	9373	10699	11371	12076
Power	2101	2900	3664	5451	5491	7438	6941	9927	10300	10800
Operation and Maintenance	2191	2329	2439	3015	3068	3107	3190	3499	3573	3665
Interest on Loans (excluding GOK)	2217	2515	2859	3309	3422	3567	3336	3322	3277	3223
Repayment of Loans (Excluding GOK)	948	1172	1267	1660	2177	2026	929	1858	1926	1907
Others	413	542	517	588	558	649	645	698	720	730
Sub-Total	12612 (49.68%)	14611 (46.37%)	16696 (47.12%)	23543 (59.47%)	24785 (64.78%)	26348 (68.11%)	24414 (62.64%)	30003 (68.09%)	31167 (64.3%)	32401 (66.6%)
Grand Total	25387	31509	35431	39589	38262	38686	38973.86	44060.69	48474.45	48649.42

Source:- Kerala Water Authority

Note: Figures in brackets denote percentage to total

Appendix 5.16

District wise & category wise number of water supply schemes under implementation as on 1/4/2006

Sl. No	Name of District	Rural Water Supply Schemes							Urban Water Supply Schemes					Total
		ARWSP	TM	PMGY	State Plan	LIC	NABARD	JBIC	AUWSP	State Plan	JBIC	LIC/ HUDCO	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Thiruvananthapuram	13		6	4	12				4	1	3		43
2	Kollam	5	1	7	2	3		1		1		1		21
3	Pathanamthitta	22		29	5	4						1		61
4	Alappuzha	26		14	2	1		1				0		44
5	Kottayam	10		20	9	3						2		44
6	Idukki	13		2	1	3	1					0		20
7	Eranakulam	10		19	4	5	2		1			3	1	45
8	Thrissur	13	2	12	2	4			5	2		5		45
9	Palakkad	22	2	5	0	6				1		3		39
10	Malappuram	47		14	0	8	1					3		73
11	Kozhikode	46	1	16	0	3					1	3		70
12	Wayanad	2		5	1	0	1					1		10
13	Kannur	17		1	3	0	3	1	1			8		34
14	Kasaragod	20	3	1	0	5			1			0		30
	Total	266	9	151	33	57	8	3	8	8	2	33	1	579

Source: Kerala Water Authority.

Appendix 5.17
District-wise Population Covered by Water Supply Schemes Implemented by
KRWSA as on 01-04-06

Sl. No	Name of District	No.of Schemes in Operation	No. of Water Supply Connections			Population Covered
			Domestic	Non Domestic	Street Taps	
1	2	3	4	5	6	7
1	Thiruvananthapuram	1	50	0	0	215
2	Kollam	1	34	0	0	170
3	Pathanamthitta	14	675	0	0	3375
4	Alappuzha	0	0	0	0	0
5	Kottayam	10	849	0	0	4245
6	Idukki	37	829	0	0	3913
7	Eranakulam	31	753	0	0	3109
8	Thrissur	379	22225	9	32	122183
9	Palakkad	476	26786	22	277	122700
10	Malappuram	547	35893	47	15	191331
11	Kozhikode	505	19513	24	0	105471
12	Wayanad	24	1018	0	0	4851
13	Kannur	22	447	0	0	2181
14	Kasaragod	41	1053	0	0	5010
	Total	2088	110125	102	324	568754

Source: KRWSA.

Appendix 5.18

District-wise distribution of KWA Water Supply Schemes Transferred to Local Bodies

Sl.No	Name of District			Total	Population Coverage
		Rural from 1050 schemes	Other than 1050 schemes		
1	Thiruvananthapuram	2	0	2	33667
2	Kollam	2	0	2	3950
3	Pathanamthitta	0	0	0	0
4	Alappuzha	0	0	0	0
5	Kottayam	5	0	5	15500
6	Idukki	3	1	4	2710
7	Eranakulam	0	0	0	0
8	Thrissur	17	10	27	50640
9	Palakkad	59	32	91	388800
10	Malappuram	42	53	95	260143
11	Kozhikode	48	49	97	141815
12	Wayanad	4	1	5	35350
13	Kannur	5	1	6	2500
14	Kasaragod	12	25	37	27650
	Total	199	172	371	962725

Source: Kerala Water Authority.

Appendix 6.1

Notified Wetlands in India

Name of Wetland	State	Water Spread (Post Monsoon) Ha.
1	2	3
Bhoj	Madhya Pradesh	32.29
Harike	Punjab	8,280
Kanjli	-do-	3,79
Ropar	-do-	220,60
Wular	Jammu & Kashmir	11562.5
Tso Morari	-do-	12,838
Pichola	Rajsthan	604
Sambhar	-do-	2,270
Chilika	Orissa	9,400
Ujini	Maharashtra	27,935
Ashtamudi	Kerala	5071.07
Sasthamkotta	-do-	354.69
Kolluru	Andhra Pradesh	28,375
Loktak	Manipur	1,166
Sukhna	Chandigarh	153
Renuka and Pong dam (combined)	Himachal Pradesh	27,878
Chandratal	-do-	
Kabar	Bihar	82
Nalsarovar	Gujarat	14818.75
East Calcutta	West Bengal	11067.5

Source: Quoted in Parkin and Datye, 2003.

Appendix 6.2
Area under Mangroves 2001
(in Sq. Km.)

State	Area
Andhra Pradesh	333
Goa	5
Gujarat	911
Karnataka	2
Maharashtra	118
Orissa	219
Tamil Nadu	23
West Bengal	2081
Andaman and Nicobar	789
Pondicheri	1
Total	4482

Source: Forest Survey of India, 2002

Appendix 6.3
Salient features of the Floristic ‘Hot Spots’ of Kerala

Agasthyamala	Anamalai – High ranges	Silent Valley - Wayanad
1. Highest peak – Agastyakundom (1868 M)	1. Highest peak – Anamudi (2694 M)	1. Wet evergreen, moist deciduous, shola, and grasslands forests, the main types of vegetation.
2. Rainfall on the windward side – 3000 to 5000 mm/annum	2. Rainfall on the windward side – 3000 to 7000 mm/annum	2. Five endemic genera – <i>Chandrashekarariaea</i> , <i>Baeolepis</i> , <i>Kanjarum</i> , <i>Meteromyrtus</i> , and <i>Silent Valleya</i>
3. <i>Aenhenrya</i> , an endemic orchid genus – exclusively occurring in the region	3. Endemic genera – <i>Haplothismia</i> , <i>Pseudoglochidon</i> and <i>Utleria</i> .	3. Major centres of genetic resources of Turmeric, Pepper, Canes and Aroids
4. About 189 endemic species, occur in small population over narrow ranges	4. Mountain folds form a mosaic of microclimatic islands due to unique physiography, high latitude, heavy rainfall and diurnal temperature.	4. Area comprises of Palakkad gap, Silent Valley, Wayanad and adjacent forests of Kannore district.
5. Recent surveys have discovered 35 new species.	5. Plantation of Tea, Cardamom and Rubber, have destroyed major components of wet evergreen and deciduous forests.	5. About 40,000 Ha, of contiguous forests and one of few area in India with out human habitation and large-scale intervention.
6. Five (5) wild life sanctuaries in the region	6. Eravikulam National Park and 7 Wild Life Sanctuaries in the region.	6. Wild life which has almost eliminated from other parts of the country such as the <i>Nilgiri Languor</i> , <i>Giant Squirrel</i> and <i>Lion tailed Macaque</i> being survived here.
7. Serious human interference due to poaching, smuggling and pilgrim influx.		

Source: STEC, 1997

Appendix 6.4

Details of River Sand Mining from Various River Basins of Greater Kochi Region

River Basin	River Length (Km.)	Drainage Area (Km. ²)	Estimated Sand reserve (10 ⁶ m ³)	Panchayats involved in Sand mining	Volume of Sand extracted (10 ⁶ m ³ / year)	Sustainable yield (M ³ /year)	No. of labourers
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Periyar	244	5398	26.7	15	3.11	50708	7000
Pamba	176	2235	10.62	14	0.40	17883	995
Muvattupuzha	121	1554	7.56	12	0.33	41827	1147
Manimala	90	847	3.18	10	0.47	14200	1300
Chalakkudi	130	1704	4.91	5	0.15	7810	1200
Meenachil	78	1272	3.12	-	-	-	-
Achankoil	128	1484	5.8	-	-	-	-

Source: Quoted by NEERI, 2002

Appendix 6.5
Estimated greenhouse gas emissions from major sources in Kerala

Gas	Source	Emission (Gg/year)	Total (Gg/year)	CO ₂ equivalent (tg/year)	Percentage of total
Carbon dioxide	Petroleum products	10,020	19,320	19.32	80.47
	Firewood	9,300			
	Petroleum products	1			
	Firewood	49			
	Wetlands	22			
Methane	Agricultural soils	20	203	4.22	17.58
	Rice paddy	2			
	Coconut husk retting	12			
	Ruminant animals	97			
	Petroleum Products	0.0002			
Nitrous oxide	Agricultural soils	0.0013	1.5	0.47	1.95
Total from all above				24.01	100.00

Source: SOE, 2005

Methane emission from firewood was computed based on conversion to charcol.

Appendix 6.6

Details of industries in Periyar River Basin

Industry/location	Type/products	Wastewater generated
1	2	3
Travancore Rayons Ltd Perumbavur	Cellulose yarn & film	46,000 m ³ /d
Periyar Chemicals Ltd, Edayar	Formic acid, sodium sulphate	330 m ³ /d
Binani Zinc Ltd, Edayar,	Zinc, Cadmium, Sulphuric acid	550m ³ /d
FACT Ltd, Eloor	Nitrogen & Phosphorus Fertilizers, Oleum & Ammonium Sulphate	25,400 m ³ /d
FACT, Petrochemical	Caprolactam, Nitric acid, Ammonium sulphate, Soda ash	5,040 m ³ /d
Travancore Cochin Chemicals	Hydrochloric acid	6,680 m ³ /d
Indian Aluminium Company, Eloor	Aluminium products,	2,700 m ³ /d
Trava Chemical & Mfg. Kalamassery	Copper products	720 m ³ /d
United Catalysts Ltd, Edayar	Chemicals, Catalyusts	537 m ³ /d
Hindustan Insecticides, Eloor	DDT, BHC, Endosulfan, Dicotol	1,000 m ³ /d
Indian Rare Earths, Eloor	Rare earths, Tri sodium phosphate	3,000 m ³ /d

Source: Draft Status of the Environment in Kerala, KSPCB, 2000

Appendix 6.8
Wastelands in Kerala

(in Ha.)

Sl. No.	District	Wasteland Area	% Total
1	Thiruvananthapuram	6658	4.6
2	Kollam	8072	5.57
3	Alappuzha	1550	1.07
4	Pathanamthitta	7731	5.34
5	Kottayam	4880	3.37
6	Idukki	34813	24.44
7	Ernakulam	8454	5.84
8	Thrissur	7198	4.97
9	Palakkad	28356	19.58
10	Malappuram	12367	8.54
11	Wayanad	5184	3.58
12	Kozhikode	2761	1.91
13	Kannur	6980	4.82
14	Kasaragod	9814	6.78
	Kerala	144818	100

Source: Land Use Board & KSRSEC

All India Total -	638.52 lakh ha
Kerala -	1.45 lakh ha.
% to All India -	0.23%

Appendix 6.7
District wise details of health care institution, beds and waste generation

District	No. of Health Care Institutions	Number of beds	Waste generated kg/day
Alappuzha	343	8835	11486
Ernakulam	546	15819	20565
Idukki	194	4096	5325
Kannur	392	5149	6694
Kasaragod	209	2107	2739
Kollam	704	7530	9789
Kottayam	440	9323	121209
Kozhikode	342	9034	11744
Malappuram	327	5030	6539
Palakkad	316	4925	6403
Pathanamthitta	310	5096	6625
Thiruvananthapuram	411	12910	16783
Thrissur	434	12991	16888
Wayanad	127	2307	2999
Total	5095	105152	136699

Source: SOE, 2005

Appendix 6.9
State-wise Wastelands of India

(Area in Sq.Kms.)

Sl. No.	State	No. of Districts Covered	Total Geog. Area of districts Covered	Total Wasteland area in districts Covered	% of Wastelands to total geog. Area
1	2	3	4	5	6
1.	Andhra Pradesh	23	275068.00	51750.19	18.81
2	Arunachal Pradesh	13	83743.00	18326.25	21.88
3	Assam	23	78438.00	20019.17	25.52
4	Bihar	55	173877.00	20997.55	12.08
5	Goa	02	3702.00	613.27	16.57
6	Gujarat	25	196024.00	43021.28	21.95
7	Haryana	19	44212.00	3733.98	8.45
8	Himachal Pradesh	12	55673.00	31659.00	56.87
9	Jammu & Kashmir *	14	101387.00	65444.24	64.55
10	Karnataka	27	191791.00	20839.28	10.87
11	Kerala	14	38863.00	1448.18	3.73
12	Madhya Pradesh	62	443446.00	69713.75	15.72
13	Maharashtra	32	307690.00	53489.08	17.38
14	Manipur	09	22327.00	12948.62	58.00
15	Meghalaya	07	22429.00	9904.38	44.16
16	Mizoram	03	21081.00	4071.68	19.31
17	Nagaland	07	16579.00	8404.10	50.69
18	Orissa	30	155707.00	21341.71	13.71
19	Punjab	17	50362.00	2228.40	4.42
20	Rajasthan	32	342239.00	105639.11	30.87
21	Sikkim	04	7096.00	3569.58	50.30
22	Tripura	04	10486.00	1276.03	12.17
23	Tamil Nadu	29	130058.00	23013.90	17.70
24	Uttar Pradesh	83	294411.00	38772.80	13.17
25	West Bengal	18	88752.00	5718.48	6.44
26	Union territories	20	10973.00	574.30	5.23
	Total	584	3166414.00	638518.31	20.17

Source: 1:50,000 scale wasteland maps prepared from Landsat Thematic Mapper/IRS LISS II/III Data

- Un-surveyed area (J&K) 120849.00
 - Total geographical area 3287263.00
- 10,000 sq.kms = 1 Million Ha.

Appendix 6.10
Central Rural Sanitation Programme: TSC

Sl. No.	Name of district	Date of sanction	Project cost (in lakhs)	Approved Share (Rs. lakh)			Components Sanctioned (Units)						
				Central	State	Beneficiary	Individual House Hold Latrine			Sanitary Complex	School Toilets	Balawadi toilets	RSM
							BPL	APL	Total				
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Alappuzha	29.1.02	1656.13	1100.05	322.2	233.88	161871	5173	167044	125	377	0	10
2	Ernakulam	12.3.03	1058.43	514.16	274.1	270.17	54585	16069	70654	100	450	565	9
3	Idukki	12.3.03	622.19	266.75	167.4	188.04	44896	3619	48515	16	103	0	4
4	Kannur	12.3.03	804.18	349.09	219.29	235.8	55914	0	55914	14	327	0	5
5	Kasaragod	15.1.01	1111.86	429.26	261.98	420.62	82200	6099	88299	100	281	0	4
6	Kollam	10.1.01	895.00	597.7	174.55	122.75	85000	7290	92290	400	225	0	10
7.	Kottayam	23.11.05	445.17	205.27	119.12	120.78	28118	1646	29764	10	182	133	5
8	Kozhikkode	12.3.03	833.86	374.81	225.67	233.38	54024	2140	56164	21	444	0	7
9	Malappuram	29.1.02	759.86	510.98	152.36	96.52	69217	0	69217	80	380	0	10
10	Palakad	12.3.03	1177.89	499.85	320.42	357.62	83059	18892	101951	49	289	0	7
11	Pathanamthitta	12.3.03	773.96	336.29	208.53	229.14	53799	1200	54999	25	172	100	5
12	Thiruvananthapuram	29.1.02	749.61	506.90	149.76	92.95	67320	22779	90099	60	350	0	10
13	Thrissur	12.3.03	546.46	258.45	144.83	143.18	33216	0	33216	10	316	0	9
14	Wayanad	29.1.02	535.19	355.32	103.25	76.62	54927	0	54927	40	78	0	3
			11969.79	6304.88	2843.46	2821.45	928146	84907	1013053	1050	3974	798	98

Source : Kerala Total Sanitation and Health Mission, Thiruvananthapuram

Abbreviations: RSM: Rural Sanitary Marts

BPL : Below Poverty Line

APL: Above Poverty Line

Appendix 6.11
Capital Cost for Introduction of MSW System

Sl. No	Item	Number	Amount (Rs. lakh)
1	House hold bins @ Rs. 50	60,000	30.00
2	Hand cart of 300 lit. capacity @ Rs. 0.15 lakhs	60	9.00
3	Tricycle for house to house collection @ Rs. 0.20 lakhs	40	8.00
4	Community bin		
	i) Dumper container of 25000 lit. @ Rs. 0.01 lakhs	85	0.85
	ii) Containers 2.5 m3 @ Rs. 0.30 lakh	24	7.20
	iii) Litter bins @ Rs. 0.01 lakhs	50	0.50
5	Cost of sweeping tools		
	i) Containerised cart @ Rs. 3000	75	2.25
6	Transportation		
	Dumper placer @ Rs. 10 lakhs	2	20.00
	Dual loader @ Rs. 8 lakhs	1	8.00
7.	Home Vermi Composting for a family of five members @ Rs. 600/pit (90cm dia of 45 cm deep, 1:2:4 concrete 2 pits)	20,000 x 2	24.00
8	Aerobic Composting 50 tonnes/day Processing area 100 x 90m 21 windrows each of 50 tonnes and maturity yard of 600 m2 for storing raw compost (30 days storage) capital cost	-	60.00
9	Sanitary land fill	-	20.00
10	Bio medical waste treatment common facility	1	
	i) Incinerator of double chamber of capacity 30 Kg/hr, 3 shifts		15.00
	ii) Autoclave of capacity 30 Kg/hr, 2 shifts		15.00
	iii) Shredder, 3000 Kg/hr		3.00
	iv) Land development and civil works		15.00
	v) Sundries		2.00
11	Civil work – flooring container stations, bin locations; Processing/Disposal plant accessories		5.00
	1. Site development		
	Weigh Bridge		15.00
	Compost Plant		8.00
	Vermi Compost Unit		4.00
	Support to home composting - vermi kits		2.00
			3.00
12	Setting up basic tools for vehicle repair		3.00
13	Community awareness/ Training for staff		3.00
14	Sundries		1.20
	Sub Total		284.00
	Less Cost of home composting unit/ household bins and bio-medical waste		104.00
	Total		180.00

(Abstract of cost excluding land cost)

Appendix 6.12
Operation and Maintenance
(Cost per annum)

Sl. No.	Item	Amount (Rs. Lakh)
i)	House to house collection @ Rs. 20 per month in 20,000 households	48.00
ii)	Street Sweeping – 152 labour @ Rs. 4,000 per month	72.90
	i) Containerised cart 6 bins, 50 lit. = 75 No. @ Rs.3000	2.25
	ii) Long handle broom 100 nos. @ Rs. 75 each	0.075
	iii) Metal tray, fork and metal plate 100 nos @ Rs. 200/set	0.05
	iv) Shovel for drain cleaning, wheel barrow @ Rs. 400/100 nos	0.10
	v) Protective gear such as gloves, boots etc. 16 nos. @ Rs. 500 per set	0.8
iii)	Transportation @ Rs. 1000 per day/ vehicle	7.20
iv)	Aerobic Composting	
	a) Labour	
	i) Turning, breaking windrows, sorting 30 men @ 50,000/year/head	15.00
	ii) Plant operation, 7 men @ 50,000/year/head	3.50
	iii) Driver/@ 80,000/year	
	b) Tools and equipment	0.80
	i) Maintenance replacement	
	ii) Fuel, power	1.00
	iii) Packing, marketing	1.50
	iv) Management supervision	3.00
	c) Amortisation @ 20% of capital cost	5.00
		12.00
v)	Sanitary Landfill	
	i) Cell formation - internal road	2.00
	ii) Cover material	3.25
	iii) Labour for levelling, covering	3.50
	iv) Hiring of dozer for immediate compaction intermediate cover – twice annually	3.00
	Leachate control monitoring - cut off drains	2.25
vi)	Bio-medical Waste treatment at common facility center	30.00
vii)	Sundries	6.90
	Sub Total	221.00
	Less House to house collection and biomedical waste management	78.00
	Total	143.00

Source: S.W.M: Reading Material: 2002 KTSHM

Appendix 6.13
Per capita Consumption of Plastic in some selected
Countries of the World during 1996

(in kg.)

Sl. No.	Country	Per capita Consumption
1	India	1.60
2	Vietnam	1.50
3	China	6.00
4	Indonesia	8.00
5	Mexico	13.00
6	Thailand	18.00
7	Malaysia	22.00
8	Western Europe	60.00
9	Japan	70.00
10	North America	78.00

Source: Central Pollution Control Board

Appendix 6.14

Access to Safe Drinking Water in Households in India

Sl. No.	States/Union Territories	Tap/Handpump/Tubewell								
		1981			1991			2001		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Jammu & Kashmir	40.3	28.0	86.7	NA	NA	NA	65.2	54.9	95.7
2	Himachal Pradesh	44.5	39.6	89.6	77.3	75.5	91.9	88.6	87.5	97.0
3	Punjab	84.6	81.8	91.1	92.7	92.1	94.2	97.6	96.9	98.9
4	Chandigarh	99.1	94.4	99.4	97.7	98.1	97.7	99.8	99.9	99.8
5	Uttranchal	-	-	-	-	-	-	86.7	83.0	97.8
6	Haryana	55.1	42.9	90.7	74.3	67.1	93.2	86.1	81.1	97.3
7	Delhi	93.0	62.3	94.9	95.8	91.0	96.2	97.2	90.1	97.7
8	Rajasthan	27.1	13.0	78.7	59.0	50.6	86.5	68.2	60.4	93.5
9	Uttar Pradesh	33.8	25.3	73.2	62.2	56.6	85.8	87.8	85.5	97.2
10	Bihar	37.6	33.8	65.4	58.8	56.5	73.4	86.6	86.1	91.2
11	Sikkim	30.3	21.7	71.9	73.1	70.8	92.8	70.7	67.0	97.1
12	Arunachal Pradesh	43.9	40.2	87.9	70.0	66.9	88.2	77.5	73.7	90.7
13	Nagaland	45.6	43.4	57.2	53.4	55.6	45.5	46.5	47.5	42.3
14	Manipur	19.5	12.9	38.7	38.7	33.7	52.1	37.0	29.3	59.4
15	Mizoram	4.9	3.6	8.8	16.2	12.9	19.9	36.0	23.8	47.8
16	Tripura	27.3	22.2	67.9	37.2	30.6	71.1	52.5	45.0	85.8
17	Meghalaya	25.1	14.3	74.4	36.2	26.8	75.4	39.0	29.5	73.5
18	Assam	NA	NA	NA	45.9	43.3	64.1	58.8	56.8	70.4
19	West Bengal	69.7	65.8	79.8	82.0	80.3	86.2	88.5	87.0	92.3
20	Jharkhand	-	-	-	-	-	-	42.6	35.5	68.2
21	Orissa	14.6	9.5	51.3	39.1	35.3	62.8	64.2	62.9	72.3
22	Chhattisgarh	-	-	-	-	-	-	70.5	66.2	88.8
23	Madhya Pradesh	20.2	8.1	66.7	53.4	45.6	79.4	68.4	61.5	88.6
24	Gujarat	52.4	36.2	86.8	69.8	60.0	87.2	84.1	76.9	95.4
25	Daman & Diu	54.5	46.4	67.0	71.4	56.9	86.8	96.3	94.9	98.9
26	Dadra & Nagar Haveli	19.4	16.8	54.3	45.6	41.2	91.0	77.0	70.5	96.1
27	Maharashtra	42.3	18.3	85.6	68.5	54.0	90.5	79.8	68.4	95.4
28	Andhra Pradesh	25.9	15.1	63.3	55.1	49.0	73.8	80.1	76.9	90.2
29	Karnataka	33.9	17.6	74.4	71.7	67.3	81.4	84.6	80.5	92.1
30	Goa	22.5	8.6	52.3	43.4	30.5	61.7	70.1	58.3	82.1
31	Lakshadweep	2.2	1.0	3.7	11.9	3.4	18.8	4.6	4.6	4.6
32	Kerala	12.2	6.3	39.7	18.9	12.2	38.7	23.4	16.9	42.8
33	Tamil Nadu	43.1	31.0	69.4	67.4	64.3	74.2	85.6	85.3	85.9
34	Pondicherry	80.6	76.9	84.2	88.8	92.9	86.1	95.9	96.6	95.5
35	Andaman & Nicobar Islands	51.6	36.3	92.0	67.9	59.4	90.9	76.7	66.8	97.8
	ALL INDIA	38.2	26.5	75.1	62.3	55.5	81.4	77.9	73.2	90.0

Source: Economic Survey 2005-2006

N.A. – Not available as no census was carried out in Assam during 1981 and in Jammu & Kashmir during 1991.

* - Created in 2001. Uttaranchal Pradesh, Jharkhand and Chattisgarh for 1981 and 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.

Appendix 6.15

Western Ghat Development Programme for Natural Resource Management (Physical and Financial Achievements 2005-06)

I. Financial Achievement			
Sl. No.	Component	Expenditure (Rs. Lakh)	
1	Watershed projects	811.24	
2	Forestry Schemes	128.61	
3	Foot Bridges	93.66	
4	Others	117.34	
	TOTAL	1150.85	
II. Major Physical Achievements			
Sl. No	Component	Unit	Achievement
1	Soil Conservation	Ha.	2582
2	Distribution of Milk Cows	Nos	469
3	Fodder Development	Ha.	437
4	Construction of Wells/Ponds	Nos	0
5	Check Dams/Cross Bars/ Weirs/Foot slaps	Nos	2753
6	Foot Bridges	Nos	49

Source: Western Ghat Development Cell

Appendix 6.16

**Division-wise Area of Forest in Kerala (as on 31- 03 - 2006) - Provisional
(Area Sq.km)**

Sl. No	Division	Reserve Forest	Proposed for Reserve Forest	Vested Forest	Total
1	2	3	4	5	6
1	Thiruvananthapuram	359.124	5.825	3.651	368.600
2	Thenmala	123.432	-	7.734	131.166
3	Achenkovil	268.794	-	0.206	269.000
4	Ranni	1,050.336	7.160	1.568	1059.064
5	Punalur	280.051	-	0.169	280.220
6	Konni	320.643	11.021	-	331.664
7	Kothamangalam	316.845	-	0.158	317.003
8	Munnar	653.932	47.256	7.364	708.552
9	Kottayam	655.486	5.257	31.409	692.152
10	Vazhachal	413.944	-	-	413.944
11	Chalakkudy	279.710	-	-	279.710
12	Malayattoor	617.241	0.525	-	617.766
13	Thrissur	204.293	-	5.715	210.008
14	Mannarkkad	209.982	-	319.578	529.560
15	Nilambur North	57.920	0.017	340.703	398.640
16	Nilambur south	267.389	-	97.763	365.153
17	Palakkad	73.410	-	162.162	235.572
18	Nenmara	205.517	-	150.448	355.965
19	Kozhikode	24.164	22.966	243.086	290.216
20	Wayanad North	134.024	15.064	65.853	214.941
21	Wayanad South	67.519	6.845	273.140	347.503
22	Kannur	207.392	5.193	90.196	302.782
23	Mankulam	0	90.06	0.000	90.06
24	Thiruvananthapuram WL	181.000	-	-	181.000
25	Idukki	130.524	-	-	130.524
26	Periyar East	618.000	-	-	618.000
27	Periyar West	157.000	-	-	157.000
28	Agasthyavanam	31.000	-	-	31.000
29	Parambikulam	274.141	-	-	274.141
30	Wayanad	344.440	-	-	344.440
31	Silent Valley	89.517	-	-	89.517
32	Sendurney	166.420	-	4.580	171.000
33	Eravikulam	209.077	-	-	209.077
34	Peechi	201.725	-	-	201.725
35	Aralam	22.357	-	32.643	55.000
	Total:	9216.349	217.190	1838.125	11271.664

Source : Forest Department

Appendix 6.17
Species-wise Area Under Forest Plantation

Sl.No.	Name of Species	2004-05	2005-06*	% to total (2005-06)
1	2	3	4	5
1	Teak	75535.831	69124.721	
2	Rosewood	549.771	483.625	
3	Mahagani	99.010	87.420	
4	Sandalwood	100.840	95.930	
5	Mangium	3400.813	3216.546	
6	Others	753.114	721.231	
	Sub Total	80439.379	73729.473	36.40
II SOFT WOOD				
1	Eucalyptus	15967.604	13246.812	
2	Green villa Robusta	1168.290	1093.430	
3	Pine	590.236	529.427	
4	Albizzia	460.650	407.625	
5	Rubber	241.684	215.532	
6	Balsa	77.240	58.340	
7	Wattle	4018.420	392.765	
8	Murukku	48.480	46.320	
9	Matti	416.829	392.765	
10	Others	6536.702	6419.836	
	Sub total	29526.135	26326.597	13.00
III BAMBOO & REEDS				
1	Bamboo	4157.806	3928.714	
2	Reeds	497.810	403.910	
3	Cane	1865.353	1792.602	
	Sub Total	6520.969	6125.226	3.02
IV PLANTATION CROPS				
1	Coffee	35.340	24.310	
2	Pepper	309.980	297.940	
3	Cinnamon	3.740	2.820	
4	Medicinal Plants	929.125	865.342	
	Sub Total	1278.185	1190.412	0.59
V MIXED PLANTATIONS				
1	Cashew	6476.839	6231.430	
2	Fuel wood	693.917	639.824	
3	Agavu	48.830	41.240	
4	Alnus	75.850	36.520	
5	Accacia	5936.189	5592.263	
6	Sesbania	21070.000	19.234	
7	Casurina	121.442	105.351	
8	Kongograss	95.200	1.750	
9	Malbury	2.000	1.750	
10	Palm Trees	13.500	9.890	
11	Others	92441.799	82394.654	
	Sub Total	105926.636	95155.536	46.98
	Grand Total	223691.394	202527.244	100.00

Source : Forest Department

Appendix 6.18

Production of Major Forest Produce (1997-98 to 2005-06)

Sl. No.	Item	Unit	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06*
1	2	3	4	5	6	7	8	9	10	11	12
1	Timber(round logs)	Cum.	19246	26664	44519	31299	38915	62591	116280.850	45012.198	52128.472
2	Timber(round poles)	No.	287243	275050	455389	129349	245254	433670	753025.000	438611	487163
3	Timber(Swan & Squard)	Cum.	2	10	7	3	9	11	126.310	45.086	72.43
4	Fire wood	MT.	11291	18424	14191	8105	11182	19085	31575.181	10636.035	11273.01
5	Cardamom	Kg.	1717	2758	4249	4687	2911	3739	1145.150	11018.30	10022.51
6	Honey	Kg.	71214	21376	41734	47976	57069	36310	40050.650	59464.11	47084.31
7	Reeds	No.	63239268	62708610	39576143	49047940	32610487	33076299	42945235	34190835	36237405
8	Bamboo	No.	2338472	2088407	627805	1390456	1305620	151722	946626	1272444	1038247
9	Jungle Wood Poles	No.	7054	670	....	212	2397	7696	10464	14196	9876
10	Sandal wood	Kg.	171252	17762	97028	405	23968	10099	88817.238	54622.300	42817.02

Source : Forest Department

* Provisional

Appendix 6.19

**Sanctuaries, National Parks, Biosphere Reserves and other Protected Areas
in Kerala**

Sl. No	Name of National Park/Wildlife Sanctuary/Biosphere Reserve	Area (Sq. Km)	Year of Formation
1	Peryar Wildlife Sanctuary	777	1950
2	Neyyar Wildlife Sanctuary	128	1958
3	Peechi-Vazhani Wildlife Sanctuary	125	1958
4	Parambikulam Wildlife Sanctuary	285	1973
5	Wayanad Wildlife Sanctuary	344.44	1973
6	Eravikulam Wildlife Sanctuary	97	1978
7	Idukki Wildlife Sanctuary	70	1976
8	Thattekkad Bird Sanctuary	25	1983
9	Peppara Wildlife Sanctuary	53	1983
10	Chimmony Wildlife Sanctuary	85	1984
11	Chinnar Wildlife Sanctuary	90.44	1984
12	Shendurney Wildlife Sanctuary	100.32	1984
13	Aralam Wildlife Sanctuary	55	1984
14	Silent Valley National Park	89.52	2003
15	Anamudi Shola National Park	7.5	2003
16	Mathikettan Shola National Park	12.82	2003
17	Pambadum Shola National Park	1.32	2003
18	Mangalavanam Bird Sanctuary	0.0274	2004
19	Kurinjomala Wildlife Sanctuary	32	2006
i	Nilgiri Biosphere Reserve	1455.4	1986
ii	Agasthyavanam Biosphere Reserve	1701	2002

Source : Forest Department

Appendix 6.20

Different groups of wild fauna in the protected areas (PA) of Kerala

Name of the PA	Number of species reported				
	Mammals	Birds	Reptiles	Amphibians	Fishes
Aralam WLS	23	171	22	23	39
Wayanad WLS	45	203	45	30	59
Silent Valley NP	31	97	35		
Parambikulam WLS	39	268	61	24	47
Chinnar WLS	26	225	52	15	13
Eravikulam NP	20	132		18	
Peechi-Vazhani WLS	39	176	31	17	40
Chimmony WLS	39	160	25	14	31
Periyar TR	62	320	45	27	38
Idukki WLS	30	201	9		
Thattekkad WLS	34	270	30	15	47
Shendruney WLS	34	245	35	22	42
Neyyar WLS	43	217	46	13	27
Peppara WLS	43	233	46	13	27

Source: Ramesh et. al (2003), quoted in SOE, 2005

Appendix 7.1
Growth of Kerala Power System at a Glance - 2005 & 2006

Sl. No	Particulars	Position as on	
		31-03-2005	31-03-2006
1	2	3	4
1	Installed Capacity -MW	2617.20	2644.25
2	Maximum Demand(System)-MW	2420	2578
3	Generation Per Annum-MU	6377.06	7600.78
4	Import Per Annum- MU	6390.79	6700.50
5	Export Per Annum-MU	0.00	635.90
6	Energy Sales Per Annum-MU	9384.40	10269.80
7	Percentage of energy losses to energy available for sales	26.22	24.59
8	Per Capita Consumption - kWh	400	427
9	220 kV Lines - CT Kms	2594	2650
10	110 kV Lines - CT Kms	3760	3816
11	66 kV Lines - CT Kms	2948	2961
12	33 kV Lines - CT Kms	516	647
13	22 kV Lines - CT Kms	103	103
14	11 kV Lines - CT Kms	33618	34680
15	LT Lines - CT Kms	207711	215152
16	Step Up Transformer capacity -MVA	2366	2391
17	No of EHT Substations		
a	400 kV	1	2
b	220 kV	13	14
c	110 kV	107	109
d	66 kV	61	95
e	33 kV	33	49
18	Step down transformer capacity - MVA	12294	12508
19	Distribution Transformers		
a	Numbers	36415	38193
b	Capacity -MVA	4722.60	4947.77
20	No of villages electrified	1384	1384
21	No of consumers (Lakhs)	77.99	82.95
22	Connected Load-MW	10333.51	10907.2
23	No of Street Lights	908016	960839
24	No of irrigation pumps	412602	423571
25	Total revenue Per Annum (Rs Lakhs)	359977.12	383731.69
26	Revenue from Sale of Power Per Annum (Rs Lakhs)	315887.53	359011.49

Source :KSEB

Appendix 7.2

Profile of Ongoing Power Projects in the State

Sl.No	Name of Schemes	District	Energy Potential (MU)	Projects sanctioned on	Major works commenced on	Orginal estimated cost (Rs lakh)	Latest estimated cost (Rs. lakh)	Expenditure upto 3/06 (Rs lakh)	Outlay for 2006-07 (Rs. lakh)	Expected year of commissioning
1	2	3	4	5	6	7	8	9	10	11
1	Malankara-10.5 MW	Idukki	65	03-03-99	17-12-99	780.00	4113.00	3111.00	50.00	Commissioned on 23-10-05
2	Vadakkepuzha Diversion	Idukki	12	18-03-88	21-01-93	131.00	495.00		30.00	Commissioned on 31/07/03
3	Vazhikkadvu Diversion	Idukki	24	15-06-89	17-01-94	250.00			10.00	Commissioned on 05/02
4	Kutiyadi Tail Race-3.75MW	Kozhikode	15	1989	19/10/00	397.00	1494.00	433.00	400.00	4/8/2006
5	Kuttiyar Diversion	Idukki	37	18-08-90	May-03	561.00	880.00	672.62	200.00	2007
6	Kutiyadi Addl.Extension (100 MW)	Kozhikode	240	1998	17.04.2000	6200.00	22050.00	3630.20	5000.00	10/5/2007
7	Kutiyadi Augementation	Kozhikode	223	1980		1305.00	19294.00	15596.44	200.00	Commissioned on 16/12/05
8	Lower Meenmutty (3.5 MW)	Trivandrum	7.63	29-9-95	20-01-03	1238.16	1308.87	1265.39	100.00	Commissioned on 25-03-06
9	Neriamangalam Extension Scheme	Idukki	58.27	04-01-00	04-07-03	3506.18	3506.18	2006.34	2500.00	31-05-07
10	Azhutha Diversion Scheme (Balance Works)	Idukki	57	20-07-85	15-05-03	207.50	239.55	195.14	50.00	Commissioned

Source: KSEB

Appendix 7.3
Power Projects and Power Generation as on 31-3-2006

Sl. No	Name of Projects and Districts	Installed Capacity MW	Firm Power MW	Power Generated during 2005-06(MU)
1	Pallivasal- Idukki	37.50	32.5	238.41
2	Sengulam-Idukki	48.00	20.8	188.79
3	Neriamangalam-Idukki	51.00	27	245.32
4	Panniyar-Idukki	30.00	18	159.86
5	Poringalkuthu+Poringalkuthu LBE-Thrissur	48	19.6+9.8	270.07
6	Sabarigiri-Pathanamthitta	310.00	153	1471
7	Sholayar-Thrissur	54.00	20.6	286.81
8	Kuttiady+Kuttiady Extn.-Kozhikode	125	30.6+8.56	515.55
9	Idukki-Idukki	780.00	280.2	2704.35
10	Idamalayar-Ernakulam	75.00	43.3	366.09
11	Kallada-Mini-Kollam	15.00	6.05	64.19
12	Kanjikode Wind Farm-Palakkad	2.03	0.4	1.88
13	Peppara-TVPM	3.00	1.3	3.76
14	Lower Periyar-Idukki	180.00	56.3	631.49
15	Brahmapuram-Ernakulam	106.60	73	55.8
16	Madupetty-Idukki	2.00	0.7	7.11
17	Kakkad - Pathanamthitta	50.00	30	248.62
18	Kayamkulam(NTPC) - Alapuzha	359.58		0.46
19	(KDPP) - Kozhikkode	128.00	102.4	93.59
20	KPCL.(IPP) -Kasargode	20.44		7.49
21	Maniyar(Private) - Pathanamthitta	12.00	3.7	41.98
22	Kuthungal (Hydro-Captive) -Idukki	21.00	9.02	49.44
23	BSES(IPP) - Ernakulam	157.00		36.78
24	Malampuzha - Palakkad	2.50	0.64	2.09
25	Urumi I&II - Kozhikode	6.15		11.84
26	Chempukadavu I&II - Kozhikode	6.45		9.32
27	Malankara	10.50		19.96
28	Lower Meenmutty	3.50		
	Grand Total	2644.25	947.47	7732.05

Source:KSEB

Appendix 7.4
Average Tariff Rate

Sl. No.	Consumer Category	Average Tariff (in Paise/Unit)	
		2004-05	2005-06
1	Domestic	177	171
2	Commercial	669	663
3	Public Lighting	183	183
4	Irrigation & Dewatering	99	99
5	Industry(LT)	415	415
6	Industry(HT & EHT)	391	391
7	Railway Traction	368	340
9	Bulk Supply	272	273
	Overall Average	311	309

Source:KSEB

Appendix 7.5
Average Realisation from Sale of Power

Sl. No	Consumer Category	Average Realisation	
		2004-05	2005-06
1	Domestic	190	186
2	Commercial	731	717
3	Public Lighting	183	183
4	Irrigation & Dewatering	110	109
5	Industry(LT)	446	445
6	Industry(HT & EHT)	400	401
7	Railway Traction	368	340
8	Bulk Supply	272	273
	Overall Average	329	326

Source :KSEB

Appendix 7.6
Pattern of Power Consumption and Revenue Collected During 2005-06

Sl.No	Category Voltage	No of Consumers as on 31-03-2006	Connected Load as on 31-03-2006	Energy Sold(MU)	Consumption as % to Total	Revenue Collected (Rs Lakhs)	Revenue as percentage of Total
1	Domestic						
a	Paying Group	6502659	6632.54	4660.62	42.74	79765.92	23.69
b	Non paying Group	43033	14.19	7.74	0.07		
2	Commercial(LT & HT)	1202468	1292.76	1092.66	10.02	72443.88	21.51
3	Industrial						
a	Low & Medium Industry	119021	1239.35	873.90	8.01	36241.18	10.76
b	HT&Extra high voltage	1988	822.80	2883.50	26.44	112869.86	33.52
4	Public Lighting	2325	84.98	207.78	1.90	3807.33	1.13
5	Railway Traction	5	28.42	57.94	0.53	1972.42	0.59
6	Agricultural Pumping	423571	738.58	189.57	1.74	1888.30	0.56
7	Licensees (Bulk Supply)	11	53.58	296.09	2.72	8090.14	2.40
8	Outside Supply			635.90	5.83	19651.32	5.84
	Total	8295081	10907.20	10905.70	100.00	336730.35	100.00

Source: KSEB

Appendix 7.7

Sources of Funding of the Power Programmes of KSEB for the year 2005-06

Sl. No.	Particulars	Rs. Lakh	
		2004-05	2005-06
1	Loan from REC	18370.54	9022.05
2	Borrowing under Section 65		
a)	Assistance from IDBI	867.28	0.00
b)	Loan from PFC	1257.58	0.00
c)	Loans from Banks through REC	10000.00	20000.00
d)	Foreign currency Loan	622.52	0.00
3	Receipts under OYEC Scheme/Service Connections Charges/Contribution from Panchyats	14243.18	14264.87
4	Medium Term Loan	0.00	0.00
5	Borrowing and Reserves	4779.84	0.00
a)	Pension Fund / Provident Fund	6122.94	6745.43
b)	Deposit and Other Debit Heads	0.00	0.00
6	Other Internal Resources	2000.00	0.00
7	Loan from Kerala PFC	9742.50	2078.65
8	EDC Kuttiyadi	84.17	58.39
9	EDC-PSP	0.00	156.61
10	Loan from State Govt. for APDRP	4271.00	6628.00
11	Addl.	11000.00	0.00
	Total	83361.55	58954.00

Source: KSEB

Appendix 8.1
Index of Industrial Production 2003-04, 2004-05 & 2005-06

Base (1980-81=100)

Sl. No.	Item	Weight	Index for		
			2003-04	2004-05	2005-06
1	2	3	4	5	6
	General Index	100.00	262.59	261.31	266.66
1	Manufacture of food products	8.82	140.83	139.26	136.99
2	Manufacture of beverages, tobacco and related products	1.46	159.91	162.91	175.94
3	Manufacture of cotton textiles	8.02	99.04	sa	108.1
4	Manufacture of wool, silk and man made fibre textiles	1.26	32.93	35.57	37.21
5	Manufacture of textile products	3.26	20.25	21.46	21.79
6	Manufacture of wood and wood products	1.35	25.12	25.89	25.37
7	Manufacture of paper and paper products	3.16	0.00	0.00	0
8	Manufacture of basic chemicals and chemical products (Except Petroleum and Coal)	19.78	267.15	262.21	268.5
9	Manufacture of rubber, plastic, petroleum and coal products and processing of unclear fuels.	10.06	368.89	347.99	359.62
10	Manufacture of non-metallic mineral products	3.42	163.14	165.21	173.19
11	Manufacture of Basic metals and alloys industries	3.43	55.83	55.82	57.68
12	Manufacture of metal products and parts	0.50	353.85	363.27	369.01
13	Manufacture of machinery and equipment	9.46	1086.97	1089.55	1088.08
14	Manufacture of transport equipment and parts	2.67	2.05	2.24	2.3
15	Other manufacturing industries	1.42	23.93	25.01	25.86
16	Electricity generation, transmission and distribution	21.93	164.33	169.15	179.75

Source : Directorate of Economics & Statistics, Tvpm.

Appendix 8.2

Growth of Working Factories and Average Daily Employment in

Year	No. of Factories			No. of Employment		
	Private	Public	Total	Private	Public	Total
1	2	3	4	5	6	7
1995	14840	491	15331	263878	111270	375148
1996	15906	528	16434	293923	111144	405067
1997	16803	533	17336	317592	111248	428840
1998	17177	542	17719	334143	109698	443841
1999	17955	549	18504	318729	117747	436474
2000	17956	558	18544	336895	101855	438750
2001	18001	553	18554	329230	107180	436410
2002	17727	535	18262	313260	95553	408813
2003	17711	528	18239	309938	94319	404257
2004*	17790	529	18319	311147	94367	405514
2005 (p)	17881	529	18410	311665	94367	406032

Source : Directorate of Economics and Statistics , Thiruvananthapuram

* Revised

(p) provisional

Appendix 8.3

Districtwise Distribution of Registered Working Factories in Kerala from 1995 to 2005

Sl.No.	Districts	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*	2005(p)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	809	850	868	892	923	898	897	890	892	898	908
2	Kollam	1498	1654	1735	1787	1899	1927	1905	1899	1895	1903	1913
3	Pathanamthitta	363	382	430	470	498	526	532	504	505	509	509
4	Alappuzha	1024	1059	1111	1140	1194	1211	1213	1214	1241	1247	1257
5	Kottayam	1180	1247	1283	1293	1302	1294	1297	1258	1255	1262	1262
6	Idukki	290	303	305	303	341	325	326	332	333	335	335
7	Ernakulam	2364	2543	2686	2700	2924	2931	2937	2928	2930	2938	2958
8	Thrissur	1944	2084	2188	2364	2547	2557	2559	2519	2516	2522	2522
9	Palakkad	1620	1774	1972	1966	2028	1993	1975	1893	1867	1873	1883
10	Malappuram	815	894	912	924	963	995	1003	1014	1014	1020	1030
11	Wayanad	128	151	180	176	139	140	141	134	133	135	135
12	Kozhikode	1582	1656	1778	1777	1749	1764	1768	1723	1707	1714	1724
13	Kannur	1473	1579	1614	1636	1738	1716	1729	1694	1696	1705	1715
14	Kasaragod	241	258	274	291	259	267	272	260	255	258	259
	Total	15331	16434	17336	17719	18504	18544	18554	18262	18239	18319	18410

Source: Directorate of Economics & Statistics, Thiruvananthapuram

* Revised

(p) Provisional

Appendix 8.4

Districtwise Distribution of Employment in Kerala - 1995 to 2005

Sl.No.	District	No. of Employment										
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*	2005(p)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	28431	29013	28300	29582	29502	29123	29188	30129	30024	30118	30168
2	Kollam	103706	120973	139283	143957	134112	137014	135518	128322	128773	128898	128988
3	Pathanamthitta	8522	9302	9863	10880	11873	12325	12660	9429	9447	9510	9538
4	Alappuzha	22366	23719	24058	24839	25149	26359	26216	25432	26614	26708	26758
5	Kottayam	17482	17544	17692	18389	17436	17504	17508	16674	16505	16615	16615
6	Idukki	6269	7668	7958	7887	7982	8032	7842	8343	8358	8389	8389
7	Ernakulam	65626	70117	70340	71988	64949	64815	64102	64315	62654	62779	62829
8	Thrissur	40376	36361	38261	41338	37599	36206	36213	35287	34957	35052	35052
9	Palakkad	19552	23036	24329	24442	24425	24462	24337	24811	23336	23430	23530
10	Malappuram	9144	9869	9954	10344	12917	13357	13409	9861	9196	9290	9290
11	Kozhikode	30358	31506	28978	29371	26653	25822	17004	21902	20141	20252	20352
12	Wayanad	2377	2759	3387	2600	16983	17001	25722	6546	6528	6561	6611
13	Kannur	18595	20286	23278	23807	23810	23562	23484	24658	24804	24945	24945
14	Kasaragod	2344	2914	4159	4417	3084	3168	3207	3104	2920	2967	2967
	Total	375148	405067	429840	443841	436474	438750	436410	408813	404257	405514	406032

Source:- Directorate of Economics and Statistics, Thiruvananthapuram

* Revised

(P) Provisional

Appendix 8.5

Industrial Disputes Arose, Handled, Settled etc. in Kerala (2000-01 to 2005-06)

Sl.No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8
1	No. of disputes pending at the beginning of the year	2409	2241	2263	2768	2667	2658
2	No. of disputes that arose during the year	4123	3356	4005	4555	4019	3405
3	No. of disputes handled during the year (1+ 2)	6532	5597	6268	7323	6686	6063
4	No. of disputes settled during the year						
a	By voluntary negotiation between parties	791	578	866	883	810	374
b	By conciliation	1210	922	1391	1876	1608	1124
c	By withdrawal	1834	1428	1230	1376	1178	1290
d	Referred for Arbitration	0	0	0	521	432	526
e	Referred for Adjudication	456	406	392	0	0	0
f	Total number of disputes settled (a to e)	4291	3334	3879	4656	4028	3314
5	Number of disputes pending at the year (3 - 4)	2241	2263	2389	2667	2658	2749
6	Number of disputes led to						
a	Strike (including pending previously)	21	9	7	22	14	7
b	Lockout including pending previously	40	38	49	35	30	29
c	Total (a + b)	61	47	56	57	44	36
7	No. of workers affected due to						
a	Strike	198040	29827	403510	47887	15202	446144
b	Lockout	8553	6700	12412	8858	82175	7301
c	Total (a + b)	206593	36527	415922	56745	97377	453445
8	Mandays lost						
a	Strike	279914	392172	6404348	93854	150134	3224163
b	Lockout	0	1405805	1772811	1799224	1979708	1807511
c	Total (a + b)	279914	1797977	8177159	1893078	2129842	5031674

Source: Office of the Labour Commissioner - Thiruvananthapuram

Appendix 8.6
Central Sector Investment in Kerala

(Rs. crore)

Years as on 31st March	Investment Gross Block		Percentage of column(3) to column(2)
	All India	Kerala	
1	2	3	4
1970	3795	116	3.06
1975	6242	202	3.24
1980	18161	423	2.33
1985	47323	831	1.76
1990	113430	1701	1.50
1995	227349	2906	1.28
1996	256200	3390	1.32
1997	284330	3992	1.40
1998	319829	4717	1.50
1999	353660	5962	1.69
2000	381365	6828	1.79
2001	411865	9893	2.40
2002	490397	13504	2.75
2003	525301	14550	2.77
2004	596725	15301	2.56
2005	649159	16828	2.59

Source: Public Enterprises Survey, Government of India.- 2004-05

Appendix 8.7

Central Sector Investment in Selected

Rank No.	Name of State	Gross Block (Rs. Crores)	Employment (Lakh Nos)
1	2	3	4
	Kerala	16828	0.42
1	Maharashtra	122899	2.01
2	Uttarpradesh	45738	0.90
3	Andhra Pradesh	44546	0.99
4	Tamilnadu	43475	1.09
5	Gujarat	42296	0.50
6	Orissa	33354	0.69
7	West Bengal	31398	1.92
8	Madhya Pradesh	29831	1.09
9	Karnataka	28544	0.81
10	Assam	28154	0.50
	All India	649159	16.93

Source: Survey of Public Enterprises, Govt. of India, 2004-05

Appendix 8.8
Capital Investment and Employment in respect of Government of India Companies
functioning in Kerala

Sl.No	Name of Company	Investment in capital (Rs. Lakhs) as on		Employment as on	
		31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd.	3342.00	3342.00	442	440
2	Hindustan Newsprint Ltd.	8254.00	8254	1039	1039
3	Cochin Refineries Ltd.	52595.00	...	1926	...
4	Hindustan Latex Ltd.	2419.31*	3015.02	1850	1801
5	Hindustan Machine Tools Ltd.	6434.09*	6756.01	831	763
6	Fertilizers and Chemicals Travancore Ltd.	151471.62	132881.05	4030	4030
7	Alagappa Textiles(Cochin) Mills	NA	NA	NA	NA
8	Instrumentation Ltd.	3736.33	4101.17	491	323
9	Cannanore Spinning & Weaving Mills	912.69	454.24	360	348
10	Indian Rare Earths Limited	22890.60*	28561.81	1031	1016
11	Hindustan Insecticides Ltd.	12959.94	12702.58	442	447
12	Cochin Shipyard Ltd.	45799.98	45252.22	2106	2075
13	Kerala Lekshmi Mills	255.24	135.87	493	478
14	Indian Telephone Industries Ltd.	...	...	667	667
15	Parvathy Mills	18068.26	729.41	637	637

Source : Reports of Companies Concerned

* Revised

Appendix 8.9

Performance of Government of India Companies in Kerala in Terms of Value of Production and Sales Turnover

Sl.No.	Name of Company	Value of Production		Total Sales Turnover	
		2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6
1	Hindustan Organic Chemicals Ltd.	45498.00	23800.00	48141.90	24898.00
2	Hindustan Newsprint Ltd.	27393.00	30296.00	27393.00	30296.00
3	Cochin Refineries Ltd.	1321430.00	...	1544027.00	...
4	Hindustan Latex Ltd.	18116.93*	18022.72	18812.00*	19993.00
5	Hindustan Machine Tools Ltd.	4698.00	4908.00	4708.00	5052.00
6	Fertilizers and Chemicals Travancore Ltd.	117226.00	139231.00	120819.90	141399.75
7	Alagappa Textiles(Cochin) Mills	NA	NA	NA	NA
8	Instrumentation Ltd.	4505.00	5201.00	4963.00	5975.00
9	Cannanore Spinning & Weaving Mills	2105.00	1931.00	1842.00	1632.00
10	Indian Rare Earths Limited	4414.05*	8307.37	9447.84*	10560.50
11	Hindustan Insecticides Ltd.	3422.75	3262.95	6569.19	2700.28
12	Cochin Shipyard Ltd.	27829.00	40776.00	27648.00	37353.00
13	Kerala Lekshmi Mills	2660.56	2368.02	2366.03	2330.97
14	Indian Telephone Industries Ltd.	...	...	16411.01	22871.74
15	Parvathy Mills	1117.91	1159.16	951.23	1082.73

Source: Reports of Companies Concern

* Revised

Appendix 8.10

Production and Capacity Utilisation in Government of India Companies Functioning in Kerala

Sl. No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2005	31-03-2006	31-03-2005	31-03-2006	31-03-2005	31-03-2006
1	2	3	4	5	6	7	8	9	10
1	Hindustan Organic Chemicals Ltd.	Phenol	M.T.	40000	40000	48403.00	28754.00	121.01	71.89
		Acetone	M.T.	24640	24640	30277.00	18253.00	122.88	74.08
		H2O2(100%)	M.T.	5225	5225	4980.00	3666.00	95.31	70.16
		Propylene	MT	..	..	32684.00	18896.00	..	..
		Cumene	MT	54000	54000	70788.00	40546.00	..	75.09
2	Hindustan News Print Ltd.	Newsprint	MT	100000	100000	112202.00	113050.00	..	113.05
3	Cochin Refineries Ltd.	Petroleum/Petrochemical Products- Crude, Thruput(MMT)	Million MT	7.5		7.92		105.60	...
4	Hindustan Latex Ltd.	1. Condom	MPcs	670	1001	926.00	990.00	138.21	98.90
		2. B. Bags	MPcs	2	5	3.51	4.62	175.50	92.40
		3. Saheli(Non Steroidal OCP)	M. Tab	30	...	15.48	...	51.60	...
		4. Mala-D/N (Steroidal OCP)	M.cycles	98.67	98.67	73.50	74.30	74.49	75.30
		5. CU.T	MPcs	4	5.5	4.20	3.41	105.00	62.00
		6. Hydrocephalus Shunt	Nos Pcs	5000	...	3388.00	...	67.76	...
		7. Suture	M.Pcs	1.5	...	0.36	...	24.00	...
5	HMT Ltd.	Machine Tools, Printing and cutting machines, accessories and spares	Nos.	453	273	253.00	269.00	55.85	98.53
6	Fertilizers & Chemicals Travancore Ltd.	Udyogamandal division							
		1. Amonium Sulphate	MT.	225000	225000	200564	172986	89.14	76.88
		2. Factamfos	MT	148500	148500	104388	143502	70.29	96.63
		3. Nitric Acid	MT	3800	3800	4192	4345	110.32	114.34
		4. Soda Ash	MT	4750	4750	5812	4275	122.36	90.00
		Cochin division							
		5. Factumfose	MT	485000	485000	456400	602400	94.10	124.21
		Petrochemical division							
		6. Caprolactam	MT	50000	50000	44932	38666	89.86	77.33
7	Alagappa Textiles(Cochin) Mills	Cotton, Yarn/Blended yarn	Kgs(Lakh)	..		..		...	...
8	Instrumentation Ltd.	1. Process control valves	Nos	7500	10000	5472.00	4346	72.96	43.46
		2. Safety relief valves & Pr.Reducing Valves	Nos	2000		146.00		7.30	
		3. Orifice plates & Flow measuring Devices	Nos	500		182.00		36.40	

Contd....

Sl. No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2005	31-03-2006	31-03-2005	31-03-2006	31-03-2005	31-03-2006
1	2	3	4	5	6	7	8	9	10
9	Cannanore Spinning & Weaving mills	Yarn in different counts	Kgs(Lakhs)	24800 (spindles)	24800 (spindles)	15.15	13.64	..	..
10	Indian Rare Earths Limited	Ilmanite	MT	154440	154440	83224.00	106419	53.89	68.91
		Zircon	MT	11220	11220	7713.00	8287	68.74	73.86
		Rutile	MT	9900	9900	4031.00	4701	40.72	47.48
		Sillimonite	MT	7080	7080	7159.00	10715	101.12	151.34
		Leocoxene	MT	1440	1440	0.00	119	0.00	8.26
		Zirflor	MT	5000	5000	4460.00	6301	89.20	126.02
		Rare Earth Chloride	MT	3000	..	..	..	..	..
		Trisodium Phosphate	MT	4050	..	..	..	..	..
		Rare Earth Flouride	MT	120	120	85.15	46.4	70.96	38.67
		Rare Earth Oxide	MT	40	..	28.87	..	72.16	..
		Cerium Oxide	MT	60	..	..	38.64	..	..
		Thorium Concentrate	MT	6000	..	1050.92	..	17.52	..
		Neodymium	MT	..	..	0.44	..	..	..
		Evaporated Lye	MT	600	..	..	..	..	..
		NGADU	MT	..	..	..	29.22	..	..
		Cerium Hydrate (Wet)	MT	400	400.00	13.90	5.87	3.48	1.47
		Magnesium Dioxide	MT	..	..	..	1.42	..	..
		Cerium Hydrate (Dry)	MT	200	200.00	14.60	2.30	7.30	1.15
		Flouride	MT	..	..	..	5.71	..	..
		Yellow Cake	MT	40	..	28.88	..	72.20	..
		Carbonate (Dry)	MT	..	..	..	8.45	..	..
		Lanthanum Concentrate	MT	..	..	2000.00	..	..	..
		Cirium Nitrate	MT	..	..	2.09	1.13	..	..
11	Hindustan Insecticides Ltd.	Tech. DDT	MT	..	..	533.81	444.38	..	..
		Form DDT	MT	..	..	1123.00	1053.9	..	..
		Tech. Endosulphan	MT	..	..	445.00	265.38	..	..
		Form Endosulphan	KL	..	..	472.62	384.37	..	..
		Dicofol Tech.	MT	..	..	69.57	37.52	..	..
		Dicofol Form	MT	..	..	28.25	14.09	..	..
		Hilban	MT	..	..	161.56	105.40	..	..
		Mancozeb	MT	..	..	157.66	501.38	..	..
12	CochinShipyard Ltd.	Ship (Building)	DWT	150000	150000	62517.00	110206	41.68	73.47
13	Kerala Lakshmi Mills	Yarn in different counts		41328 Spindles	41328 Spindles	2015804 Kgs	1949212	..	..
14	Parvathy Mills	Yarn	Spindles	25400	25400	522355 Kgs	538510 Kgs	..	..
		Cloth	Loom	37	37	949392 Kgs	1213982 Kgs	..	..

Source: Reports from Companies concerned

Sl. No.	Name of Company	Name of Product	Unit	Installed capacity as on		Production during		Capacity utilisation %	
				31-03-2005	31-03-2006	31-03-2005	31-03-2006	31-03-2005	31-03-2006
1	2	3	4	5	6	7	8	9	10

*Revised

Appendix 8.11
District-wise break up of Medium and Large Scale Industries in Kerala as on
31-03-2006

SI.No.	Districts	Central Sector	State Sector	Co -Operative Sector	Joint Sector	Private Sector	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	2	14	2	4	68	90
2	Kollam	2	7	2		20	31
3	Alappuzha	...	7	...	3	28	38
4	Kottayam	1	2	2		29	34
5	Pathanamthitta	...	1	1	1	5	8
6	Idukki	...	...	1	1	15	17
7	Ernakulam	12	8	2	4	229	255
8	Thrissur	2	8	1	7	48	66
9	Palakkad	2	2	2	6	77	89
10	Malappuram	...	5	1	2	22	30
11	Kozhikode	...	3	1	1	24	29
12	Wayanad	...	...	...	...	7	7
13	Kannur	1	7	5	...	16	29
14	Kasaragod	...	1	1	...	2	4
	Total	22	65	21	29	590	727

Source: Kerala State Industrial Development Corporation (KSIDC), Thiruvananthapuram

Appendix 8.12
Units Assisted by K.S.I.D.C as on 31-3-2006

SI.No.	Districts	No. of Units		Project Cost (Rs. Lakh)	
		Public Sector	Private Sector	Public Sector	Private Sector
1	2	3	4	5	6
1	Thiruvananthapuram	9	40	14762	30817
2	Kollam	4	10	3069	2821
3	Alappuzha	3	29	2168	28536
4	Pathanamthitta	...	6	...	975
5	Idukki	...	14	...	6697
6	Kottayam	1	19	644	20832
7	Ernakulam	4	162	20916	210202
8	Thrissur	4	39	2006	29186
9	Palakkad	1	79	1373	107650
10	Malappuram	...	21	...	6315
11	Kozhikode	3	16	1628	5362
12	Wayanad	...	6	...	1227
13	Kannur	1	9	148	17891
14	Kasaragod	1	1	87	178
	Total	31	451	46801	468689

Source : KSIDC, Thiruvananthapuram

Appendix 8.13

Capital Invested and Employment in Respect of Govt. Owned Companies in Kerala

Sl.No.	Name of Company	Capital Invested (Rs.lakh)		Employment (Nos.)	
		as on 31-3-2005	as on 31-3-2006	as on 31-3-2005	as on 31-3-2006
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	9170.84*	9730.93	1040	1010
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	32461.72*	34671.71	1445*	1473
3	Malabar Cements Ltd, Palakkad	5037.68	6321.78	941*	960
4	Kerala Clays & Ceramics Products Ltd, Kannur	131.82	131.82	316*	321
5	Sitaram Textiles Ltd, Thrissur	3406.54*	3540.99	257	205
6	Kerala Hitech Industries Ltd, Thiruvananthapuram	3645.08	3665.57	225	225
7	Kerala Automobiles Ltd, Thiruvananthapuram	1217.14*	1217.14	360	342
8	Steel Industrials Kerala Ltd, Thrissur	8364.15	8681.5	306	306
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	5144*	5176	874	773
10	Kerala Minerals and Metals Ltd, Kollam	3391.92*	3392.1	1839*	1937
11	Steel and Industrial Forgings Ltd, Thrissur	1040	...	260	...
12	Foam Mattings India Ltd. Alappuzha	515.23	515.23	170	170
13	Kerala Garments Limited	235.51*	235.51	118	116
14	Kerala Agro Machinery Corporation Limited	161.46	...	565	...
15	Kerala State Cashew Development Corporation	36614.7	37790.04	14987	15184
16	Trivandrum Rubber Works, Thiruvananthapuram	NA	...	NA	...
17	Meat Products of India	287.87	...	105	...
18	Autocast Limited	6295.43	...	342	...
19	Kerala State Bamboo Corporation	1207.03	1187.83	249	239
20	Artisans Development Corporation	390	247.2	25	25
21	Kerala State Coir Corporation	1168.88	1187.66	179	179

Source:- Reports of Companies Concerned

* Revised

Appendix 8.14

Performance of Govt. Owned Companies in Kerala in Terms of Value of Production and Sales Turnover

(Rs. Lakh)

Sl. No.	Name of Company	Value of Production		Sales Turnover	
		2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	5552.84	6347.93	5458.93	5996.31
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	4274.10	5820.91	8251.03*	10486.6
3	Malabar Cements Ltd, Palakkad	16892.12	22782.95	16752.83	22780.37
4	Kerala Clays & Ceramics Products Ltd, Kannur	315.75	363.8	398.46	427.96
5	Sitaram Textiles Ltd, Thrissur	639.93	...	673.83	636.7
6	Kerala Hitech Industries Ltd, Thiruvananthapuram (KELTEC)	NA	1480	1509.75	1582.58
7	Kerala Automobiles Ltd, Thiruvananthapuram	4115.97*	3494.65	4872.94*	3849.56
8	Steel Industrials Kerala Ltd, Thrissur	138.80	319.35	1516.71	1283.9
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	3587*	3709	3623.00	3545
10	Kerala Minerals and Metals Ltd, Kollam	27073.69	31134.32	28554.26	28967.07
11	Steel and Industrial Forgings Ltd, Thrissur	2666.00	...	3083.00	...
12	Foam Mattings India Ltd, Alappuzha	399.94*	364.12	566.55	456.42
13	Kerala Garments Limited	17.00*	24	6.08	7.11
14	Kerala Agro Machinery Corporation Limited	5810.01	...	7934.39	...
15	Kerala State Cashew Development Corporation	5635.89	11014.18	3587.13	8960.05
16	Trivandrum Rubber Works, Thiruvananthapuram	NA	...	NA	...
17	Meat Products of India	461.60	...	473.02	...
18	Autocast Limited	1418.00	...	1419.79	...
19	Kerala State Bamboo Corporation	870.16	...	968.44	921.28
20	Artisans Development Corporation	...	...	1.17	1.38
21	Kerala State Coir Corporation	...	...	367.71	340.91

Source:- Reports of Companies Concerned

* Revised

Appendix 8.15

Production and Capacity Utilisation of Government Owned Companies in Kerala during 2004-05 and 2005-06

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on		Production During		Capacity Utilization (%)	
				31-3-2005	31-3-2006	31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6	7	8	9	10
1	Kerala Electrical and Allied Engineering Co. Ltd, Kochi	Distribution of Transformers	KVA	500000*	500000	474500	327175	94.90	65.44
		Steel Structures	Tonnes	1200	1200	181	324	15.08	27.00
		HRC Fuses	Nos	120000	120000	..	..	..	..
		Cast Iron Specials	Tonnes	1500	1500	..	..	..	..
		Alternators (TL)	Nos	1500	1500	994	868	66.27	57.87
		Electrical & Wiring Accessories	Nos	133000	133000	45719	42546	34.38	31.99
		Alternators(G.P) & D.G Sets	Nos	3000	3000	1048*	858	34.93	28.60
2	Kerala State Electronics Development Corporation Ltd, Thiruvananthapuram	Various Electronic Products	Production is reported in terms of value and not in terms of quantity						
3	Malabar Cements Ltd, Palakkad	Portland Cement	M.Ts	620000	620000	561114	682916	90.50	110.15
4	Kerala Clays and Ceramic Products Ltd, Kannur	ChinaClay	M.Ts	N.A	N.A	11314	10815	..	..
		Fire Bricks	Nos	N.A	N.A	130229	130310	..	..
		Laterite	M.Ts	N.A	N.A	18405	23492	..	..
		Wirecut Bricks	Nos	N.A	N.A	129006	144400	..	..
5	Sitaram Textiles Ltd, Thrissur	Cotton Yarn	M.Ts	12064 (spindles)	12064 (spindles)	503	485	..	..
6	Kerala Hitech Industries Ltd, Thiruvananthapuram (KELTEC)		Not available						
7	Kerala Automobiles Ltd, Thiruvananthapuram	Autorickshaw	Nos	..	..	6725	5481	..	..
8	Steel Industrials Kerala Ltd, Thrissur	Structural Steel Fabrication	M.Ts	3000	3000	48.398	66.43	1.61	2.21
		Cast Iron	M.Ts	1200	1200	290	375.48	24.17	31.29
9	Kerala State Textile Corporation Ltd, Thiruvananthapuram	Cotton/Blended Yarn	Spindles	86236	86236	2241 MT	2248 MT	..	..
10	Kerala Minerals & Metals Ltd, Kollam	Titanium Dioxide Pigment	M.Ts	22000	40000	30662	33191	139.37	82.98
		Ilmenite	M.Ts	51600	51600	47650	51430	92.34	99.67
		Rutile	M.Ts	2400	2400	3332	2789	138.83	116.21
		Zircon	M.Ts	1500	1500	2056	1864	137.07	124.27
11	Steel and Industrial Forgings Ltd, Thrissur	Steel Forgings	M.Ts	7500	..	2486	..	33.15	..

Contd....

Sl. No.	Name of Company	Name of products	Unit	Installed Capacity as on		Production During		Capacity Utilization (%)	
				31-3-2005	31-3-2006	31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6	7	8	9	10
12	Foam Mattings (India) Ltd, Alappuzha	Mattings plant	M2	523000	523000	85122	120904	16.28	23.12
		Latex backing plant	M2	1200000	1200000	394182	361736	32.85	30.14
		Dyeing Plant	M.Ts	840	840	1505.5	10004.25	179.23	1190.98
		Powerloom Plant	M2(Lac)	190000	190000	66557	37819	35.03	19.90
13	Kerala Garments Limited	Readymade Garments	Nos	120000	120000	24396	34000	20.33	28.33
14	KAMCO	Power Tiller	Nos	6000		7567		126.12	
		Power Reapers	Nos	..		525		..	
		Power stone cutter	Nos	..		2		..	
15	Kerala State Cashew Development Corporation	Kernals	MTs	12000		2432.4	4753.68	20.27	
16	Trivandrum Rubber Works	Procured Tread	Kg	..		..		..
		Bonding Gum	Kg	..		..		..
		Vulcanising Cement	Lts	..		..		..
		Foam Products	Nos	..		..		..
		Rubber Sheeting	Tbns	..		..		..
		Retreaded Tyre	Nos	..		..		..
17	Meat Products of India	Meat	MTs	300		323.75		107.92	
		Feed	MTs	7200		1497.27		20.80	
18	Autocast Limited	GI / SGI Castings	MTs	23000		1378		5.99	
		SG Windmill Castings	MTs	..		1269		..	
19	Kerala State Bamboo Corporation	Bamboo Ply	Sq.M 4mm	5.99	6.06	3.21	3.54	53.59	58.42
		Bamboo Matts	Sq. ft.	..		200.22		..	
		Reech	Nos	..		81		..	
20	Artisans Development Corporation			Trading Activities					
21	Kerala State Coir Corporation			Trading Activities					

Source: Reports of the Companies Concerned

* Revised

Appendix 8.16

Capital Invested and Employment in respect of Govt. Majority Companies in Kerala

Sl. No	Name of Company	Capital Invested (Rs. Lakh)		Employment (Nos.)	
		2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6
1	Traco Cable Company Ltd, Kochi	3376.60	3976.61	625	650
2	Travancore Titanium Products Ltd, Thiruvananthapuram	176.75	267.65	1121*	1143
3	The Travancore Cochin Chemicals Ltd, Kochi	7224.00	7518.66	774*	783
4	Keltron Electroceramics Ltd, Malappuram	487.61	489.29	90	88
5	The Travancore Cements Ltd, Kottayam	50.00	176.00	562*	585
6	The Metal Industries Ltd, Shoranur	147.95	147.95	89	89
7	The Travancore Sugars and Chemicals Ltd.	326.91*	216.37	119	118
8	Forest Industries (Travancore) Ltd, Aluva	383.09*	394.24	121	115
9	Keltron Magnetics Ltd, Kannur	403.05	458.81	29	25
10	Transformers and Electricals Kerala Ltd.	8687.38*	7606.70	1022*	1046
11	Keltron Resisitors Ltd, Cannanore	289.62	308.12	47	46
12	Keltron Component Complex Ltd.	1594.26	1617.31	301	298
13	Keltron Crystels Ltd.	1426.78	1604.10	106	102
14	Kerala State Handloom Development Corporation	2697.95*	2739.75	361*	379
15	Kerala Ceramics Ltd.	NA	...	NA	...
16	United Electrical Industries Ltd	731.28	731.28	140	149

Source: Reports of the Companies Concerned

* Revised

Appendix 8.17

Performance of Government Majority Companies in Kerala in Terms of Value of Production and (Rs.Lakh)

Sl. No.	Name of Company	Value of Production		Sales Turnover	
		2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6
1	Traco Cable Company Ltd, Kochi	4271.04	3848.08	4173.70	3684.38
2	Travancore Titanium Products Ltd, Thiruvananthapuram	14875.01*	11532.69	11941.00	13388.00
3	The Travancore Cochin Chemicals Ltd, Kochi	10234.00	12660.00	10651.00	12742.00
4	Keltron Electroceramics Ltd, Malappuram	293.97	176.37	410.71	362.77
5	The Travancore Cements Ltd, Kottayam	2810.00*	2138.00	2779.00	2166.00
6	The Metal Industries Ltd, Shoranur	145.05	111.75	245.05	166.77
7	The Travancore Sugars and Chemicals Ltd.	487.25	8.31	677.51*	655.23
8	Forest Industries (Travancore) Ltd, Aluva	612.41*	727.00	612.41*	727.00
9	Keltron Magnetics Ltd, Kannur	255.22	288.00	338.12*	398.24
10	Transformers and Electricals Kerala Ltd.	9896.00*	10583.00	9415.00	10880.00
11	Keltron Resisters Ltd., Cannanore	95.73	87.22	149.33	151.11
12	Keltron Component Complex Ltd.	2291.98*	2200.95	2455.23	2455.20
13	Keltron Crystals Ltd.	73.89	93.54	80.48	104.88
14	Kerala State Handloom Development Corporation	772.51*	696.05	1603.84	1491.50
15	Kerala Ceramics Ltd.	NA	...	NA	...
16	United Electrical Industries Ltd	727.38	523.56	711.63	...

Source: Reports of companies concerned

* Revised

Appendix 8.18

Production and Capacity Utilisation of Government Majority Companies in Kerala during 2004-05 and 2005-06

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2005	31-3-2006	31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6	7	8	9	10
1	Traco Cable Company Ltd, Kochi	1.AAC / ACSR	MT	1500	1500	1454.46	1974.15	96.96	131.61
		2.PVC Covered Conductors	MCM	32.92	32.92	0.94	1.91	2.85	5.80
		3.JFTC (IBM)	LCKM	2.50	2.50	0.00	0.08	0.03	3.20
		4.JFTC (TVLA)	LCKM	15.00	15.00	3.27	0.01	21.80	0.05
2	Travancore Titanium Products Ltd, Thiruvananthapuram	Titanium Dioxide	M.T	15000	15000	18359.00	17111.00	122.39	114.07
3	The Travancore Cochin Chemicals Ltd, Kochi	1.Caustic Soda Lye	MT	52250	48370	47201.00	51004.00	90.34	105.45
		2.Chlorine Products	MT	46295	42857	41820.00	45190.00	90.33	105.44
4	Keltron Electroceramics Ltd, Malappuram	1.Ceramic Capacitors	Lakh Nos	1100	1100	409.57	476.02	37.23	43.27
		2.N.T.C.Thermistors	Lakh Nos	10	10	2.97	4.72	29.70	47.20
		3.Buzzers/Ringers/Flasher	Lakh Nos	5	5	1.05	0.22	21.00	4.40
		4.Metaloxide varistors	Lakh Nos	20	20	25.76	6.66	128.80	33.30
		5. Transducers	Lakh Nos	...	...	0.02	0.02	...	...
5	The Travancore Cements Ltd	1.White Cement	M.T	30000	30000	23965.00	15134.00	79.88	50.45
		2.Cement Paint	M.T	1050	1050	1340.00*	1345.00	127.62	128.10

Contd....

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2005	31-3-2006	31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6	7	8	9	10
6	The Metal Industries Ltd, Shoranur	1.Mammatties 2.All Axes 3.Pick Axes 4.Crow Bar 5.Sledge Hammer 6.Others	MT MT MT MT MT	272.00	272.00	226.00	125.00	79.88	80.88
7	Travancore Sugars & Chemicals Ltd	1.Spirit 2. I.M.F.L.(lakh)	B.L. B.L.	2820000 1600000.00	... 1600000.00	56023.00 1463971.00	31185.00 1316000.00	1.99 91.50	... 82.25
8	Forest Industries (Travancore) Ltd, Aluva	Wooden Furntiure and Joineries	m ³	1500	1500	419.37	493.48	27.96	32.90
9	Keltron Magnetics Ltd, Kannur	1.Servo Controlled Voltage Stabilizer 2.Uninterrupted Power Supply Systems 3.MPPCAPS	Nos. Nos. '000 Nos.	100 50 1140	... ... 1140	... ... 1224.00	... ... 1739.00	... ... 107.37	... ... 152.54
10	Transformers and Electricals Kerala Ltd, Ernakulam	1.Power Transformer 2.Current and Potential Transformers 3.Gas Circuit Breakers	MVA No No	4500 1000 100	4500 1000 100	3538.00* 377.00* ..	3475.00 260.00 ..	78.62 37.70 ..	77.22 26.00 ..
11	Keltron Resistors Ltd., Cannanore	Carbon & Metal Film Resisitors	M.Nos	217	217	102.93	87.50	47.43	40.32
12	Keltron Component Complex Ltd.	Alu. Electrical Capacitors	M.Nos.	150	150	160.27	168.11	106.85	112.07

Contd....

Sl. No.	Name of Company	Name of Products	Unit	Installed Capacity as on		Quantity of Production		Capacity Utilization %	
				31-3-2005	31-3-2006	31-3-2005	31-3-2006	31-3-2005	31-3-2006
1	2	3	4	5	6	7	8	9	10
13	Keltron Crystals Ltd., Cannanore	1.Piezo Electric Quartz Crystals	Nos (000)	2084	2084	390.00	727.00	18.71	34.88
		2.Lead Taps for aliminium electrolytic capacitors	M.Nos	240	240	171.00	186.00	71.25	77.50
14	Kerala State Handloom Development Corporation	Handloom Fabrics	Lakh Metres	2500 (looms)	2600 (looms)	15.43	16.88	..	..
15	Kerala Ceramics Ltd.	Kaalex	MT	..	..	..	..	..	..
16	United Electrical Industries Ltd.			..	..	34462.00		..	..
		1. S.P.Static Metre	Nos	..	..		232032	..	..
		2. Starters	Nos	..	..	555	603	..	..
		3. Cross Arms	Nos	..	..	32400	15000	..	..
		4. P.P.Metre	Nos	..	..	42	65	..	..
		5. FFATS	Nos	..	..	8	29	..	..

Source: Reports of the companies concerned

* Revised

Appendix 8.19

Details of Joint Stock Companies Working in Kerala

Sl.No	Particulars	Private Limited	Public Limited	Total
1	2	3	4	5
1	Number of Joint Stock Companies in Kerala as on 31.3.2005	13210	1445	14655
2	Number of Companies newly registered during 2005-06	1222	39	1261
3	Number of Companies transferred from other States during 2005-06	6	2	8
4	Number of Companies wound up dissolved / struck off/amalgamated during 2005-06	369	35	404
5	Number of Companies transferred to other States during 2005-06	7	3	10
6	Net addition to the total No.of Joint Stock Companies in Kerala during 2005-06 [(2+3)-(4+5)]	852	3	855
A	No.of companies converted from public to private	4	...	4
B	No.of companies converted from private to public	...	9	9
7	Total No.of Joint Stock Companies in Kerala as on 31.3.'2006 (Item 1+6)	14062	1448	15510
8	Total No.of Government Companies registered in Kerala as on 31-3-2005	60	51	111
9	Total No.of Government Companies registered in Kerala during 2005-06	...	...	...
10	No.of government Companies wound up during 2005-06	2	...	2
11	Net addition to the total No.of Government Companies in Kerala during 2005-06 (Item 9-10)	(-)2	...	(-)2
12	Total No.of Government Companies in Kerala as on 31.3.2006 (Item 8+11)	58	51	109
13	Name of Government Companies, newly registered in Kerala during 2005-06	...	...	...
14	Name of Government Companies, wound up during 2005-06	(1) Kerala Inland Fisheries Development Corporation Ltd. (2)Keltron Power DevicesLtd.		
15	No.of other major companies wound up during 2005-06	...	...	...

Source : Registrar of Joint Stock Companies, Kochi.

Appendix 8.20

District-wise Details of Small Scale Industrial Units Registered in Kerala During the Year 2005-06

Sl. No.	District	Number of SSI units promoted by					Investment (Rs. lakh)	Value of goods and services produced (Rs. lakh)	Employment provided (Nos.)
		SC	ST	Women	Others	Total			
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	4	1	216	370	591	2116.00	8689.00	3309
2	Kollam	1	0	183	790	974	1643.00	3874.00	4016
3	Pathanamthitta	0	0	14	269	283	451.00	329.00	787
4	Alapuzha	1	0	281	354	636	1204.00	4945.00	5347
5	Kottayam	10	2	148	252	412	1280.00	6231.00	1637
6	Idukki	0	0	14	177	191	389.00	1820.00	555
7	Ernakulam	0	0	154	474	628	6702.00	38220.00	3910
8	Thrissur	26	0	144	435	605	1637.00	7870.00	3060
9	Palakkad	0	0	81	180	261	1317.00	8518.00	1187
10	Malappuram	0	2	43	165	210	1068.00	4304.00	1004
11	Kozhikode	0	0	5	267	272	720.00	8531.00	986
12	Wayanad	0	0	3	39	42	270.00	38.00	216
13	Kannur	1	0	44	300	345	1338.00	4854.00	1419
14	Kasaragod	0	0	3	173	176	1035.00	2545.00	695
Total		43	5	1333	4245	5626	21170	100768	28128

Source : Directorate of Industries & Commerce, Tvpm.

Appendix 8.21
District-wise Details of Small Scale Industrial Units Registered in Kerala as on
31st March 2006

Sl. No	District	Number of SSI units promoted by				Total Investment (Rs. lakh)	Value of goods and services produced (Rs lakh)	Employment provided (Nos)
		SC/ST	Women	Others	Total			
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	1342	6440	22646	30428	37696.54	158972.38	122226
2	Kollam	1875	6958	19538	28371	37361.28	95644.24	176380
3	Pathanamthitta	793	2971	10134	13898	13576.84	31332.49	46421
4	Alapuzha	764	5901	19499	26164	30587.34	115890.68	122953
5	Kottayam	598	4966	23367	28931	36196.80	98046.15	95921
6	Idukki	466	2491	4743	7700	9548.91	29999.44	27550
7	Ernakulam	855	5406	30429	36690	100528.85	546611.62	174175
8	Thrissur	1256	4765	24358	30379	58361.53	179864.56	123593
9	Palakkad	712	4051	17363	22126	33801.72	70752.93	102512
10	Malappuram	881	1983	10547	13411	23360.41	90100.65	53801
11	Kozhikode	464	2910	17718	21092	24478.97	102921.18	88152
12	Wayanad	308	1649	2695	4652	5973.11	10737.91	17198
13	Kannur	339	1811	12882	15032	22252.44	113361.18	97780
14	Kasaragod	165	902	6269	7336	10448.39	27942.16	39473
Total		10818	53204	222188	286210	444173.13	1672177.6	1288135

Source : Directorate of Industries & Commerce

Appendix 8.22

Working Status of Small Scale Units as on 31st March 2006

Sl. No.	District	Total No. of Units	Number of units identified as			Units revived by DIC during 2005-06
			Sick	Registered	Revived	
1	2	3	4	5	6	7
1	Thiruvananthapuram	21509	519	277	125	1
2	Kollam	15767	539	293	137	0
3	Pathanamthitta	9110	277	65	62	7
4	Alappuzha	17746	502	235	199	1
5	Kottayam	19721	663	326	261	2
6	Idukki	4978	243	56	30	1
7	Ernakulam	24414	1914	293	125	0
8	Trissur	22070	600	153	69	1
9	Palakkad	14432	530	130	70	5
10	Malappuram	10014	297	67	11	0
11	Kozhikode	15888	479	258	109	0
12	Wayanad	2848	90	52	20	0
13	Kannur	9827	290	122	42	0
14	Kasaragod	4978	121	4	5	0
Total		193302	7064	2331	1265	18

Source : Directorate of Industries & Commerce

Appendix 8.24
Industrial Co-operative Societies in Kerala as on 30.6.2006

Sl. No.	District	Industrial Co-operative societies registered	Total Number of Industrial Co-operative Societies as on 30-6-				Total number of societies
			SC	ST	Women	Others	
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	13	39	7	72	114	232
2	Kollam	1	27	7	42	67	143
3	Pathanamthitta	0	0	8	24	8	40
4	Alappuzha	0	16	2	46	43	107
5	Kottayam	2	1	5	24	26	56
6	Idukki	0	17	4	0	22	43
7	Ernakulam	2	9	1	39	16	65
8	Trissur	0	2	7	30	27	66
9	Palakkad	3	15	2	40	15	72
10	Malappuram	0	20	3	30	17	70
11	Kozhikode	0	5	0	8	20	33
12	Wayanad	0	9	2	4	10	25
13	Kannur	0	20	6	62	13	101
14	Kasaragod	0	1	3	16	28	48
	Total	21	181	57	437	426	1101

Source : Directorate of Industries & Commerce

Appendix 8.23
Achievement under Self Employment Programme during 2005-06 (PMRY)

Sl. No.	District	Target	Applications sanctioned and amount disbursed during 2005-06			
			Sanctioned		Disbursed	
			Number	Amount (Rs.lakh)	Number	Amount (Rs.lakh)
1	2	3	4	5	6	7
1	Thiruvananthapuram	2550	2635	1238.49	2179	1002.70
2	Kollam	2550	2844	1326.25	2203	959.02
3	Pathanamthitta	1175	1187	647.31	966	486.13
4	Alappuzha	1975	2124	1090.70	1956	991.21
5	Kottayam	2510	2657	1215.87	1989	820.06
6	Idukki	980	1052	555.71	945	481.58
7	Ernakulam	2900	2951	1534.15	2662	1415.45
8	Trissur	2760	2842	1243.39	2363	980.22
9	Palakkad	2930	3191	1338.33	2766	1101.13
10	Malappuram	2250	2255	1418.78	1576	966.90
11	Kozhikode	2400	2699	1516.90	1958	1013.50
12	Wayanad	700	726	302.03	605	275.46
13	Kannur	1600	1682	765.01	966	414.05
14	Kasaragod	720	612	408.05	489	318.13
Total		28000	29457	14600.97	23623	11225.54

Source : Directorate of Industries & Commerce

Appendix 8.25
Outstanding Credit to Various Sectors by
Commercial Banks in Kerala

(Rs. Crore)

Sl. No.	Year (as at March)	Total Advances	Agriculture Advances	SSI Advances	Other Priority Sector Advances	Non Priority Sector Advances
1	2	3	4	5	6	7
1	2001	19180	2747	2262	3885	10286
2	2002	22062	3035	2540	4557	11930
3	2003	27007	3507	2562	5798	15140
4	2004	31867	4502	2618	8605	16142
5	2005	40948	5803	3128	11972	20045
6	2006	51919	8259	3708	15796	24156

Source : State Level Bankers' Committee.

Appendix 8.26
District-wise Number of Handloom Co-operatives

Sl. No	District	2004-05						Total
		SC		ST		Others		
		Women	General	Women	General	Women	General	
1	Thiruvananthapuram	5	14	1	7	46	290	363
2	Kollam		7		1	1	70	79
3	Pathanamthitta		3				6	9
4	Alappuzha	2	1			2	21	26
5	Kottayam		2			2	12	16
6	Idukki	1			4		7	12
7	Ernakulam		2	1			29	32
8	Thrissur	1	5				25	31
9	Palakkad		6		4	1	35	46
10	Malappuram	1	2				10	13
11	Kozhikode		2				41	43
12	Wayanad		2		2			4
13	Kannur		2				71	73
14	Kasaragod						11	11
	Total	10	48	2	18	52	628	758

Source: Directorate of Handlooms & Textiles

e Socieites in the State

of socieites

2005-06						
SC		ST		Others		Total
Women	General	Women	General	Women	General	
5	14	1	7	46	290	363
	7		1	1	70	79
	3				6	9
2	1			2	21	26
	2			2	12	16
1			4		7	12
	2	1			29	32
1	5				25	31
	6		4	1	35	46
1	2				10	13
	2				41	43
	2		2			4
	2				71	73
					11	11
10	48	2	18	52	628	758

Appendix 8.27

Production and Productivity under Handloom Industry in Kerala

Sl.No	Item	2004-05	2005-06
1	2	3	4
1	Co-operative Sector		
i	Number of looms	47200	47235
ii	Production of Handloom cloth (M.M)	59.90	59.96
iii	Value of Production (Rs. crores)	269.55	269.82
iv	Productivity (M/L/A)	1269.07	1269.40
v	No. of weavers	129250	129470
vi	Employment generated during the period (mandays in lakhs)	457	457
vii	No. of women employed	27610	27645
2	Corporate /unorganised/private sector		
i	Number of looms	3000	3020
ii	Production of Handloom cloth (M.M)	2.40	2.42
iii	Value of production (Rs. crores)	10.80	10.90
iv	Productivity (M/L/A)	800.00	801.32
v	No. of weavers	6200	6225
vi	Employment generated during the period (mandays in Lakhs)	28	28
vii	No. of women employed	1200	1210
3	Total: Co-operative, corporate and unorganised sector		
i	Number of looms	50200	50255
ii	Production of Handloom cloth (M.M)	62.3	62.38
iii	Value of Production (Rs. crores)	280.35	280.72
iv	Productivity (M/L/A)	1241.04	1245.46
v	No. of weavers	135450	135695
vi	Employment generated during the period (mandays in Lakhs)	485	485
vii	No. of women employed	28810	28855
4	Assistance extended by way of loan and grant for the development of handloom industry (Rs. lakh)		
a	Loan		
i	State Government	83.85	90
ii	Central Government		
iii	N.C.D.C, NABARD, HUDCO	39.6	0
	Total (a)	123.45	90
b	Grant		
i	State Government	946.91	1056.86
ii	Central Government	1072.50	341.38
iii	N.C.D.C, NABARD, HUDCO		
	Total (b)	2019.41	1398.24
c	Amount spent as Rebate on the sale of Handloom cloth:		
i	State Government	150.00	300.00
ii	Central Government	287.50	0.69
	Total (c)	437.50	300.69

Sl.No	Item	2004-05	2005-06
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Contd...

Sl.No	Item	2004-05	2005-06
5	Value of unsold stock (Rs. crores)		
a	In the Co-operative Sector	110	13.08
b	In the Corporate Sector	24	26
c	Unorganised/ private sector	NA	NA
6	Number of Co-operative Societies		
a	Factory type:		
1	working	112	112
2	Dormant	26	26
3	under liquidation	11	11
4	Not started working	6	6
	Total (a)	155	155
b	Cottage type:		
1	Working	440	440
2	Dormant	60	60
3	under liquidation	81	81
4	Not started working	22	22
	Total (b)	603	603
	Total 6 (a+b)	758	758

Source: Directorate of Handlooms & Textiles

Appendix 8.28
Working Results of Handloom Apex Society (Hantex)

Sl.No	Particulars	2004-05	2005-06
1	2	3	4
1	Sales turnover (Rs. crores)	16.13	10.16
2	Value of cloth produced (Rs. crores)	8.75	
3	Value of yarn purchased (Rs. Crores)	8.82	6.56
4	Value of yarn distributed (Rs. crores)	8.96	6.75
5	No. of exhibitions conducted	14	26
6	No. of primary societies registered as members (cumulative)	463	466
7	Paid up share capital (Rs. in lakhs)	1347.35	1387.55

Source: Hantex

Appendix 8.29

Working Results of Kerala State Handloom Development Corporation (HANVEEV)
(Rs lakh)

Sl.No	Particulars	2004-05	2005-06 (P)
1	2	3	4
1	Paid up capital (as at the end of the year)	1355.48	1382.28
2	Total Borrowing (as at the end of the year including interest)	2856.61	3058.61
3	Gross Block (as at the end of the year)	413.56	420.83
4	Value of production through sponsored societies (as at the end of the year)	11.18	16.92
5	Income through sales of products (as at the end of the year) Less discount -- Yarn & Fabrics	1603.84	1491.50
6	Other income:-		
a	Export of handloom cloth by K S H D C	...	...
b	Grants, M D A, Interest, Processing charges etc.	104.10	119.39
7	Expenditure on Raw Materials		
a	Yarn	424.16	327.18
b	Dyes and Chemicals	27.26	18.00
c	Fabrics (Procured from weavers)	761.33	679.13
8	Expenditure on personal payments	435.67	461.41
9	Provision of Depreciation	12.10	11.27
10	Expenditure towards interest and bank charges	189.55	188.91
11	Other Expenses		
a	Trading expenses	133.40	143.00
b	Administration and selling expenses	145.67	163.49
12	Stock differential	14.49	(-) 106.49
13	Net Profit (+), Net loss(-)	(-) 417.89	(-) 504.91
14	Accumulated loss at the end of the year	2503.53	3008.44

Source: Kerala State Handloom Development Corporation

(P): Provisional

Appendix 8.30

Production and Productivity under Powerloom Industry

Sl.No	Items	2004-05
1	2	3
1	Total No. of Powerlooms in the state	3800
2	No. of looms in the cooperative sector	1381
3	percentage of 2 to 1	36.34
4	No. of Powerloom cooperative societies in the state	3
5	No. of members in the cooperative sector	6600
6	No. of women employed in Powerloom sector	1223
7	Co-operative sector	
a	Production of cloth (lakh metres)	62.15
b	Value of production (Rs. Lakh)	761.34
c	Productivity(Metre/loom)	4500.36
8	Un organised/private sector	NA
9	Total (Cooperative and Unorganised/private sectors)	
a	Production of cloth (lakh metres)	62.15
b	Value of Production (Rs. Lakh)	761.34
c	Productivity (Meter/loom)	1635.53

Source: Directorate of Handlooms & textiles, Tvpm

2005-06 figures are not available

Appendix 8.31
Coir Co-operative Societies in Kerala

Sl.No	Type of Society	No.of Societies as on 31-3-2005	No. of Societies as on 31-3-2006
1	2	3	4
1	Primary Coir Co-operative Societies		
a)	Working	375	362
b)	New Societies which have not started working	11	6
c)	Dormant societies	114	105
	Total (1)	500	473
2	Manufacturing Societies		
a)	Working (Started production)	35	34
b)	New Societies which have not started working	15	18
c)	Dormant societies	6	6
	Total (2)	56	58
3	Small Scale Producers Co-operative Societies		
a)	Working	14	13
b)	New Societies which have not started working	7	7
c)	Dormant societies	3	4
	Total (3)	24	24
4	Husk Procurement and Distribution Societies		
a)	Working	1	1
b)	New Societies which have not started working	2	2
c)	Dormant societies	0	0
	Total (4)	3	3
5	Fibre Societies (Defibering Mill Societies)		
a)	Working	30	28
b)	New Societies which have not started working	24	26
c)	Dormant societies	20	19
	Total (5)	74	73
6	Co-operative Coir Marketing Federation	1	1
7	Total number of coir Co-operative societies		
a)	Working	455	438
b)	New Societies which have not started production	59	59
c)	Dormant societies	143	134
d)	Societies under liquidation	145	170
	Grand Total	802	801

Source : Directorate of Coir Development, Tvpm.

Appendix 8.32
Activities of Coir Co-operative Societies

a.Yarn Sector									
Year	No.of working Societies	No.of Workers (1000)	Husk purchased		Fibre purchased		Yarn produced		Wages paid (Rs. lakh)
			Number (in lakhs)	Value (Rs.lakh)	Qty (Tonnes)	Value (Rs.lakh)	Qty (Tonnes)	Value (Rs.lakh)	
2003-04	362	152.00	266.37	113.90	1300.50	412.95	3389.00	4179.76	591.06
2004-05*	376	51.93	228.068	169.30	4436.84	769.75	4838.38	1427.76	593.08
2005-06	366	52.18	239.50	195.66	4706.37	646.92	5192.1	1592.62	734.49
b.Product Sector									
Year	No.of working Societies	No.of Workers	Value of Production (Rs. lakh)		Wages paid (Rs. lakh)				
2003-04	89	2113	534.48		469.85				
2004-05*	56	5310	1965.04		256.97				
2005-06	68	4104	2261.04		329.75				

Source : Directorate of Coir Development, Tvpm.

* Revised

Appendix 8.33
District-wise Details of Coir Co-operative Societies

Sl. No	District	Project Offices	No. of Coir Societies as on 31-3-2006			
			Working & New	Dormant	Under liquidation	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	Chirayinkil	47	14	28	89
2	Kollam	Kollam	77	22	21	120
3	Alappuzha	Kayamkulam	58	23	10	91
		Alappuzha	119	28	27	174
4	Kottayam & Idukki	Vaikom	27	2	6	35
5	Ernakulam	North Paravoor	19	5	44	68
6	Thrissur	Thrissur	19	6	20	45
7	Malappuram/	Ponnani	22	7	2	31
8	Kozhikode	Kozhikode	66	15	9	90
9	Kannur/ Kasaragod	Kannur	43	12	3	58
Total			497	134	170	801

Source : Directorate of Coir Development, Tvpm.

Appendix 8.34

Export of Coir and Coir Products from India during 2004-05 & 2005-06

Sl. No	Items	2004-05		2005-06	
		Qty (Tonnes)	Value (Rs.Lakh)	Qty (Tonnes)	Value (Rs.Lakh)
1	2	3	4	5	6
1	Curled Coir	69.00	11.97	0.00	0.00
2	Coir Fibre	1350.45	186.03	1552.98	196.05
3	Coir Rugs & Carpet	1727.34	1002.64	1242.70	730.38
4	Coir Pith	43420.54	3042.41	53444.48	3872.60
5	Coir Rope	299.67	116.91	162.73	70.41
6	Coir (other source)	502.40	199.38	123.03	74.65
7	Coir Yarn	10987.59	3358.16	9582.52	3019.00
8	Coir Geo-textiles	2323.19	1049.76	2512.32	1140.56
9	Handloom Mat	40127.35	25129.27	42516.42	26698.73
10	Powerloom Mat	1433.22	931.16	1609.94	1027.10
11	Tufted Mat	16502.27	9499.05	19671.49	11605.96
12	Handloom Mattings	3518.90	2334.04	2915.91	1913.38
13	Powerloom Mattings	188.94	138.92	155.95	118.89
14	Rubberised Coir	475.92	340.57	536.50	377.05
	Total	122926.78	47340.27	136026.97	50844.76

Source : Directorate of Coir Development, Tvpm.

Appendix 8.35
Foreign Exchange Earnings of India from Cashew Industry

(Rs. Crore)

Year	Export Value		Total	Import Value of Cashewnuts	Net Foreign Exchange Earned
	Cashew Kernels	Cashewnut shell liquid			
1	2	3	4	5	6
2000-2001	2049.60	3.89	2053.49	960.84	1092.65
2001-2002	1788.68	5.93	1794.61	949.25	844.60
2002-2003	1933.02	9.26	1942.28	1236.60	705.68
2003-2004	1804.43	7.03	1811.46	1400.90	410.56
2004-2005	2709.24	7.91	2717.15	2190.94	526.21
2005-2006	2514.86	7.09	2521.95	2162.95	359.00

Source: Cashew Export Promotion Council, Kochi

Appendix 8.36
Import of Raw Cashewnuts into India

Year	Kerala*		India	
	Quantity (MT)	Value (Rs.crore)	Quantity (MT)	Value (Rs.crore)
1	2	3	4	5
2000-01	152516	552.74	249318	960.84
2001-02	191579	502.46	355443	949.25
2002-03	249970	772.47	400659	1236.60
2003-04	294552	909.45	452398	1400.90
2004-05	283149	1055.08	578884	2190.94
2005-06	306765	1134.83	565400	2162.95

Source: Cashew Export Promotion Council, Kochi.

* Import through Cochin

Appendix 8.37
Kerala Khadi & Village Industries Board
Production, Sales, Employment, and Wages paid during 2004-05 & 2005-06

(Rs. Lakh)

Sl. No.	Name of Industry	Value of production		Value of sales		Employment(Nos)		Wages paid	
		2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10
I	Khadi	479.10	493.58	1152.24	1331.96	4919	4587	350.68	294.40
II	Village Industries								
1	Cottage Match	1001.70	809.70	1008.30	805.30	6570	6270	412.10	405.60
2	Agarbathy	252.90	202.40	267.80	203.30	1379	1279	87.85	85.35
3	Village Leather	1558.00	1421.00	1664.00	1459.00	1572	1280	197.50	214.50
4	Fibre & Screwpine	551.70	503.50	554.95	491.60	57161	53411	445.10	443.80
5	Rubber based industry	1753.00	1509.00	2227.00	1839.00	1613	1311	260.80	237.90
6	Handmade paper	323.00	292.00	345.00	305.00	482	427	67.80	86.10
7	Village pottery	1968.00	1916.00	2412.00	2301.00	21029	19981	825.50	935.00
8	Gurkhandasari	167.50	112.00	170.30	115.00	1920	1490	162.50	158.00
9	Service Industry	436.00	411.00	436.00	411.00	923	763	390.80	414.00
10	Non-edible oil & Soap	562.00	515.00	855.00	762.00	1179	934	124.40	133.60
11	Village oil	1358.00	1188.00	1609.00	1494.00	1023	907	179.00	187.20
12	Textile	1014.50	782.00	1023.00	817.00	6124	6025	449.50	553.00
13	Palmgur	190.00	128.00	186.50	132.00	8094	7003	628.70	625.00
14	Bee-keeping	231.20	181.20	288.38	171.38	17739	15897	160.70	159.70
15	Processing of cereals & pulses	765.00	530.00	788.50	669.00	14438	13385	660.70	687.70
16	Ayurvedic medicines	169.00	145.00	180.50	151.00	1087	1041	87.20	85.70
17	Fruits & Vegetable Preservation	547.00	480.00	563.00	466.00	3085	2650	181.70	279.00
18	Lime	1618.50	1566.00	1651.50	1609.50	9075	8718	843.00	1007.00
19	Cane & Bamboo	238.70	202.20	245.70	236.70	3109	2959	158.00	158.00
20	Carpentry & Blacksmithy	1730.50	1499.00	1743.50	1700.00	6389	6030	1078.60	1093.00
21	Aluminium industry	680.20	601.00	683.20	597.00	868	749	178.30	142.70
22	Electronics	370.50	317.00	381.00	340.00	871	770	63.00	114.00
23	Polyvastra	55.13	39.70	100.86	82.81	710	500	45.16	31.38
24	PVC	148.70	128.00	150.60	149.00	227	227	32.20	32.30
	Total II	17690.73	15478.70	19535.59	17307.59	166667	154007	7720.11	8269.53
	Grand Total	18169.83	15972.28	20687.83	18639.55	171586	158594	8070.79	8563.93

Source: Kerala Khadi & Village Industries Board, Thiruvananthapuram.

Appendix 8.38

**Districtwise Number of Sales Outlets & Sales under
KVIB during 2005-06**

Sl. No.	Name of project	No. of sales outlets	Sales during 2005-06 (Rs. Lakh)
1	Thiruvananthapuram	19	77.8
2	Kollam	18	64.29
3	Pathanamthitta	10	27.1
4	Alappuzha	18	42.62
5	Kottayam	17	58.1
6	Idukki	4	19.87
7	Ernakulam	10	148.2
8	Thrissur	18	32
9	Palakkad	17	62.86
10	Malappuram	12	23.93
11	Kozhikkodu	30	97.32
12	Payyannur Khadi Centre	45	398.52
	Total	218	1052.61

Source: Khadi & Village Industries Board, Thiruvananthapuram.

Appendix 8.39

Physical Achievement under Sericulture for the year 2004-05 & 2005-06

Sl. No	District	Mulberry Cultivation (acres) (Cumulative)		No. of farmers (Cumulative)		DFLs supplied (Nos.)		Cocoon Production (Kg)		Silk production (Kg)	
		2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	116.73	126.23	207	217	2175	1750	460.90	392.05		
2	Kollam	164.59	192.84	270	331	6395	5895	2038.00	2132.30		
3	Pathanamthitta	120.97	138.47	194	222	4610	4870	1502.50	1906.60		
4	Alappuzha	173.65	191.65	344	374	6385	6865	2103.71	2634.10	1247.73	1304.51
5	Kottayam	145.65	158.50	267	288	5350	4925	1671.25	1619.95		
7	Idukki	456.12	518.51	637	717	10010	11375	3596.75	4269.45		
6	Ernakulam	121.45	132.95	240	257	12095	13755	4520.44	4654.70	286.62	693.00
8	Thrissur	156.57	178.27	280	313	28200	29180	13747.75	15322.22		
9	Palakkad	235.80	318.55	277	374	27450	45125	11625.08	19970.70	911.80	396.15
10	Malappuram	192.60	217.15	314	368	26975	32505	11435.25	14858.30		
11	Kozhikkodu	114.30	128.30	221	248	6390	7905	2469.25	2634.20		
13	Wayanad	201.00	239.00	289	336	21985	20350	10299.80	10000.15		
12	Kannur	141.65	156.40	294	317	17575	15725	8141.10	6908.00		
14	Kasaragod	93.90	107.15	141	159	9430	9830	4007.80	4780.95	1665.38	1366.86
	Total	2434.98	2803.97	3975	4521	185025	210055	77619.58	92083.67	4111.53	3760.51

Source: SERIFED, Thiruvananthapuram.

Appendix 8.40
Kerala State Industrial Development Corporation
Physical & Financial Performance 2005-06

(Rs. Crore)

Sl. No.	Particulars	2005-06
A	Physical	
1	Projects Completed	
a.	No. of projects	18
b.	Aggregate cost	248
c.	Employment (Nos.)	1543
2	Projects under implementation (31.03.2005)	
a.	No. of projects	32
b.	Aggregate cost	497
c.	Employment (Nos.)	5763
3	Projects cleared by KSIDC Board	
a.	No. of projects	29
b.	Aggregate cost	546
c.	Employment (Nos.)	2166
4	MOU signed with private parties	
a.	No. of projects	Nil
b.	Estimated aggregate cost	...
B	Financial	
a	Gross sanction	181
b	Disbursement	50
c	Recovery	51
d	Operating profit	22

Source : Kerala State Industrial Development Corporation Thiruvananthapuram

Appendix 8.41
Kerala Financial Corporation: Loan Operations as on 31.3.2006

(Rs.Lakh)

Sl.No	Particulars	During the year 2005-06						Since Inception upto 31.3.2006					
		S.S.I		Others		Total		S.S.I		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Application pending as on 1.4.2005	27	1505.00	18	2819.00	45	4324	0	0	0	0	0	0
2	Application Received during 2005-06	189	5025.00	217	11493	406	16518	28722	195514.00	18299	180383.00	47021	375897.00
3	Total application for consideration	216	6530.00	235	14312	451	20842	28722	195514.00	18299	180383.00	47021	375897.00
4	Application withdrawn/ rejected or otherwise disposed off	33	2672.00	26	3891.00	59	6563	4411	35471.00	1559	27976.00	5970	63447.00
5	Application Sanctioned (Gross)	174	3601.00	194	8512.00	368	12113	23681	143619.00	17201	151981.00	40882	295600.00
6	A. Application cancelled/reduced out of current year's sanction	0	7.00	1	9	1	16	0	0	0	0	0	0
	B. Application cancelled/reduced out of previous year's sanction	7	164.00	11	1274	18	1438	0	0	0	0	0	0
	C. Total cancellation/ reduction (6A+B)	7	171.00	12	1283	19	1454	2841	9513.00	1330	2961.00	4171	12475.00
7	Application sanctioned effectively (5-6A)	174	3594.00	193	8503	367	12097	0	0	0	0	0	0
8	Net Sanctions (5-6C)	167	3430.00	182	7230	349	10660	20840	134105.00	15871	149020.00	36711	283125.00
9	Amount disbursed along with number of newly assisted units	147	2804.00	138	5048.00	285	7852	21311	112572.00	15215	113878.00	36526	226450.00
10	Application pending sanction as on at the end of the period	9	256.00	15	1909.00	24	2165	0	0	0	0	0	0

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.42

District-wise details of Disbursement of Loan by KFC during 2005-06

(Rs.lakh)

Particulars		Effective Sanction		Disbursement					
				SSI		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10
Backward Districts									
Category - A									
	Idukki	11	288.80	6	44.53	4	58.17	10	102.7
	Wayanad	23	314.29	6	22.52	14	193.84	20	216.36
Category - B									
	Alappuzha	15	460.42	4	57.55	9	382.51	13	440.06
	Malappuram	15	602.54	4	103.44	10	304.28	14	407.72
	Kannur	11	145.00	5	31.90	3	108.34	8	140.24
	Kasaragod	23	221.77	10	82.34	11	120.73	21	203.07
Category - C									
	Thiruvananthapuram	37	1851.32	9	154.08	17	1482.14	26	1636.22
	Thrissur	57	1659.93	28	815.98	14	421.03	42	1237.01
	Total	192	5544.07	72	1312.34	82	3071.04	154	4383.38
Non Backward Disrticts									
	Pathanamthitta	6	65.95	3	105.45	2	52.00	5	157.45
	Kollam	42	821.29	14	194.11	11	415.18	25	609.29
	Kottayam	12	182.37	4	41.58	1	115.31	5	156.89
	Ernakulam	33	3309.52	13	586.84	8	757.26	21	1344.1
	Perumbavoor	17	428.36	14	235.28	2	31.04	16	266.32
	Palakkad	15	710.02	5	122.75	9	261.17	14	383.92
	Kozhikode	42	883.61	21	193.52	17	233.06	38	426.58
	Thodupuzha	8	152.20	1	12.00	6	111.63	7	123.63
	Total	175	6553.32	75	1491.53	56	1976.65	131	3468.18
Grand Total		367	12097.39	147	2803.87	138	5047.69	285	7851.56

Particulars		Effective Sanction		Disbursement					
				SSI		Others		Total	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.43

Industry-wise Classification of Loan sanctioned and Disbursed by the Kerala Financial Corporation as on 31-3-2006

(Rs. Lakh)

Sl.No	Type of Industry	Amount Sanctioned	% of total loans sanctioned	Amount disbursed	% of total loan Disbursed
1	2	3	4	5	6
1	Mining	9374.00	3.31	8041.00	3.55
2	Crude Petroleum	264.00	0.09	120.00	0.05
3	Petroleum Refining	13.00	0.00	11.00	0.00
4	Other Food Products	22285.00	7.87	20759.00	9.17
5	Textiles	9404.00	3.32	5303.00	2.34
6	Paper & Paper Products	6156.00	2.17	5217.00	2.30
7	Leather & Leather Products	566.00	0.20	544.00	0.24
8	Rubber Products	19319.00	6.82	15677.00	6.92
9	Chemical & Chemical Products	7043.00	2.49	5804.00	2.56
10	Cement	110.00	0.04	84.00	0.04
11	Basic Metals				
	a) Iron & Steel	4840.00	1.71	2466.00	1.09
	b) Non Ferrous	773.00	0.27	604.00	0.27
12	Metal Products	6111.00	2.16	4022.00	1.78
13	Capital Goods				
	a) Non-Electrical Machinery	2002.00	0.71	1755.00	0.78
	b) Electrical Machinery	2505.00	0.88	2064.00	0.91
	c) Transport Equipment	1575.00	0.56	1039.00	0.46
14	Electricity Generation	114.00	0.04	35.00	0.02
15	Services				
	a) Motels & Shopping Complex	67417.00	23.81	52063.00	22.99
	b) Hospitals	12676.00	4.48	9426.00	4.16
	c) Others	44410.00	15.69	43559.00	19.24
16	Others	66168.00	23.37	47857.00	21.13
	Total	283125.00	100.00	226450.00	100.00

Source : Kerala Financial Corporation, Tvpm.

Appendix 8.44

Progress of the Working of Kerala Financial Corporation at a Glance (Rs.lakh)

Year	Loans sanctioned cumulatively*	Loans disbursed cumulatively*	Loans - outstanding	Profit before taxation*	Profit after taxation*
1	2	3	4	5	6
1995-96	1013 85	73745	50919	472	188
1996-97	1 2 1221	92606	61549	594	211
1997-98	146212	112550	73731	472	225
1998-99	166243	131663	82850	469	243
1999-00	182448	146635	91020	(-)869	(-)1069
2000-01	211694	169324	104730	(-)1990	2438
2001-02	227734	186918	120306*	(-)2860	(-)2883
2002-03	243283	198149	113736	(-)604	(-)630
2003-04	260077	210051	113071	391	181
2004-05	271028	218599	106761*	(-)236	(-)249
2005-06	283125	226450	106279	51	(-)194

Source : Kerala Financial Co.

* Revised

Appendix 8.45

Selected Indicators of the Activities of SIDCO

Sl. No.	Activities	Unit	2004-05	2005-06
1	2	3	4	5
1	Raw Material Distribution			
1.1	SSI units assisted for procurement of raw materials	Nos	250	132
1.2	Quantity of Raw Materials Distributed			
a	Iron and Steel including pig iron	M.T	15328.62	7379.839
b	Cement	M.T	1319.200	535.3
c	Coal	M.T		
d	Paraffin wax	M.T	633.576	298.1
e	Titanium Dioxide	M.T	13.650	23.375
f	Others			
	i) Pipe	Mtrs	996.000	303.58
	ii) IPCL	M.T	499.716	446.67
	iii) Aluminium sheet	M.T	24.000	
	iv) IOC products			
a	Lubricants	Litre	29013.000	16281
b	Bitumen	M.T	6512.742	3663.552
2	Over dues			
a	No. of Units	Nos.	...	...
b	Amount of over dues	Rs. Lakhs	...	162.3
3	Marketing of SSI products			
3.1	SSI Units assisted in marketing of products	Nos	80	108
3.2	Value of SSI products marketed through SIDCO			
a	Domestic	Rs. Lakhs	1611	1919
b	Export	Rs. Lakhs		
c	Total	Rs. Lakhs	1611	1919
4	Industrial Estates & Infrastrucutre Development			
4.1	Major Estates			
a	Major Estates	Nos	17	17
b	Sheds available	Nos	527	527
c	Shed occupied	Nos	474	474
d	SSI Units	Nos	694	694
	i) Working	Nos	573	573
	ii) Defunct, Idle or closed	Nos	121	121

Source: SIDCO, Thiruvananthapuram

Appendix 8.46

Small Industries Service Institute (SISI) - Achievement during 2005-06

Sl.No	Name of Activity	Unit	Achievement
1	2	3	4
1	Units visited for providing technical assistance	Nos	599
2	Visitors rendered assistance at SISI premises		4026
	a. Assistance to prospective entrepreneurs	Nos	3445
	b. Assistance to existing entrepreneurs	Nos	581
3	Preparation of State profile	Nos	1
4	Preparation of Industrial Potential Survey Report for Kerala	No. of Districts	4
5	Project Profiles	Nos	35
6	Ancillary Development Programmes	Nos	Nil
7	Motivation campaigns	Nos	25
8	EDPs - 4/6 weeks duration		
	i Courses undertaken	Nos	24
	ii Persons trained	Nos	611
9	Management Development Programmes		
	i Courses undertaken	Nos	18
	ii Persons trained	Nos	411
10	Common Facility Workshop/Lab performance		
	i Training (including skill development programme)	Nos	2
	ii Persons trained	Nos	411
11	Export Packaging Training		
	a Courses undertaken	Nos	2
	b Persons trained	Nos	56
12	PMRY Beneficiaries Training		
	a Courses undertaken	Nos	Nil
	b Persons trained	Nos	Nil

Source : Small Industries Service Institute, Trissur.

Appendix 8.47**Small Industries Development Bank of India's Assistance to Small Scale Industries***(Rs. Crore)*

year	Sanction and Disbursement				Performance of Kerala as % of All India	
	All India		Kerala		Sanction	Disbursement
	Sanction	Disbursement	Sanction	Disbursement		
1	2	3	4	5	6	7
2000-2001	10821	6441	556	389	5.14	6.04
2001-2002	9026	5919	535	396	5.93	6.69
2002-2003	10904	6789	614	214	5.63	3.15
2003-2004	8246	4414	162	133	1.96	3.00
2004-2005	9091	6188	221	142	2.43	2.29
2005-2006	11975	9100	522	479	4.36	5.26

Source : SIDBI, Ernakulam.

Appendix 8.48
DA/DP under DIC as on 9/2006

District	Name of DA/DP	Total area acquired (acres)	Allotable area (acres)	Area allotted (acres)	No. of working units	No. of closed units	Total no. of units
2	3	4	5	6	7	8	9
Thiruvananthapuram	DA, Veli	109.630	89.280	89.280	94	15	109
	DA, Manvila	27.530	22.690	22.690	49	8	57
Kollam	DP, Mundakkal	20.660	18.080	18.080	43	10	53
Alappuzha	Coir Park-I, Cherthala	23.400	21.200	21.100	10	2	12
	DA, Kollakkadavu	16.220	15.470	15.470	34	6	40
	DP, Chengannur	5.510	4.280	4.280	19	4	23
	DA, Punnappra	57.280	53.000	53.000	51	2	53
	DA, Coir Park-II, Cherthala	17.060	16.540	16.540	3	0	3
	CTC, Aroor	15.800	12.330	12.330	18	1	19
	DA, Aroor	47.170	41.780	41.780	46	2	48
Kottayam	DA, Poovanthuruth	41.250	37.400	37.400	173	39	212
	DP, Athirampuzha	1.000	0.860	0.860	10	0	10
	DP, Vaikom	3.750	3.250	3.250	11	3	14
Pathanamthitta	DP, Kunnamthanam	20.940	15.620	15.500	6	0	6
Idukki	DA, Muttom	5.000	4.580	4.580	10	3	13
	DP, Thudanganad	17.500	17.500	2.500	0	0	0
Ernakulam	DA, Aluva	64.410	59.150	59.150	72	12	84
	DA, Edayar	435.240	376.700	376.700	263	55	318
	DA, Angamaly	219.520	214.520	214.520	30	14	44
	DA, Vazhakkulam	15.260	12.160	12.160	26	17	43
	DP, Angamaly	31.910	26.620	26.620	51	9	60
	DP, Kalamassery	78.120	64.740	64.740	153	25	178
Thrissur	DP, Athani	48.286	43.286	43.280	71	13	84
	DP, Kunnamkulam	3.035	2.100	2.100	19	4	23
	DP, Puzhakkalpadam	51.000	46.410	40.000	...	...	...
	DP, Ayyankunnu	24.070	20.870	20.870	...	...	...
	DP, Valakkod	24.060	21.930	5.000	...	...	...
Palakkad	DP, Pudussery	134.150	125.990	125.990	42	16	58
	DA, Kanjikod	532.800	513.440	512.660	264	24	288
	DA, Umminikulam	90.960	40.000	3.000	0	0	0
	DA, Kappoor	18.260	17.000	2.610	0	0	0
	Kanalpirivu	34.000	...	34.000	...	...	...
	Land of instrumentation	144.000	...	144.000	...	...	...
Malappuram	FIE, Payyanadu	16.190	6.600	6.590	16	0	16
Kozhikkode	DP, West Hill	12.630	10.330	10.330	31	3	34
	DP, Raroth	20.430	18.430	...	...	...	...
Kannur	DP, Andoor-I	59.310	46.610	39.430	131	26	157
Kasragod	DA, Ananthapuram	108.000	103.890	22.200	1	4	5
	DP, Ananthapuram	104.500	97.690	66.320	2	11	13
	DP, Chattanchal	28.500	25.660	25.020	6	0	6
Total		2728.341	2267.986	2215.930	1755	328	2083

Source : DIC, Tvpm

Appendix 8.49
Mini Industrial Estates under DIC as on 9/2006

Sl. No.	District	No. of Industrial Estates	Total No. of SSI units	No. of working units	No. of employees	No. of sheds allotted to working units	Total No. of sheds
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	6	65	45	190	60	60
2	Kollam	5	50	39	208	48	50
3	Pathanamthitta	2	22	8	31	20	20
4	Alappuzha	6	65	55	150	60	60
5	Kottayam	10	42	97	524	100	100
6	Idukki	4	107	25	106	40	40
7	Ernakulam	17	112	119	666	148	170
8	Thrissur	7	154	79	410	93	93
9	Palakkad	6	61	40	152	55	60
10	Malappuram	4	43	38	142	42	42
11	Kozhikode	8	85	53	308	80	80
12	Kannur	4	46	27	82	35	36
13	Kasaragod	5	57	31	94	47	47
	Total	84	909	656	3063	828	858

Source: Directorate of Industries and Commerce, Tvpm.

Appendix 8.50
Major Industrial Estates under SIDCO as on 9/2006

District	Name of Industrial Estate	Total area acquired (Acres)	Allotable area (acres)	Total area allotted (acres)	No.of working Units	No.of employees in working units	No. of closed units	Total No. of units	No. of sheds allotted to working units	Total No. of sheds
1	2	3	4	5	6	7	8	9	10	11
Thiruvananthapuram	Pappanamcode	18.5327	18.5327	18.3027	65	186	9	74	40	43
Kollam	Umayanallur	26.0400	26.0400	24.0400	57	192	12	69	38	43
	Karunagappally	8.6300	8.6300	5.9400	10	64	3	13	16	19
Alappuzha	Kollakadavu	19.1535	19.1535	16.5435	14	30	5	19	38	38
	Cherthala	8.9400	8.9400	8.1400	12	84	3	15	15	19
Kottayam	Changanacherry	14.2245	14.2245	14.1545	57	142	9	66	28	31
	Ettumanoor	30.3100	30.3100	29.9700	67	325	5	72	57	57
Ernakulam	Palluruthy	1.8600	1.8600	1.8600	5	28	3	8	7	7
	Mudickal	4.6215	4.6215	4.6215	11		1	12	21	21
Trissur	Ollur	29.5625	29.5625	29.0625	76	175	23	99	6	48
	Kallettumkara	5.0000	5.0000	4.9000	11	270	5	16	19	19
Palakkad	Karakkad	10.9600	10.9600	10.1600	35	260	8	43	21	22
	Olavakkod	21.9300	21.9300	18.5900	22	236	1	23	20	49
Malappuram	Manjeri	4.9900	4.9900	4.9900	16	108	4	20	19	19
Kozhikkode	West hill	12.4400	12.4400	12.4400	53	350	7	60	41	42
Kannur	Palayad	8.4200	8.4200	8.2200	17	55	15	32	11	11
Kasaragod	Kasaragod	15.8400	15.8400	15.5400	45	215	8	53	39	39
	Total	241.4547	241.4547	227.4747	573	2720	121	694	436	527

Source: SIDCO, Tvpm

Appendix 8.51
Mini Industrial Estates under SIDCO as on 9/2006

Sl. No	District	Name of Industrial Estate	Total area of IE (Acres)	Total area allotted (Cents)	No. of working Units	No. of employees in working units	No. of closed units	Total No. of units	No. of sheds allotted to working units	Total No. of sheds
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	Ulloor	1.00	95.00	4	24	7	11	4	13
2		Vellanad	1.00	90.00	2	18	7	9	4	12
3		Anad	1.00	90.00	3	18	5	8	6	12
4		Varkala	1.00	85.00	3	15	3	6	9	12
5	Kollam	Chadayamangalam	1.00	95.00	5	55	1	6	11	12
6		Thrikovilvattom	1.00	90.00	6	24	1	7	10	12
7		Chithara	1.00	95.00	3	28	1	4	5	12
8	Pathanamthitta	Pandalam	1.00	80.00	2	6	5	7	10	12
9	Alappuzha	Mararikulam	1.00	95.00	6	24	3	9	10	12
10		Kadakarapally	1.00	90.00	10	24	2	12	10	12
11	Kottayam	Nattakam	1.00	95.00	9	25		9	11	11
12		Pampady	1.00	95.00	3	25	3	6	10	12
13		Ayarkunnam	1.00	80.00	8	30	1	9	11	12
14	Idukki	Adimali	1.00	90.00	3	27	2	5	10	12
15		Kodikulam	1.00	90.00	2	3	2	4	10	12
16		Olamattom	1.00	90.00	6	13	1	7	10	12
17	Ernakulam	Rayamangalam	1.00	90.00	6	21	1	7	9	11
18		Kothamangalam	1.00	90.00	7	20	2	9	10	12
19		Piravom	1.00	90.00	7	24	2	9	10	12
20		Vazhakulam	1.00	90.00	5	24	5	10	11	12
21		Edathala	1.00	90.00	4	32	4	8	9	10
22	Thrissur	Mala	1.00	95.00	5	13	5	10	11	12
23		Kattoor	1.00	95.00	2	32	8	10	11	12
24		Arimbur	1.00	100.00	7	8	4	11		12
25	Palakkad	Ottappalam	1.00	100.00	9	18	1	10	10	12
26		Vaniyamkulam	1.00	100.00	11	24	1	12	10	12
27		Pattambi	1.00	100.00	9	10	1	10	4	12
28	Malappuram	Oorakam	1.00	100.00	7	16	2	9	10	12
29		Kokkur	1.00	95.00	6	12	3	9	10	12
30		Edavanna	1.00	89.00	3	10	8	11	10	12
31	Kozhikode	Perambra	1.00	80.00	6	12	5	11	10	12
32		Kadalundi	1.00	69.00	9	18	2	11	9	12
33	Kannur	Thaliparamba		90.00	7	14	2	9	10	12
34		Valapattonam		95.00	5		3	8	11	12
35	Kasaragod	Kanhangad		90.00	6	10	6	12	10	12
36	Wayanad	Sulthan Bathery		95.00	7	20	1	8	11	12
Total			32.00	3288.00	203	697	110	313	327	429

Source: SIDCO, Thiruvananthapuram

Appendix 8.52

Total Area Covered by Mining Leases

Sl. No.	Minerals	Area in Hectares
1	Clay	22.0815
2	Silica Sand	36.7075
3	Bauxite	0.7237
4	Limeshell	9.8000
5	Limestone	....
6	Mineral Sand	....
7	Quartz	2.511
	Total	71.8237

Source : Directorate of Mining & Geology

Appendix 8.53
Production and Sale of Major Minerals other than Mineral Sand in Kerala
during 2005-06

(In Tonnes)

Sl. No.	Mineral	Production		Sales	
		Raw	Processed	Raw	Processed
1	2	3	4	5	6
1	China Clay	455137	11700		287739
2	Silica Sand	128054		90062	
3	Bauxite	30150		30150	
4	Limeshell	74098		59103	14995
5	Limestone	625341		625341	
6	Quartz	1600		1600	

Source : Directorate of Mining & Geology

Appendix 8.54
Production and Sale of Mineral Sand in Kerala -
2005-06

Sl. No.	Mineral	Production (Tonnes)	Sales (Tonnes)
1	2	3	4
1	Zircon	9300	9300
2	Rutile	7502	7502
3	Ilmenite	127003	127003
4	Sillimanite	9200	9200

Source : Directorate of Mining & Geology

Appendix 9.1
Growth of Foreign Tourist Arrivals in India and Kerala (2001-05)

Year	India (Nos.)	Percentage change	Kerala (Nos)	Percentage change	Kerala's share (%) in country's tourism
1	2	3	4	5	6
2001	2537282	-3.31	208830	-0.53	8.23
2002	2384364	-6.03	232564	11.37	9.75
2003	2726214	14.34	294621	26.68	10.81
2004	3457477	26.82	345546	17.28	9.99
2005	3915324	13.24	346499	0.28	8.85

Source: Department of Tourism

Appendix 9.2
Flow of Domestic Tourist to Kerala (2001 –2005)

Year	Number of Tourists	Percentage Variation over the previous year
1	2	3
2001	5239692	4.52
2002	5568256	6.27
2003	5871228	5.44
2004	5972182	1.72
2005	5946423	-0.43

Source : Department of Tourism

Appendix 9.3
District wise Foreign and Domestic Tourist Arrivals during 2004& 2005

District	No. Foreign Tourists		No. of Domestic Tourists	
	2004	2005	2004	2005
1	2	3	4	5
Thiruvananthapuram	103558	119940	855787	837211
Kollam	8242	6813	100729	98227
Pathanamthitta	330	349	64640	59328
Alappuzha	38024	30274	185906	173626
Kottayam	23517	20017	163084	164909
Ernakulam	109344	108773	1043479	1025944
Idukki	46031	39378	482283	473772
Thrissur	2658	2421	1378118	1327856
Plakkad	947	801	256015	266837
Malappuram	3129	5115	297203	306431
Wayanad	749	942	187701	191184
Kozhikode	4702	8420	498931	553363
Kannur	2516	2090	323645	333855
Kasaragod	1799	1166	134661	133880
Total	345546	346499	5972182	5946423

Source: Department of Tourism

Appendix 9.4
Earnings from Tourism (2001-05)

(Rs. crore)

Year	Foreign Exchange Earnings	Earnings From Domestic Tourists	Total Revenue Generated from Tourism (Direct & Indirect)
2001	535.00	2561.16	4500.00
2002	705.67	3011.31	4931.00
2003	983.37	3492.68	5938.00
2004	1266.77	3881.92	6892.00
2005	1552.31	4281.42	7738.00

Source: Department of Tourism

Appendix 9.5
Details of Availability of Accommodation Facility in classified Hotels 2004 and 2005

Category of Hotels	2004		2005	
	Number of hotels	Number of Rooms	Number of hotels	Number of Rooms
1	2	3	4	5
5 Star Deluxe	2	252	2	242
5 Star	7	469	8	557
4 Star	15	862	14	832
3 Star	61	2059	98	3033
2 Star	78	2241	91	2600
1 Star	31	852	26	652
Heritage Resort	10	276	8	250
Total	204	7011	247	8166

Source: Department of Tourism

Appendix 9.6
State Plan allocation for Tourism (2002-2007)

Year	Allocation (Rs. crores)
2002-03	64.30
2003-04	61.35
2004-05	69.29
2005-06	88.02
2006-07	81.57

Source: Department of Tourism

Appendix 9.7
Central Financial Assistance for Tourism (2002-2006)

Year	Allocation (Rs. crore)
2002-03	9.11
2003-04	12.39
2004-05	21.99
2005-06	48.09

Source: Department of Tourism

Appendix 10.1

Growth of Transport & Communications in Kerala since 1999 compared to 1975

Sl. No.	Item	Unit	1975	1999	2000	2001	2002	2003	2004	2005	2006
1	2	3	4	5	6	7	8	9	10	11	12
1	Road Length (PWD)	Kms.	14870	21938	21731	21508	21347	21467	21467	26269	28203
2	Road Length (PWD) per sq.km.	"	0.38	0.56	0.56	0.55	55	56	0.56	0.68	0.72
3	Road Length (Panchayats)	"	54812	77356	81790	87094	92084	95516	98973	104257	108451
4	Motor Vechicles	Nos.	119720	1708938	1910237	2111885	2315372	2552171	2792094	3122082	3559504
5	Motor Vechicles per 100 sq.km.	"	308	4397	4945	5434	5958	6567	7184	8033	9159
6	Buses & Stage Carriages	"	7828	48884	58888	65681	71966	79713	87447	94486	127574
7	Good Vechicles	"	15875	151082	163443	173856	184176	195363	211798	234191	264262
8	Buse owned by KSRTC	"	2212	3928	4093	4562	4421	4302	4319	4642	4668
9	Railway route length	Kms.	896	1198	1119	1148	1148	1148	1148	1148	1148
10	Post Offices	Nos.	4024	5051	5070	5071	5073	5077	5083	5082	5074
11	Telephone Exchanges	"	286	850	924	988	1088	1179	1195	1218	1223
12	Total Equipped Capacity	"	70410	1704395	2203954	2584236	3153418	3653413	4070934	4319958	4700880
13	Public Call Offices	"	2352	23485	27388	36926	48321	59444	81917	104142	120570

Appendix 10.2
District - wise and category - wise Length of Roads Maintained by PWD (R & B)
as on 31.3.2006

(in Km)

SI.No	Nameof District	State Highway	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	181	2256	0	0	2437
2	Kollam	100	1677	0	0	1777
3	Alappuzha	170	1095	0	0	1265
4	Pathanamhitta	271	1605	0	0	1876
5	Kottayam	404	2426	0	0	2830
6	Idukki	964	1530	0	0	2494
7	Ernakulam	171	2484	0	0	2655
8	Thrissur	320	1458	0	0	1778
9	Palakkad	232	1495	0	0	1727
10	Malappuram	393	2031	0	0	2424
11	Kozhikode	275	1933	0	0	2208
12	Wayanad	177	793	0	0	970
13	Kannur	330	2013	0	0	2343
14	Kasaragode	149	1270	0	0	1419
	Total	4137	24066	0	0	28203

Source : PWD (R&B)

Appendix 10.3

**District-wise, Surface-wise & Category-wise length of roads maintained by Kerala PWD
as on 31-03-2006**

Sl. No.	District	State Highways				Major District Roads				Total Roads
		CC	BT	WBM	Others	CC	BT	WBM	Others	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	0.000	181.000	0.000	0.000	0.000	2212.782	12.978	30.240	2437.000
2	Kollam	0.000	100.000	0.000	0.000	0.000	1670.103	6.897	0.000	1777.000
3	Alappuzha	0.000	170.000	0.000	0.000	0.000	1019.922	39.785	35.293	1265.000
4	Pathanamthita	0.000	271.000	0.000	0.000	0.000	1555.837	29.650	19.513	1876.000
5	Kottayam	0.000	404.000	0.000	0.000	0.000	2322.893	25.640	77.467	2830.000
6	Idukki	0.000	944.000	0.000	20.000	0.000	1309.743	22.407	197.850	2494.000
7	Ernakulam	0.000	171.000	0.000	0.000	0.464	2314.176	60.715	108.645	2655.000
8	Thrissur	3.391	316.609	0.000	0.000	0.000	1443.000	15.000	0.000	1778.000
9	Palakkad	0.000	216.250	1.250	14.500	0.000	1435.310	40.690	19.000	1727.000
10	Malappuram	0.000	393.000	0.000	0.000	0.000	1877.860	122.650	30.490	2424.000
11	Kozhikkode	0.000	275.000	0.000	0.000	0.000	1918.560	14.440	0.000	2208.000
12	Wayanad	0.000	175.000	2.000	0.000	0.000	749.218	23.600	20.182	970.000
13	Kannur	2.800	327.200	0.000	0.000	0.000	1968.481	4.386	40.133	2343.000
14	Kasaragode	0.000	149.000	0.000	0.000	0.000	1244.850	25.150	0.000	1419.000
	Total	6.191	4093.059	3.250	34.500	0.464	23042.735	443.988	578.813	28203.000

Source : PWD (R&B)

Appendix 10.4
Surface-wise and Category-wise Length of P.W.D. Roads added
during 2005-2006

(in Kms.)

Item	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6
Cement Concrete					
Length as on 31.3.2005	6.191	0.464	0.000	0.000	6.655
Length added in 05-06	0.000	0.000	0.000	0.000	0.000
Length as on 31.3.2006	6.191	0.464	0.000	0.000	6.655
Black topped					
Length as on 31.3.05	3577.671	21461.322	0.000	0.000	25038.993
Length added in 05-06	515.388	1581.413	0.000	0.000	2096.801
Length as on 31.3.2006	4093.059	23042.735	0.000	0.000	27135.794
Water Bound Macadam					
Length as on 31.3.2005	3.250	443.993	0.000	0.000	447.243
Length added in 05-06	0.000	-0.005	0.000	0.000	-0.005
Length as on 31.3.2005	3.250	443.988	0.000	0.000	447.238
Others					
Length as on 31.3.05	200.855	578.813	0.000	0.000	779.668
Length added in 05-06	-166.355	0.000	0.000	0.000	-166.355
Length as on 31.3.06	34.500	578.813	0.000	0.000	613.313
Total					
Length as on 31.3.05	3787.967	22484.592	0.000	0.000	26272.559
Length added in 05-06	349.033	1581.408	0.000	0.000	1930.441
Length as on 31.3.06	4137.000	24066.000	0.000	0.000	28203.000

Source: PWD (R&B)

Appendix 10.5
District-wise and Surface-wise Length of Roads Maintained by P.W.D.
as on 31.3.2006

(in Kms.)

Sl.No	Name of District	Cement Concrete	Black Topped	Water Bound Mecadam	Others	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	0.000	2393.782	12.978	30.240	2437.000
2	Kollam	0.000	1770.103	6.897	0.000	1777.000
3	Alappuzha	0.000	1189.922	39.785	35.293	1265.000
4	Pathanamthitta	0.000	1826.837	29.650	19.513	1876.000
5	Kottayam	0.000	2726.893	25.640	77.467	2830.000
6	Idukki	0.000	2253.743	22.407	217.850	2494.000
7	Ernakulam	0.464	2485.176	60.715	108.645	2655.000
8	Thrissur	3.391	1759.609	15.000	0.000	1778.000
9	Palakkad	0.000	1651.560	41.940	33.500	1727.000
10	Malappuram	0.000	2270.860	122.650	30.490	2424.000
11	Kozhikode	0.000	2193.560	14.440	0.000	2208.000
12	Wayanad	0.000	924.218	25.600	20.182	970.000
13	Kannur	2.800	2295.681	4.386	40.133	2343.000
14	Kasaragode	0.000	1393.850	25.150	0.000	1419.000
	Total	6.655	27135.794	447.238	613.313	28203.000

Source : PWD (R&B)

Appendix 10.6

No. of Bridges and Culverts in P.W.D. Roads as on 31.3.2006

Sl. No.	Item	SH	MDR	Total
1	2	3	4	5
1	Total Number of bridges	627	1552	2179
2	Number of unsafe bridges	60	88	148
3	Total Number of culverts	11512	39910	51422
4	Number of unsafe culverts	641	878	1519

Source: PWD (R&B)

Appendix 10.7

District-wise details of vehicles newly registered in the State during the year 2005-2006 (Provisional)

Sl. No.	District	Goods Vehicles		Buses		Cars and Station Wagons				Three wheelers		Two Wheelers		Tractors, Trailer Articulated	Tractors				Total
		Four wheelers & above	Three wheelers including Tempos	Stage carriages	Contract Carriages/ Omni Buses	Cars	Station wagons	Taxis	Jeeps	Auto rickshaws	Motorised Cycle rickshaws	Motorised cycles	Scooter/ Motor cycles		Tractors	Tillers	Trailers	Others	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Thiruvananthapuram	16010	7717	7710	12653	68321	0	13324	7167	33308	12	0	320980	0	224	108	140	2632	490306
2	Kollam	13266	4114	948	4996	47610	0	5891	4797	28545	9	1004	157878	0	346	227	331	476	270438
3	Pathanamthitta	7932	2999	909	3646	29829	0	8245	3425	13726	0	4	81559	0	164	37	175	91	152741
4	Alappuzha	8852	7871	1009	4755	33688	0	6706	544	15070	3	3	163258	0	262	108	254	156	242539
5	Kottayam	14727	4362	2298	9643	51063	0	11685	11072	29434	37		149426	0	496	101	59	75	284478
6	Idukki	3693	926	688	1644	7317	0	3328	5306	6918	0	0	23149	0	164	131	12	359	53635
7	Ernakulam	40346	9173	4210	15964	90966		12720	2120	39311	0	0	369819	0	864	1299	150	4195	591137
8	Thrissur	19331	8764	4051	14364	42647	0	12349	4415	31948	0	0	238365	0	763	451	611	382	378441
9	Palakkad	14787	3946	2081	5837	17383	0	7088	3674	19869	0	0	136293	0	4118	949	121	1578	217724
10	Malappuram	19873	9477	3778	8879	32992	0	17889	9704	50552	0	6	121097	0	891	714	88	407	276347
11	Kozhikode	16232	5219	3111	3964	40164	0	7457	7848	26338	0	0	181080	0	240	143	78	1565	293439
12	Wayanad	2802	859	432	1081	3962	0	2774	3874	6332	0	0	20596	0	106	255	83	1474	44630
13	Kannur	12577	4204	3156	4467	20781	0	8302	5930	25927	0	0	95911	0	1292	259	94	2161	185061
14	Kasargode	3804	1199	825	475	11749		1995	3282	15188	0	0	39224	0	48	402	68	329	78588
	Total	194232	70830	35206	92368	498472	0	119753	73158	342466	61	1017	2098635	0	9978	5184	2264	15880	3559504

Source: Motor Vehicle Department

Appendix 10.8
Number of Motor Vehicles Having Valid Registration as on 31.3.2006

Sl.No.	District	Goods Vehicles		Buses		Four Wheelers			Three Wheelers		Two Wheelers		Tractor Trailer Articulated	Tractors				Total	
		Four wheelers and above	Three wheelers including Tempos	Stage Carriages	Contract Carriages/ Omni Buses	Cars	Stat-ion wag- ons	Taxis	Jeeps	Autori- cksaws	Motorised Cycle rickshaws	Motorised cycles		Scooters/Moto r cycles	Tractors	Tillers	Trailors		Others
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Thiruvananthapuram	1105	1212	299	977	7956	0	725	4	1514	0	0	38395	0	9	0	1	63	52260
2	Kollam	930	943	60	551	4805	0	610	82	1215	0	0	22427	0	26	0	6	92	31747
3	Pathanamthitta	683	324	55	404	6085	0	535	28	623	0	0	10354	0	20	0	2	11	19124
4	Alappuzha	1195	885	38	458	3302	0	886	0	1072	0	0	21587	0	13	0	2	48	29486
5	Kottayam	1251	652	108	590	5935	0	558	125	1444	0	0	15273	0	34	0	2	38	26010
6	Idukki	447	271	59	139	1070	0	345	24	1015	0	0	3257	0	20	0	3	21	6671
7	Ernakulam	3184	1957	321	1162	10841	0	1721	916	2239	0	0	45313	0	84	0	2	210	67950
8	Thrissur	1200	1418	107	1045	4901	0	821	37	1814	0	0	29573	0	76	0	2	111	41105
9	Palakkad	2181	436	19	2658	2355	0	362	73	5892	0	0	24618	0	236	0	0	0	38830
10	Malappuram	1333	1212	102	450	3604	0	163	51	4421	0	0	19419	0	74	0	11	96	30936
11	Kozhikode	1295	1240	119	381	3525	0	617	56	1905	0	0	24948	0	6	0	1	14	34107
12	Wayanad	276	208	25	60	401	0	123	2	189	0	0	2223	0	8	0	33	20	3568
13	Kannur	1503	1025	142	410	3607	0	609	7	1533	0	0	12986	0	6	0	2	100	21930
14	Kasaragode	310	260	21	83	1658	0	205	0	824	0	0	5961	0	7	0	2	32	9363
	Total	16893	12043	1475	9368	60045	0	8280	1405	25700	0	0	276334	0	619	0	69	856	413087

Source : Motor Vehicle Department

Appendix 10.9

District-wise Growth of Motor Vehicles in Kerala and Their Index (Base 1990-91 =100)

Sl. No.	District	1990-91		2000-01		2001-02		2002-03		2003-04		2004-05		2005-06	
		Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index	Motor Vehicles (Nos)	Index
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvananthapuram	101980	100	293199	287	320061	314	350455	344	388763	381	433468	425	490306	481
2	Kollam	57694	100	152526	264	168907	293	189346	328	212249	368	239511	415	270438	469
3	Pathanamthitta	35555	100	96241	271	106070	298	117704	331	131254	369	146207	411	152741	430
4	Alappuzha	39545	100	125327	317	139551	353	157011	397	176296	446	201743	510	242539	613
5	Kottayam	39758	100	183614	462	196400	494	213004	536	230997	581	251133	632	284478	715
6	Idukki	12812	100	33477	261	36359	284	39721	310	43468	339	48044	375	53635	419
7	Ernakulam	105622	100	369168	350	405661	384	446959	423	464922	468	525204	497	591137	560
8	Thrissur	70831	100	220607	311	241560	341	266665	376	296763	419	333598	471	378441	534
9	Palakkad	37623	100	123526	328	134854	358	151979	404	165072	439	181608	482	217724	577
10	Malappuram	30671	100	157240	513	174504	569	192958	629	214127	698	239623	781	276347	901
11	Kozhikode	55939	100	172387	308	190809	341	207117	370	227125	406	252962	452	293439	525
12	Wayanad	8379	100	29737	355	31553	377	33550	400	36026	430	39047	466	44630	533
13	Kannur	36540	100	108022	296	118115	323	129680	355	142899	392	161150	441	185061	506
14	Kasaragode	14793	100	46814	316	50968	345	56022	379	62113	420	68784	465	78588	497
	Total	647742	100	2111885	326	2315372	357	2552171	394	2792074	436	3122082	482	3559504	550

Source : Motor Vehicle Department.

Appendix 10.10

Category-wise Growth of Motor Vehicles in Kerala since 1999 compared to 1990

Sl. No	Type of Vehicles	1990	2000	2001	2002	2003	2004	2005	2006
1	2	3	4	5	6	7	8	9	10
I	GOODS VEHICLES								
1	Four Wheelers and above	51530	135058	142168	146719	152802	161343	173110	194232
2	Three Wheelers including Tempos	9576	28385	31688	37457	42561	50455	61081	70030
II	BUSES								
1	Stage Carriages	15056	23537	25161	26899	29249	31889	33736	35206
2	Contract Carriages/ Omni buses	5234	35351	40520	45067	50464	55558	61750	92368
III	CARS AND STATION WAGONS								
1	Cars	116676	257796	282996	305887	336583	378955	428327	498472
2	Station Wagons	849	0	0	0		0	0	
3	Taxi Cars	37638	71581	75628	82236	88070	93458	100012	119753
4	Jeeps	24351	67497	69261	70212	70864	71656	72227	73158
IV	THREE WHEELERS								
1	Autorickshaws	58165	227895	248350	265767	285092	303092	320788	342466
2	Motorised Cycle rickshaws	62	58	58	163	63	63	63	61
V	TWO WHEELERS								
1	Motorised Cycle	70	1124	1124	1124	1124	1124	1124	1017
2	Scooter/ Motor Cycles	248374	1020797	1151735	1289035	1449283	1595937	1818760	2098635
VI	Tractor Trailer, Articulated	2661	0	0	0	0	0	0	0
VII	Tractors	4115	7782	8177	8459	8700	9002	9459	9978
VIII	Tillers	1927	4763	4763	4979	4980	4980	5037	5184
IX	Trailers	580	1506	1576	1771	1823	1913	2001	2264
X	Others	4190	27107	28680	29697	30513	32679	34607	15880
	Total	581054	1910237	2111885	2315372	2552171	2792074	3122082	3559504
	Per centage increase over the previous year	11.03	11.78	10.56	9.63	10.23	10.58	11.8	13.48

Source: Motor Vehicle Department

Appendix 10.11

District-wise Road Accidents in Kerala in which number of persons held during 2004-05, 2005-06

Sl. No.	Name of District	No.of Accidents		Increases/Decreases %	No.of Persons injured		Increases/Decreases %	No.of persons Killed		Increases/Decreases %
		2004	2005		2004	2005		2004	2005	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	5379	5418	0.73	6221	6137	-1.35	355	337	-5.07
2	Kollam	3314	3521	6.25	3981	4311	8.29	282	304	7.80
3	Pathanamthitta	1643	1641	-0.12	2059	1991	-3.30	120	138	15.00
4	Alappuzha	3194	3644	14.09	3719	4219	13.44	246	292	18.70
5	Kottayam	3005	3523	17.24	3568	3531	-1.04	192	230	19.79
6	Idukki	1111	1164	4.77	1302	1435	10.22	79	76	-3.80
7	Ernakulam	7687	7425	-3.41	8794	8222	-6.50	406	436	7.39
8	Trissur	4629	4595	-0.73	5788	5611	-3.06	324	352	8.64
9	Palakkad	2321	2454	5.73	3403	3243	-4.70	284	263	-7.39
10	Malappuram	2677	2631	-1.72	4112	3624	-11.87	270	279	3.33
11	Kozhikode	3334	3315	-0.57	3824	3771	-1.39	231	277	19.91
12	Wayanad	624	593	-4.97	1015	1018	0.30	50	43	-14.00
13	Kannur	1530	1641	7.25	2320	2893	24.70	144	118	-18.06
14	Kasaragod	772	800	3.63	1119	1121	0.18	76	58	-23.68
	Total	41220	42365	2.78	51225	51127	-0.19	3059	3203	4.70

Source : Director General of Police, Thiruvananthapuram

Appendix 10.12

Motor Vehicle Accidents in Kerala by Primary Causes of Accidents during 2005

Sl.No	Name of District	Fault of Driver of motor vehicles	Fault of driver other than motor vehicles	Fault of Cyclist	Fault of Pedestrian	Fault of passengers	Defect of Motor vehicles	Defect of road surface	Bad weather condition	Other causes	Causes not known	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	5407	0	0	0	0	10	0	1	0	0	5418
2	Kollam	3519	0	0	0	0	2	0	0	0	0	3521
3	Pathanamthitta	1638	0	0	0	0	3	0	0	0	0	1641
4	Alappuzha	3643	0	0	0	1	0	0	0	0	0	3644
5	Kottayam	3521	0	0	0	0	1	1	0	0	0	3523
6	Idukki	1161	0	0	0	0	2	1	0	0	0	1164
7	Ernakulam	7351	0	0	0	0	73	0	1	0	0	7425
8	Trissur	4595	0	0	0	0	0	0	0	0	0	4595
9	Palakkad	2454	0	0	0	0	0	0	0	0	0	2454
10	Malappuram	2631	0	0	0	0	0	0	0	0	0	2631
11	Kozhikode	3314	0	0	0	0	1	0	0	0	0	3315
12	Wayanad	593	0	0	0	0	0	0	0	0	0	593
13	Kannur	1632	0	0	0	0	3	2	4	0	0	1641
14	Kasaragod	800	0	0	0	0	0	0	0	0	0	800
	Total	42259	0	0	0	1	95	4	6	0	0	42365
	Percentage to Total	99.75	0.00	0.00	0.00	0.00	0.22	0.01	0.01	0.00	0.00	100.00

Source : Director General of Police, Thiruvananthapuram

Appendix 10.13

Type-wise details of Motor Vehicles Involved in Road Accidents in Kerala during 2005

Sl. No.	District	KSRTC Buses	Other Buses	Goods Vehicles	Motor Cars	Jeeps	Autorick shaws	Two wheelers	Miscellaneous vehicles	Class not known	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	407	205	620	935	128	840	3300	79	116	6630
2	Kollam	170	236	291	616	151	600	1513	211	26	3814
3	Pathanamthitta	70	162	209	280	112	301	726	26	32	1918
4	Alappuzha	166	190	297	747	32	592	1914	226	189	4353
5	Kottayam	123	366	451	631	184	801	1881	47	139	4623
6	Idukki	39	131	54	129	227	330	320	69	12	1311
7	Ernakulam	206	772	681	1474	185	1117	4830	559	368	10192
8	Trissur	107	574	745	921	97	917	2650	20	95	6126
9	Palakkad	49	370	497	296	181	529	1333	44	22	3321
10	Malappuram	38	393	345	371	196	662	948	148	24	3125
11	Kozhikode	40	583	367	413	257	528	1102	31	49	3370
12	Wayanad	29	74	44	78	99	130	242	33	4	733
13	Kannur	36	298	240	218	132	355	501	26	18	1824
14	Kasaragod	33	93	119	136	58	241	309	17	9	1015
	Total	1513	4447	4960	7245	2039	7943	21569	1536	1103	52355
	Percentage to Total	2.89	8.49	9.47	13.84	3.89	15.17	41.20	2.93	2.11	100

Source : Director General of Police, Thiruvananthapuram

Appendix 10.14
Motor Vehicle Accidents by time of day during 2005

Sl.No	District	Day light	Darkness	Time not known	Total
1	2	3	4	5	6
1	Thiruvananthapuram	3495	1923	-	5418
2	Kollam	2386	1135	-	3521
3	Pathanamthitta	1177	464	-	1641
4	Alappuzha	2393	1251	-	3644
5	Kottayam	2368	1155	-	3523
6	Idukki	767	397	-	1164
7	Ernakulam	5062	2363	-	7425
8	Thrissur	3188	1407	-	4595
9	Palakkad	1765	689	-	2454
10	Malappuram	1935	696	-	2631
11	Kozhikode	2168	1147	-	3315
12	Wayanad	385	208	-	593
13	Kannur	1149	492	-	1641
14	Kasaragod	572	228	-	800
	Total	28810	13555	-	42365
	Percentage to Total	68	32	-	100.00

Source : Director General of Police, Thiruvananthapuram

Appendix 10.15
Agewise Details of Vehicles Owned by KSRTC as on
31.03.2006& 31.08.2006

Sl.No	Age	31.03.2006	31.08.2006
1	2	3	4
1	10 Years and above	1019	1054
2	Above 7 years and below 10 years	1166	1148
3	Above 5 years and below 7 years	1010	999
4	Below 5 years	1382	1467
	Total	4577	4668

Source : KSRTC

Appendix 10.16
Major indicators showing operational efficiency of KSRTC

Sl. No	Items	Year		Increase/Decrease
		2004-05	2005-06	
1	2	3	4	5
1	Fleet Strength (Nos)	4642	4668	(+)0.56
2	Gross revenue earnings (Rs. In crores)	734.01	829.08	(+)12.95
3	Gross revenue expenditure (Rs. In crores)	918.12*	981.25*	(+)6.88
4	Gross operating loss (Rs. In crores)	144.72*	152.16*	(+)5.14
5	No. of schedules operated as on 31st March 2006	3814	3746	(-)1.78
6	Average earnings per vehicle on road per day (Rs)	5636	6033	(+) 7.04
7	Average earnings per km. of buses operated (paise)	1707	1853	(+) 8.55
8	Average earnings per Passenger (Paise)	627	770	(+) 22.81
9	Average route length (Kms)	49.08	49.07	(-) 0.02
10	Average kms. Run per bus per day	331	326	(-)1.51
11	Average number of buses held daily (Nos.)	4496	4711	(+) 4.78
12	Passengers carried (Lakhs)	11846.82	12022.47	(+)1.48

* Provisional Figures

Appendix 10.17

KSRTC Operational Statistics during 2005 - 06

Sl.No	Unit	No.of buses held as on 31.03.06	No.of schedules 31.03.06	No.of routes as on 31.03.06	Route distance (Kms)	Gross Kms. Operated	Effective Kms. Operated	Passengers Carried	Average carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
1	Parassala	78	74	105	5626	82.64	72.33	106.94	60
2	Neyyattinkara+Vellarada	152	147	246	8130	164.62	126.56	407.63	60
3	Poovar	79	72	66	2400	78.59	65.82	196.34	60
4	Vizhinjam	86	82	40	1624	85.94	65.74	196	60
5	Kattakkada	86	89	85	2850	90.73	73.36	237.6	60
6	Thiruvananthapuram City	123	120	225	2478	93.02	70.46	370.84	60
7	Pappanamcode	141	129	205	2352	101.85	81.18	401.39	60
8	Thiruvananthapuram Central	111	71	40	12216	180.31	169.03	200.12	60
9	Vikas Bhavan	86	79	126	2791	6786	53.49	260.98	60
10	Peroorkada	87	88	171	2838	69	54.98	323.71	60
11	Nedumangad+PLD+ARD+VTR	172	162	320	10651	174.08	133.24	379.57	60
12	Vellanad	54	55	70	1772	48.52	36.44	149.78	60
13	Kaniyapuram	62	60	39	1694	62.4	48.65	150.34	60
14	Venjaramoodu	40	37	97	7562	38.54	28.89	82.94	60
15	Chathannur	41	40	125	4776	47.05	39.79	130.74	60
16	Attingal	83	85	72	1557	94.03	77.67	237.45	60
17	Kilimanoor+ PPM+CDLM	151	139	220	7429	151.06	116.45	450.83	60
18	Kollam	94	97	123	7162	117.85	104.95	375.3	60
19	Kottarakkara	123	120	133	8320	136.29	110.76	283.84	60
20	Punaloor+ Kulathupuzha	85	72	230	6672	82.54	66.69	276.36	60
21	Karunagapally	77	70	142	2603	77.63	69.2	233.34	60
22	Edathuva+ Mallappally	42	38	22	1440	44.92	31.79	45.92	60
23	Pathanamthitta	69	61	77	5150	76.82	68.43	165.19	60
24	Adoor+ Pandalam	65	62	78	4849	71.9	54.99	198.82	60
25	Thiruvalla	46	42	70	3278	48.04	39.22	101.14	60
26	Kayamkulam	69	64	111	4954	79.5	71.06	216.78	60
27	Harippad	37	37	68	3134	43.7	37.84	103.28	60
28	Mavelikkara	43	38	26	1323	51.2	42.7	129.38	60
29	Alappuzha	95	97	69	3368	116.63	96.02	250.99	60
30	Cherthala	102	99	30	1579	113.6	97.9	266.73	60
31	Chengannur	56	58	30	1768	67.25	56.5	219.75	60
32	Changanassery	54	52	23	1778	62.75	45.74	161.81	60
33	Kottayam	104	106	59	5567	138.2	113.64	303.45	60
34	Ponkunnam+ Erumely	43	40	77	3233	52.01	43.3	85.69	60

Sl.No	Unit	No.of buses held as on 31.03.06	No.of schedules 31.03.06	No.of routes as on 31.03.06	Route distance (Kms)	Gross Kms. Operated	Effective Kms. Operated	Passengers Carried	Average carrying Capacity per Bus
1	2	3	4	5	6	7	8	9	10
<i>Contd.....</i>									
35	Pala	78	68	58	3966	94.21	77.96	184.05	60
36	Erattupetta	51	49	22	2878	61.37	48.03	124.03	60
37	Vaikom	43	37	14	1254	48.6	41.88	94.36	60
38	Muvattupuzha	63	60	49	2280	68.36	55.57	155.82	60
39	Thodupuzha+Moolamattom	74	64	45	3934	82.75	67.73	145.02	60
40	Kothamangalam+Munnar	56	48	44	4065	64.35	57.32	82.94	60
41	Ernakulam	85	73	50	4564	114.65	99.19	213.74	60
42	Aluva	71	64	37	2768	7583	64.01	191.33	60
43	Ankamaly	39	37	40	1200	41.95	37.56	122.13	60
44	North Paravoor	63	63	90	3477	71.08	57.87	149.78	60
45	Perumbavoor	50	49	21	2297	5194	44.26	178.46	60
46	Chalakkudy	47	46	34	1245	54.74	47.28	109.15	60
47	Iringalakkuda	11	13	9	372	16.94	14.09	21.55	60
48	Mala+ Kodungallur	57	55	90	3296	64.09	56.23	108.56	60
49	Thrissur	90	84	40	3878	134.13	113.85	214.07	60
50	Puthukkad	13	11	21	776	13.87	13.15	48.45	60
51	Guruvayoor	41	39	22	4338	54.8	49.74	82.96	60
52	Ponnani	27	24	30	2326	35.61	29.47	66.9	60
53	Perinthalmanna	28	28	19	2120	46.95	36.4	51.96	60
54	Malappuram+Nilambur	56	53	65	2195	84.28	71.64	112.39	60
55	Palakkad+Vadakkanchery	99	89	47	4947	150.04	130.3	399.1	60
56	Chittor	24	23	14	2095	36.62	32.61	61.56	60
57	Mannarkkadu	16	13	18	4785	19.62	18.07	25.85	60
58	Thottipalam+ Vadakara	31	28	28	1720	33.85	28.13	53.69	60
59	Kozhikkode	90	72	46	3908	111.33	102.06	210.17	60
60	Thamarassery	48	43	45	2860	49.79	45.74	101.57	60
61	Kannur	112	92	53	6749	140.29	115.89	207.4	60
62	Payyannur	60	57	36	2551	75.89	60.09	159.47	60
63	Sulthan Bathery	64	60	28	3063	79.25	67.07	125.39	60
64	Kaseragode	98	89	48	3617	115.96	103.38	243	60
65	Mananthavady	65	53	42	2784	69.54	59.13	109.6	60
66	Kalpetta	43	37	39	2265	45.75	37.66	101.93	60
67	Kumily (wef 07.02.04)	35	34	43	2973	54.27	40.07	65.11	60
Total		4664	4337	4907	242470	24641.14	4388.24	11642.89	

Source : KSRTC

Appendix 10.18
Fare structure of KSRTC during 2006

Sl. No.	Type of service	Basic fare per KM (paise)	Minimum fare (paise)
1	2	3	4
1	City	48	300
2	Ordinary	48	300
3	City Fast Passenger	52	300
4	Fast Passenger	52	400
5	Super Fast	55	600
6	Express	60	1000
7	Super Express	60	1000
8	Super Delux Service	70	2000
9	A/C Air Bus	80	3000
10	High Tech (Volvo)	90	3000

Source: KSRTC

Appendix 10.19
KSRTC Operational Statistics during 2005-06

Sl.No	Unit	Average No.of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms)	Average earning per passengers (Ps)	Average distance travelled by a passenger (Kms)	Earning per Vehicle on road per day (in Rs)	Earning per km of buses operated (in Ps)
1	2	3	4	5	6	7	8	9	10
1	Parassala	80	336	73.95	53.58	1227	40.58	6092	18.14
2	Neyyattinkara+ Vellarada	155	308	70.79	33.05	395	14.05	5358	16.89
3	Poovar	80	302	74.61	36.36	607	20.11	5474	18.1
4	Vizhinjam	90	285	70.26	40.6	628	20.13	5338	18.72
5	Kattakkada	58	275	79.71	33.51	541	18.52	5030	17.52
6	Thiruvananthapuram City	127	205	74.17	11.01	398	11.4	4293	20.92
7	Pappanamcode	140	213	74.41	11.47	338	12.14	3565	16.7
8	Thiruvananthapuram Central	116	491	81.51	305.4	1772	50.68	10308	20.98
9	Vikasbhavan	86	222	76.68	22.15	412	12.3	4454	20.11
10	Peroorkada	90	208	80.6	16.6	329	10.29	4017	19.36
11	Nedumangad+ PLD+ARD+VTR	175	286	72.16	33.28	291	9.33	5263	18.72
12	Vellanadu	55	246	73.79	25.31	504	14.6	5090	20.72
13	Kaniyapuram	62	281	76.51	44.44	588	19.41	5108	18.18
14	Venjaramoodu	40	267	73.93	77.96	607	20.9	4651	17.44
15	Chathannur	42	319	81.61	38.21	563	18.26	5906	18.51
16	Attingal	86	313	79.43	21.61	652	19.62	6245	19.95
17	Kilimanoor+PPM+CDLM	147	262	73.29	33.77	204	6.59	5275	17.91
18	Kollam	98	337	86.79	58.23	566	16.78	68.08	20.23
19	Kottarakkara	121	314	79.72	62.56	722	23.41	5801	18.5
20	Punaloor+ Kulathupuzha	83	289	74.98	29.01	335	1074	5438	18.82
21	Karunagappally	75	293	85.83	18.33	571	17.79	5637	19.26
22	Edathuva+ Mallappally	42	298	69.85	65.45	681	20.69	5518	18.55
23	Pathanamthitta	68	348	78.87	66.88	773	24.85	6496	18.67
24	Adoor+ Pandalam	67	299	74.6	62.17	368	12.31	5377	18.15
25	Thiruvalla	47	299	77.04	46.83	744	23.27	5745	19.19
26	Kayamkulam	70	329	84.91	44.63	632	19.67	6333	19.27
27	Harippad	38	319	86.2	46.09	713	22.0	6216	19.47
28	Mavelikkara	43	358	76.37	50.88	580	19.74	6315	17.63
29	Alappuzha	99	318	83.47	48.81	732	29.95	6086	19.14
30	Cherthala	103	305	85.03	52.63	693	22.0	5771	18.89
31	Chengannur	56	296	93.14	58.93	480	15.43	5524	18.68
32	Changanassery	56	305	73.07	77.30	523	16.96	6648	18.51

Sl.No	Unit	Average No.of buses held daily	Average Kms. run per day per bus	Percentage vehicular utilisation	Average route length (Kms)	Average earning per passengers (Ps)	Average distance travelled by a passenger (Kms)	Earning per Vehicle on road per day (in Rs)	Earning per km of buses operated (in Ps)
1	2	3	4	5	6	7	8	9	10

Contd....

33	Kottayam	110	364	77.67	94.36	698	22.47	6778	18.65
34	Ponkunnam+ Erumely	44	349	77.63	41.99	560	19.71	6123	17.52
35	Pala	77	376	73.28	68.38	746	25.41	6630	17.62
36	Erattupetta	52	318	79.58	130.82	760	23.23	6248	19.62
37	Vaikkom	42	339	80.09	89.57	781	26.63	5960	17.59
38	Muvattupuzha	62	304	80.61	46.53	722	21.4	6157	20.24
39	Thodupuzha+ Moolamattom	73	350	74.25	87.42	687	21.53	6790	18.71
40	Kothamangalam+ Munnar	56	359	78.84	92.39	687	22.24	6913	18.83
41	Ernakulam	84	403	80.5	91.28	949	27.84	8237	20.46
42	Aluva	70	300	83.99	74.81	599	20.07	5368	17.91
43	Ankamali	39	302	86.98	30.00	539	18.45	5302	17.54
44	North Paravoor	65	305	80.36	38.63	652	23.18	5151	16.86
45	Perumbavoor	50	300	81.55	109.38	459	14.88	5548	18.49
46	Chalakkudy	49	316	83.85	36.62	832	25.99	6074	19.2
47	Irinjalakkuda	12	372	85.03	41.33	1182	39.25	6721	18.07
48	Mala+ Kodungallur	57	339	78.8	36.62	597	20.2	6049	17.64
49	Thrissur	92	435	78.02	96.95	972	31.91	7958	18.28
50	Puthukkad	13	322	88.81	36.95	498	16.29	5914	18.35
51	Guruvayoor	41	423	77.77	197.18	1063	36.0	7495	17.73
52	Ponnani	26	397	76.82	77.53	744	26.43	6704	16.88
53	Perinthalmanna	28	441	79.74	111.58	1274	42.0	8023	18.19
54	Malappuram+ Nilambur	57	440	79.19	33.77	966	31.42	7454	17.75
55	Palakkad+VDCY+Chittur	124	450	80.51	115.44	1469	24.38	7555	17.67
56	Mannarkkadu	16	411	77.05	265.83	1235	41.95	7263	17.66
57	Thottilppalam+ Vadakara	31	308	78.59	61.43	756	26.57	4840	16.66
58	Kozhikkode	92	385	79.21	84.96	913	29.14	7242	18.81
59	Thamarassery	47	315	85.17	63.56	776	27.02	5422	17.23
60	Kannur	114	361	77.21	127.34	942	33.53	6091	16.86
61	Payyannur	60	356	76.96	70.86	608	22.61	5749	16.14
62	Sulthan Bathery	66	329	85.1	109.39	968	32.09	5945	18.09
63	Kasaragod	99	344	83.2	75.35	704	25.53	5684	16.54
64	Mananthavady	64	349	72.51	66.29	1017	32.37	6588	18.86
65	Kalpetta	42	335	73.14	58.08	632	22.17	5734	17.11
66	Kumily	41	377	70.49	69.14	1136	36.93	6958	18.46

Source : KSRTC

Appendix 10.20
Category-wise Staff Position of KSRTC

Sl. No.	Category	As on 01.04.05	As on 01.04.06	As on 31.10.2006
1	2	3	4	5
1	Administrative staff	2721	2427	2375
2	Traffic Personnel	15946	17319	16605
3	Maintenance Personnel	3607	3398	3769
	Total	22274	23144	22749

Source : KSRTC

Appendix 10.21
Number of Ships called at Cochin Port during 2004-05 and 2005-06

Sl. No	Type of Vessel	No. of Ships		% variation Increase (+)	Net Registered Tonnage		% variation
		2004-05	2005-06		2004-05	2005-06	
1	2	3	4	5	6	7	8
1	Container	314	421	34.08	1750841	2326724	32.89
2	Break Bulk	117	109	-6.84	151359	308221	103.64
3	Dry Bulk	48	50	4.17	493425	495115	0.34
4	Liquid Bulk	342	383	11.99	5332334	5200593	-2.47
5	Passenger (Foreign)	20	26	30	192002	297961	55.19
6	Others	285	236	-17.2	256246	200985	-21.57
	Total	1126	1225	8.79	8176207	8829599	7.99

Source: Cochin Port Trust

Appendix 10.22
Commodity - wise cargo handled at the Intermediate and Minor ports of Kerala
during 2005-06.

(in tonnes)

Sl.No.	Name of Port	Commodity	Imports			Exports			Grand Total
			Coastal	Foreign	Total	Coastal	Foreign	Total	
1	2	3	4	5	6	7	8	9	10
1	Kasaragod		0	0	0	0	0	0	0
2	Azhikkal	Timber	0	0	0	39		39	39
3	Kannur		0	0	0	0	0	0	0
4	Thalassery		0	0	0	0	0	0	0
5	Vadakara		0	0	0	0	0	0	0
6	Beypore	Soda ash	20580	0	20580	0	0	0	20580
		Machinery	153	0	153	558	2137	2695	2848
		Palm Oil	0	36552	36552	0	0	0	36552
		Pig iron	912	0	912	0	0	0	912
		Wheat	10478	0	10478	1	0	1	10479
		Oil Cake	1705	0	1705	0	0	0	1705
		Salt	715	0	715	90	0	90	805
		Rice	1797	0	1797	6	0	6	1803
		Cattle feed	4356	0	4356	57	0	57	4413
		Mustard seeds	559	0	559	0	0	0	559
		Cement	0	0	0	7367	0	7367	7367
		POL	0	0	0	10813	0	10813	10813
		LPG	0	0	0	988	0	988	988
		Timber	5	0	5	3611	0	3611	3616
		Iron & Steel	0	0	0	830	0	830	830
		Miscellaneous	5037	765	5802	13690	1	13691	19493
7	Ponnani		0	0	0	0	0	0	0
8	Munambam		0	0	0	0	0	0	0
9	Alappuzha		0	0	0	0	0	0	0
10	Neendakara		0	0	0	0	0	0	0
11	Trivandrum		0	0	0	0	0	0	0
12	Vizhinjam	River Sand	210	0	210	0			210
		Miscellaneous					11015	11015	11015
Total			46507	37317	83824	38050	13153	51203	135027

Source : Directorate of Ports

Appendix 10.23

Number and Tonnage of steamers and sailing Vesels which called at the Intermediate and Minor Ports of Kerala during 2005-06.

Name of Port	Coastal / Foreign	Steamers		Sailing Vessles		Total No. of Vessels	Total Tonnage
		No.	Tonnage	No.	Tonnage		
1	2	3	4	5	6	7	8
Kasaragod	0	0	0	0	0	0	0
Azhikkal	0	0	0	1	894	1	894
Kannur	0	0	0	0	0	0	0
Thalassery	0	0	0	0	0	0	0
Vadakara	0	0	0	0	0	0	0
Kozhikode / Beypore	0	105	69093	221	42619	326	111712
Ponnani	0	0	0	0	0	0	0
Munambam	0	0	0	0	0	0	0
Alappuzha	0	0	0	0	0	0	0
Neendakara	0	0	0	0	0	0	0
Valiyathura	0	0	0	0	0	0	0
Kovalam / Vizhinjam	0	62	14692	36	4519	98	19211
Grand Total	0	167	83785	258	48032	425	131817

source: Directorate of Ports.

Appendix 10.24
Number of Harbour Crafts registered at the Intermediate and Minor Ports of Kerala during 2005-06

Name of Port	Cargo boats including Barges	Canoes including boats	Mechanised fishing vessels	Mechanised sailing vessels	Total
1	2	3	4	5	6
Kasaragod	0	269	92	0	361
Azhikkal	0	0	27	0	27
Kannur	0	0	13	0	13
Thalassery	0	33	0	0	33
Vadakara	0	0	0	0	0
Kozhikode / Beypore	0	0	81	1	82
Ponnani	1	7	4	0	12
Munambam	0	0	260	0	260
Alappuzha	0	0	4116	0	4116
Neendakara	0	0	202	0	202
Thiruvananthapuram	0	0	0	0	0
Vizhinjam	0	0	0	0	0
Total	1	309	4795	1	5106

Source: Directorate of Ports.

Appendix 10.25
Category - wise break up of Revenue Collected at the Intermediate and
Minor Ports of Kerala during 2005-06

(in Rupees)

Name of Port/ Office	Port Dues	Export & Import dues	Tug hire Charges	Pilotage fees	Registration and other fees	Miscellaneo us	Total
1	2	3	4	5	6	7	8
Kasaragod	0	0	0	0	103850	2286940	2390790
Azhikkal	2730	536	0	0	107857	4356543	4467666
Kannur	0	0	0	36000	76385	3905	116290
Thalassery	0	0	0	0	1980	1748084	1750064
Vadakara	0	0	0	0	0	0	0
Kozhikode/ Beypore	166639	1455460	780750	205185	726582	1896363	5230979
Ponnani	0	0	0	0	21950	24020	45970
Munambam	0	0	0	0	117294	960	118254
Alappuzha					566267	80960	647227
Neendakara	0	0	50000	0	83120	1219386	1352506
Thiruvananthapuram	0	0	0	0	0	150815	150815
Vizhinjam	56718	116510	0	0	0	864063	1037291
Directorate of Ports	0	0	0	0	0	5439322	5439322
Total	226087	1572506	830750	241185	1805285	18071361	22747174

Source : Directorate of Ports

Appendix 10.26

Operational Statistics of Inland Water Transport Agencies in Kerala

Particulars	State Water Transport Department		Kerala Shipping and Inland Navigation Corporation	
	2	3	4	5
	2004-05	2005-06	2004-05	2005-06
No. of boats/Jhankars	87	81	13	13
Boat in operation	50	49	11	4
No. of trips on Schedule	646	646	28197	13505
No. of passengers carried (in lakhs)	163.6	148.29	36	10.62
Gross Route Distance (in KM)	6775	6775	299525	149285
Volume of Cargo carried (000 tonnes)	Nil	Nil	879	743
Total Revenue Receipts (in lakhs)	448	483	1067.77	819.29
Total Revenue Expenditure (in lakhs)	1431	1479	1056.14	912.23
No. of Employees (Total)	963	1003	274	262
Profit/Loss (in lakhs)	983	996	11.63	92.63

Source: SWTD, KSINC

Appendix 10.27(A)

Details of flights operated by various agencies from Thiruvananthapuram International Airport

Sl.No.	Airlines	2004-05				2005-06			
		No. of Flights		No of Passengers		No. of Flights		No of Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	0	1828	0	195084	0	1720	0	183686
2	Indian Airlines	2582	1152	219476	109425	0	0	0	0
3	Gulf Air	0	728	0	149580	0	730	0	151074
4	Oman Air	0	752	0	91,186	0	746	0	99,862
5	Kuwait Airways	0	418	0	61,487	0	416	0	64,754
6	Sri Lankan Airways	0	818	0	112434	0	1210	0	169038
7	Qatar Airways	0	988	0	113816	0	730	0	120985
8	Jet Airways	730	0	68155	0	960	0	88492	0
9	Silk Air	0	348	0	30979	0	356	0	29138
10	My Travels	0	42	0	7920	0	40	0	7835
11	Emirates	0	0	0	0	0	130	0	19637
12	First Choice	0	0	0	0	0	22	0	4837
13	Pulkova Air	0	0	0	0	0	4	0	27
14	Non-Sch	0	0	0	0	6	2	0	0
15	Air Decan	0	0	0	0	236	0	10709	0
16	Indian	0	0	0	0	2499	1225	223324	129331
17	Air India Express	0	0	0	0		328		22443
	Total	3312	7074	287631	871911	3701	7659	322525	1002647

Source : Airport Authority of India, Thiruvananthapuram

Appendix 10.27 (B)
Details of flights operated by various agencies from Kozhikode Airport

SI.No.	Airlines	2004-05				2005-06			
		No.of Flights		Passengers		No.of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Indian Airlines	3399	1889	119554	206105	3079	2257	102735	216235
2	Air India	543	2265	10341	350629	569	3109	13292	444027
3	Jet Airways	730	0	60723	0	720	0	60788	0
4	Expo Cargo	0	66	0	0	0	136	0	0
5	Sreelankan Airways	0	390	0	40527	0	884	0	91742
6	Air Deccan					174	0	5220	0
7	Others (Defence/Casual etc)					265	66	0	0
	Total	4672	4610	190618	597261	4807	6452	182035	752004

Source: Airport Authority of India, Kozhikode.

Appendix 10.27 (C)
Details of flights operated by various agencies from Nedumbassery International Airport

Sl.No	Airlines	2004-05				2004-05			
		No.of Flights		Passengers		No.of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	0	3273	0	336183	0	2176	0	208724
2	Air India Express	2636		224930	0	0	1322	0	169809
3	Indian Airlines	0	604	0	61268	2108	3257	205167	106456
4	Oman Air	0	432	0	44208	0	710	0	81367
5	Silk Air	0	312	0	51993	0	548	0	51765
6	Kuwait Airways	0	650	0	134400	0	314	0	58954
7	Emirates Airlines	0	784	0	85702	0	588	0	145082
8	Qatar Airways	0		0		0	500	0	78707
8	Saudi Arabian Airways	0	314	0	69149	0	314	0	73154
9	Sri Lankan Airlines	0		0		0	1052	0	108134
9	Gulf Air	0	606	0	70319	0	540	0	65741
10	Jet Airways	4319	0	301648	0	4386	0	344595	0
11	Air Sahara	728	0	63476	0	728	0	74672	0
12	Mahan Air	0	0	0	0	0	102	0	6824
14	Non Scheduled Flights	0	0	0	0	427	21	0	0
15	Air Decasn	0	0	0	0	644	0	32290	0
16	King fisher Airlines	0	0	0	0	738	0	32290	0
17	Go Air	0	0	0	0	72	0	4287	0
18	Paramaount Airways	0	0	0	0	228	0	3521	0
	Total	7683	6975	590054	853222	9331	11444	696822	1154717

Source : Airport Authority of India, Kochi

Appendix 10.28

No. of Passports issued from the Passport Offices in Kerala from 2000-01 to 2005-06

Year	No. of applications Received				No. of Passports Issued			
	Thiruvananthapuram	Kochi	Kozhikode	Total	Thiruvananthapuram	Kochi	Kozhikode	Total
1	2	3	4	5	6	7	8	9
2000-01	84609	111974	147831	344414	76454	101356	141169	318979
2001-02	97952	134863	182604	415419	90969	130084	181880	402933
2002-03	100525	136971	168922	406418	96396	136766	164126	397288
2003-04	125517	133754	238543	497814	120907	126965	199680	447552
2004-05	119177	177598	228566	525341	126529	183627	250036	560192
2005-06	126914	189638	241248	557800	125455	185308	248539	559302

Source : Passport Offices, Thiruvananthapuram, Kochi and Kozhikode

Appendix 10.29
Growth of Post Offices in Kerala During the Last Seven Years

Year	HOs	DSOs	EDSOs	EDBOs	Total
1	2	3	4	5	6
2000	51	1462	528	3028	5069
2001	51	1461	528	3031	5071
2002	51	1462	527	3034	5074
2003	51	1463	527	3036	5077
2004	51	1464	526	3042	5083
2005	51	1464	508	3059	5082
2006	51	1451	470	3099	5071

Source: Chief Post Master General , Kerala Circle

Appendix 10.30

**Category - wise Offices in Postal and other Postal Services
in Kerala.**

Category of Office	As on 31st March	
	2005	2006
1	2	3
(a) Postal Services		
1. Head Post Offices	51	51
2. Sub Post Offices	1464	1451
ii) Extra Departmental Sub Post Offices	508	470
3. Branch Offices	3059	3099
Total (a)	5082	5071
(b) Speed Post Centres National		
National	9	9
State	35	16
Extension Counters	183	183
Total (b)	227	208
(c) Other Postal Services		
1. Head Record Office	3	3
ii) Sorting Mail Offices	29	28
iii) Sub Record Office	26	26
iv) Transist Mail Offices	12	12
v) R.M.S. Sections	19	19
vi) Press Sorting Office	2	2
vii) Parcel Sorting Office	3	2
viii) Pathrika Channel Office	5	5
ix) Mail Motor Service Division unit	1	1
x) Central Stamp Depot	1	1
xi)Postal Store Depot	3	3
Total (C)	104	102

Source : CPMG, Kerala Circle, Thiruvananthapuram.

Appendix 10.31
Division-wise and Category - wise Post Offices under Kerala Circle
as on 31.3.2006

Sl. No.	Name of Division	Head Offices	Sub Offices			
			SO	EDSO	EDBO	Total
1	2	3	4	5	6	7
1	Trivandrum (N)	2	74	8	113	197
2	Trivandrum (S)	2	68	15	135	220
3	Quilon	3	91	28	123	245
4	Pathanamthitta	3	77	45	187	312
5	Thiruvalla	2	64	27	66	159
6	Alappuzha	2	48	26	48	124
7	Mavelikara	2	52	20	53	127
8	Changanacherry	2	46	9	108	165
9	Idukki	2	52	12	225	291
10	Kottayam	3	79	40	136	258
11	Ernakulam	2	72	4	61	139
12	Aluva	3	71	28	153	255
13	Thrissur	3	106	28	158	295
14	Irinjalakuda	2	63	11	116	192
15	Lakshadweep	0	6	3	1	10
16	Palakkad	3	83	21	129	236
17	Ottappalam	1	55	20	143	219
18	Manjeiri	2	46	21	191	260
19	Tirur	2	53	21	100	176
20	Kozhikode	3	70	13	217	303
21	Vadakara	2	40	31	152	225
22	Thalassery	1	44	7	156	208
23	Kannur	2	63	25	139	229
24	Kasaragod	2	29	10	188	226
	Total (Kerala Circle)	51	1452	473	3098	5071

Source : CPMG, Kerala Circle, Thiruvananthapuram.

Appendix10.32
Urban/Rural Split of Post Offices as on 31-3-2006

Divison/Region	Head Office		Sub Office		EDSO		EDBO		Grand Total		
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10	11	12
TV North	0	2	44	30	7	1	94	19	145	52	197
TV South	0	2	39	29	15	0	130	5	184	36	220
Kollam	2	1	66	25	26	2	118	5	212	33	245
Pathanamthitta	0	3	69	8	43	2	181	6	293	19	312
Thiruvalla	0	2	53	11	26	1	61	5	140	19	159
Total SR	2	10	271	103	117	6	584	40	974	159	1133
Alappuzha	0	2	23	25	19	7	36	12	78	46	124
Mavelikara	0	2	45	7	20	0	50	3	115	12	127
Changanacherry	1	1	43	3	9	0	106	2	159	6	165
Idukki	1	1	48	4	12	0	223	2	284	7	291
Kottayam	0	3	56	23	35	5	133	3	224	34	258
Ernakulam	0	2	19	53	2	2	43	18	64	75	139
Aluwa	0	3	40	31	25	3	148	5	213	42	255
Thrissur	1	2	68	38	18	10	138	20	225	70	295
Irinjalakuda	0	2	39	24	9	2	98	18	146	46	192
Lakshadweep	0	0	6	0	3	0	1	0	10	0	10
Total CR	3	18	387	208	152	29	976	83	1518	338	1856
Palakkad	1	2	64	19	21	0	122	7	208	28	236
Ottappalam	0	1	44	11	18	2	133	10	195	24	219
Manjeri	0	2	38	8	20	1	178	13	236	24	260
Tirur	0	2	46	6	18	0	101	0	165	8	173
Kozhikode	0	3	20	50	9	4	178	39	207	96	303
Vadakara	0	2	36	4	25	6	150	2	211	14	225
Thalassery	0	1	15	29	1	6	126	30	142	66	208
Kannur	0	2	24	39	10	15	101	38	135	94	229
Kasargod	0	2	20	9	8	2	182	6	210	19	229
Total NR	1	17	307	175	130	36	1271	145	1709	373	2082
Grand Total	6	45	965	486	399	71	2831	268	4201	870	5071

Source: CPMG, Kerala Circle

Appendix 10.33
District - wise details of area and population served by one post office
during 2005-06

Sl. No.	Name of district	Post Office (Nos.)	Area (Sq.Km.)	Area served by One post office (Sq.Kms)	Population (2001 census)	Population served by one post office
1	2	3	4	5	6	7
1	Thiruvananthapuram	445	2192	4.92	3234356	7268
2	Kollam	366	2491	6.8	2585208	7063
3	Pathanamthitta	315	2637	8.37	1234016	3917
4	Alappuzha	281	1414	5.03	2109160	7505
5	Kottayam	413	2208	5.34	1953646	4730
6	Idukki	289	4358	15.07	1129221	3907
7	Ernakulam	393	3068	7.8	3105798	7902
8	Thirussur	487	3032	6.22	2974232	6107
9	Palakkad	451	4480	9.93	2617482	5803
10	Malappuram	436	3550	8.14	3625471	8315
11	Kozhikode	407	2344	5.75	2879131	7074
12	Wayanad	163	2131	13.07	780619	4789
13	Kannur	380	2966	7.8	2408956	6339
14	Kasaragod	229	1992	8.69	1204078	5258
	Kerala	5055	38863	7.68	31841374	6299
	UT of Lakshadweep	10	32	3.2	60650	6065
	UT of Pondichery	4	8.71	2.18	8779	2200

Source: CPMG Kerala Circle, Thiruvananthapuram

Appendix 10.34

District - Wise details of Telephone network during 2005-06 (Wireline + WLL)

Sl.No	Name of District	No. of Exchanges	Equipped Capacity	Working connections	Area (sq.Kms)	No. of Telephone (Sq. Kms)	No. of Telephone per 1000 population
1	2	3	4	5	6	7	8
1	Alappuzha	72	302474	248701	1414	176	118.1
2	Kozhikode	93	388946	310586	2344	133	107.9
3	Kannur	112	376596	304914	2966	103	126.4
4	Ernakulam	122	540759	432002	2407	179	139.4
5	Idukki	80	142732	112370	5019	22	99.5
6	Kasaragod	58	185055	151423	1992	76	125.9
7	Kottayam	98	343853	289467	2203	131	148.3
8	Lakshadweep	11	11576	9004	32	281	147.6
9	Malappuram	88	427083	353745	3550	100	97.5
10	Palakkad	111	265284	225939	4480	50	86.3
11	Pathanamthitta	81	250964	206595	2642	78	167.7
12	Pondicherry (Mahe)	1	6000	5534	10	553	184.5
13	Kollam	85	388202	314796	2491	126	121.8
14	Trichur	83	480876	397848	3032	131	133.7
15	Thiruvananthapuram	97	506786	410794	2192	187	127
16	Wayanad	31	83694	66618	2131	31	84.6
	Total	1223	4700880	3840336	38905	99	120.24

Appendix 10.35
Total Census Houses and Urban Census Houses in India
and Kerala - 2001

(Nos.)

Area	Type	Total Census Houses	Total Occupied Census Houses	Total Vacant Census Houses
India	Total	249095869	233284677	15811192
	Urban	71558356	65106336	6452020
Kerala	Total	9356874	8625051	731823
	Urban	2462098	2238836	223262

Source: Census 2001, Government of India, New Delhi

Appendix 10.36

Distribution of Census Houses used as Residence and Residence- Cum-Other use - 2001

(Nos)

Area	Type	Total Census Houses	Residence			Residence - cum-other use		
			Good	Livable	Dilapidated	Good	Livable	Dilapidated
India	Total	187063733	90295913	79004784	9974908	3633584	3825098	329446
	Urban	52012465	32192595	16196272	1834096	1111329	622126	56047
Kerala	Total	6532021	362910	2330594	530076	18546	19894	3001
	Urban	1631971	1053257	474470	92059	6087	5351	747

Source :Census 2001, Government of India, New Delhi

Appendix 10.37

Distribution of Households by the condition of Census houses occupied by them - 2001

(Nos)

Area	Type	Total Census Houses	Residence			Residence - cum-other use		
			Good	Livable	Dilapidated	Good	Livable	Dilapidated
India	Total	191963935	92813201	81139219	10223387	3633584	3825098	329446
	Urban	53692376	33335574	16690437	1876863	1111329	622126	56047
Kerala	Total	6595206	3663705	2354327	535733	18546	19894	3001
	Urban	1652656	1065690	481307	93474	6087	5351	747

Source : Census 2001, Government of India, New Delhi

Appendix 10.38

**Distribution of Census Houses used as Residence & Residence - cum
Other use by the Type of Structure**

(Nos)

Area	Type	Total Census Houses	Permanent	Semi- Permanent	Temporary		Unclassified
					Serviceable	Non- Serviceable	
India	Total	187063733	96566196	56377181	21622375	12447013	50968
	Urban	52012465	41168843	8075325	1702041	1045025	21231
Kerala	Total	6532021	4452290	1410682	393749	271509	3791
	Urban	1631971	1287095	236040	56541	50963	1332

Source : Census 2001, Government of India, New Delhi

Note : This Table excludes institutional house holds. Permanent, ie. Houses with wall and roof made of permanent materials. Temporary ie, houses with wall&roof made of temporary material. Semi permanent ie, either wall or roof is made of permanent material and other is made of temporary material. Temporary - servicible means wall is made of mud, un burnt brick or wood& Non-servicable means wall is made of grass, thatch, bamboo, etc. Plastic or Polythene.

Appendix 10.39
Distribution of Households by Type of Census Houses Occupied - 2001

(Nos)

Area	Type	Total Census Houses	Permanent	Semi-Permanent	Temporary		Unclassified
					Serviceable	Non-Serviceable	
India	Total	191963935	99431727	57664327	22096480	12719139	52262
	Urban	53692376	42602249	8262330	1738089	1067983	21725
Kerala	Total	6595206	4493814	1424375	398983	274211	3823
	Urban	1652656	1302681	239279	57723	51624	1349

Source : Census 2001, Government of India, New Delhi

Note : This Table excludes institutional house holds. Permanent, ie. Houses with wall and roof made of permanent materials. Temporary ie, houses with wall&roof made of temporary material. Semi permanent ie, either wall or roof is made of permanent material and other is made of temporary material. Temporary - serviceable means wall is made of mud, unburnt brick or wood & Non-serviceable means wall is made of grass, thatch, bamboo, etc. Plastic or Polythene.

Appendix 10.40
District-wise details of Population in Kerala

Sl. No.	Districts	Total Population -2001	Urban Population - 2001	% of Urban Population
1	Kasaragod	1204078	233700	19.41
2	Kannur	2408956	1212898	50.35
3	Wayanad	780619	29612	3.79
4	Kozhikode	2879131	1101157	38.25
5	Malappuram	3625471	356170	9.82
6	Palakkad	26174282	356575	1.36
7	Thrissur	2974232	839433	28.22
8	Ernakulam	3105798	1477085	47.56
9	Idukki	1129221	57593	5.10
10	Kottayam	1953646	299808	15.35
11	Alappuzha	2109160	621457	29.46
12	Pathanamthitta	1234016	123798	10.03
13	Kollam	2585208	465978	18.92
14	Thiruvananthapuram	3234356	1091661	33.75

Source: Census 2001, Government of India, New Delhi

Appendix 11.15
Stage-wise and Management-wise Number of Teachers in Schools in Kerala: 2005-06

Stage	Government			Aided			Unaided			Total Teachers		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
L.P.S. Teachers	3876	10184	14060	6765	19097	25862	256	1573	1829	10897	30854	41751
U.P.S. Teachers	4390	8478	12868	9431	21016	30447	408	1703	2111	14229	31197	45426
H.S. Teachers	10610	18114	28724	15402	34804	50206	2379	7144	9523	28391	60062	88453
TTI Teachers	187	220	407	108	424	532	0	0	0	295	644	939
Total	19063	36996	56059	31706	75341	107047	3043	10420	13463	53812	122757	176569

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.2
Management -wise Number of Schools in Kerala -1999-00 to 2005-06

Year	Management	LP Schools	LP Sections in UP Schools	LP Sections in High Schools	UP Schools	UP Sections in High Schools	High Schools	Total (3+6+8)
1	2	3	4	5	6	7	8	9
1999-00	Govt.	2552	899	436	959	838	979	4490
	Aided	4035	1279	191	1873	1043	1397	7305
	Unaided	161	61	105	134	171	220	515
	Total	6748	2239	732	2966	2052	2596	12310
2000-01	Govt.	2565	898	438	960	844	985	4510
	Aided	4035	1296	183	1873	1051	1412	7320
	Unaided	158	56	101	124	172	218	500
	Total	6758	2250	722	2957	2067	2615	12330
2001-02	Govt.	2565	899	439	960	846	986	4511
	Aided	4031	1304	185	1874	1051	1415	7320
	Unaided	158	58	99	125	171	217	500
	Total	6754	2261	723	2959	2068	2618	12331
2002-03	Govt.	2551	888	440	957	845	984	4492
	Aided	4003	1308	178	1870	1038	1409	7282
	Unaided	158	68	100	124	164	215	497
	Total	6712	2264	718	2951	2047	2608	12271
2003-04	Govt.	2551	888	440	956	848	991	4498
	Aided	3993	1308	188	1872	1049	1422	7287
	Unaided	172	74	108	136	178	229	537
	Total	6716	2270	736	2964	2075	2642	12322
2004-05	Govt.	2548	894	437	954	848	995	4497
	Aided	3994	1322	189	1870	1046	1423	7287
	Unaided	285	150	187	218	277	363	866
	Total	6827	2366	813	3042	2171	2781	12650
2005-06	Govt.	2548	897	442	954	848	996	4498
	Aided	3992	1332	189	1870	1046	1428	7290
	Unaided	277	155	187	213	277	366	856
	Total	6817	2384	818	3037	2171	2790	12644

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.3
District-wise/ Management-wise Number of Schools in Kerala: 2005-06

Sl. No.	District	High Schools				U.P.Schools				L.P.Schools				H.S+U.P.S+L.P.S			
		G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T	G	PA	PUA	T
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Thiruvananthapuram	119	95	42	256	98	101	27	226	299	181	27	507	516	377	96	989
2	Kollam	76	131	14	221	62	139	16	217	268	190	28	486	406	460	58	924
3	Pathanamthitta	48	111	9	168	42	84	15	141	168	236	22	426	258	431	46	735
4	Alappuzha	58	129	9	196	67	77	11	155	192	198	21	411	317	404	41	762
5	Kottayam	60	166	22	248	67	128	10	205	169	268	31	468	296	562	63	921
6	Idukki	56	73	11	140	40	63	4	107	85	136	10	231	181	272	25	478
7	Ernakulam	87	175	48	310	91	103	25	219	181	271	33	485	359	549	106	1014
8	Thrissur	80	150	31	261	55	162	14	231	115	381	23	519	250	693	68	1011
9	Palakkad	61	79	33	173	63	159	11	233	194	349	13	556	318	587	57	962
10	Malappuram	82	84	79	245	113	223	38	374	350	477	26	853	545	784	143	1472
11	Kozhikodu	69	99	23	191	74	240	13	327	181	529	11	721	324	868	47	1239
12	Wayanadu	40	23	5	68	34	39	2	75	91	53	6	150	165	115	13	293
13	Kannur	83	80	23	186	76	280	18	374	114	608	10	732	273	968	51	1292
14	Kasaragod	77	33	17	127	72	72	9	153	141	115	16	272	290	220	42	552
	Total	996	1428	366	2790	954	1870	213	3037	2548	3992	277	6817	4498	7290	856	12644

Source: Directorate of Public Instruction, Thiruvananthapuram.

G-Govt, PA-Private Aided PUA-Private Unaided T.-Total

Note:- Palakkad-2 LP& 1UP; Malappuram-12 LP& 8UP; Kozhikode-2 LP; Wayanad-1 LP; Kasaragod-1 LP working under Area Intensive Programme included in the Private Unaided category

Appendix 11.4

Districtwise Number of Schools (other than state syllabus) in Kerala (2005-2006)

Sl.No.	District	CBSE	ICSE	Kendriya Vidyalaya	Jawahar Navodaya
1	2	3	4	5	6
1	Thiruvananthapuram	51	11	4	1
2	Kollam	37	10	0	1
3	Pathanamthitta	27	13	1	1
4	Alappuzha	42	10	1	1
5	Kottayam	48	5	1	1
6	Idukki	18	4	0	1
7	Ernakulam	92	11	6	1
8	Thrissur	51	5	1	1
9	Palakkad	44	2	3	1
10	Malappauram	58	2	1	1
11	Kozhikode	43	1	2	1
12	Wayanadu	13	1	1	0
13	Kannur	44	1	3	1
14	Kasaragod	19	2	2	1
	Total	587	78	26	13

Source: Directorate of Public Instruction , Thiruvananthapuram.

Appendix 11.5

District-wise Details of Government Schools having Building Facilities: Kerala - 2005-06

Sl.No.	District	No.of Schools having Pucca Buildings				No.of Schools having Thatched Sheds				No.of Schools working in Rented Building			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	295	84	81	460	4	14	38	56	0	0	0	0
2	Kollam	268	62	72	402	0	0	4	4	0	0	0	0
3	Pathanamthitta	168	42	48	258	0	0	0	0	0	0	0	0
4	Alappuzha	192	67	58	317	0	0	0	0	0	0	0	0
5	Kottayam	169	67	60	296	0	0	0	0	0	0	0	0
6	Idukki	85	40	56	181	0	0	0	0	0	0	0	0
7	Ernakulam	181	91	87	359	0	0	0	0	2	0	0	2
8	Thrissur	113	55	79	247	2	0	1	3	17	0	0	17
9	Palakkad	194	63	61	318	0	0	0	0	37	2	0	39
10	Malappuram	350	112	82	544	0	1	0	1	88	26	2	116
11	Kozhikode	179	73	69	321	2	1	0	3	43	9	1	53
12	Wayanad	91	34	37	162	0	0	3	3	32	8	1	41
13	Kannur	114	76	70	260	0	0	13	13	24	14	3	41
14	Kasaragod	141	72	77	290	0	0	0	0	16	5	5	26
	Total	2540	938	937	4415	8	16	59	83	259	64	12	335

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.6

**District - wise Details of Govt. Schools having Drinking Water/Latrines/Urinal Facilities
in Kerala (2005-06)**

Sl. No.	District	No. of Schools having							
		Drinking Water				Urinals / Latrines			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	295	98	109	502	266	91	109	466
2	Kollam	226	55	74	355	219	59	76	354
3	Pathanamthitta	162	40	48	250	160	42	48	250
4	Alappuzha	191	67	54	312	191	67	56	314
5	Kottayam	164	66	60	290	159	63	60	282
6	Idukki	66	34	56	156	73	37	56	166
7	Ernakulam	180	90	82	352	181	89	83	353
8	Thrissur	107	53	80	240	108	55	72	235
9	Palakkad	173	59	61	293	176	63	61	300
10	Malappuram	317	106	78	501	314	104	82	500
11	Kozhikode	161	71	69	301	169	72	69	310
12	Wayanad	79	32	37	148	90	34	40	164
13	Kannur	103	70	83	256	102	73	83	258
14	Kasaragod	141	72	77	290	141	72	77	290
	Total	2365	913	968	4246	2349	921	972	4242

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.7
Enrolment of Students in Schools - District-wise and Stage-wise: 2005-06

Sl. No.	Districts	L.P.S(I-IV)			U.P.S(V-VII)			H.S(VIII-X)			TOTAL		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	84100	85848	169948	67156	66510	133666	70888	68996	139884	222144	221354	443498
2	Kollam	61451	61358	122809	54473	52050	106523	56948	53423	110371	172872	166831	339703
3	Pathanamthitta	25544	25539	51083	22498	21598	44096	26405	24224	50629	74447	71361	145808
4	Alappuzha	47222	46984	94206	41178	38791	79969	45553	42526	88079	133953	128301	262254
5	Kottayam	48645	47829	96474	39069	36954	76023	40205	39906	80111	127919	124689	252608
6	Idukki	27538	26924	54462	22543	20121	42664	21783	19988	41771	71864	67033	138897
7	Ernakulam	72766	71618	144384	60473	57765	118238	62427	60981	123408	195666	190364	386030
8	Thrissur	88417	86615	175032	70027	67122	137149	68321	66218	134539	226765	219955	446720
9	Palakkad	85701	84493	170194	68824	64346	133170	67552	65221	132773	222077	214060	436137
10	Malappuram	152480	146002	298482	122020	112087	234107	117881	114226	232107	392381	372315	764696
11	Kozhikode	88684	87879	176563	72802	67647	140449	73902	71148	145050	235388	226674	462062
12	Wayanad	27017	25916	52933	18942	17781	36723	18507	18140	36647	64466	61837	126303
13	Kannur	70776	67764	138540	58927	54796	113723	60497	57635	118132	190200	180195	370395
14	Kasaragod	40735	39608	80343	31120	28945	60065	31278	29509	60787	103133	98062	201195
	Total	921076	904377	1825453	750052	706513	1456565	762147	732141	1494288	2433275	2343031	4776306

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.8
Enrolment of SC Students in Schools - District-wise and Stage-wise: 2005-06

Sl. No	Districts	L.P.S(I-IV)			U.P.S(V-VII)			H.S(VIII-X)			TOTAL		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	12471	12367	24838	9993	9490	19483	9927	9713	19640	32391	31570	63961
2	Kollam	10490	10241	20731	7734	7366	15100	7924	7185	15109	26148	24792	50940
3	Pathanamthitta	4680	4674	9354	3611	3406	7017	4115	3784	7899	12406	11864	24270
4	Alappuzha	5803	5435	11238	4278	4074	8352	4839	4497	9336	14920	14006	28926
5	Kottayam	4904	4720	9624	3765	3503	7268	3584	3587	7171	12253	11810	24063
6	Idukki	4310	4131	8441	3536	3057	6593	2950	2895	5845	10796	10083	20879
7	Ernakulam	8251	7582	15833	6279	5643	11922	5971	5771	11742	20501	18996	39497
8	Thrissur	12610	11806	24416	9355	8476	17831	8345	8044	16389	30310	28326	58636
9	Palakkad	15965	14964	30929	12151	10985	23136	10913	10309	21222	39029	36258	75287
10	Malappuram	12330	11432	23762	9271	8300	17571	8594	8190	16784	30195	27922	58117
11	Kozhikode	6673	6417	13090	4956	4444	9400	4880	4520	9400	16509	15381	31890
12	Wayanad	1607	1514	3121	1111	1052	2163	1013	981	1994	3731	3547	7278
13	Kannur	2807	2574	5381	2082	1877	3959	2085	2049	4134	6974	6500	13474
14	Kasaragod	2511	2339	4850	1634	1566	3200	1328	1299	2627	5473	5204	10677
	Total	105412	100196	205608	79756	73239	152995	76468	72824	149292	261636	246259	507895

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.9
Enrolment of ST Students in Schools - District-wise and Stage-wise: 2005-06

Sl. No.	Districts	L.P.S(I-IV)			U.P.S(V-VII)			H.S(VIII-X)			TOTAL		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	606	563	1169	515	566	1081	420	539	959	1541	1668	3209
2	Kollam	215	222	437	239	151	390	252	187	439	706	560	1266
3	Pathanamthitta	256	275	531	181	131	312	197	131	328	634	537	1171
4	Alappuzha	129	122	251	133	101	234	89	67	156	351	290	641
5	Kottayam	518	505	1023	418	365	783	370	391	761	1306	1261	2567
6	Idukki	1516	1274	2790	1060	985	2045	905	763	1668	3481	3022	6503
7	Ernakulam	370	365	735	335	240	575	315	195	510	1020	800	1820
8	Thrissur	302	451	753	160	264	424	139	211	350	601	926	1527
9	Palakkad	2096	1928	4024	994	785	1779	641	584	1225	3731	3297	7028
10	Malappuram	505	457	962	369	293	662	254	198	452	1128	948	2076
11	Kozhikode	393	340	733	328	229	557	313	255	568	1034	824	1858
12	Wayanad	6821	6409	13230	3388	3197	6585	2391	2351	4742	12600	11957	24557
13	Kannur	1559	1461	3020	1038	922	1960	698	709	1407	3295	3092	6387
14	Kasaragod	1445	1321	2766	990	867	1857	800	817	1617	3235	3005	6240
	Total	16731	15693	32424	10148	9096	19244	7784	7398	15182	34663	32187	66850

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.10
Management-wise/Standardwise Enrolment of Students in Schools: Kerala 2005-06

(Nos)

Management	Standards												Total	Total I to X
	I	II	III	IV	Total	V	VI	VII	Total	VIII	IX	X		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Government														
Boys	67013	72999	78542	81231	299785	69907	70173	76024	216104	85786	87812	78439	252037	767926
Girls	66887	70955	75952	78372	292166	66866	66400	70217	203483	78578	81688	80122	240388	736037
Sub Total	133900	143954	154494	159603	591951	136773	136573	146241	419587	164364	169500	158561	492425	1503963
Aided														
Boys	123390	132701	137690	138884	532665	157320	157328	169256	483904	162732	162563	138950	464245	1480814
Girls	124806	130527	136522	136691	528546	152267	149826	157766	459859	152244	154606	143891	450741	1439146
Sub Total	248196	263228	274212	275575	1061211	309587	307154	327022	943763	314976	317169	282841	914986	2919960
Un Aided														
Boys	22388	22413	22629	21196	88626	17668	16484	15892	50044	15625	15611	14629	45865	184535
Girls	20869	20979	21462	20355	83665	15371	14168	13632	43171	13767	13863	13382	41012	167848
Sub Total	43257	43392	44091	41551	172291	33039	30652	29524	93215	29392	29474	28011	86877	352383
Total Boys	212791	228113	238861	241311	921076	244895	243985	261172	750052	264143	265986	232018	762147	2433275
Total Girls	212562	222461	233936	235418	904377	234504	230394	241615	706513	244589	250157	237395	732141	2343031
Grand Total	425353	450574	472797	476729	1825453	479399	474379	502787	1456565	508732	516143	469413	1494288	4776306

Source : Directorate of Public Instruction, Thiruvananthapuram

Appendix 11.11
Categorywise & Standardwise Strength of Students in Kerala: 2005-06

Std	Government Schools				Private Aided Schools				Private Unaided Schools			
	Total	Others	SC	ST	Total	Others	SC	ST	Total	Others	SC	ST
I	2	3	4	5	6	7	8	9	10	11	12	13
I	133900	110065	19679	4156	248196	217024	27579	3593	43257	41716	1437	104
II	143954	119109	20417	4428	263228	231719	27811	3698	43392	41770	1518	104
III	154494	127825	22223	4446	274212	240499	29990	3723	44091	42501	1482	108
IV	159603	132473	22782	4348	275575	242614	29349	3612	41551	40106	1341	104
V	136773	114866	18366	3541	309587	273895	32566	3126	33039	32032	853	154
VI	136573	116030	17325	3218	307154	272766	31435	2953	30652	29809	724	119
VII	146241	125100	18019	3122	327022	291205	32953	2864	29524	28623	754	147
VIII	164364	140668	20392	3304	314976	282066	30515	2395	29392	28522	720	150
IX	169500	145535	20856	3109	317169	284232	30864	2073	29474	28712	641	121
X	158561	137410	18720	2431	282841	255363	25989	1489	28011	27306	595	110
Total	1503963	1269081	198779	36103	2919960	2591383	299051	29526	352383	341097	10065	1221

Source: Directorate of Public Instruction, Kerala.

Appendix 11.12
District-wise/Stage-wise Drop Out Ratio in Schools: 2004-05

Sl. No.	Districts	LP Stage			UP Stage			HS Stage		
		Enrolment	Drop Out	% Drop Out	Enrolment	Drop Out	% Drop Out	Enrolment	Drop Out	% Drop Out
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	172533	1729	1.00	136263	533	0.39	143050	908	0.63
2	Kollam	121526	442	0.36	108196	294	0.27	114314	1114	0.97
3	Pathanamthitta	54908	282	0.51	45694	54	0.12	52978	165	0.31
4	Alapuzha	96518	423	0.44	81619	300	0.37	91156	745	0.82
5	Kottayam	98826	521	0.53	76614	206	0.27	82622	690	0.84
6	Idukki	54857	866	1.58	43142	350	0.81	42545	1004	2.36
7	Ernakulam	148377	1459	0.98	119491	463	0.39	126864	1877	1.48
8	Thrissur	179593	917	0.51	138052	753	0.55	138366	2802	2.03
9	Palakkad	171707	2136	1.24	131286	835	0.64	134673	3412	2.53
10	Malappuram	297897	2212	0.74	232136	874	0.38	230548	3739	1.62
11	Kozhikode	177204	1973	1.11	143834	406	0.28	148305	1209	0.82
12	Wayanad	51710	1258	2.43	36635	450	1.23	37581	1126	3.00
13	Kannur	143174	1083	0.76	115690	551	0.48	120622	2171	1.80
14	Kasargode	78243	966	1.23	61349	478	0.78	61317	1972	3.22
	Total	1847073	16267	0.88	1470001	6547	0.45	1524941	22934	1.50

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.13

District-wise and Stage-wise Uneconomic Schools in Kerala: 2005

(Nos)

Sl. No.	District	Government				Aided				Total			Grand Total
		LPS	UPS	HS	Total	LPS	UPS	HS	Total	LPS	UPS	HS	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	85	22	16	123	11	3	4	18	96	25	20	141
2	Kollam	107	11	0	118	29	1	2	32	136	12	2	150
3	Pathanamthitta	120	31	14	165	185	30	6	221	305	61	20	386
4	Alleppuzha	117	26	3	146	73	16	3	92	190	42	6	238
5	Kottayam	113	47	16	176	105	28	7	140	218	75	23	316
6	Idukki	58	15	17	90	51	12	5	68	109	27	22	158
7	Ernakulam	118	56	11	185	83	30	2	115	201	86	13	300
8	Trissur	54	13	4	71	70	10	1	81	124	23	5	152
9	Palakkad	52	0	1	53	50	2	0	52	102	2	1	105
10	Malappuram	22	2	0	24	16	0	0	16	38	2	0	40
11	Kozhikkode	70	12	0	82	176	12	0	188	246	24	0	270
12	Wayanad	36	2	0	38	2	0	0	2	38	2	0	40
13	Kannur	78	27	6	111	360	47	1	408	438	74	7	519
14	Kasaragod	67	8	0	75	27	2	0	29	94	10	0	104
	Total	1097	272	88	1457	1238	193	31	1462	2335	465	119	2919

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.14
Protected Teachers in Kerala- 2005-2006

Sl. No	Name of District	Deployed in Govt. School				Retained in parent school				Deployed in other aided school				Undeclared				Total Number of Protected Teachers			
		H S A	PD	Spl.	Total	H S A	PD	Spl.	Total	H S A	PD	Spl.	Total	H S A	PD	Spl.	Total	H S A	PD	Spl.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Thiruvananthapuram	12	40	25	77	2	5	10	17	0	8	22	30	0	2	1	3	14	55	58	127
2	Kollam	94	147	53	294	23	33	45	101	7	9	9	25	5	20	5	30	129	209	112	450
3	Pathanamthitta	25	45	26	96	7	11	22	40	0	2	1	3	7	8	2	17	39	66	51	156
4	Alappuzha	37	67	44	148	36	33	26	95	2	6	0	8	7	9	20	36	82	115	90	287
5	Kottayam	26	24	9	59	3	3	18	24	3	12	3	18	4	3	14	21	36	42	44	122
6	Idukki	9	6	13	28	0	0	17	17	1	3	3	7	1	1	0	2	11	10	33	54
7	Ernakulam	58	98	12	168	14	31	67	112	14	48	118	180	0	0	0	0	86	177	197	460
8	Thrissur	37	115	33	185	11	51	24	86	4	4	1	9	7	9	14	30	59	179	72	310
9	Palakkad	8	91	30	129	3	63	20	86	3	1	1	5	0	29	3	32	14	184	54	252
10	Malappuram	4	101	11	116	0	67	39	106	0	1	0	1	0	0	0	0	4	169	50	223
11	Kozhikkode	43	183	46	272	4	128	8	140	2	2	0	4	11	108	4	123	60	421	58	539
12	Wayanad	2	17	0	19	1	5	2	8	1	7	0	8	0	0	1	1	4	29	3	36
13	Kannur	63	115	21	199	5	105	82	192	1	3	10	14	13	199	18	230	82	422	131	635
14	Kasaragod	11	30	0	41	2	15	6	23	0	0	0	0	0	0	0	0	13	45	6	64
	Total	429	1079	323	1831	111	550	386	1047	38	106	168	312	55	388	82	525	633	2123	959	3715

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.15
Stage-wise and Management-wise Number of Teachers in Schools in Kerala: 2005-06

Stage	Government			Aided			Unaided			Total Teachers		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
L.P.S. Teachers	3876	10184	14060	6765	19097	25862	256	1573	1829	10897	30854	41751
U.P.S. Teachers	4390	8478	12868	9431	21016	30447	408	1703	2111	14229	31197	45426
H.S. Teachers	10610	18114	28724	15402	34804	50206	2379	7144	9523	28391	60062	88453
TTI Teachers	187	220	407	108	424	532	0	0	0	295	644	939
Total	19063	36996	56059	31706	75341	107047	3043	10420	13463	53812	122757	176569

Source: Directorate of Public Instruction, Thiruvananthapuram.

Appendix 11.16

District-wise/Management-wise Number of Higher Secondary Schools in Kerala-2006

Sl. No.	District/Taluk	Number of Higher Secondary Schools				Total No. of Batches	Total No. of Seats
		Govt.	Aided	Unaided	Total		
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	73	46	44	163	607	30350
2	Kollam	55	49	23	127	423	21150
3	Pathanamthitta	25	36	29	90	328	16400
4	Alappuzha	40	49	16	105	369	18450
5	Kottayam	37	60	27	124	453	22650
6	Idukki	24	26	15	65	199	9950
7	Ernakulam	62	63	53	178	627	31350
8	Thrissur	61	44	45	150	486	24300
9	Palakkad	51	23	30	104	330	16500
10	Malappuram	82	39	79	200	632	31600
11	Kozhikode	56	39	32	127	383	19150
12	Wayanad	20	11	7	38	114	5700
13	Kannur	62	28	26	116	350	17500
14	Kasaragod	51	11	15	77	212	10600
	Total	699	524	441	1664	5513	275650

Source: Directorate of Higher Secondary Education, Thiruvananthapuram.

Appendix 11.17 (a)

No. of Students Appeared and Passed in Higher Secondary Examination: 2006

	No. of Students Appeared			No. of Students Passed		
	All Students	SC	ST	All Students	SC	ST
Boys	170333	12559	1531	94147	5120	566
Girls	186912	16457	1743	123822	7415	796
Total	357245	29016	3274	217969	12535	1362
Percentage				61.01	43.2	41.6

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.17

Intake of Students in Higher Secondary (Plus Two) Courses in Kerala-2004-05 to 2006-07

Year	All Students (Second Year)			SC Students (Second Year)			ST Students (Second Year)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2004	134151	166120	300271	9883	14310	24193	1063	1222	2285
2005	151376	178376	329752	11073	15709	26782	1238	1498	2736
2006	176140	190999	367139	13291	17029	30320	1651	1800	3451

Source: Directorate of Higher Secondary Education, Thiruvananthapuram.

Appendix 11.18
Course wise Intake of Students in VHSE- 2005

Sl. No.	Name of Course	Sanctioned Intake (in Nos.)	Actual Intake (in Nos.)
1	2	3	4
1	Civil Construction and Maintenance	992	936
2	Maintenance and Repairs of Two Wheelers and Three Wheelers	354	336
3	Maintenance and Repairs of Automobiles	387	347
4	Maintenance and Repairs of Radio and Television	2103	1946
5	Maintenance and Repairs of Domestic Appliances	1533	1409
6	Mechanical Servicing (Agro Machinery)	81	80
7	Refrigeration and Air conditioning	519	495
8	Printing Technology	603	555
9	Rubber Technology	81	77
10	Textile B28Dyeing and Printing	35	35
11	Textile Weaving	27	--
12	Computer Science	1176	1137
13	Computer Application	1071	1014
14	Plant Protection	1758	1659
15	Fruits and Vegetables	600	571
16	Nursery Management and Ornamental Gardening	1260	1218
17	Sericulture	81	52
18	Livestock Management (Dairy Husbandry)	607	576
19	Livestock Management (Poultry Husbandry)	357	344
20	Dairying (Milk Products)	108	108
21	Aquaculture	219	215
22	Fishing Craft and Gear Technology	109	107
23	Maintenance and Operation of Marine Engines	165	164
24	Fish Processing Technology	409	400
25	Medical Laboratory Technician	3722	3572
26	Maintenance and Operation of Bio Medical Equipment	797	772
27	ECG and Audiometric Technician	244	237
28	Domestic Nursing	408	407
29	Dental Technology	84	80
30	Physiotherapy	30	27
31	Physical Education	54	50
32	Clothing and Embroidery	462	406
33	Cosmetology and Beauty Parlour Management	137	126
34	Creche and Pre-School Management	108	104
35	Travel and Tourism	654	632
36	Office Secretaryship	1800	1666
37	Accountancy and Auditing	2205	2056
38	General Insurance	379	369
39	Marketing and Salesmanship	681	656
40	Reception, Book-keeping and communication	138	134
41	Catering & Restaurant Management	84	80
42	Banking Assistance	252	227
	Total	26874	25382

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.19**Intake of Students in Vocational Higher Secondary Schools: 2004-05 to 2006-07**

Year	First Year			Second Year			Combined		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
2004-05	14308	15267	29575	13223	14995	28218	27531	30262	57793
2005-06	9803	11082	20885	14308	15267	29575	24111	26349	50460
2006-07	12543	13444	25987	9803	11082	20885	22346	24526	46872

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.20

Intake of SC Students in Vocational Higher Secondary Schools: 2004-05 to 2006-07

Year	First Year			Second Year			Combined		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
2004-05	956	1129	2085	1159	1587	2746	2115	2716	4831
2005-06	836	988	1824	956	1129	2085	1792	2117	3909
2006-07	954	1189	2143	956	1129	2085	1910	2318	4228

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.21

Intake of ST Students in Vocational Higher Secondary Schools: 2004-05 to 2006-07

Year	First Year			Second Year			Combined		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
2004-05	59	74	133	92	106	198	151	180	331
2005-06	43	43	86	59	74	133	102	117	219
2006-07	53	47	100	43	43	86	96	90	186

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.22

Districtwise Details of VHSE Schools and Courses: 2004-05

Sl. No.	District	No of Schools			No of Courses		
		Govt	Aided	Total	Govt	Aided	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	30	11	41	74	36	110
2	Kollam	20	32	52	51	109	160
3	Alapuzha	10	17	27	35	21	56
4	Pathanamthitta	14	7	21	26	51	77
5	Kottayam	21	10	31	49	26	75
6	Ernakulam	22	12	34	54	39	93
7	Idukki	11	5	16	31	15	46
8	Thrissur	26	10	36	64	32	96
9	Palakkad	17	7	24	37	20	57
10	Malappuram	23	3	26	53	7	60
11	Kozhikode	20	8	28	51	23	74
12	Wayanad	5	2	7	13	5	18
13	Kannur	15	1	16	38	2	40
14	Kasargod	13	3	16	30	8	38
	Total	247	128	375	606	394	1000

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.23

No. of Students Appeared and Passed in VHSE Examination: 1995 to 2005

Year of Examination	Number Appeared			Number Passed			% Passed to Appeared		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
1995 March	7222	5686	12908	2921	2036	4957	40	36	38
1996 March	8104	6004	14108	3112	3102	6214	38	52	44
1997 March	10107	8108	18215	4521	4091	8612	45	50	47
1998 March	8483	9778	18261	3184	5174	8358	38	53	46
1999 March	8701	9864	18565	5050	7194	12244	58	73	66
2000 March	10009	11243	21252	5161	7266	12427	52	65	58
2001 March	11905	7298	19203	8091	4960	13051	68	68	68
2002 March	11534	11840	23374	8364	8874	17238	73	75	74
2003 March	11681	13862	25543	7782	10941	18723	67	79	73
2004 March	12384	14522	26906	8341	10615	18956	67	73	70
2005 March	12410	14329	26739	9173	11856	21029	74	83	79

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.24

No. of SC Students Appeared and Passed in VHSE Examination: 2004 to 2006

Year of Examination	Number Appeared			Number Passed			% Passed to Appeared		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
2004 March	1423	1918	3341	813	168	981	57	9	29
2005 March	1366	1799	3165	661	990	1651	48	55	52
2006 March	1431	1704	3135	679	964	1643	47	57	52

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.25

No. of ST Students Appeared and Passed in VHSE Examination: 2004 to 2006

Year of Examination	Number Appeared			Number Passed			% Passed to Appeared		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10
2004 March	80	92	172	39	40	79	49	43	46
2005 March	87	93	180	46	45	91	53	48	51
2006 March	89	98	187	44	53	97	49	54	52

Source : Directorate of Vocational Higher Secondary Education.

Appendix 11.26
Districtwise/Managementwise Arts and Science Colleges
in Kerala 2006

(Students in Nos)

Sl. No.	District	Government	Private	Total
1	2	3	4	5
1	Thiruvananthapuram	8	12	20
2	Kollam	1	12	13
3	Pathanamthitta	0	9	9
4	Alapuzha	0	12	12
5	Kottayam	1	21	22
6	Idukki	2	6	8
7	Ernakulam	4	21	25
8	Thrissur	3	17	20
9	Palakkad	4	9	13
10	Malappuram	3	8	11
11	Kozhikode	6	8	14
12	Wayanad	2	4	6
13	Kannur	2	9	11
14	Kasargode	3	2	5
	Total	39	150	189

Source: Directorate of Collegiate Education

Appendix 11.27
University-wise Teachers in Arts & Sciencne Colleges in Kerala: 2003-04 to 2005-06

(Nos)

Sl.No	University	2003-04			2004-05			2005-06		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	6	7	8
1	Kerala	1526	1625	3151	1632	1535	3167	1528	1305	2833
2	Mahatma Gandhi	1720	1973	3693	1987	1701	3688	1891	1632	3523
3	Calicut	1351	1440	2791	1461	1372	2833	1401	1208	2609
4	Kannur	310	402	712	402	378	780	562	275	837
	Total	4907	5440	10347	5482	4986	10468	5382	4420	9802

Source: Directorate of Collegiate Education

Appendix 11.28
Details of B.A Degree Enrolment in Colleges: 2005-06

(Students in Nos)

Sl.No	Subject	First Year			Second Year			Third Year		
		Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
1	2	3	4	5	6	7	8	9	10	11
1	Economics	6468	1937	4531	6201	1739	4462	6162	1871	4291
2	History	3832	1290	2542	3119	682	2437	2991	509	2482
3	Sociology	981	30	951	818	15	803	684	206	478
4	Politics	1125	193	932	1020	305	715	963	277	686
5	Philosophy	873	311	562	658	255	403	481	8	473
6	Geography	150	71	79	90	28	62	79	34	45
7	Psychology	427	211	216	368	198	170	261	60	201
8	English	4412	1984	2428	4208	1843	2365	3983	1773	2210
9	Malayalam	3527	1206	2321	3381	1115	2266	3297	1165	2132
10	Hindi	1108	291	817	1012	276	736	936	415	521
11	Islamic History	532	314	218	402	282	120	355	253	102
12	Arabic	422	0	422	352	25	327	297	87	210
13	Sanskrit	463	335	128	372	274	98	281	209	72
14	Kannada	30	8	22	41	19	22	32	16	16
15	Tamil	90	71	19	60	45	15	37	27	10
16	Music	72	54	18	50	33	17	33	21	12
	Total	24512	8306	16206	22152	7134	15018	20872	6931	13941

Source: Directorate of Collegiate Education

Appendix 11.29
Details of B.Sc.Degree Enrolment in Colleges: 2005-06

(Students in Nos.)

Sl.No	Subject	First Year			Second Year			Final Year		
		Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
1	2	3	4	5	6	7	8	9	10	11
1	Mathematics	5798	2472	3326	5586	2648	2938	4413	1037	3376
2	Physics	4418	1449	2969	4236	1385	2851	3123	281	2842
3	Chemistry	4338	1499	2839	4162	1490	2672	3103	276	2827
4	Zoology	4016	1194	2822	3952	1400	2552	3024	404	2620
5	Botany	3676	765	2911	3528	900	2628	3016	299	2717
6	Statistics	318	216	102	358	155	203	210	92	118
7	Geology	216	106	110	175	93	82	150	86	64
8	Homescience	98	40	58	88	67	21	52	5	47
9	Bio-Chemistry	168	115	53	142	101	41	101	70	31
10	Polymer Chemistry	178	117	61	168	128	40	113	85	28
11	Bio-Technology	148	96	52	130	99	31	105	87	18
12	Computer Science	146	114	32	128	73	55	108	87	21
13	Industrial Fish and Fisheries	58	25	33	48	30	18	30	-2	32
14	Electronics	108	85	23	88	39	49	70	52	18
15	Analytical Chemistry	38	18	20	26	6	20	15	4	11
	Total	23722	8311	15411	22815	8614	14201	17633	2863	14770

Source: Directorate of Collegiate Education

Appendix 11.30
Details of B.Com Degree Enrolment in the
Colleges of Kerala: 2005-06

(Students in Nos)

Year	Boys	Girls	Total
1	2	3	4
First Year	3849	4718	8567
Second Year	3853	4414	8267
Third Year	3636	3853	7489
Total	11338	12985	24323

Source: Directorate of Collegiate Education

Appendix 11.31
Details of M.A Degree Enrolment in Colleges: 2005-06

(Students in Nos)

Sl.No	Subject	First Year			Second Year		
		Total	Boys	Girls	Total	Boys	Girls
1	2	3	4	5	6	7	8
1	Economics	934	107	827	958	169	789
2	History	593	135	458	531	98	433
3	Sociology	33	18	15	15	8	7
4	Politics	417	75	342	247	57	190
5	Philosophy	88	30	58	47	15	32
6	Geography	51	12	39	34	12	22
7	Psychology	50	20	30	35	10	25
8	English	789	188	601	766	168	598
9	Malayalam	704	206	498	535	98	437
10	Hindi	372	171	201	259	68	191
11	Islamic History	189	40	149	93	38	55
12	Arabic	199	131	68	179	118	61
13	Sanskrit	95	30	65	104	32	72
14	Kannada	26	8	18	13	5	8
15	Tamil	17	7	10	16	6	10
16	Music	0	0	0	0	0	0
	Total	4557	1178	3379	3832	902	2930

Source: Directorate of Collegiate Education

Appendix 11.32
Details of M.Sc.Degree Enrolment in Colleges: 2005-06

(Students in Nos.)

Sl.No	Subject	First Year			Second Year		
		Total	Boys	Girls	Total	Boys	Girls
1	2	3	4	5	6	7	8
1	Mathematics	1037	216	821	1008	198	810
2	Physics	888	210	678	866	196	670
3	Chemistry	747	186	561	741	178	563
4	Zoology	776	188	588	763	180	583
5	Botany	769	178	591	750	170	580
6	Statistics	874	202	672	868	195	673
7	Geology	80	19	61	72	14	58
8	Homescience	108	16	92	103	13	90
9	Bio-Chemistry	52	14	38	42	10	32
10	Analytical Chemistry	64	17	47	55	14	41
	Total	5395	1246	4149	5268	1168	4100

Source: Directorate of Collegiate Education

Appendix 11.33
Details of M Com Degree Enrolment in the
Colleges of Kerala: 2005-06

(Students in Nos)

Year	Boys	Girls	Total
1	2	3	4
First Year	628	1210	1838
Second Year	588	1199	1787
Total	1216	2409	3625

Source: Directorate of Collegiate Education

Appendix 11.34

Details of SC/ST Students in Arts and Science Colleges in Kerala : 2005-06

(Students in Nos)

Sl. No	Courses	Scheduled Caste			Scheduled Tribe		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
1	B.A.	3862	7016	10878	376	562	938
2	B. Sc.	2623	5231	7854	124	242	366
3	B. Com.	1609	2192	3801	162	183	345
4	B. Ed.	79	390	469	14	56	70
5	B.B.A.	120	92	212	7	7	14
6	B.B.S.	11	12	23	4	2	6
7	B.P.E.	12	0	12	1	1	2
8	B.B.M.	18	12	30	3	4	7
9	B.C.A.	17	15	32	3	1	4
10	M.A.	380	875	1255	33	68	101
11	M. Sc.	271	723	994	24	56	80
12	M.Com.	186	392	578	19	26	45
13	M. Ed.	5	4	9	0	0	0
14	M.S.W.	7	27	34	2	1	3
15	M.B.A.	8	5	13	2	3	5
16	M.C.A.	4	3	7	0	0	0
17	M. Phil.	7	7	14	0	0	0
	Total	9219	16996	26215	774	9219	9993

Source: Directorate of Collegiate Education

Appendix 11.35
Year-wise Break up of Private Registration (2001 to 2005)

Year	Kerala University						Calicut University						Mahatma Gandhi University					
	BA	MA	B.Com	M.Com	M.Sc	Total	BA	MA	B.Com	M.Com	M.Sc	Total	BA	MA	B.Com	M.Com	M.Sc	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2001	9888	3949	12458	1952	565	28812	16822	6137	13779	2021	510	39269	3659	2835	11056	1859	203	19612
2002	8978	3640	10510	2625	1000	26753	18624	5930	18052	2734	483	45823	4381	2930	13033	2556	272	23172
2003	6466	N.A	9866	N.A	N.A	16332	19738	4643	21534	3205	570	49690	2754	3018	9199	2322	306	17599
2004	6172	N.A	7175	N.A	N.A	13347	18455	N.A	22472	N.A	N.A	40927	2530	3220	7732	2794	352	16628
2005	7000	N.A	7500	N.A	N.A	14500	18096	N.A	23448	N.A	N.A	41544	2616	3172	7145	2967	378	16278

Source: Universities in Kerala

Appendix 11.36
University-wise Number of Engineering Colleges in
Kerala: 2006

Sl. No	Name of University	No. of Colleges
1	2	3
1	University of Kerala	19
2	Mahatma Gandhi University	22
3	University of Calicut	18
4	Kannur University	5
5	CUSAT	18
6	Agricultural University	2
	Total	84

Source: Directorate of Technical Education, Thiruvananthauram.

Appendix 11.37
District-wise and Management-wise details of Engineering Colleges in Kerala: 2006

Sl. No	Name of District	No. of Colleges				Sanctioned Intake			
		Govt.	Aided	Unaided	Total	Govt	Aided	Unaided	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	2	0	13	15	773	0	3600	4373
2	Kollam	0	1	8	9	0	500	2085	2585
3	Pathanamthitta	0	0	5	5	0	0	1350	1350
4	Alappuzha	0	0	3	3	0	0	600	600
5	Kottayam	1	0	6	7	300	0	1845	2145
6	Idukki	1	0	3	4	240	0	840	1080
7	Ernakulam	0	1	12	13	0	480	3910	4390
8	Thrissur	1	1	8	10	510	23	2550	3083
9	Palakkad	1	1	1	3	180	480	240	900
10	Malappuram	0	1	3	4	0	46	750	796
11	Kozhikodu	1	0	3	4	240	0	1080	1320
12	Wayanadu	1	0	0	1	120	0	0	120
13	Kannur	1	0	3	4	300	0	900	1200
14	Kasaragod	0	0	2	2	0	0	510	510
	Total	9	5	70	84	2663	1529	20260	24452

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.38
Branch-wise Distribution of Seats in Engineering Colleges:2005-06

Sl.No	Name of Course/Branch	Total Sanctioned Seats
1	2	3
1	Applied Electronics	1200
2	B.Tech (Agriculture Engineering)	46
3	Architecture	130
4	Bio-medical Engineering	100
5	Bio-Technology	240
6	Civil Engineering	1712
7	Chemical Engineering	150
8	Automobile Engineering	240
9	Computer Science & Engineering	4760
10	Diary Science & Technology	23
11	Electronics and Communication	5795
12	Electrical and Electronics	3450
13	Electronics & Instrumentation	300
14	Instrumentation and Control Engineering	120
15	Industrial Engineering	30
16	Information Technology	2295
17	Mechanical (Automobile)	240
18	Mechanical (Engineering)	3291
19	Mechanical (Production Engineering)	90
20	Polymer Engineering	60
21	Production Plant Engineering	90
22	Printing Technology	30
23	Bio Technology & Bio Chemical Engineering	60
	Total	24452

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.39

Course-wise Annual Intake of Students in Government and Aided Engineering Colleges at Post Graduate Level - 2004-05 to 2005-06

SI.No.	Name of Course	Annual (Intake In Nos.)					
		2004-05			2005-06		
		Govt.	Aided	Total	Govt.	Aided	Total
1	2	3	4	5	6	7	8
1	Civil Engineering	67	8	75	67	8	75
2	Mechanical Engineering	46	7	53	46	7	53
3	Electrical Engineering	36	0	36	36	0	36
4	Electronics & Communication	24	0	24	42	0	42
5	Architecture	7	0	7	7	0	7
6	Chemical Engineering	8	0	8	8	0	8
	Total	188	15	203	206	15	221

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.40

University-wise Details of Teachers in Govt & Aided Engineering Colleges in Kerala: 2005-06

Sl. No	Name of University	No. of Teachers			
		Government		Aided	
		Permanent	Temporary	Permanent	Temporary
1	2	3	4	5	6
1	University of Kerala	642	0	353	0
2	Mahatma Gandhi University	350	0	350	0
3	University of Calicut	640	0	350	0
4	Kannur University	394	0	0	0
5	CUSAT	*	*	*	*
6	Agricultural University	*	*	*	*
	Total	2026	0	1053	0

Source: Directorate of Technical Education, Thiruvananthapuram.

* Data not available.

Appendix 11.41
Trade-wise Annual Intake of Students in Polytechnics - 2006-07

Sl.No.	Name of Trade	Sanctioned Intake	Actual Intake
1	2	3	4
1	Civil Engineering	980	980
2	Mechanical Engineering	1310	1310
3	Electrical Engineering	970	970
4	Electronics	1770	1770
5	Chemical Engineering	90	90
6	Automobile	240	240
7	Textile Technology	160	160
8	Computer Engineering	1640	1640
9	Instrument Technology	110	110
10	Polymer Technology	140	140
11	Computer hardware Maintenance	470	470
12	Tool & Die making	90	90
13	Electronic Production	120	120
14	Architecture	70	70
15	Electronics & Communication	380	380
16	Electrical & Instrumentation	320	320
17	Wood A2 Paper Technology	40	40
18	Painting Technology	70	70
19	Commercial Practice	300	300
20	Electronics & Avionics	50	50
21	CA & BM	260	260
22	Bio Medical Engineering	40	40
23	Information Technology	40	40
	Total	9660	9660

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.42
Annual Intake and Students Strength in Government Polytechnics
in Kerala: 2004-05 to 2006-07

Year	No of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2004-05	43	21708	2412	24120	7128	792	7920
2005-06	43	22068	2452	24520	7340	820	8160
2006-07	43	22032	2448	24480	7344	816	8160

Source: Directorate of Technical Education, Thiruvananthauram.

Appendix 11.43
Annual Intake and Students Strength in Aided Polytechnics
in Kerala: 2004-05 to 2006-07

Year	No of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2004-05	6	4032	448	4480	1360	140	1500
2005-06	6	4059	451	4510	1350	150	1500
2006-07	6	4050	450	4500	1340	160	1500

Source: Directorate of Technical Education, Thiruvananthauram.

Appendix 11.44
Annual Intake and Students Strength in Polytechnics
in Kerala: 2004-05 to 2006-07

Year	No of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2004-05	49	25740	2860	28600	8488	932	9420
2005-06	49	26127	2903	29030	8690	970	9660
2006-07	49	26082	2898	28980	8684	976	9660

Source: Directorate of Technical Education, Thiruvananthauram.

Appendix 11.45

Number of Students and Teachers in Polytechnics 2004-05 & 2005-06

Type of Institutions	Students (in Nos)						Teachers (in Nos)					
	2004-05			2005-06			2004-05			2005-06		
	Boys	Girls	Total	Boys	Girls	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	11	12	13			
1. Government	15400	8700	24100	22032	2448	24480	1330	80	1410	1330	80	1410
2. Private (Aided)	2670	1500	4170	4050	450	4500	246	73	319	246	73	319
Total	18070	10200	28270	26082	2898	28980	1576	153	1729	1576	153	1729

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.46
Number of SC/ST Students and SC/ST Teachers in Polytechnics 2004-05 & 2005-06

Type of Institutions	Students (in Nos)						Teachers (in Nos)					
	2004-05			2005-06			2004-05			2005-06		
	Boys	Girls	Total	Boys	Girls	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	11	12	13			
1. Government	1928	482	2410	1958	490	2448	90	15	105	88	14	102
2. Private (Aided)	334	83	417	441	9	450	0	0	0	0	0	0
Total	2262	565	2827	2399	499	2898	90	15	105	88	14	102

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.47
Total Seats in Diploma Courses (Self Financing): 2006-07

Sl.No.	Name of Trade	No of Seats
1	2	3
1	Applied Electronics	185
2	Medical Electronics	160
3	Computer Hardware Maintenance	285
4	Telecommunication Technology	155
5	Automobile	120
6	Computer	120
7	Electronics	120
8	Electronics & Communication	170
9	Architecture	30
10	Quantity Surveying & Construction Management	30
11	Bio Medical	60
12	Electronics & Instrumentation	60
13	Tool & Dye	60
14	Mechanical Engineering	60
	Total	1615

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.48
Trade-wise Annual Intake of Students in Technical High Schools: 2006-07

Sl.No.	Name of Trade	Sanctioned Intake	Actual Intake
1	Electronics	NA	260
2	Electro Plating	NA	55
3	Welding	NA	375
4	Fitting	NA	400
5	Turning	NA	235
6	Maintenance and Repair of Two/Three Wheelers	NA	155
7	Survey	NA	115
8	TV Maintenance and Repair	NA	120
9	Motor Mechanics	NA	135
10	Electrical Wiring	NA	285
11	Refrigeration and Air Conditioning	NA	50
12	Rubber Technology	NA	20
13	Composing, Proof Reading and Book Binding	NA	30
14	Plumbing	NA	30
15	Masonary and Concrete Work	NA	15
16	Soap and Candle Making	NA	15
	Total	NA	2295

Source: Directorate of Technical Education, Thiruvananthapuram.

NA: Not Available.

Appendix 11.49
Number of Students and Teachers in Technical High Schools
2004-05 to 2006-07

Year	No of Students			No of Teachers		
	Boys	Girls	Total	Male	Female	Total
1	2	3	4	5	6	7
2004-05	5625	630	6255	840	191	1031
2005-06	5630	625	6255	835	180	1015
2006-07	5674	631	6305	837	178	1015

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.49(a)
Number of SC Students and SC Teachers in Technical High Schools
2004-05 to 2006-07

Year	No of Students			No of Teachers		
	Boys	Girls	Total	Male	Female	Total
1	2	3	4	5	6	7
2004-05	450	50	500	97	40	137
2005-06	440	60	500	98	42	140
2006-07	439	65	504	102	48	150

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.49(b)
Number of ST Students and ST Teachers in Technical High Schools
2004-05 to 2006-07

Year	No of Students			No of Teachers		
	Boys	Girls	Total	Male	Female	Total
1	2	3	4	5	6	7
2004-05	106	19	125	23	10	33
2005-06	105	20	125	27	8	35
2006-07	107	19	126	28	12	40

Source: Directorate of Technical Education, Thiruvananthapuram.

Appendix 11.50
Department wise Details of Courses in Cochin University of
Science & Technology- 2005

Sl. No.	Name of the Courses	Duration of courses	Sanctioned Intake	Actual Intake
1	2	3	4	5
FACULTY OF ENGINEERING				
1	B.Tech Civil Engineering	8 Sem.	130	130
2	B.Tech Computer Science and Engg.	8 Sem.	150	150
3	B.Tech Electrical & Electronics Engg.	8 Sem.	120	120
4	B.Tech Electronics & Comm.Engineering	8 Sem.	150	150
5	B.Tech Mechanical Engineering	8 Sem.	150	150
6	5 year Integrated MSc Software Engg (No admissions in the current Year)	10 Sem.	40	40
7	B.Tech Information Technology	8 Sem.	90+60	90+60
8	B.Tech. Safety & Fire Engg.	8 Sem.	30	30
9	M.Tech Chemical Engg.	5 Sem.	15	15
10	M.E by research (admissions only for Civil, Mechanical and Electronics Engg.)	5 Sem. (Part time)	Variable	Variable
FACULTY OF ENVIRONMENTAL STUDIES				
12	Stream I. Env. Engg. Stream II Env.Bio tech	4 Sem. 4Sem.	6 6	6 6
13	Ph D		Variable	Variable
FACULTY OF HUMANITIES				
14	Certificate programmes in French/ German/Japanese/Russian	1 Year	25	25 each
15	Diploma in Communicative English	1 Years	25	25
16	Diploma Programmes in French/German/Japanese/Russian	1 Years	10	10 each
17	Diploma in Functional Arabic	1 Years	20	20
18	Integrated Diploma in French/German/Japanese/Russian	1 Years	20	20 each
19	M.A Translation in German/Russian	4 Sem.	5	5each
20	M.A Hindi Language and Literature	4 Sem.	28	28
21	M Phil Hindi	2 Sem.	10	10
22	Reporting in Hindi	1 Year	28	28
23	Ph D		Variable	Variable
FACULTY OF LAW				
24	LLB	6 Sem.	60	60
25	LLM	4 Sem.	36	36
26	PhD		Variable	Variable
FACULTY OF MARINE SCIENCES				
27	MSc (Industrial Fisheries)	4 Sem.	16	16
28	MSc Meteorology	4 Sem.	12	12
29	M.Tech (Atmos.Sciences)	4 Sem.	10	10
30	MSc. Hydrochemistry	4 Sem.	12	12
31	M.Phil Chemical Oceanography	2 Sem.	6	6
32	MSc Marine Biology	4 Sem.	19	19
33	M.Phil Life Sciences	2 Sem.	6	6
34	MSc Marine Geology	4 Sem.	10	10

Contd....

Sl. No.	Name of the Courses	Duration of courses	Sanctioned Intake	Actual Intake
1	2	3	4	5
35	MSc Marine Geophysics	2 Years	10	10
36	PG Diploma in Coastal Zone Management (No admission in the current year)	4 Sem.	16	16
37	MSc Oceanography	4 Sem.	12	12
38	M.Tech Ocean Technology	4 Sem.	8	8
39	Ph D		Variable	Variable
FACULTY OF SCIENCE				
40	MSc Applied Chemistry	4 Sem.	12	12
41	M Phil Chemistry	2 Sem.	9	9
42	M.Tech Industrial Catalysis	4 Sem.	10	10
43	M.Sc Biotechnology	4 Sem.	10	10
44	MSc Mathematics	4 Sem.	20	20
45	Computer Applications (offered only odd years)	4 Sem.	15	15
46	MSc Physics	4 Sem.	25	25
47	M Phil Physics	2 Sem.	8	8
48	MSc Statistics (offered only in even years)	4 Sem.	15	15
49	M.Tech Engg. Statistics	4 Sem.	8	8
50	Ph D		Variable	Variable
FACULTY OF SOCIAL SCIENCES				
51	M.Phil Applied Economics	2 Sem	10	10
52	MBE (Master of Business Economics)	4 Sem	15	15
53	MBA (Full time)	4 Sem	50	50
54	MBA (Part time)	6 Sem	30	30
55	MIB (Master of International Business)	4 Sem.	30	30
56	M.Phil (Commerce)	2 Sem	6	6
57	Ph D		Variable	Variable
FACULTY OF TECHNOLOGY				
58	5 year Integrated MSc in Photonics	10 Sem.	20	20
59	MCA	6 Sem.	50	50
60	M Tech Electronics (with specialization in Digital Electronics Microwave and Radar Electronics)	4 Sem.	20	20
61	MSc Electronics Science (with specialization in Artificial Intelligence, Robotic Microwave Electronics and Computer Technology)	4 Sem.	25	25
62	B.Tech Instrumentation	8 Sem.	28	28
63	B.Tech Polymer Science & Rubber Technology	8 Sem.	20	20
64	M Tech Polymer Technology	4 Sem.	10	10
65	B Tech Naval Architecture & ship Building	8 Sem.	24	24
66	M Tech Computer Aided Structural analysis and Design	4 Sem.	15	15
67	M Tech Opto Electronics & Laser Technology	4 Sem.	10	10
68	M.Phil Photonics	2 Sem.	6	6
69	MCA	6 Sem.	30	30
70	M Tech Computer & Information Science	4 Sem.	14	14
71	M.Tech Software Engineering	4 Sem.	13	13
72	MCA	6 Sem.	60	60
73	Ph D		Variable	Variable

Source: Cochin University of Science & Technology

Appendix 11.51

ITI wise details of seat strength and enrolment in Governemnt ITI's

Sl. No	Name of Institution	Total Seat Strength			Total Enrolment			Women			SC			ST		
		2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	ITI D'Puram	690	690	690	677	668	636	61	93	98	70	90	126	5	1	1
2	Aryanad	57	57	57	54	56	55	2	5	7	27	29	35	2	1	6
3	Chakkai	857	800	800	763	831	764	30	70	54	51	100	80	4	8	3
4	Kazhakkuttam(w)	233	233	233	228	225	233	228	225	233	28	24	25	1	1	--
5	Attingal	523	469	570	460	308	564	41	14	43	59	25	71	2	--	1
6	Chandanathope, Kollam	617	673	640	556	649	540	33	68	42	42	60	53	5	5	2
7	Kollam(w)	257	257	257	242	212	212	242	212	212	30	30	32	3	2	--
8	Chathannoor	57	57	57	57	55	55	22	17	17	6	5	8	3	3	--
9	Basic Training Centre (BTC,Kollam)	95	110	110	88	100	110	8	5	8	12	9	11	2	2	--
10	Chengannur	665	741	741	613	708	580	24	53	51	70	100	119	6	8	3
11	(W) Chengannur	96	106	106	88	97	103	88	97	103	24	20	24	3	2	1
12	Chenneerkara	114	114	114	103	105	110	15	8	21	14	10	18	2	1	0
13	Palliccathode	228	228	371	219	196	305	19	15	16	31	31	23	6	2	5
14	Ettumanoor	552	596	596	548	585	558	19	39	21	60	58	51	8	2	5
15	Kattappana	138	138	138	134	134	128	3	9	5	14	20	14	2	1	3
16	Kalamassery	480	590	590	475	587	542	7	41	36	44	71	70	9	11	7
17	(W) Kalamassery	110	110	110	96	81	90	96	81	90	15	10	17	2	-	0
18	Chalakydy	580	580	580	550	572	558	35	49	56	58	78	74	4	4	2
19	(W)Chalakkudy	96	96	96	86	84	83	86	84	83	12	15	19	--	1	0
20	Mala	120	120	120	115	108	106	23	26	25	16	16	17	--		0
21	Malampuzha	510	560	560	487	554	493	37	48	47	56	79	79	6	5	6
22	(W) Malampuzha	96	72	110	86	65	109	86	65	109	9	8	8			0
23	Kuzhalmannam	98	98	98	95	92	91	5	8	15	10	6	10		2	0
24	Arecode	210	242	242	187	228	190	29	28	24	15	39	20	3	0	0
25	Nilambur	38	38	38	38	38	38	10	8	2	4	4	30	2	3	0
26	Kalpetta	68	68	114	68	54	113	8	4	12	6	2	18	3	4	0
27	Kozhikode	480	510	510	473	496	499	51	54	46	49	68	43	1	4	4
28	(W)Kozhikkode	192	192	219	165	181	210	165	181	210	15	23	38	2	3	0
29	Quilandy	44	44	44	38	38	38	2	4	6	2	6	4	1	2	0
30	Kannur	560	640	560	558	626	524	34	63	54	66	66	62	3	7	6
31	(W) Kannur	96	96	96	86	85	84	86	85	84	8	6	7		--	1
32	Kasargode	96	80	210	89	65	186	25	19	27	18	5	10	7	--	0
33	Kayyur	110	124	124	40	101	118	--	43	38		7	8		1	3
	Total	9163	9529	9901	8562	8984	9025	1620	1821	1895	941	1120	1224	97	86	59

Appendix 11.52
District-wise Details of Trainees admitted during 8/2005 in ITI/ITC/SCDD

(Nos)

Sl.No	District	No. of Trainees admitted		SC		ST		Women		SCDD/ STDD	PH
		ITI	ITC	ITI	ITC	ITI	ITC	ITI	ITC	ITC	
1	2	3	4	5	6	7	8	9	10	11	12
1	Thriuvananthapuram	2252	1876	337	110	11	1	435	401	169	2
2	Kollam	917	2686	104	176	2	0	278	424	94	3
4	Alappuzha	683	1655	143	331	4	0	154	227	65	3
3	Pathanamthitta	110	1076	18	98	18	19	21	158	53	1
5	Idukki	128	254	14	10	3	4	5	43	16	0
6	Kottayam	863	923	88	54	10	2	54	150	50	2
7	Ernakulam	632	1960	87	100	7	2	126	158	33	1
8	Trissur	747	1259	110	29	2	0	164	64	167	5
9	Palakkad	693	548	97	20	6	2	171	15	70	0
10	Malappuram	228	564	48	10	0	2	26	7	45	0
11	Kozhikode	747	1187	85	22	4	0	262	172	37	0
12	Wayanad	113	127	18	4	0	7	12	34	0	0
13	Kannur	608	534	69	10	7	4	138	70	31	2
14	Kasaragod	304	157	37	0	13	0	68	38	35	1
	Total	9025	14806	1255	974	87	43	1914	1961	865	20

Source:- Industrial Training Department

Appendix 11.53

Trade wise in take and out turn in Govt. ITI's during 2005-06 as on 30-11- 2006 (1 Year Course)

(in Nos.)

Sl.No.	Name of trade	Students admitted in 2005						students passed					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Plumber	429	-	43	--	4	--	333	--	34	--	3	0
2	Mech.Diesel	268	4	28	1	3	1	158	2	15	1	2	0
3	Secretarial Practice	--	54	0	7	0	0	0	40	--	4	-	0
4	COPA	162	435	29	56	1	2	129	419	20	51	1	2
5	Steno (English)	123	202	17	44	1	0	55	185	6	39	-	1
6	Steno (Hindi)	4	62	--	4	1	0	3	32	0	1	1	--
7	Dress Making	0	94	--	14	0	0	0	88	0	9	-	--
8	Welder	816	--	104	0	3	0	502	0	58	0	1	--
9	Hair and Skin care	0	0	0	0	0	0	0	0	0	0	0	
10	Foundrymen	142	0	25	0	0	0	51	0	0	8	0	--
11	DTPO	0	65	0	8	1	0	0	60	0	7	0	
12	F.H.T	0	0	0	0	0	0	0	0	0	0	0	
13	Upholstery	27	0	3	0	0	0	0	0	0	0	0	--
14	SMW	298	29	30	10	2	0	123	4	11	0	0	--
15	Carpenter	420	0	34	0	1	0	247	0	21		0	
16	P.P.O	64	14	9	3	0	0	24	7	4	1	0	
17	Mech. Tractor	76	--	13	0	0	0	33	0	0			
18	Mech. Auto Electrical and Electronics	0	0	0	0	0	0	0	0	0			
19	Sanitary Hardware Fitter	11	0	0	0	0	0	0	0	0			
20	Front Office Assistant	3	10	0	1	0	0	0	0	0			
21	Health Sanitary Inspector	12	31	3	3	0	0	0	0	0			
22	Driver cum Mach	67	0	9	0	0	0	0	0	0			
23	Diarying	15	2	1	0	0	0	0	0	0			
24	Network Tach	16	1	0	0	0	0	0	0	0			
25	Data Entry Operator	15	3	0	0	0	0	0	0	0			
26	Architectural Asst.	3	27	5	1	0	0	0	0	0			
	Total	2971	1033	353	152	17	3	1658	837	169	121	8	3

Source: Industrial Training Department

Appendix 11.54

Trade wise in take and out turn in Government ITI's during 2004-06 as on 30.11.2006 (two year course)

(in Nos)

Sl.No.	Name of Trade	Students admitted in 2004						Students passed.					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	MRTV	314	120	61	21	2	1	167	52	25	11	2	0
2	D/Civil	172	180	20	28	4	2	125	150	7	24	0	2
3	D/Mech	72	30	11	5	--	--	40	14	4	3	0	0
4	MRAC	283	24	67	12	1	0	188	11	32	1	0	0
5	Surveyor	52	80	10	9	0	0	27	60	3	3	0	0
6	Fitter	688	10	78	12	2	0	537	9	41	4	3	0
7	Wireman	427	0	56	0	1	0	251	0	24	0	1	0
8	Electronic Mech.	393	255	75	59	4	0	202	139	24	17	1	0
9	Electrician	481	88	46	14	2	0	238	17	15	5	2	0
10	MMV	524	12	53	10	10	0	409	8	49	2	6	0
11	Turner	355	1	45	0	1	0	277	0	32	0	1	0
12	Mechinist	303	13	35	7	1	0	210	10	15	5	0	0
13	Painter General	85	4	15	0	1	0	72	2	11	0	0	0
14	Instrument Mech.	82	12	5	1	1	0	63	9	5	0	1	0
15	Watch and Clock Maker	0	0	0	0	0	0	0	0	0	0	0	0
16	Electro Plater	0	0	0	0	0	0	0	0	0	0	0	0
17	MM Tol Maintenance	8	3	1	0	0	0	0	0	0	0	0	0
18	Agriculture Mechinery	15	4	3	0	0	0	13	1	1	0	0	0
19	Mechanical Industrial Electronics	0	16	0	3	0	2	0	0	0	0	0	0
	Total	4254	852	581	181	30	5	2819	482	288	75	17	2

Source: Industrial Training Department

Appendix 11.55

New Trades Introduced during the last 3 years as part of Modernisation

Sl.No.	Name of ITI	Trade	Unit
Year 2004			
1	ITI Chackai, TVPM	1. Sanitary Hasrdware Fitter 2. Front office Assistant	1 1
2	ITI Kazhakkuttom, TVPM	Hospital House Keeping	2
3	ITI Chathannoor	Electrician	1
4	ITI Kollam	Driver cum Mechanic Data Entry Operator	1 1
5	ITI Kollam (w)	Hospital House Keeping Mechanic Computer	1 1
6	ITI Chengannoor	Horticultural Driver cum Mechanic	1 1
7	ITI Ettumanoor	Health Sanitary Inspector Driver Cum Mechanic	1 1
8	ITI Pallickathode	Dairyig	1
9	ITI Kalamassery	Data Entry Operator Sanitary Hardware Fitter	1 1
10	ITI Kalamassery(w)	Front Office Assistant Sanitary Hardware Fitter	1 1
11	ITI Mala	MECH Computer Hardware	1
12	ITI Malampuzha (w)	Health Sanitary Inspector	1
Year 2005			
1	ITI Kannur	1. Mechanic Mechatronics. 2. Building Maintenance	1 1
2	ITI Kozhikode	Mechanic Computer Hardware Mechanic Auto Electricals& Electronics	1 1
3	ITI Areacode	Life Mechanic Operator	1
4	ITI Ettumanoor	Architectural Assistant	1
5	ITI Pallickathode	Mechanic Computer Hardware Front Office Assistant	1 1
6	ITI Kollam	Lift Mechanic Operator Health Sanitary Inspector	1 1
7	ITI Thiruvananthapuram	Mechanic Computer Hardware Network Technician	1 1
8	ITI Dhanavuchapuram	Mechanic Computer Hardware Mechanic Consumer Electronics Helath Sanitary Inspector Driver -cum- Mechanic	1 1 1 1
9	ITI (w) Kozhikode	Fashion Technology Mechanic Computer Hardware Front Office Assistant Data Entry Operator	1 1 1 1
10	ITI Kalamassery	Driver- cum- Mechanic	1
11	ITI Kattappana	Front Office Assistant	1
12	ITI Chengannoor	Mechanic Auto Electrical & Electronics	1
13	ITI(w) Kollam	Network Technic Data Entry Operator Front Office Assistant	1 1 1
Year 2006			
1	Chengannoor ITI	Data Entry Operator Dental Lab Technician Mech. Computer Hardware	1 1 1
2	ITI Kayyur	Electronic Mechanic	1

Appedix 11.56
Institution-wise Details of Apprentices Under Industrial Training Department

Sl.No	Name of Insitutue	Seat Strength		Apprentices Trained			
		2005	2006	2005		2006	
				Boys	Girls	Boys	Girls
1		3	4	5	6	7	8
1	Thiruvananthapuram R.I.C	1078	1196	1008	70	1101	95
2	Kollam „	668	686	593	45	553	113
3	Allapuzha „	605	613	566	38	564	48
4	Kottayam „	593	639	315	40	400	43
5	Kalamassery „	1320	1398	1238	82	1321	77
6	Thrissur „	770	767	702	68	690	77
7	Palakkad „	656	886	503	41	629	61
8	Kozhikode „	465	466	272	22	128	23
9	Kannur „	320	374	274	46	297	77
10	Chenneerkara I.T.I	219	216	171	48	169	47
11	Kattappana „	206	252	111	14	47	9
12	Areacode „	301	264	299	2	257	7
13	Kasaragode „	69	69	40	6	40	9
14	Kalpatta „	68	73	35	8	37	1
	Total	7338	7899	6127	530	6233	687

Source: Industrial Training Department

RIC- Related Instruction Centres

Appendix 12.1
District wise details of infrastructure under Co-operative Sector - 2006

Sl. No.	Name of District	No. of hospitals	No. of beds	No. of dispensaries	No. of doctors		No. of other Paramedical Staff including Nurses		No. of patients treated during 2006		Remarks
					Hospitals	Dispensaries	Hospitals	Dispensaries	IP	OP	
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	3	28	Nil	1	Nil	6	Nil	1365	10635	2 Hospitals under Liquidation
2	Kollam	6	119	Nil	14	Nil	73	Nil	2167	70434	1 Hospital under Liquidation
3	Pathanamthitta	1	25	Nil	1	Nil	7	Nil	1390	16320	
4	Alappuzha	7	18	Nil	2	Nil	11	Nil	250	5407	4 hospitals and one dispensary are not working and 1 hospital under liquidation
5	Kottayam	6	34	Nil	9	Nil	41	Nil	1308	37541	3 hospitals dormant and 1 under liquidation
6	Idukki	1	120	Nil	8	Nil	38	Nil	2251	40210	
7	Ernakulam	4	519	Nil	65	Nil	171	Nil	13668	130115	3 hospitals are not functioning
8	Thrissur	8	539	1	77	1	235	5	36985	123365	2 hospitals are not functioning
9	Palakkad	2	112	Nil	18	Nil	29	Nil	7216	47069	
10	Malappuram	9	745	3	63	1	381	3	24226	253347	1 hospital dormant, 4 hospitals and 2 dispensaries are under liquidation
11	Kozhikode	14	563	Nil	110	Nil	240	Nil	14318	262718	2 hospitals dormant and 1 under liquidation
12	Wayanad	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	All the 3 are dormant
13	Kannur	15	2454	3	415	4	875	4	277109	1003967	3 hospitals dormant, 3 not functioning
14	Kasaargode	12	171	2	22	Nil	53	Nil	7573	85637	5 hospitals, 1 dispensary are not functioning, 1 hospital and 1 dispensary are dormant
	Total	88	5447	9	805	6	2160	12	389826	2086765	

Source: Registrar of Co-operative societies

Appendix 12.2

District wise details of infrastructure in the Directorate of Insurance Medical Services - 2006

Sl.No.	Name of District	No.of hospitals	No. of beds	No. of dispensaries	No.of doctors		No. of other Paramedical Staff including Nurses		No.of patients treated during 2006		
					Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals (OP)	Dispensaries (OP)	Hospitals (IP)
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	1	152	11	28	25	105	55	22037	283780	1065
2	Kollam	2	238	30	41	102	210	137	43366	774017	2336
3	Pathanamthitta	0	0	2	0	8	0	13	0	51750	0
4	Alappuzha	1	60	14	16	24	58	75	21407	361154	712
5	Kottayam	1	65	8	16	14	59	49	24310	206400	837
6	Idukki	0	0	1	0	1	0	5	0	19210	0
7	Ernakulam	2	220	20	45	47	145	109	45420	546945	1976
8	Thrissur	2	212	15	35	29	130	87	41210	387116	1409
9	Palakkad	1	50	7	15	10	42	35	19487	19375	157
10	Kozhikode	1	100	12	21	34	82	72	24801	309597	520
11	Malappuram	0	0	5	0	5	0	38	0	128863	0
12	Kannur	1	56	11	15	15	35	49	23330	280706	253
13	Kasaargod	0	0	1	0	1	0	4	0	22310	0
	Total	12	1153	137	232	315	866	728	265368	3391223	9265

Source: Directorate of Insurance Medical Services

Appendix 12.3
District -wise Medical Institutions and beds - Government Sector (2006)

(NOS.)

Sl. No.	District	Allopathy		Ayurveda		Homoeopathy		Total		Beds per lakh of population
		Institutions	Beds	Institutions	Beds	Institutions	Beds	Institutions	Beds	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	117	8225	81	919	56	285	254	9429	292
2	Kollam	89	2189	62	190	40	75	191	2454	95
3	Pathanamthitta	64	1755	45	150	26	25	135	1930	157
4	Alappuzha	88	4176	66	180	44	75	198	4431	211
5	Kottayam	83	3810	52	150	47	175	182	4135	212
6	Idukki	64	1235	37	160	37	50	138	1445	128
7	Ernakulam	115	4550	75	419	54	85	244	5054	163
8	Thrissur	123	4526	96	446	40	25	259	4997	168
9	Palakkad	112	2474	81	160	40	25	233	2659	101
10	Malappuram	123	2520	80	370	44	50	247	2940	81
11	Kozhikode	95	5170	60	210	49	175	204	5555	193
12	Wayanad	41	913	26	170	20	25	87	1108	140
13	Kannur	105	2768	69	316	40	25	214	3109	129
14	Kasaragode	60	1094	41	100	24	75	125	1269	106
	Total	1279	45405	871	3940	561	1170	2711	50515	159

NB:(1)Including medical college hospitals

(2)Population based on 2001 Census

Appendix 12.5

District -wise details of IP,OP, Major/Minor operations conducted in Hospitals/Dispensaries under DHS (2004-05 and 2005-06)

Sl.No.	District	2004-05				2005-06			
		IP	OP	Operations conducted		IP	OP	Operations conducted	
				Major	Minor			Major	Minor
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	181218	6191280	16286	32367	186772	6601981	14443	38699
2	Kollam	133347	2150276	17586	18053	148207	2252159	17228	11294
3	Pathanamthitta	47544	2126777	5887	5668	82690	2426477	8798	11280
4	Alappuzha	85978	3638218	6164	14054	85842	4804840	3506	10298
5	Kottayam	103131	2631071	2940	13191	87548	2020963	1934	6031
6	Idukki	35474	1491393	1545	2683	28427	1645565	2192	7657
7	Ernakulam	169748	4337051	5903	20464	311894	4208722	10813	10618
8	Thrissur	111586	3593704	4736	32894	117165	3655041	4972	34538
9	Palakkad	156230	2975611	4402	12365	359291	3178223	4418	11119
10	Malappuram	82929	3720275	3333	27253	114467	3311879	1756	11975
11	Kozhikode	133523	3981854	12304	28406	128257	4043513	12445	59531
12	Wayanad	84053	1352340	2712	1318	84892	1365863	2739	4096
13	Kannur	72289	2010652	6342	9263	150535	2875835	6631	10041
14	Kasargode	34709	1139703	1365	3754	34069	1228335	1938	5642
	Total	1431759	41340205	91505	221733	1920056	43619396	93813	232819

Source: Directorate of Health Services

Appendix 12.4
Medical Institutions and Beds in Kerala - Category-wise - 2005-06

Sl. No.	District	Hospitals		PHCs including MCH Centres		Community Health Centres		Dispensaries		T.B. Clinics/ Centres		Grand in aid Institutions		Sub centres	Leprosy Control Clinics/ Units
		No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Thiruvananthapuram	18	3752	77	490	10	528	9	34	1		3	245	455	1
2	Kollam	9	1434	65	342	9	413	..	..	2		3	325	449	4
3	Pathanamthitta	8	1185	51	504	3	66	1	..	1		4	863	260	..
4	Alappuzha	10	2457	65	493	8	307	1	..	2	36	4	750	368	1
5	Kottayam	12	1506	60	544	8	426	..	..	2	48	6	1021	359	..
6	Idukki	3	488	52	528	6	219	2	..	1	..	0	0	231	..
7	Ernakulam	22	3010	77	935	10	485	5	80	1	40	3	1010	351	..
8	Thrissur	16	2558	87	640	9	323	5	6	1	..	1	170	492	4
9	Palakkad	8	1147	82	790	12	537	8	..	1	..	3	187	471	1
10	Malappuram	7	1302	94	760	11	406	6	..	2	52	2	70	508	3
11	Kozhikode	8	2115	69	311	11	364	3	..	1	..	0	0	389	2
12	Wayanad	3	374	25	318	5	221	7	..	1	..	0	0	204	..
13	Kannur	9	1693	79	761	7	244	9	70	1	..	0	0	352	..
14	Kasargode	3	644	46	259	5	191	3	..	1	..	0	0	205	2
	Total	136	23665	929	7675	114	4730	59	190	18	176	29	4641	5094	18

Source: Directorate of Health Services

Excluding Medical Colleges and attached Institutions

Appendix 12.6
Target and Achievement of Immunisation Programme

Sl. No	Item	Unit	2004-05		%	2005-06		%
			Target	Achievement		Target	Achievement	
1	2	3	4	5	6	7	8	9
	M.C.H. Programme							
a)	Immunisation Programme							
(I)	D.P.T	Dose	562410	558421	99.3	554704	536424	96.7
(ii)	Polio	Dose	562410	556564	99.0	554704	555479	100.1
(iii)	B.C.G.	Dose	562410	586706	104.3	554704	565879	102.0
(iv)	Measles	Dose	562410	539401	95.9	555072	542018	97.6
(v)	T.T for Pregnant women	Dose	622860	569963	91.5	560463	589527	105.2
(vi)	T.T. for 5 Years	Dose	520279	442144	85.0	511619	481521	94.1
(vii)	T.T. for 10 Years	Dose	548952	449880	82.0	511619	510971	99.9
(VIII)	T.T. for 16 Years	Dose	543726	421147	77.5	511619	499793	97.7
b)	Prophylaxis against nutritional anaemia							
(I)	Women	Dose	622860	539295	85.5	552979	562603	101.7
(ii)	children'	Dose	..				..
c)	Prophylaxis against Blindness due to vitamin A deficiency in children	Dose	1687230	1498655	98.8	1479465	1438987	97.3

Source: Directorate of Health Services

Appendix 12 .7
Number of Attack and Death due to Major Principal Diseases
during 2004 & 2005

Sl.No.	Name of Diseases	Attack		Death	
		2004	2005	2004	2005
1	2	3	4	5	6
1	Acute Diarrhoeal Diseases	541438	555368	17	5
2	Diphtheria	1	1	0	0
3	Acute Poliomyelitis	0	0	0	0
4	Tetanus-Others	13	5	0	1
5	Neonatal Tetanus	0	0	0	0
6	Whooping Cough	102	212	0	0
7	Measles	3091	3586	1	0
8	Chickenpox	14920	13024	8	8
9	Acute Respiratory Infection	8589630	9305118	195	272
10	Pneumonia	22395	21630	42	44
11	Enteric Fever	9451	7383	3	1
12	Dengue Fever	839	1046	7	8
13	Viral Hepatitis-A	6992	8265	2	8
14	Viral Hepatitis-B	795	669	8	7
15	Weils Disease(Leptospirosis)	1455	1716	76	92
16	Japanese Encephalitis	9	0	0	0
17	Menningococal Menningitis	75	21	4	5
18	Rabies(Hydrophobia)	27	26	27	26
19	Syphillis	72	59	0	0
20	Gonococcal Infection	40	277	0	0
21	Pulmonary Tuberculosis	20836	18722	187	204
22	All Other Diseases (including communicable and non communicable diseases)	24178063	26266559	7862	7439
	Total	33390244	36203687	8439	8120

Source: Directorate of Health Services

Appendix 12.8
District-wise details of Dengue Fever - 2005

(Nos.)

Sl.No.	District	Patients treated	Patients cured	Death reported
1	2	3	4	5
1	Thiruvananthapuram	512	512	0
2	Kollam	33	32	1
3	Pathanamthitta	22	22	0
4	Alappuzha	78	77	1
5	Kottayam	28	28	0
6	Idukki	78	78	0
7	Ernakulam	128	124	4
8	Thrissur	30	30	0
9	Palakkad	3	3	0
10	Malappuram	8	8	0
11	Kozhikode	9	9	0
12	Wayanad	4	3	1
13	Kannur	15	14	1
14	Kasaragode	98	98	0
	Total	1046	1038	8

Source: Directorate of Health Services

Appendix 12.9
Distirct-wise details of Leptospyrosis - 2005

(Nos.)

Sl.No.	District	Patients treated	Patients cured	Death reported
1	2	3	4	5
1	Thiruvananthapuram	115	115	0
2	Kollam	56	45	11
3	Pathanamthitta	74	66	8
4	Alappuzha	485	467	18
5	Kottayam	121	107	14
6	Idukki	172	165	7
7	Ernakulam	311	286	25
8	Thrissur	114	112	2
9	Palakkad	19	19	2
10	Malappuram	49	47	0
11	Kozhikode	57	57	0
12	Wayanad	24	24	0
13	Kannur	79	75	4
14	Kasaragode	40	39	1
	Total	1716	1624	92

Source: Directorate of Health Services

Appendix 12.10

Details of Blood Units Collected in Blood Banks- Kerala

Sl.No	Name of Category	Blood units collected (No.)		
		2004	2005	2006 till October
1	2	3	4	5
A	Government Sector			
1	Medical College Hospitals	81734	77707	63964
2	General Hospitals	7870	7088	6225
3	District Hospitals	13922	13513	11946
4	Women and Children Hospitals	899	1176	1381
5	Taluk Head Quarters Hospitals	13218	6063	6445
6	Other Hospitals	19477	23602	19445
	Sub Total	137120	129149	109406
B	Autonomous Institutions			
1	Regional Cancer Centre	7001	9450	10495
2	Sree Chitra thirunal Institute of Science and Technology	6317	6176	5068
	Sub Total	13318	15626	15563
C	Private Sector	145203	160738	148948
	Total (A+B+C)	295641	305513	273917

Source: Drugs Controller

Appendix 12.11

Medical and Para-medical Courses conducted in Govt. Medical Colleges with annual intake of Students

Sl.No.	Name of Courses	No.of seats in Medical Colleges				
		Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6	7
<i>Degree Courses</i>						
1	M.B.B.S.	200	200	150	100	150
2	B.D.S	40	40	40	--	--
3	B.Sc. Nursing	60	60	60	--	--
4	B.Pharm	60	20	--	--	--
5	B.Sc. MLT	24	--	--	--	--
	Sub Total	384	320	250	100	150
<i>Post Graduate Courses</i>						
1	M.Sc. Nursing	16	8	0	--	--
2	M.D.S.	23	16	--	--	--
3	M.D.Anaesthesia	4	2	2	1	--
4	M.D.Biochemistry	1	1	--	--	--
5	M.D.Forensic medicine	1	1	--	--	--
6	M.D.Dermatology and Venerology	1	2	1	1	--
7	M.D.General Medicine	7	6	4	1	2
8	M.D.Microbiology	1	1	--	--	--
9	M.D.Obstetrics and Gynaecology	4	4	4	1	--
10	M.D.Pathology	3	1	2	--	--
11	M.D.Pharmacology	2	2	--	--	--
12	M.D.Physiology	1	1	1	--	--
13	M.D.Paediatric	3	3	1	1	--
14	M.D.Psychiatry	1	1	2	--	--
15	M.D.Radio Diagnosis	1	2	--	--	2
16	M.D.Radiotherapy	1	--	--	--	--
17	M.D. Community Medicine	1	--	1	--	--
18	M.D.T.B. And Respiratory Diseases	2	2	2	--	--
19	M.S. Anatomy	1	1	2	--	--
20	M.S.Orthinolaryngology	1	1	1	--	--
21	M.S.General Surgery	10	6	4	1	--
22	M.S Orthopaedics	2	2	2	--	--
23	M.S.Ophthalmology	3	2	1	--	--
24	M.O.Physical Medicine	2	1	--	--	--
	Sub Total	92	66	30	6	4
<i>Super Speciality courses</i>						
1	Mch.Paediatric Surgery	2	2	--	--	--
2	Mch.Plastic Surgery	2	2	1	--	--
3	Mch. Genito Urinary surgery	2	2	1	--	--
4	Mch. Thorasic Surgery	2	2		--	--
5	Mch. Neuro Surgery	2	1	2	--	--
6	D.M.Gastro Enterology	1	--	--	--	--

Sl.No.	Name of Courses	No.of seats in Medical Colleges				
		Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6	7

Contd....

7	7. D.M.Neurology	1	1	..	--	--
8	D.M.Cardiology	2	1	2	--	--
9	Mch.Gastro Enterology	2	1	--	--	--
10	D.M.Nephrology	1	1	1	--	--
	Sub Total	17	13	7	0	0

Diploma Courses						
1	Diploma in Anaesthesia	4	3	3	1	--
2	Diploma in child Health	3	6	3	1	--
3	3. Diploma in Clinical Pathology	3	6	--	--	--
4	Diploma in Dermatology and Venerology	--	1	--	--	--
5	Diploma in Laryngology and Otology	4	3	1	--	--
6	D.M.R.D	1	2	--	--	--
7	D.M.R.T.	1	2	--	--	--
8	Diploma in Obstetrics and Gynaecology	6	6	9	1	--
9	Diploma in Ophthalmology	2	3	2	--	--
10	Diploma in Orthopaedic Surgery	4	3	3	--	--
11	Diploma in Physical Medicine and Rehabilitation	4	4	--	--	--
12	Diploma in Psychiatric Medicine	2	--	--	--	--
13	Diploma in Public Health	6	--	--	--	--
14	D.T.C.D	2	2	--	--	--
	Sub Total	42	41	21	3	0

Diploma / Certificate Courses.						
1	MLT Certificate(2 years)	60	50	15	15	15
2	Diploma in Radiological Technology (2 Years)	10	30	15	15	10
3	Ophthalmic Assistant Certificate(2 Years)	10	20	15	5	5
4	D.Pharm(2 years)	60	50	30	40	--
5	Dental Mechanic Certificate course(2 years)	5	10	--	--	--
6	Dental Hygienist Certificate Course	10	--	--	--	--
	Sub Total	245	190	95	70	105
	Grand Total	780	630	403	179	259

Source: Directorate of Medical Education

Appendix 12.12
District-wise details of Medical and Paramedical Personnel under DHS - 2005-06

Sl.No.	District	Medical Officers	Dentists	Senior Nurses	Junior Nurses	Lady Health Inspectors	Pharmacists	JPHN (ANMS)	Junior Health Inspectors	Health Inspectors	Population for one doctor
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram	445	7	305	1117	71	194	527	296	75	7269
2	Kollam	243	6	80	363	79	102	427	301	71	10634
3	Pathanamthitta	197	4	28	260	44	73	266	180	42	6252
4	Alappuzha	274	7	158	631	71	135	381	215	53	7684
5	Kottayam	257	5	161	645	61	109	328	220	51	7599
6	Idukki	143	4	24	167	59	63	315	223	56	7892
7	Ernakulam	369	10	171	657	76	148	427	265	64	8397
8	Thrissur	334	8	162	659	99	160	499	328	79	8909
9	Palakkad	285	6	73	408	80	127	515	294	71	9183
10	Malappuram	316	7	67	420	97	136	589	333	83	11486
11	Kozhikode	271	6	203	894	67	156	419	272	66	10622
12	Wayanad	122	3	28	166	34	46	205	126	30	6448
13	Kannur	310	4	102	484	83	132	423	290	74	7782
14	Kasaragode	160	4	31	182	41	61	249	168	38	7521
	Total	3726	81	1593	7053	962	1642	5570	3511	853	8545

Source: Directorate of Health Services

NB: Population Based on 2001 census

Appendix 12.13

Details of Personnel (Clinical/Non-clinical) in Medical Colleges - 2000-2006

Sl.No.	Category	No. of Clinical/Non Clinical personnel						
		2000	2001	2002	2003	2004	2005	2006
1	2	3	4	5	6	7	8	9
Medical Education								
1	Director and Professor							
2	Professor	202	207	207	189	189	189	219
3	Associate Professor	242	236	236	236	236	236	266
4	Assistant Professor	449	490	490	431	431	431	517
5	Tutor/Lecturer	711	1877	1877		613	613	854
	Sub Total	1604	2810	2810	856	1469	1469	1856
Nursing Education								
6	Director							
7	Professor	7	7	7	8	8	8	11
8	Associate Professor	18	17	17	16	16	16	21
9	Assistant Professor	27	25	25	23	23	23	29
10	Tutor	40	29	29	32	32	32	52
	Sub Total	92	78	78	79	79	79	113
M.L.T. Course								
11	Director	..	..	..	..
12	Assistant Professor	3	..	..	..			3
13	Tutor	5	3	5	9			5
14	Tutor Technician	14	..	..	..	9	9	
	Sub Total	22	3	5	9	9	9	8
Dental								
15	Principal	2	3	3	3	3	3	
16	Professor	16	16	16	17	17	17	30
17	Associate Professor	12	4	4	8	8	8	10
18	Assistant Professor	25	24	24	20	20	20	36
19	Tutor/Lecturer	44	43	43	45	45	45	66
	Sub Total	99	90	90	93	93	93	142
Pharmacy								
20	Director	1	5	5	5	5	5	
21	Professor	3	4	4	4	4	4	6
22	Associate Professor	7	5	5	4	4	4	9
23	Assistant Professor	13	12	12	12	12	12	14
24	Lecturer	30	27	27	28	28	28	35
	Sub Total	54	53	53	53	53	53	64
	Total	1871	3034	3036	1090	1703	1703	2183

Source: Directorate of Medical Education

Appendix 12.14
Registered Medical Practitioners

(Nos)

Sl.No.	System	Class of Registration	2005	2006
1	2	3	4	5
1	Modern Medicine	A	34200	35246
2	Homoeopathy	A	7465	7629
3	Ayurveda	A	8377	8712
4	Siddha	A	Nil	Nil
5	Unani	A	Nil	Nil

Source: Travancore-Cochin Medical Council

Appendix 12.16
Annual intake in different Nursing Courses - 2005-06

(Nos.)

Sl.No.	Name of Institutions	Institutions	Annual intake
1	2	3	4
I	Integrated General Nurse-cum-Midwives (3 year course)		
a)	Government Nursing schools	15	354
b)	Private Nursing schools	N.A	N.A
II	Junior Public Health Nurses (18 months)		
a)	Government Nursing schools	4	180
b)	Private Nursing schools	N.A	N.A

Source: Directorate of Health Services

Appendix 12.15
Registered Para Medical Practitioners

Sl.No	Category	2005	2006
1	2	3	4
1	Nurse	39858	41380
2	Midwife	40718	42236
3	Nurses and Midwives	43088	47624
4	Auxillary	14563	14990
5	Health Visitors	101	Nil

Source: Travancore-Cochin Medical Council

Appendix 12.17
District-wise distribution of Insitutions, Beds and Patients treated under Ayurvedic system of
Medicine in Kerala (2005-06)

(Nos.)

Sl. No.	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated in 2005		Doctors-2006
		2005	2006	2005	2006	2005	2006	2005	2006	Inpatients	Outpatients	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	14	14	285	285	64	64	78	78	4676	2402748	104
2	Kollam	9	9	190	190	53	53	62	62	3805	1831672	75
3	Pathanamthitta	5	5	150	150	40	40	45	45	1258	1022778	55
4	Alappuzha	10	10	180	180	56	56	66	66	1613	1495554	78
5	Kottayam	8	9	150	150	44	43	52	52	1617	1910338	65
6	Idukki	3	3	160	160	34	34	37	37	2056	800577	47
7	Ernakulam	13	13	280	280	61	61	74	74	3095	2298555	91
8	Thrissur	15	16	273	273	80	79	95	95	2479	2196126	109
9	Palakkad	6	6	160	160	75	75	81	81	1355	1333444	84
10	Malappuram	11	11	220	220	66	68	77	79	1355	905804	85
11	Kozhikode	7	7	210	210	53	53	60	60	1763	1805462	66
12	Wayanad	3	3	170	170	23	23	26	26	18947	605813	20
13	Kannur	6	6	216	216	62	62	68	68	1713	1388466	58
14	Kasaragode	5	5	100	100	36	36	41	41	899	724777	28
	Total	115	117	2744	2744	747	747	862	864	46631	20722114	965

Source: Directorate of Ayurveda

Appendix 12.18
Annual Intake of Students and Courses in Ayurveda Colleges

Sl.No.	Name of College	Annual Intake of Students	
		BAMS	P.G.Degree
1	2	3	4
Government			
1	Ayurveda Medical College, Thiruvananthapuram	70	57
2	Ayurveda Medical College, Trippunnithura	30	5
3	Ayurveda Medical College, Kannur	40	10
Government aided			
4	Vaidyaratnam Ayurveda college, Ollur	40	--
5	Vaidyaratnam P.S.Varrier Ayurveda college, Kottakkal	50	10
Total		230	82
Self-financing			
6	Pankajakasthuri Ayurveda Medical College, Kattakkada, Thiruvananthapuram	50	--
7	Parassinikadavu Ayurveda Medical College, Pappinisseri	50	--
8	Vishnu Ayurveda College, Shornur	50	--
9	Santhigiri Ayurveda Medical College, Palakkad	50	--
10	Nangelil Ayurveda Medical College, Kothamangalam	40	--
11	Santhigiri Siddha Medical College, Pothencode, Thiruvananthapuram	50	--
12	Amritha Ayurveda Medical College, Kollam	60	--
13	Sreenarayana Institute of Ayurveda studies and Research, Puthoor, Kollam	50	--
14	Mannam Sugar Mill Co-operative Ayurveda College, Pandalam	50	--
Total		450	--
Grand Total		680	82

Source: Directorate of Ayurveda Medical Education

Appendix 12.19

**District-wise Distribution of Institutions , Beds and Patients Treated under
Government Homoeopathy Directorate (2005 & 2006)**

(Nos.)

Sl. No.	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated in 2005		Doctors-2005
		2005	2006	2005	2006	2005	2006	2005	2006	Inpatients	Outpatients	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram	4	4	185	185	51	51	55	55	2662	1421146	63
2	Kollam	3	3	75	75	37	37	40	40	1182	1197851	44
3	Pathanamthitta	1	1	25	25	25	25	26	26	NR*	636262	27
4	Alappuzha	3	3	75	75	41	41	44	44	650	1250330	48
5	Kottayam	3	3	175	175	44	44	47	47	1311	1385705	54
6	Idukki	2	2	50	50	33	33	35	35	770	783285	38
7	Ernakulam	3	3	85	85	51	51	54	54	11284	1461929	59
8	Thrissur	1	1	25	25	39	39	40	40	593	1068412	42
9	Palakkad	1	1	25	25	39	39	40	40	387	754717	42
10	Malappuram	2	2	50	50	42	42	44	44	141	707339	47
11	Kozhikode	3	3	75	75	45	45	48	48	1005	709529	52
12	Wayanad	1	1	25	25	19	19	20	20	208	123886	22
13	Kannur	1	1	25	25	38	38	39	39	651	500547	41
14	Kasaragode	3	3	75	75	21	21	24	24	629	568990	28
	Total	31	31	970	970	525	525	556	556	21473	12569928	607

Source: Directorate of Homoeopathy

* IP is not working for want of infrastructure facilities

Appendix 12.20

Annual intake of students and courses in Homoeo Colleges

Sl.No.	Name of College	Annual intake of students		Nurse cum Pharmacist course
		BHMS	P.G.Degree	
1	2	3	4	5
	Government			
1	Homoeopathic Medical college, Thiruvananthapuram	50	30	60
2	Homoeopathic Medical college, Kozhikode	50	30	60
	Government aided			
3	Dr.Padiyar memorial Homoeopathic Medical college, Ernakulam	50	--	--
4	Athurasramam N.S.S. Homoeopathic Medical college, Kottayam	50	--	--
5	Sree Vidhyadhiraja Homoeopathic Medical college, Nemon	50	--	--
	Total	250	60	120

Source: Govt. Homoeo Medical College, Thiruvananthapuram

Appendix 12.21

Achievement of Family Welfare Programme (2005-06) District -wise

Sl.No.	District	Vasectomy	PPS	Minilap	Laprosopic	Total (4+5+6)	Cu -T	Nirodh supplied	Oral pills	Induced Abortion
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	107	14222	469	5061	19752	5320	1686087	27901	2606
2	Kollam	28	8071	349	709	9129	5454	1373249	34606	2999
3	Pathanamthitta	23	3905	734	349	4988	4333	891113	19150	738
4	Alappuzha	66	6011	573	843	7427	3734	883130	16565	930
5	Kottayam	473	4919	158	1391	6468	7672	646952	33948	1525
6	Idukki	139	6703	492	792	7987	4618	557186	21373	1371
7	Ernakulam	212	16410	490	2799	19699	7360	1025862	40364	3064
8	Thrissur	69	8024	673	3296	11993	6976	926151	45359	2632
9	Palakkad	61	8068	444	2529	11041	6918	943333	35409	1860
10	Malappuram	32	12334	448	544	13326	7981	1334053	46711	2832
11	Kozhikode	284	10747	1404	318	12469	5911	981672	23634	6920
12	Wayanad	11	3890	223	279	4392	3291	708203	15723	1342
13	Kannur	88	9600	450	489	10539	6486	1482383	29542	812
14	Kasargode	2	2311	269	994	3574	3171	446115	12241	733
	Total	1595	115215	7176	20393	142784	79225	13885489	402526	30364

Source: Directorate of Health Services

Appendix 12.22
District-wise Couple Protection Rate and Female
Reproductive Age Group - 2004

Sl.No.	District	Couple protection rate	Female reproductive age group (15-44) (in thousands)
1	2	3	4
1	Thiruvananthapuram	97.6	496.85
2	Kollam	79.01	363.4
3	Pathanamthitta	90.32	188.47
4	Alappuzha	66.76	272.48
5	Kottayam	78.1	259.5
6	Idukki	66.3	167.01
7	Ernakulam	70.13	361
8	Thrissur	71.15	426.4
9	Palakkad	64.12	367.87
10	Malappuram	49.6	575.67
11	Kozhikode	63.08	461.4
12	Wayanad	67.54	120.58
13	Kannur	61.83	376.45
14	Kasaragode	59.1	158.27
	State	72.1	4595.35

Source: Directorate of Health Services

Appendix 12.23

District wise Report of Suspected Chikungunya- 2006 (up to 13-12-2006)

(Nos.)

Sl.No.	District	Total No. of suspected Chikungunya cases treated	Total No. of suspected Chikungunya cases cured	Total No. of Death due to reported viral fever as on 13-12-2006	Cases under treatment (IP only)
1	2	3	4	5	6
1	Thiruvananthapuram	8301	8295	5	1
2	Kollam	159	159	0	0
3	Pathanamthitta	686	682	0	4
4	Alappuzha	57976	57848	74	54
5	Kottayam	149	148	1	0
6	Idukki	43	43	0	0
7	Ernakulam	1838	1832	0	6
8	Thrissur	93	92	0	1
9	Palakkad	756	756	0	0
10	Malappuram	12	12	0	0
11	Kozhikode	306	305	1	0
12	Wayanad	3	3	0	0
13	Kannur	21	21	0	0
14	Kasaragode	18	18	0	0
	State	70361	70214	81	66

Source: Directorate of Health Services

Appendix 13.1

Achievements under Major Housing Schemes (Nos) by Different Housing Agencies in Kerala

Sl.No.	Name of Schemes	2002-03	2003-04	2004-05	2005-06	2006-07 (up to 30-9-06)
1	2	4	5	6	7	8
1	Kerala State SC/ST Development Corporation	31	44	24	33	15
2	SC Dev. Dept.	18764	2090	5471	11978	
3	Fisheries Dept.	445	1500	1500	4000	
4	KS Co-op.Agril &RDB	13448	14794	16389	17495	3227
5	Sainik Welfare	69	77	9	13	11
6	LIC Housing Finance	2871	4169	4396	4309	
7	GIC Housing Finance	741	1345	398	93	136
8	Commissionerate of Rural Developemnt	32107	26375	43291	12990	
9	Canfin Homes	413	156	149	80	
10	HOUSE FED	7380	7612	6996	5119	
11	KSHB	8686	12933	2414	93	65
12	Nationalised Scheduled Bank	40620	54454	74327	25095	
13	HUDCO	13210	379	370	28681	37
14	Nirmithi Kendra (KESNIC)	189	92	91	134	
16	ST Development Dept.	1746	393	104	508	1430
	Total	140720	126413	155929	110621	4921

Source: Housing Commisioner

Appendix 13.2
Houses Assisted and Amount disbursed by
Kerala State Co-operative Housing Federation

(Rs. Lakh)

Sl. No	Category	Amount distributed				Houses Assisted			
		2002-03	2003-04	2004-05	2005-06 (upto 30-9-06)	2002-03	2003-04	2004-05	2005-06 (upto 30-9-06)
1	2	3	4	5	6	7	8	9	10
1	EWS	957.86	1118.62	782	685.16	2518	2574	1747	1508
2	LIG	2078.47	2305.27	1994.46	2710.78	2536	2610	2286	3094
3	MIG	1345.49	1482.45	1579.39	3428.07	706	731	744	1642
4	Others	1333.31	1486.9	1817.21	3154.93	1593	1697	1915	3054
	Total	5715.13	6393.24	6173.06	9978.94	7353	7612	6692	9298

Appendix 13.3
Interest Rates of Different Financial Institutions on Housing Loan
as on 30/9/2006 (percentage)

Sl.No.	Name of Institution	Floating rate	Fixed rate
1	2	3	4
1	State Bank of India		
	General Loan (Housing) Up to 15 lakhs 5years	8.50%	9.25%
	5 years up to 15 years	8.75%	
	15 years up to 20 years	9.25%	
	above 15 lakh-upto 5 years	8.75%	9.50%
	5 to15 years	9.00%	
	15 to 20 years	9.50%	
2	State Bank of Travancore		
	5 to 10 years	8.75%	9.25%
	10 to15 years	8.75%	9.25%
	above 15 years	9.25%	
3	Syndicate Bank		
	Up to 5 years	8.50%	9.50%
	5 to 10 years	9.00%	10.00%
	10 to 20 years	9.25%	
	20 to 25 years	9.50%	
4	Corporation Bank		
	upto 5 years	8.50%	
	5 to15 years	9.75%	10.00%
	15 to 25 years	9.75%	10.00%
5	HDFC		
	Below 5 lakh	9.75%	11.00%
	Above 5 lakh	9.50%	
6	HUDCO		
	A. EWS housing by all borrowers		
	(I) Housing projects for widows, SC/STs. Legally handicapped single woman above 35 years of age and natural calamities affected areas	8.50%	9.00%
	(ii) Others and action plan projects	9.00%	9.50%
	B. LIG housing projects by all borrowers	9.75%	10.25%
	C. Direct borrowing by Govt. Police Organisation and Govt./Public borrowers	10.25%	10.75%
	D. Other Borrowers		
	(I) Not rated	11.25%	11.75%
	(ii) 'AAA' rated proposals/ borrowers by CRISIL, ICRA CARE& FITCH	10.25%	10.75%
	(iii)'AA' but below rated proposals/ borrowers by CRISIL, ICRA etc	10.75%	11.25%
	HUDCO Niwas (Up to 10 lakh)	9%	9.50%
	(Above 10 lakhs)	9.50%	10.00%
7	LIC Housing Finance Ltd	9.25%	10.00%
8	GIC Housing Finance		
	I) Up to 5 lakhs - 5 years	8.75%	9.75%
	-10 years	9.25%	10.50%
	-15 years	9.50%	10.75%
	- 20 years	9.75%	11%

SI.No.	Name of Institution	Floating rate	Fixed rate
1	2	3	4
			<i>Contd...</i>
	2) Above 5 lakh - 5 years	8.50%	9.75%
	-10 years	9.00%	10.50%
	-15 years	9.25%	10.50%
	- 20 years	9.50%	11%
9	Canfin Homes		
	Upto 5 years	9.50%	
	5 to 10 years	9.75%	
	11 to 20 years	10%	
10	Dhanalekshmi Bank		
	upto 5 years		10.00%
	5 to10 years		11.00%
	above 10 years		11.50%
11	Bank of India		
	upto 5 years	8.00%	10.00%
	5 to10 years	8.50%	
	10 years to 25 years	9.00%	
12	Kerala State Co-Op. Bank Ltd		
	Rural Husing Scheme of NABARD Thanal Housing Scheme	--	9 to 15% 10.25%
	Rural Housing through 'DCBs & Branches of KSCB	--	8 to 9%
13	Kerala State Co-op Agricultural and Rural Development Bank Ltd		
	(1) NABARD		
	Construction/Purchase of New houses/flats		
	Up to Rs. 50,000/-		9.00%
	Rs. 50001 to 1 lakh		11.00%
	Repairs of houses		
	Up to Rs. 50,000/-		9.50%
	Above Rs. 50000/- to 3,00,000		11.00%
	(2). NHB		
	New construction/purchase		
	Up to 2 lakhs -5 years		9.50%
	above 5 to 10 years		10.00%
	Upgradation /Major repairs		
	Upto 2 lakh (5 years)		10.00%
	Above 5 to 10 years		10.50%
14	Kerala State Housing Board		
	LIG	13.50%	The higher rate of interests is
	MIG	14.50%	Mainly because of the lending
	HIG	15.50%	rate of HUDCO
15	BOB Housing Finance		
	Up to 5 years	9.00%	
	5 to 15 years	9.50%	
	Above 15 years	9.50%	10.50%

Source: Housing Commissioner

Appendix 13.4
Fund Flow to Kerala State Co-operative Housing Federation
(Rs. Lakh)

Year	Institutions	(Borrowing)	
		Funds Flow	Amount Disbursed
1	2	3	4
2002-03	LIC	4000	5715.13
	NHB	2500	
2003-04	NHB	1500	6393.24
2004-05	NHB	4500	6173.06
	Canara Bank	5000	
2005-06	Canara Bank	4000	9978.94
	Federal Bank	2500	
Up to 30-9-06	--	---	

Appendix 14.1
Poverty Projection for 2006-07

Sl.No	State/Union Territories	Rural		Urban		Combined	
		Percentage of poor	No. of Poor (lakh)	Percentage of poor	No. of Poor (lakh)	Percentage of poor	No. of Poor (lakh)
1	2	3	4	5	6	7	8
1	Andhra Pradesh	4.58	26.97	18.99	41.75	8.49	68.72
2	Arunachal Pradesh	37.89	3.54	4.48	0.14	29.33	3.68
3	Assam	37.89	95.36	4.48	1.78	33.33	97.14
4	Bihar	44.81	482.16	32.69	54.74	43.18	536.90
5	Goa	NA	NA	NA	NA	NA	NA
6	Gujarat	2.00	6.88	2.00	4.38	2.00	11.26
7	Haryana	2.00	3.30	2.00	1.51	2.00	4.81
8	Himachal Pradesh	2.00	1.18	2.00	0.14	2.00	1.32
9	Jemmu Kashmir	NA	NA	NA	NA	NA	NA
10	Karnataka	7.77	28.66	8.00	16.34	7.85	45.00
11	Kerala	1.63	4.03	9.34	8.01	3.61	12.04
12	Madhya Pradesh	28.73	192.07	31.77	74.46	29.52	266.53
13	Maharashtra	16.96	101.61	15.20	72.68	16.18	174.29
14	Manipur	37.89	8.10	4.48	0.27	30.52	8.37
15	Meghalaya	37.89	7.99	4.48	0.24	31.14	8.23
16	Mizoram	37.89	1.88	4.48	0.23	20.76	2.11
17	Nagaland	37.89	8.01	4.48	0.21	31.86	8.22
18	Orissa	41.72	139.12	37.46	23.57	41.04	161.69
19	Punjab	2.00	3.40	2.00	1.95	2.00	5.35
20	Rajasthan	11.09	54.41	15.42	23.44	2.11	77.85
21	Sikkim	37.89	2.08	4.48	0.03	33.78	2.11
22	Tamil Nadu	3.68	12.46	9.64	31.61	6.61	44.07
23	Tripura	37.89	10.70	4.48	0.28	31.88	10.98
24	Utter Pradesh	24.25	373.16	26.17	111.25	24.67	484.41
25	West Bengal	21.98	137.53	8.98	22.21	18.30	159.74
26	A&N Island	3.68	0.10	9.64	0.14	5.82	0.24
27	Chandigarh	2.00	0.02	2.00	0.19	2.00	0.21
28	Dadra & Nagar Haveli	NA	NA	NA	NA	NA	NA
29	Daman& Diu	NA	NA	NA	NA	NA	NA
30	Delhi	NA	NA	NA	NA	NA	NA
31	Lekshadweep	1.63	0.01	9.34	0.02	4.59	0.03
32	Pondicherry	3.68	0.13	9.64	0.70	7.72	0.83
	All India	21.09	1704.86	14.99	492.27	19.33	2197.13

Source : India's Five Year Plan (Complete Document) First Five Year Plan 1951 - 56 to Tenth Five Year Plan 2002-07 - Mid Term Appraisal June 28, 2005. Planning Commission, Government of India.

Appendix 14.2
Community based organisation status in Rural Areas as on 31-01-2007

SI.No.	District	Cumulative					2006-07		
		No. of GPs	Total NHGs	Families Covered (nos)	Thrift (Rs)	Loans (Rs)	No. of NHG	Thrift (Rs.)	Loan (Rs.)
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	78	16740	344165	730585942	1319926174	1066	107263047	264138819
2	Kollam	71	12085	223550	496695477	1064477191	361	76615156	200431981
3	Pathanamthitta	54	6426	131304	284929853	457208819	354	23630485	15332983
4	Alappuzha	73	12691	254434	571687718	1269389483	629	93875888	218025125
5	Kottayam	75	10310	215042	438712580	846157425	866	113859455	297720627
6	Idukki	52	8829	161983	455552641	1116793550	96	56380719	140770276
7	Ernakulam	88	12189	206828	464932447	1232574983	1520	53970697	380764783
8	Thrissur	92	15512	281736	687308051	2584047393	438	84697631	313752162
9	Palakkad	91	19365	330352	682101610	1638895214	1068	153314858	549643778
10	Malappuram	102	12810	298810	548270675	764154063	616	94678607	170261709
11	Kozhikkode	78	13311	280803	732375703	2059009966	271	119094590	487034490
12	Wayanad	25	7156	120248	316202372	1104380403	1191	54560010	50211244
13	Kannur	81	10509	215305	497844635	1729103928	364	43126474	470300664
14	Kasargode	39	5493	118969	285101093	1063972376	217	32813564	160419655
	Sub total	999	163426	3183529	7192300797	18250090968	9057	1107881181	3718808296
15	Urban (58 ULBs)		11987	515715	436388809	486406430		62012515	71937366
16	Tribal NHGs(8 Dist)		2232	35880	77998663	143236185		23883941	35623524
	Grand Total	999	177645	3735124	7706688269	18879733583	9057	1193777637	3826369186

Source: Kudumbashree, Government of Kerala

Note: Tribal NHGs are separately tracked, these are not reflected in the District wise data.

Appendix 14.3
District wise details of Linkage Banking as on 31-01-2007

Sl. No.	Name of District	Cumulative		2006-07	
		NHGs linked	Amount (Rs Lakh)	NHGs linked	Amount (Rs Lakh)
1	Thiruvananthapuram	8983	3508.79	997	425.11
2	Kollam	7526	5117.08	1713	1315.18
3	Pathanamthitta	2429	2409.87	273	449.95
4	Alappuzha	9241	4702.88	247	303.99
5	Kottayam	3366	2172.27	457	575.22
6	Idukki	3927	2807.06	462	400.60
7	Ernakulam	5873	2156.96	1010	521.25
8	Thrissur	5269	2566.04	97	126.61
9	Palakkad	9824	3655.55	1607	525.07
10	Malappuram	4360	1745.65	213	217.17
11	Kozhikkode	5377	2790.63	596	553.63
12	Wayanad	5950	4070.78	102	907.54
13	Kannur	4106	1932.38	178	407.56
14	Kasaragode	2449	1000.75	180	137.84
	Total	78680	40636.69	8132	6866.72

Source: Kudumbashree Government of Kerala

Note: In case of the second and subsequent linkages of the NHGs, only the amount is accounted.

Appendix 14.4
District wise details of Lease Land Farming as on 31-01-2007

Sl. No.	Name of District	No. of NHGs	No. of families	Area in Acres
1	Thiruvananthapuram	2019	21159	2486.52
2	Kollam	1304	4922	2627.65
3	Pathanamthitta	1126	11344	1670.00
4	Alappuzha	6382	86004	11239.78
5	Kottayam	985	10006	1762.15
6	Idukki	6759	61103	8314.00
7	Ernakulam	2391	27950	5194.42
8	Thrissur	298	2710	388.00
9	Palakkad	2518	17726	3914.81
10	Malappuram	2021	11359	2870.00
11	Kozhikkode	2044	12877	2850.00
12	Wayanad	734	10202	6849.00
13	Kannur	2088	23009	2233.20
14	Kasaragod	1041	7589	473.65
	Total	31710	307960	52873.18

Source: Kudumbashree Government of Kerala

Note: LLF taken up in 2006-07

Appendix 14.5
District wise details of Balasabha - Childrens NHG as on 31-01-2007

Sl.No.	District	Cumulative				2006-07		
		No. of GPs	No. of Balasabha	No. of Children	Thrift (Rs)	No. of Balasabha	No. of Children	Thrift (Rs)
1	2	3	4	5	6	7	8	9
1	Thiruvananthapuram	78	3663	62366	942539	469	11605	448867
2	Kollam	71	1464	31303	280798	296	6149	149980
3	Pathanamthitta	45	1224	21795	590329	337	3841	344286
4	Alappuzha	65	2634	46742	374089	197	2468	355669
5	Kottayam	74	2318	42528	1239157	452	5766	670410
6	Idukki	51	2127	35680	3454031	108	1688	621262
7	Ernakulam	83	2380	42908	1921599	429	8870	815163
8	Thrissur	92	2084	39983	1099373	97	2571	214717
9	Palakkad	91	3145	52756	1082086	652	10076	428746
10	Malappuram	102	3296	51255	1190244	503	6977	324133
11	Kozhikkode	78	3807	70883	519389	567	11859	436387
12	Wayanad	25	2219	32503	969472	17	142	969472
13	Kannur	81	2537	46489	1153742	209	6988	746921
14	Kasargode	39	1640	29279	1795768	494	8429	936094
	Total	975	34538	606470	16612616	4827	87429	7462107

Source: Kudumbashree Government of Kerala

Appendix 14.6
District wise details of Rural Micro Enterprises(RME)
Programme- Status of Individual Enterprises as on 31-01-2007

Sl. No.	District	Cumulative		2006-07	
		No. of enterprises	Subsidy (Rs)	No. of enterprises	Subsidy (Rs)
1	Trivandrum	246	1653900	4	30000
2	Kollam	175	1302000	1	7500
3	Pathanamthitta	10	75000	9	68000
4	Alapuzha	24	164940	9	67500
5	Kottayam	8	59000	2	14000
6	Idukki	163	1194950	22	163000
7	Eranakulam	10	75000	5	37500
8	Thrissur	14	97800	9	60300
9	Palakkad	4	30000	4	30000
10	Malapuram	52	330350	47	292350
11	Kozhikkode	107	790500	13	97500
12	Wayanad	4	30000	2	15000
13	Kannur	7	52500	4	30000
14	Kasargod	95	635500	4	30000
	Total	919	6491440	135	942650

Source: Kudumbashree Government of Kerala

Appendix 14.7

**District wise details of Rural Micro Enterprises(RME)
Programme- Status of Group Enterprises as on 31-01-2007**

Sl. No.	District	Cumulative		2006-07	
		No. of enterprises	Subsidy (Rs)	No. of enterprises	Subsidy (Rs)
1	Trivandrum	242	13422569	76	3265000
2	Kollam	185	7437500	60	2255000
3	Pathanamthitta	136	4246000	51	1534500
4	Alapuzha	138	6705000	57	2385000
5	Kottayam	42	2255000	18	912500
6	Idukki	397	20123600	109	4339200
7	Eranakulam	192	10486500	82	3460000
8	Thrissur	133	6843045	59	2565595
9	Palakkad	162	7014000	143	5800000
10	Malapuram	172	11995750	69	3010750
11	Kozhikkode	258	14443500	55	2330000
12	Wayanad	45	2667500	7	202500
13	Kannur	89	4406500	49	1993000
14	Kasargod	77	4099400	10	592500
	Total	2268	116145864	845	34645545

Source: Kudumbashree Government of Kerala

Appendix 14.8

Financial Achievement under SGSY, IAY, JGSY, EAS/SGRY

(Rs.Lakh)

Sl. No.	Year	SGSY		IAY		JGSY		EAS		SGRY		Total	
		Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure	Total Fund	Expenditure
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2002-03	2103.30	2062.58	4984.26	4517.34	5440.51	3731.46	5741.01	4050.16	0.00	0.00	18269.08	14361.54
2	2003-04	2127.44	2054.13	6245.27	5767.77	6725.13	4496.65	7535.14	5628.49	0.00	0.00	22632.98	17947.04
3	2004-05	2514.48	2445.14	8212.78	7839.16	0.00	0.00	0.00	0.00	16897.32	13565.39	27624.58	23849.69
4	2005-06	2491.03	2420.47	7765.82	7150.22	0.00	0.00	0.00	0.00	16563.85	15532.67	26820.70	25103.36
5	2006-07 (October)	1400.91	1013.59	4196.93	2035.74	0.00	0.00	0.00	0.00	8582.90	5022.93	14180.74	8072.26
	Total	10637.16	9995.91	31405.06	27310.23	12165.64	8228.11	13276.15	9678.65	42044.07	34120.99	109528.08	89333.89

Source: Commissionerate of Rural Development

Appendix 14.9
District-wise Distribution of Surplus Land as on 31-01-2007

Sl. No.	Districts	Number of Beneficiaries				Land Distributed (Area in Acres)			
		SCs	STs	Others	Total	SC	STs	Others	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	0	0	0	0	0	0	0	0
2	Kollam	15	0	9	24	1.29	0	0.44	1.73
3	Pathanamthitta	0	0	0	0	0	0	0	0
4	Alappuzha	0	0	0	0	0	0	0	0
5	Kottayam	0	0	0	0	0	0	0	0
6	Idukki	0	0	0	0	0	0	0	0
7	Ernakulam	0	0	0	0	0	0	0	0
8	Thrissur	5	0	25	30	0.54	0	1.53	2.07
9	Palakkad	60	0	47	107	4	0	2	6
10	Malappuram	21	0	8	29	2	0	1	3
11	Kozhikkode	0	0	0	0	0	0	0	0
12	Wayanad	0	0	0	0	0	0	0	0
13	Kannur	0	3	2	5	0	1	1	2
14	Kasaragod	2	8	25	35	1	1	3	5
	Total	103	11	116	230	8.83	2	8.97	19.8

Source : Survey and Land Records Department

Appendix 14.10
District- wise Urban Thrift & Credit Operation - as on 30-10-2006

Sl. No.	Name of District	No. of NHG	No. of ADS	No. of CDS	Amount of Thrift (Rs)	Amount of Loan (Rs)	No. of families started Thrift
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	2204	125	5	43731523	32816489	76094
2	Kollam	1172	70	3	41375840	42088266	18723
3	Pathanamthitta	405	30	3	10413115	7909584	8090
4	Alappuzha	956	81	5	61151747	56436591	22744
5	Kottayam	430	46	4	14396774	13366408	9291
6	Idukki	60	5	1	3028510	2893310	1680
7	Ernakulam	1763	146	10	120705896	160603366	68585
8	Thrissur	951	97	7	27675561	29483644	12468
9	Palakkad	1221	103	4	27765586	65451117	21436
10	Malappuram	624	84	5	20035012	10754377	16311
11	Kozhikkode	1052	73	3	36613136	46615045	28817
12	Wayanad	75	11	1	2941912	2614258	2092
13	Kannur	497	62	6	11414922	9584325	25801
14	Kasaragod	452	53	2	14471507	5085100	2167
	Total	11862	986	59	435721041	485701880	314,299

Source : Kudumbashree, Thiruvananthapuram

Appendix 14.11

Details of Micro Enterprises (District-wise) as on 30-11-06

(Nos)

Sl.No	Name of District	DWCUA	USEP
	Thiruvananthapuram	240	2304
1	Kollam	80	1977
2	Pathanamthitta	33	918
3	Alapuzha	159	2690
4	Kottayam	75	1068
5	Idukki	11	91
6	Ernakulam	431	2502
7	Thrissur	151	1350
8	Palakkad	84	1972
9	Malappuram	82	1010
10	Kozhikkode	199	2020
11	Wayanad	16	125
12	Kannur	88	1740
13	Kasargod	47	710
14	Total	1696	20477

Source: Kudumbashree, Thiruvananthapuram

Appendix 14.12
Details of Group Micro Enterprises in Urban Area

Sl. No.	Name of Project	No. of Units
1	Direct Marketing	118
2	IT unit	69
3	Soap making unit	58
4	Canteen	78
5	Catering Service	65
6	Dairy unit	53
7	Ethnic Delicacies	57
8	IT @ School	49
9	Garments/Readymade	53
10	Hotel	56
11	Tender Coconut selling unit	33
12	Provision Store	34
13	Paper Cover & Paper Bag	35
14	Kerashree (Coconut processing/Oil extraction unit)	32
15	Mat Weaving/Cover making unit	28
16	Super Market	33
17	Curry Powder unit	31
18	Umbrella Manufacturing	29
19	Mobile market (Pick up van)	22
20	Laundry unit	24
21	Solid waste processing unit	45
22	Remedial Education Centre	19
23	Bakery/Sweet stall unit	33
24	Tailoring unit	22
25	Book Binding unit	30
26	Food Products	22
27	Agricultural Nursery	22
28	Sanitation unit	22
29	Clean Kerala Business	57
30	Grinding unit	17
31	KSRTC Canteen	17
32	Fish vending unit	17
33	Palm mat unit	13
34	Consumer Store/Traders	14
35	Pickles making	20
36	Bag manufacturing	15
37	Coir Yarn/Products	9
38	Vanila Nursery	11
39	Cloth Bag unit	10
40	Bamboo unit	7
41	Chappel making	9
42	Coconut Products	10
43	Metal crushing unit	10
44	Neighbours - Support Services to Friends	8
45	Note Book Manufacturing	26
46	Beauty parlour	9
47	Bricks/Hollow bricks	13
48	Flowers & Garland	7
49	Handicrafts	13
50	Toy manufacturing	8
51	Computer Hardware unit	10
52	Hospital Restaurant	14
53	Telephone Repair	5
54	Herbal Nursery	8
55	Hosiery unit	4

Contd....

Sl. No.	Name of Project	No. of Units
56	Prasoothika	4
57	Rice/Rice powder business	12
58	Chicken Stall	6
59	Cooking mate/Gas light/Decoration (Hiring service)	3
60	Electronic unit	4
61	Fish/Sea shell processing	6
62	Instant Mix manufacturing unit (Palada)	3
63	Paddy Cultivation	3
64	Pappad making unit	11
65	United Services	3
66	Water Meter Repair unit	3
67	Multi Purpose Job Club	3
68	Agarbathi/Candle unit	6
69	Atta packing	2
70	Chips unit	5
71	Construction work of women	6
72	Courier Service	4
73	Day Care centre	2
74	Documentation/File works unit	4
75	Electronic Choke Assembling unit	2
76	Furniture manufacturing	9
77	Ice Cream Parlour	3
78	Marketing unit	5
79	Ornaments Manufacturing unit	2
80	Painting unit	2
81	Pandhal unit	2
82	Poultry farm	8
83	Printing unit	4
84	Shawl/Pardha Making	2
85	Tarpolin production/Chackuviri	2
86	Women Hostel	2
87	Fire wood	2
88	Photo Album	2
89	Sound system	2
90	Bio Technology	1
91	Cashew nut processing	1
92	Cement products	1
93	Handloom weaving	1
94	Home Nursing unit	1
95	Net works	1
96	Plastic chair & mat	1
97	Pottery unit	1
98	Soda making	1
99	Solar Cooker	1
100	Vegetable Vending	1
101	Vehicle Service	1
102	Wire Coir Carpet making unit	1
103	Fancy and rental	1
104	Fashion designing	1
105	Goat rearing	2
106	Hyring service	1
107	Jwellery designing	1
109	Mosquito control unit	2
111	Pipe bending	1
113	Waster paper collection	1
114	Women's source group	1
	Total	1696

Source: Kudumbashree, Thiruvananthapuram

Appendix 14.13
District-wise Number of Beneficiaries in Welfare Institutions - 2006

Sl. No	Name of Welfare Institution	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	Total	Sanctioned strength
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Mahila Mandir	21	10	14	13	15	0	28	23	16	23	24	0	24	10	361	300
2	Home for Mentally Deficient children											24				24	50
3	Home for Physically Handicapped	26						19				25				70	75
4	Home for the cured mental patients (Asha Bhavan)	76						25	34			56				191	200
5	Care Home for Disabled Children			14					8			25				70	75
6	Old Age Home	125	28	0	28	25	0	30	21	0	20	29	0	18	37	361	1000
7	After Care Home for adolescents		13									63		5		81	250
8	Observation Home	60	34	36	6	60	0	60	60	24	24	60	60	24	204	648	425
9	Juvenile Homes	720	636			864			708			376				6804	9000
10	Government Balasadan			228												228	100
11	Rescue Home			12							20					32	200
12	Children's Home			36												36	50
13	Home for Physically Handicapped (Aged)			21		19				25			37			102	150
14	Day Care Centre & Old Age Home	24														24	25
15	Pratheeksha bhavan										30					30	50
16	Short Stay Homes											13				13	50
	Institutions run by NGO's																
17	Orphanages and Fondlings Homes	2025	1816	1513	1610	6316	1506	8117	8352	1661	8342	6346	1074	2112	1314	52064	
18	Fondling Home	86		32	69		78	62								417	
19	Begger Homes		110			162		108	36					90		470	
20	Home for Aged Infirm			9			22			19				23		73	
21	Oldage homes	410	250	460	640	3050	280	2860	2410	325	110	250	50	324	120	11539	

Source: Social Welfare Department

Appendix 14.14
Details of Self-Employment Programme through Kerala
State Handicapped Persons Welfare Corporation
(2000 -2006)

Year	No. of Applicant	No. of Applications Forwarded to Bank	No. of Applications Sanctioned	Amount Released by Corporation	No. of Aids & Appliances Distributed	Amount (Rs.in lakhs)
1	2	3	4	5	6	7
2000-01	2326	2326	533	1E+06	4002	66.42
2001-02	1348	1348	242	481000	1077	16.1
2002-03	1303	1303	281	562500	1644	33.07
2003-04	1256	1256	344	756535	1166	27.29
2004-05	1417	1417	314	773475	1368	34.26
2005-06	1503	1503	354	874660	996	28

Source: KSHPMC, Tvpw.

Source: Land Revenue Department

Appendix 14.15

Major Pension Schemes In Kerala through Revenue Deptment - District-wise Beneficiaries 2006

Sl.No.	Name of Scheme	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thrissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasargod	State Total
1	Widow/Destitute Pension Scheme	35376	32087	14750	7702	11703	3082	19302	22592	23020	31291	24053	6011	16924	11542	259438
2	Special Pension for persons with Disabilities	20762	17004	13286	5809	8607	3547	13216	16288	13990	18568	17179	3573	11296	6292	169417
3	Leprosy, Cancer patients	2216	2553	571	238	186	107	441	255	210	275	385	99	120	45	7701
4	Freedom Fighters	1567	808	1330	58	85	134	304	289	297	520	962	39	1446	168	8007
5	National Old Age Pension	15360	13583	6438	3440	9366	3226	13551	11874	17239	14045	2851	1989	8877	5443	131912
6	Unmarried women above 50years	2364	1067	2368	588	1428	69	2130	5919	2427	2035	4852	104	3922	566	29839

Source: Land Revenue Department

Appendix 14.17

District-wise Complaints Received by Kerala Womens Commission (January-September 2007)

Sl.No.	Item	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Idukki	Kottayam	Ernakulam	Trissur	Palakkad	Malappuram	Wayanad	Kozhikode	Kannur	Kasargode	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Harassment of Women	76	20	19	37	21	27	26	24	28	23	12	19	12	9	353
2	Dowry Harassment	57	15	11	26	12	11	27	9	19	10	15	19	7	7	245
3	Harassment by Husband	63	22	20	30	22	28	28	17	20	19	18	24	22	19	352
4	Cheating	2	2	0	10	5	10	6	0	1	1	0	1	2	0	40
5	Divorced by Husband	47	5	3	6	4	2	14	2	5	4	4	3	2	4	105
6	Suspicious death	8	7	5	5	3	2	4	3	3	4	1	1	2	2	50
7	Property related	25	13	12	16	12	19	17	14	13	10	9	12	10	10	192
8	Job related	5	1	0	4	1	3	3	3	0	0	0	0	0	0	20
9	Threatening to life	9	5	8	6	3	2	9	6	4	3	2	6	8	2	73
10	Sexual Harassment	17	7	7	7	6	12	13	3	3	5	5	4	5	3	97
11	Use of abusive language	26	10	13	11	10	11	11	9	9	7	6	8	8	7	146
12	Neighbour's nuisance	40	25	18	16	13	21	23	20	7	6	5	9	8	5	216
13	Atrocities	45	19	20	5	28	15	16	3	4	2	8	7	2	1	175
14	Against Police	37	4	14	14	5	3	2	1	5	5	2	1	4	1	98
15	Theft	4	3	2	1	3	2	4	2	3	1	1	3	2	1	32
16	Beating	18	16	12	15	13	19	21	14	10	8	7	5	6	3	167
17	Nuisance of anti-social elements	52	12	12	12	3	25	23	2	2	1	7	21	10	5	187
18	To get divorce	18	11	11	20	9	10	11	11	9	9	10	9	9	11	158
19	Nuisance after drinking	17	12	10	9	7	11	5	4	8	7	6	5	9	4	114
20	Alimony	17	8	17	24	20	8	2	17	11	2	6	15	11	10	168
21	Economic help	5	3	0	2	3	1	0	0	0	3	0	0	1	0	18
22	Path problems	26	13	8	9	6	8	5	7	5	10	6	6	4	4	117
23	Doctor's negligence	5	3	1	7	0	2	0	2	0	0	0	0	0	0	20
24	Child marriage	1	1	0	0	0	0	0	0	0	2	0	0	0	2	6
25	Miscellaneous	28	10	8	6	10	36	22	10	14	16	9	5	5	3	182
	Total	648	247	231	298	219	288	292	183	183	158	139	183	149	113	3331

Source: Kerala Women's Commission

Appendix 14.16

Details of Social Security Pension Schemes in Kerala - 2006

Sl. No.	Welfare Institution	Qualifying conditon	Year	Year of Revision and Rate of assistancae						
				5	6	7	8	9	10	
1	Agricultural Workers Welfare Scheme	1. Pension - Above 60 years. Annual family income Rs.11,000 2. Retirement benefi - minimum one year membershipt	1980 1990	Rs.40/m Rs5000 to Rs25000	Rs.45/m(1985)	Rs.60/m(1987)	Rs.70/m(1991)	Rs.80/m(1996)	Rs.100/m(1997)	Rs120/m(2000)
2	Kerala Widow Pension Scheme	Death of husband/divorsed/not remarried. Income Rs.300/m	1973	Rs.55/m	Rs.65/m(1991)	Rs.80/m(1995)	Rs.100/m(1996)	Rs.110/m(1997)		
3	Special Pension for the Disabled and Mentally Retarded Persons	40% Disability. Medical Certificate. Family Income below 500/m.	1982	Rs.75/m	Rs.110/m(2000)	Rs.150/m(2003)				
4	Pension to Sportsmen	Income Rs.1100 per annum. Inter District/State level paraticipation	1978	Below 60myrsRs100/m 60 to 70 yrs Rs.150/m 70 yrs and above Rs.200/m	Below 60 yrs Rs.200/m(1993) 60 to 70 yrs Rs.300/m 70 yrs and above Rs400/m	Belowm60 yrs Rs.400/m(1998) 60 to 70 yrs Rs.600/m 70 yrs and above Rs800/m				
5	IInd World War Veterens	Participated in the 2nd World War. Non recipient of any other assistance. Annual income Rs.6000.	1997	Rs.200/m	Rs.300/m(2000)	Rs.400/m(2003)				
6	Freedom fighters Pension Scheme	Participated in the National Movement.	1971	Rs.300/m	Rs.1000/m(1996)	Rs.1500/m(1997)	Rs.2000/m(1998)	Rs.3000/m(2000)		
7	Financial Assistance to Leprosy and Cancer Patients	Certificate from hospitals. Income Rs.200/m.	1976	Rs.50/m	Rs.115/m(1991)	Rs.200/m(1997)				
8	Pension to Journalists/ Dependents	1. Living Journalist who are unemployed due to illhealth and overage 2. Pension to journalist who retired after 10 year service 3. Pension to daily workers. Minimum 10 year service for full pension, 50% pension for 5 year service.	1976 1993 2000	Rs.300/m Rs.1000/m Rs.1000/m	Rs.500/m(1997) Rs.1400/m(2001)					
9	Welfare Fund for Cine Artists	Cine Artists in distruss. Annual family income Rs.12000	1981	Rs.300/m	Rs.400/m(1997)	Rs.500/m(1998)				
10	Kerala Cashew Workers Welfare Schemes	1. Cashew Workers above the age of 60. Incapicity to do work. 2. Death benefit to nominees	1989 1991	Rs.75/m Rs.250/m	Rs.100/m(1992) Rs.500/m(1995)	Rs.125/m(1996) Rs.1000(1998)				
11	Kerala Coir Workers Welfare Scheme	1. Pension - Workers above the age of 60 years. 2. Family Pension - Death of the member worker	1989 1989	Rs.75/m Rs.75/m	Rs100/m(1997)					

Sl. No.	Welfare Institution	Qualifying conditon	Year	Year of Revision and Rate of assistancae					
				5	6	7	8	9	10
12	Kerala Construction Workers Welfare Scheme	1. Pension - Workers having one year service, 60 years of age.	1991	Rs.75/m	Rs.100/m(1995)	Rs.150/m(1996)	Rs.200/m(2000)		
		2. Disability pension - Medical Certificate	1993	Rs.150/m					
		3. Family Pension - Death of the Pensioner	1996	Rs.100/m					
13	Kerala Khadi Workers Welfare Scheme	10 years service, 60 years of age	1990	Rs.60/m	Rs.180/m(1991)	Rs.100 to Rs.300(1999)			
14	Kerala Handloom Wrokers Welfare Scheme	1. Pension - Above the age of 60 years, atleast 3 years service	1989	Rs.75/m	Rs100/m(1997)				
		2. Self employed person	1998	Rs.100/m					
		3. Death Benefit	1990	Rs.1000/m	Rs.5000/m(1999)				
15	Kerala Abkari Workers Welfare Scheme	1. Pension - 60 years. Completed 3 years continous service	1993	Rs.115/m	Rs.200/m(1995)				
		2. Death benefit		Rs.10000					
		3. Permanent Disability Benefit		Rs.5000					
16	Kerala Toddy Workers Welfare Scheme	1. Pension - Not lessthan 10 years membrship	1997	Rs.100/m					
		2. Assistance to Disabled workers	1988	Rs.100/m	Rs.125/m(1992)	Rs.150/m(1994)			
17	Kerala Head Load Workers Welfare Scheme	1. Death benefit	1987	Normal death Rs.10000 Accidental death Rs.20000	Rs.15000 and Rs.30000 respectively				
		2. Invalid Pension	1990	Rs.150/m	Rs.200 to Rs.2400(2000)				
18	Kerala Motor Workers Welfare Scheme	1. Death benefit - 3 months continuous service	1986	Rs.5000	Rs.25000(2000)				
		2. Retirement benefit		Rs.12000 for 5years service and Rs.60000 for 15 years service					
19	Kerala Fishermen Welfare Scheme	1. Pension - Completed 60 years. Annual Income Rs.5000	1987	Rs.75/m	Rs.85/m(1992)	Rs.100/m(1996)	Rs.120/m(2000)		
		2. Accidental death/missing - 18 to 70 years.	1986	Rs.15000	Rs.21000(1990)	Rs.25000(1992)	Rs.50000(1996)	Rs.100000((1999)	
		3. Permanent disability	1986	Rs.7500	Rs.10500(1990)	Rs.25000(1992)	Rs.50000(1996)	Rs.100000((1999)	
20	Kerala Tailoring Workers Welfare Scheme	1. Pension - Completed 60 years. Minimum 9 years service.	2000	Rs.100 to Rs.430/m					
		2. Disability Pension	1997	Rs.100/m					

Contd....

Sl. No.	Welfare Institution	Qualifying conditon	Year	Year of Revision and Rate of assistancae						
				5	6	7	8	9	10	
21	Kerala Artisans & Skilled Workers Welfare Scheme	1. 60 years and above and is a member 2. Death Benefit 3. Permanent disability	1986	Rs.50000 for 40 years of service. Rs.600 for 2 yrs service						
22	Financial Assistance to Widows for the marriage of their daughter	Family annual Income Rs.10000, Individual Income Rs.6000.	1978	Rs.1000	Rs.1250(1991)	Rs.2000(1995)	Rs.2500(1998)	Rs.5000(2002)		
23	Tree Climbers Welfare Scheme	Workers in the event of total accidents and permanent total disability followisng the accidents	1980	Rs.10000						
24	Kerala National Employment Services	1. Unemployment Assistance Passed SSLC registrant of employment exchange for more than 3 years. Age limit 18-35 years. Family Annual Income Rs.12000 should not be a student. 2. Self Employment Scheme for the registered unemployed Persons between 21-40 years. Annual Family Income Rs.24000	1982	Rs.50/m	Rs.60/m(1987)	Rs.70/m(1991)	Rs.80/m(1996)	Rs.90/m(1997)	Rs.100/m(1998)	Rs.120/m(2000)
25	National Old Age Pension Scheme	Above 65 years. Annual Family Income below Rs.11000	1995	Rs.100/m	Rs.110/m(1996)					
26	Ration Dealers Welfare Fund Scheme	1. Pension - completed 65 years/ Minimum 10 years of service 2. Death Benefit - one year minimum membership	2000	Rs.150/m						
27	Beedi and Cigar Workers Welfare Scheme	1. Pension - Completion of 60 years/Minimum 3 years service 2. Retirement benefit	1997	Rs.100/m						
28	Pension to unmarried women	Above 50 years. Annual family income below Rs.6000. Not covered under any other social security schemes	2001	Rs.110/m						

Source: Different Welfare Fund Boards/Departments.

Appendix 14.18
Major Welfare Measures in the Welfare Fund Boards in Kerala - 2006

Sl. No.	Name of Welfare Fund Boards	Maternity benefits	Marriage Assistance	Medical Assistance	Death Relief	Pension (per month)	Family Pension (per month)	Invalid Pension	Permanent disability	Educational Assistance	House Building Advance
1	2	3	4	5	6	7	8	9	10	11	12
1	Kerala Agricultural Workers Welfare Fund Board	1000	2000	1000	1000	200	0	0	0	NA	0
2	Kerala Building and Other Construction Workers Welfare Board	2000	3000 (Daughters) 2000(Sons)	300 to 5000	15000 to 100000	200	100	150	50000	NA	50000
3	Kerala Handloom Workers Welfare Fund Board	0	2000	0	5000	100	0	0	5000	250 to 2000	0
4	Kerala Fishermen's Welfare Fund Board	0	0	2000	100000	0	0	0	100000	0	0
5	Kerala Toddy Workers Welfare Fund Board	0	0	7000 (cancer)	5000	150	0	0	150	0	0
6	Kerala Ration Dealers Welfare Fund	0	0	5000 to 15000	0	150	0	0	0	2500	0
7	Kerala Abkari Workers Welfare Fund Board	0	0	0	10000	200 to 300	0	0	10000	0	0
8	Kerala Tailoring Workers Welfare Scheme	0	1000	0	10000	100 to 430	0	0	0	500 to 3000	0
9	Kerala Headload Workers Welfare Board	0	0	0	0	250 to 2400	125	250	0	0	0
10	Kerala Coir Workers Welfare Fund Board	0	1000	350	5000	100	75	0	2500	500 to 1500	10000
11	Kerala Cashew Workers Relief Welfare Fund Board	0	0	0	1000 pensioner-500	125 to 200	0	0	0	0	0

Source: Different Welfare Fund Boards.

Appendix 14.19
District-wise ICDS beneficiaries in Kerala - 2006

Sl. No	Name of District	0-3 years	3-6 years	Pregnant and lactating women	Adolescent Girls
1	2	3	4	5	6
1	Thiruvananthapuram	34059	43477	16017	8241
2	Kollam	30214	40508	13780	10940
3	Pathanamthitta	10133	19979	4785	4354
4	Alappuzha	22220	34783	10719	10661
5	Kottayam	21408	33708	9583	10031
6	Idukki	20874	24291	9080	10570
7	Ernakulam	27329	45868	12590	19839
8	Thrissur	28821	52423	14219	13021
9	Palakkad	45869	40802	15326	13053
10	Malappuram	63626	68033	22670	40055
11	Kozhikkode	30827	46269	14720	14853
12	Wayanad	10658	12156	4918	10626
13	Kannur	17119	38465	8139	8134
14	Kasaragod	13950	25056	5932	7705
	Total	377107	525848	162478	182083

Source: Social Welfare Department

Appendix 14.20

ICDS Projects (General) - 2006

Sl.No	Name of Project	Year of sanctioning	Type of project	No.of AWCs Sanctioned
1	2	3	4	5
	THIRUVANANTHAPURAM			
1	Thiruvananthapuram	95-96	Urban	106
2	Thiruvananthapuram	82-83	Rural	114
3	Kilimanoor	94-95	Rural	165
4	Nemom	82-83	Rural	117
5	Perumkadavila	82-83	Rural	147
6	Vamanapuram	86-87	Rural	219
7	Thiruvananthapuram (UI)	77-78	Rural	103
8	Athiyannoor	82-83	Rural	147
9	Chirayinkeezh	81-82	Rural	146
10	Kazhakuttam	95-96	Rural	230
11	Varkala	95-96	Rural	140
	KOLLAM			
12	Sasthamkotta	82-83	Rural	92
13	Ithikara	83-84	Rural	141
14	Vettikavala	82-83	Rural	179
15	Chillumala	85-86	Rural	123
16	Pathapuram	88-89	Rural	172
17	Anchal	94-95	Rural	199
18	Kottarakara	94-95	Rural	144
19	Chadayamangalam	95-96	Rural	203
20	Chavara	79-80	Rural	152
21	Oachira	80-81	Rural	110
22	Anchalummoodu	82-83	Rural	114
	PATHANAMTHITTA			
23	Pulikeezhu	85-86	Rural	121
24	Elanthoor	95-96	Rural	105
25	Ranni	94-95	Rural	208
26	Pandalam	94-96	Rural	103
27	Konni	88-89	Rural	179
28	Kulanad	90-91	Rural	85
29	Paracode	82-83	Rural	153
	ALAPPUZHA			
30	Pattanacadu	80-81	Rural	195
31	Thykattussery	79-80	Rural	107
32	Kanjikuzhi	82-83	Rural	159
33	Alappuzha (U)	82-83	Rural	147
34	Campakulam	82-83	Rural	118
35	Ambalappuzha	81-82	Rural	117
36	Harippad	82-83	Rural	118
37	Muthukulam	83-84	Rural	182
38	Mavelikkara	94-95	Rural	183
39	Bharanikkavu	94-95	Rural	171
40	Chengannur	95-96	Rural	171

Sl.No	Name of Project	Year of sanctioning	Type of project	No.of AWCs Sanctioned
1	2	3	4	5

Contd...

	KOTTAYAM			
41	Lalam	82-83	Rural	114
42	Pampady	82-84	Rural	129
43	Madappally	85-86	Rural	235
44	Kanjirappally	90-91	Rural	108
45	Vaikom	79-80	Rural	108
	IDUKKI			
46	Adimali	91-92	Rural	143
47	Azudai	86-87	Rural	192
48	Devikulam	83-84	Rural	116
49	Elamdesam	79-80	Rural	111
50	Idukki	82-83	Rural	124
51	Kattappana	88-89	Rural	209
52	Nedumkandam	92-93	Rural	105
53	Thodupuzha	93-94	Rural	
	ERNAKULAM			
54	Vypin	83-84	Rural	125
55	North Paravur	80-81	Rural	118
56	Mattanchery	79-80	Rural	110
57	Kochi(U)	95-96	Urban	179
58	Vadavucode	82-83	Urban	128
59	Mulamthuruthy	90-91	Rural	140
60	Vytilla	94-95	Rural	50
	THRISSUR			
61	Anthikad	80-81	Rural	101
62	Chavakkad	78-79	Rural	199
63	Chalakkudy	83-84	Rural	154
64	Chowannoor	95-96	Rural	176
65	Irinjalakkuda	90-91	Rural	135
66	Mala	82-83	Rural	118
67	Mullassery	88-89	Rural	96
68	Pazhayanoor	86-87	Rural	166
69	Thalikulam	85-86	Rural	109
70	Vellangallur	94-95	Rural	98
71	Vadakkanchery	94-96	Rural	174
	PALAKKAD			
72	Kuzhalmannam	80-81	Rural	85
73	Kollengode	81-82	Rural	103
74	Alathur	83-84	Rural	145
75	Sreekrishnapuram	83-85	Rural	137
76	Chittur	86-87	Rural	160
77	Ottappalam	86-87	Rural	174
78	Mannarkad	88-89	Rural	275
79	Thrithala	90-91	Rural	187
80	Palakkad	91-92	Rural	231

Sl.No	Name of Project	Year of sanctioning	Type of project	No.of AWCs Sanctioned
1	2	3	4	5
81	Pattambi	92-93	Rural	226

Contd...

82	Nenmara	93-94	Rural	72
83	Attappady	81-82	Tribal	126
84	Ponnani	80-81	Rural	113
85	Tanur	83-84	Rural	135
86	Tirur	82-83	Rural	149
87	Thirurangadi	85-86	Rural	204
88	Andathode	93-94	Rural	134
89	Manjeri (Areacode)	83-84	Rural	182
90	Kondotty	81-82	Rural	165
91	Kuttipuram	92-93	Rural	196
92	Malappuram	93-94	Rural	174
93	Mankada	93-95	Rural	228
94	Nilambur	93-96	Rural	211
95	Perinthalmanna	83-84	Rural	168
96	Vengra	75-76	Rural	172
97	Wandoor	91-92	Rural	290
	KOZHIKODE			
98	Balussery	90-91	Rural	227
99	Koduvallit	82-83	Rural	133
100	Perambra	83-84	Rural	150
101	Kunnamangalam	83-85	Rural	152
102	Meladi	82-83	Rural	80
103	Calicut(UI)	77-78	Rural	101
104	Calicut (UII)	83-84	Urban	111
	WAYANADU			
105	Sulthan Bethery	82-83	Rural	166
106	Kalpatta	82-84	Rural	205
107	Mananthavadi	78-79	Rural	206
	KANNUR			
108	Kannur (Urban)	82-83	Urban	34
109	Kuyhuparambu	83-84	Rural	162
110	Peravoor	86-87	Rural	136
111	Irikkur	93-94	Rural	215
112	Edakkad	82-83	Rural	157
113	Iritty	94-95	Rural	163
114	Kannur(Rural)	93-94	Rural	143
115	Payyanur	93-94	Rural	336
116	Thaliparambu	81-82	Rural	224
117	Thalassery	94-95	Rural	243
	KASARGOD			
118	Kanhangad	80-81	Rural	227
119	Kasargod	85-86	Rural	269
120	Manjeswaram	94-95	Rural	260

Source: Social Welfare Department

Appendix 14.21
District-wise Details of SC/ST population Census 2001

SI.No	India/State/District	Total Population			Scheduled Caste			Scheduled Tribe		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kasargod	588083	615995	1204078	44904	45314	90218	15132	15206	30338
2	Kannur	1152817	1256139	2408956	48275	50716	98991	9793	10176	19969
3	Wayanad	391273	389346	780619	16738	16626	33364	67394	68668	136062
4	Kozhikkode	1399358	1479773	2879131	98386	102597	200983	2924	3016	5940
5	Malappuram	1754576	1870895	3625471	140535	144907	285442	5996	6271	12267
6	Palakkad	1266985	1350497	2617482	210624	221954	432578	19990	19675	39665
7	Thrissur	1422052	1552180	2974232	171443	182783	354226	2293	2533	4826
8	Ernakulam	1538397	1567401	3105798	129706	133812	263518	5079	4967	10046
9	Idukki	566682	562539	1129221	79389	79973	159362	25510	25463	50973
10	Kottayam	964926	988720	1953646	73885	76397	150282	8972	9368	18340
11	Alappuzha	1014529	1094631	2109160	96900	102331	199231	1565	1566	3131
12	Pathanamthitta	589398	644618	1234016	78731	83271	162002	3184	3365	6549
13	Kollam	1249621	1335587	2585208	156880	166007	322887	2447	2743	5190
14	Thiruvananthapuram	1569917	1664439	3234356	178718	192139	370857	9890	11003	20893
	Kerala	15468614	16372760	31841374	1525114	1598827	3123941	180169	184020	364189
	Share of Kerala (Per cent)	2.91	3.31	3.1	1.77	1.98	1.88	0.43	0.45	0.44

Source: Census 2001

Appendix 14.22
Enrolment of Scheduled Caste/Scheduled Tribe
Students at School Level 2006-07 as on 1.10.2006

Standard	General	Scheduled Caste	Scheduled Tribe	All Communities
1	2	3	4	5
I	364711	47070	8013	419794
II	387048	51275	8154	446477
III	395515	50389	8140	454044
IV	412754	54228	8175	475157
Sub Total	1560028	202962	32482	1795472
V	425778	53978	7746	487502
VI	422997	51898	6507	481402
VII	432438	51245	6126	489809
Sub Total	1281213	157121	20379	1458713
VIII	439830	50422	5817	496069
IX	448547	51421	5240	505208
X	407842	44415	4012	456269
Sub Total	1296219	146258	15069	1457546
Grand Total	4137460	506341	67930	4711731

Source: Director of Public Instruction

Appendix 14.23

District - wise Details of Students Appeared and Passed in the SSLC Examination 2004-05

District	No. of Students Appeared in SSLC				No. of Students Passed in the Examination			
	SC	ST	General	Total	SC	ST	General	Total
1	2	3	4	5	6	7	8	9
Thiruvananthapuram	5726	280	40817	46823	3077	143	31865	35085
Kollam	4455	66	32039	36560	2342	20	25630	27992
Pathanamthitta	2372	105	14562	17039	1075	32	11335	12442
Alappuzha	2868	47	25619	28534	1905	30	21202	23137
Kottayam	2089	240	23413	25742	1601	152	21006	22759
Idukki	1577	423	10438	12438	1199	253	9015	10467
Ernakulam	3562	1468	36216	41246	2630	766	31997	35393
Thrissur	4796	93	38021	42910	3517	61	33470	37048
Palakkad	6383	264	34436	41083	3239	181	24785	28205
Malappuram	5029	99	64672	69800	3008	50	47419	50477
Kozhikkode	2749	119	41653	44521	1735	66	32816	34617
Wayanad	501	957	9157	10615	308	458	6686	7452
Kannur	1212	248	35849	37309	888	136	29934	30958
Kasaragod	679	379	17102	18160	381	189	12047	12617
Total	43998	4788	423994	472780	26905	2537	339207	368649

Source: Commissioner for Govt. Examinations, Kerala

Appendix 14.24 (a)

**SCP through Local Self Govt. Institutions - Kerala
Physical Achievements 2002-2003 to 2005-06(Provisional)**

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
1	Area brought under cultivation	Ha	1494.46	4121	803.84	559
2	Beneficiaries of vegetable cultivation	No	6472	9034	5966	18130
3	Beneficiaries who received Planting materials distributed through integrated agricultural development programmes	No		16393	7542	7028
4	Pumpset distributed through integrated agricultural development programmes	No	174	753	396	591
5	Sprayers distributed through integrated agricultural development programmes	No		165	94	140
6	Poultry-egg rearing units	No	544	5151	959	785
7	Fresh water fish culture(Area)	Ha	-	0	37	0
8	Construction of cattlesheds	No	537	1212	691	670
9	Watershed development projects	No	22	127	121	39
10	Land brought under cultivation through watershed development projects	Ha	220.53	305	169	195
11	New industrial units	No	66	95	217	25
12	Rehabilitation of traditional industrial units	No	21	50	51	29
13	Persons who received industrial entrepreneurship training	No	884	36	1068	341
14	Skill development(Persons trained)	No	2892	4764	6583	1942
15	Micro enterprises started	No	276	523	230	240
16	Self employment units started	No	784	328	321	441
17	Self employed persons	No	1248	1938	4581	1260
18	Employment training programme for destitutes	No	12	69	211	19
19	Self employment units started by poor people	No	6	826	62	310
20	Self employment units for destitutes	No	1	20	336	29
21	Destitutes trained (Persons)	No	58		187	66
22	Computer training (Persons trained)	No	2076	4019	15313	11559
23	Area of land distributed to landless	Ha	2482.11	1732	5622	2757
24	Distribution of house plots	No	1480	4030	4257	1737
25	Houses constructed	No	9016	12309	15040	12478
26	Distribution of land to land less(beneficiaries)	No	2424	8038	2011	3724
27	Renovation of houses	No	6718	10020	9135	10866

Contd....

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
28	Shelter upgradation	No	1234	2160	1125	1510
29	Renovation of SC/ST houses	No	10551	6534	7251	4985
30	Integrated development SC habitats	No	324	1176	521	442
31	Electric wiring of houses	No	6753	3875	2954	2605
32	Construction of sanitation units	No	8946	21883	11167	9716
33	New wells	No	2044	3942	2674	2922
34	New public water tap connection installed	No	1088	1618	1835	838
35	New water tap connection to households	No	28	91	256	309
36	Renovation of ponds	No	45	195	40	64
37	Pump sets	No	17.4	343	184	331
38	Ordinary roads (Number)	No	427	2818	1369	1189
39	Ordinary roads (Length)	Km	7510.53	6854	7398.14	2118
40	Roads above 8M width(Number)	No	3	110	11	66
41	Roads above 8M width(Length)	Km	29	1957	15.89	52
42	Roads between 6 and 8 M width(Number)	No	33	573	303	228
43	Roads between 6 and 8 M width(Length)	Km	39.27	960	373.75	1607
44	Roads below 6M width(Number)	No	517	752	567	255
45	Roads below 6M width(Length)	Km	432	3570	536.10	582
46	New culverts	No	52	69	46	87
47	New bridges	No	9	37	11	32
48	Anganwadi Buildings	No	27	36	25	16
49	Rehabilitation of puramboke dwellers (projects)	No	17	294	28	91
50	Slum development projects	No	77	13	71	22

Source : Information Kerala Mission

Estimated from Annual expenditure statement of Local Governments

Appendix 14.24 (b)

**TSP through Local Self Govt. Institutions - Kerala
Physical Achievements 2002-03 to 2005-2006 (Provisional)**

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06
1	Area brought under cultivation	Ha	137.75	240	251.52	25
2	Beneficiaries of vegetable cultivation	No	323	1295	123	242
3	Beneficiaries who received Planting materials distributed through integrated agricultural development programmes	No		1360	1530	236
4	Pumpset distributed through integrated agricultural development programmes	No	33	41	24	33
5	Sprayers distributed through integrated agricultural development programmes	No		73	0	0
6	Poultry-egg rearing units	No	2	547	0	50
7	Fresh water fish culture(Area)	Ha	-	-	0	0
8	Construction of cattlesheds	No	43	58	23	32
9	Watershed development projects	No	1	16	176	2
10	Land brought under cultivation through watershed development projects	Ha	50	24	102	100
11	New industrial units	No	1	11	4	0
12	units	No	0	-	16	0
13	Persons who received industrial entrepreneurship training	No	239	16	193	100
14	Skill development(Persons trained)	No	368	284	25	611
15	Micro enterprises started	No	49	48	35	6
16	Self employment units started	No	23	36	28	44
17	Self employed persons	No	240	696	116	196
18	Employment training programme for destitutes	No	-	6	0	0
19	Self employment units started by poor people	No		106	0	29
20	Self employment units for destitutes	No	1	2	0	0
21	Destitutes trained (Persons)	No	35		0	0
22	Computer training (Persons trained)	No	707	60	0	1278
23	Area of land distributed to landless	Ha	104	69	132	169
24	Distribution of house plots	No	20	264	245	241
25	Houses constructed	No	1051	1377	1922	2117
26	Distribution of land to land less(beneficiaries)	No	161.03	132	294	229
27	Renovation of houses	No	594	1067	1119	1200
28	Shelter upgradation	No	60	150	144	222
29	Renovation of SC/ST houses	No	203	1116	787	596

Sl.No	Item	Unit	2002-03	2003-04	2004-05	2005-06
1	2	3			5	6

Contd....

30	Integrated development SC habitats	No	-	4	39	2
31	Electric wiring of houses	No	375	1259	1323	1158
32	Construction of sanitation units	No	1690	2262	1009	394
33	New wells	No	93	422	103	134
34	New public water tap connection installed	No	110	233	43	147
35	New water tap connection to households	No	2	14	0	31
36	Renovation of ponds	No	1	8	0	11
37	Pump sets	No	33	25	4	4
38	Ordinary roads (Number)	No	11	332	70	26
39	Ordinary roads (Length)	Km	51539	1258	407.59	103
40	Roads above 8M width(Number)	No	0	3	0	0
41	Roads above 8M width(Length)	Km	9.38	751	0.00	0
42	Roads between 6 and 8 M width(Number)	No	1	14	15	5
43	Roads between 6 and 8 M width(Length)	Km	0	1278	7.14	8
44	Roads below 6M width(Number)	No	15	64	38	4
45	Roads below 6M width(Length)	Km	24	553	19.02	3
46	New culverts	No	6	11	0	8
47	New bridges	No	2	5	7	3
48	Anganwadi Buildings	No	8	14	4	5
49	Rehabilitation of puramboke dwellers (projects)	No	5	2	0	3
50	Slum development projects	No	5	2	0	7

Source : Information Kerala Mission

Estimated from Annual expenditure statement of Local Governments

Appendix 14.25

Scheduled Castes, Scheduled Tribes And Other Backward Classes Expenditure From 2002-03 To 2006-07 (Up To December 2006)

(Rs. Lakh)

Sl. No.	Major Head/ Minor Head of Development	Expenditure				
		2002-03	2003-04	2004-05	2005-06	2006-07 (upto 1.12.2006)
1	2	3	4	5	6	7
1	WELFARE OF SCHEDULED CASTES					
1.1	Externally Aided Projects					
1.2	State Share for CSSchemes					
1	Kerala State Development Corporation for Scheduled Castes/Scheduled Tribes Ltd - Share Capital (51%SS)	86.66	76.50	200.00	204.00	58.17
2	Coaching and Allied Schemes(50%SS)	11.61	11.03	9.46	11.30	20.67
3	Construction of Girls' Hostels(50%SS)	15.47	6.82	75.50	16.31	
4	Construction of Boys' Hostel(50%SS)	0.68	20.74	53.29	1.87	
5	Book Banks in Professional Colleges and Polytechnics(50%SS)	30.89	21.44	18.14		
6	Protection of Civil Rights and Enforcement of PCR Act (50%SS)	41.95	40.14	95.32	76.22	119.81
7	Assistance to the Dependence of Safai Karmacharis (50%SS)	9.98	2.63	3.31	6.50	
8	Enforcement of Prevention of Atrocities Act 1989 (50%SS)	2.55	3.73	0.00		
	Sub Total	199.79	183.03	455.02	316.20	198.65
1.3	State Schemes					
1	Production-cum-Training Centres and Industrial Training Centres	43.16	29.93	59.87	61.65	18.98
2	Pre-Matric Studies(Tutorial System in Pre-metric Hostels)	151.08	260.41	0.00	17.56	
3	Ayyankali Memorial Talent Search & Special Incentive schemes.	31.06	45.61	75.61	67.97	
4	Better Education to Bright Scheduled Caste Students	28.45	35.31	0.00	0.00	
5	Ayyankali Memorial Sports School	46.12	47.74	39.76	40.04	
6	Financial Assistance to Failed SC Students	39.11	85.38	47.08	3.46	
7	Bharat Darshan	7.06	7.53	8.00	8.00	8.00
8	Boarding Grants		302.73	0.00	0.00	5.62
9	Post Matric Hostels	48.78	55.95	96.24	110.27	74.39
10	Tuition System in Pre-Matric	464.20		0.00		
11	Land and Buildings for Hostels and ITCs	22.69	39.30	151.73	3.87	8.39
12	Pre-Examination Training/ Buildings	0.27		3.29	0.66	
13	Model Residential School	354.05	577.38	692.16	620.01	112.43

Contd...

Sl. No.	Major Head/ Minor Head of Development	Expenditure				
		2002-03	2003-04	2004-05	2005-06	2006-07 (upto 1.12.2006)
1	2	3	4	5	6	7
14	Grant to Civil Service Examination Society	52.00	30.00	30.00	32.50	
15	Development of Vulnerable		17.13	0.00	2.58	11.22
16	P&M Cell/ Modernisation of Offices and Audio-Visual Equipments	4.77	43.35	3.11	30.09	0.71
17	Information-cum-Guidance Centre	6.20	26.31	10.56	8.28	1.32
18	Office Complex for Directorate of		0.49	0.11	0.00	
19	Centre of Excellence	0.10	20.00	43.78	30.00	24.76
20	High-tech courses/Entrance		1.16	75.00	0.00	
21	National Trade and Arts Fair of SCs	25.00		9.00	5.43	
22	Honorarium and Training to SCP promoters	277.74	172.79	223.26	143.44	180.78
23	Advocate Clerk-cum-Typist	10.29	13.49	0.00		
24	Training on SCP/TSP Schemes		2.21	0.00		
25	Para-medical studies	154.66	286.67	40.20	25.12	22.99
26	A M Talent Search and	4.35	29.22	0.00		
27	Encouragement of Boat race in			0.00		
28	Self Employment		98.46	143.56	158.89	66.68
29	Establishing Shopping Complex			0.00		
30	Dr. Ambedkar Bhavanam			450.00		
31	Rehabilitation of Landless		709.04	0.00		
32	Apprenticeship to ITI/ITC Diploma/Degree		19.92	34.06	35.11	16.43
33	Renovation of Post-Matric Hostels		1.60	402.04		
34	Assistance to the seriously ill			75.00	175.00	99.57
35	Assistance to marriage of SC girls				0.00	17.30
36	Pre-primary Education		58.24		0.00	
37	Co-operatives through LSGs				5.00	
38	Pooled Funds/ Corpus Fund	8638.94	3702.93	3923.50	3803.18	1290.20
	Sub Total	10410.08	6720.28	6636.92	5388.11	1959.77
	Total 1(State Schemes/State Sponsored Schemes)+B1	10609.87	6903.31	7091.94	5704.31	2156.42
	Special Central Assistance to Special Component Plan*	1195.76	231.30	7.31	166.84	

Contd...

Sl. No.	Major Head/ Minor Head of Development	Expenditure				
		2002-03	2003-04	2004-05	2005-06	2006-07 (upto 1.12.2006)
1	2	3	4	5	6	7
2	WELFARE OF SCHEDULED TRIBES					
2.1	Externally Aided Projects					
2.2	State Share of CSSchemes					
1	Share Capital Contribution to KSDC for SC/ST for Implementing Schemes Benefiting Scheduled	2.55	4.25	5.00	5.00	0
2	Grant-in-aid to KIRTADS	10.36	9.98	10.68	14.67	20.1
3	Construction of Boys'	9.99	0.44	43.22	19.82	3.2
4	Construction of Girls'	13.91	15.26	76.31	27.06	3.2
5	Enforcement of Prevention of Atrocities Act (50%SS)	2.77	5.35	1.63	3.60	9.56
6	Model Residential School (Building construction)			325.01	327.37	83.38
7	Health Project, AttappadyArt	20.00	35.00	2.50		
8	Health Project, IdukkiArt 275(1)25%	4.85	1.33	2.84		
9	Housing for Primitive Tribes	2.89	2.36	0.00		
10	Water Shed Studies with(30% SS)-Grant-in-aid to CESS	7.72	15.00			0
	Sub Total	75.04	88.97	467.19	397.52	119.44
2.3	State Schemes					
1	Support to Group Farms	124.00	100.45	56.69	35.00	32.66
2	Assistance to Tribal Co-operative Societies for Providing Medical and Educational Facilities/ Grant-in-aid to Attappadi Cooperative Farming Society(ACFS) for Conducting a School and Hospital		10.00	10.00	10.00	
3	Grant-in-aid to Ambedkar Memorial Rural Institute for Development, Wayanad (AMRID)	3.00		3.00	3.00	3
4	Adikala Gramam/Assistance to Adikala Kendram	10.00	1.45	4.51	9.49	4.82
5	Tribal Hostels/ Improvement of Tribal Hostels	45.10	28.90	72.32	22.12	9.73
6	Scheme for Purchase of Land for Construction of Tribal Hostels	17.17		1.15	3.04	0
7	Model Residential Schools/Ashramam Schools	626.77	589.45	606.26	533.19	523.06
8	Tutorial Scheme for School Going Students and Failed Students	35.06	63.59	75.16	47.64	22.63
9	Special Incentives to Brilliant Students	13.83	13.69	17.95	10.00	19.81
10	Incentive to Talented Tribal Youths in Arts & Sports		0.14	0.03	0.22	0.14
11	Better Education Facilities to S T Students	89.17		3.45		
12	Bharat Darshan	6.00	6.00	6.00	6.00	7
13	Repair of Post Matric Hostels		2.63	4.50	15.01	14.41

Contd...

Sl. No.	Major Head/ Minor Head of Development	Expenditure				
		2002-03	2003-04	2004-05	2005-06	2006-07 (upto 1.12.2006)
1	2	3	4	5	6	7
14	Apprenticeship to ITI/ITC Passed Candidates	0.06	0.03	0.18	0.62	0.66
15	Peripatetic education to the Primitive Tribes		0.00	5.21	21.85	19.54
16	Health Project, Mananthavady, Idukki, Attappady	0.39	11.31	5.00	25.00	19
17	Housing Programme	277.20	179.46	0.00	99.16	62.19
18	Information Education and Communication (IEC)	17.03	12.77	23.17	16.85	6.71
19	Modernisation of Dept & Monitoring of scheme	23.83	3.32	30.31	13.72	3.73
20	Tribal Youth Festivals & Sports Infrastructure	6.39	5.50	1.00	4.55	0
21	Assistance to Marriage of Schedule Tribe girls			0.00	12.10	9.8
22	Health Care Packages to Tribals affected by diseases	10.91	21.68	49.11	44.72	35.53
23	Imp. of Restoration of Alienated Lands Act, 1999		0.00			0
24	Food support programmes	89.25	96.99	150.00	150.00	137.42
25	Programmes for PTG - Adiyans & Paniyans	211.53	82.89	90.00	73.59	43.76
26	Social Activists/Tribal Promoters	168.49	147.23	149.91	164.36	83.56
27	Strengthening field Level Monitoring	15.54	7.18	0.54		
28	Insurance for Tribals/ Health Insurance Scheme	10.00		0.00		2.00
29	National Trade and Arts Festival	10.00	0.00	8.25	9.09	5.83
30	Training in Information Technology	6.91	4.72	0.00		
31	Extension of Kudumbasree to Tribal Areas	50.00	0.00		0.00	0
32	Ayyankali Memorial Talent Search & Development	13.50	10.33	20.37	32.06	12.15
33	Organisation of Oorukootams	59.51	18.28	17.74	11.09	8.19
34	Assistance to NGOs	74.37	0.00	24.99	0.00	0
35	Opening of Grain Banks	40.00	14.04	8.00	0.00	
36	Dr. Ambedkar Bhavan for Dalit Empowerment		0.00	45.00	0.00	
37	Corpus Fund for Project based Activities	590.39	990.57	1187.50	631.84	191.00
38	Resettlement of Landless Tribals	5127.07	0.00	1550.00	1000.00	166.39
39	Grant-in-aid to schemes under Article 275(i)				0.00	
	Sub Total	7772.47	2422.60	4227.30	3005.31	1444.72
	Additional Central Assistance					
1	Drinking water supply to Tribals	0.00	550.00	575.02	700.00	0
2	Enhancement of facilities to Tribal areas	0.00	330.69	0.00		251.65
3	Resettlement of Landless Tribals	0.00	0.00	0.00		166.39

Contd...

Sl. No.	Major Head/ Minor Head of Development	Expenditure				
		2002-03	2003-04	2004-05	2005-06	2006-07 (upto 1.12.2006)
1	2	3	4	5	6	7
4	Guaranteeing quality Education to Tribals	0.00	0.00	0.00		0.00
5	Health Insurance Scheme for Tribals	0.00	0.00	0.00		2.00
6	Improving Facilities in ST Hostels				80.28	40.00
	Sub Total	0.00	880.69	575.02	780.28	460.04
	Total 2 (State Schemes/State Sponsored Schemes)	7847.51	3392.26	5269.51	4183.11	2024.2
	<i>Special Central Assistance to TSP*</i>	270.09	328.62	272.17	244.45	-
3	OTHER BACKWARD CLASSES					
3.1	<i>Externally Aided Projects</i>					
3.2	<i>State Share for CSSchemes</i>					
1	Construction of Hostels for Girls (50% SS)		0.00	21.85	18.63	-
3.3	State Schemes					
1	Kerala State Development Corporation for Christian Converts from Scheduled Castes and Recommended Communities	225.00	255.00		300.00	
2	Kerala State Backward Classes Development Corporation	350.00			400.00	
3	Post-Matric Studies(Concessions)/Post Matriculation Studies	26.33	1469.47	80.00	105.01	105.00
4	Pre-Matric Concessions /Pre-matriculation Studies	11.17	94.84	49.90	44.98	50.25
	Sub Total	612.50	1895.63	129.90	849.99	155.25
	Total: Other Backward Classes	612.50	1895.63	151.75	868.62	155.25
	Total: Scheduled Caste Development, Scheduled Tribe Development and Other Backward Classes	19069.88	12191.20	12513.20	10756.04	4337.87
	Total Special Central Assistance to SCP/TSP	1465.85	559.92	279.48	411.29	-

Source : SC & ST Development Depts.

Appendix 14.26

**Major Schemes of Scheduled Castes Development Department
Physical Achievements during 2002-03 - 2006-07(up to 31.12.2006)**

Sl. No	Name of Scheme	Unit	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8
1	Pre-matriculation studies (SC)	Students	420860	169488	422440	426084	296175
2	Special incentive to talented students	Students	3489	1352	5157	4291	3832
3	Post matric hostel	Students	1002	1320	1280	989	973
4	Model Residential Schools	School students	661	625	952	1009	1013
5	Bharath Dharsan	Students	60	60	60	60	
6	Financial assistance to failed SC students for continuing education	Students	4784	1343	6343	474	679
7	Upgradation of performance of SC students in sports and games	School students	190	35	146	180	
8	Self employment scheme for SCs	Beneficiaries		98	618	377	95
9	Apprenticeship to ITI/ITC/Diploma holders	Trainees		106	420	399	115
10	Production cum training centers	Trainees	1356		850	745	155
11	Grant to civil services examination training society	Students	30	30	30	30	

Contd...

Sl. No	Name of Scheme	Unit	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8
12	Training and Honorarium to SC promoters	Promoters	1175		1175	1175	1175
13	Paramedical Education	Students			2199	799	213
14	Pre-matriculation studies OBC	Students	89013		128545	117916	96863
15	Post matriculation studies OBC	Students	64944		176565	148798	74186
16	Financial assistance to seriously ill SC under poverty line	Families					2975
17	PCR & PA Act	Families	394	7	462	310	439
18	Coaching and Allied schemes	Center Students	18	65	2700	30	
19	Development of dependence of SC who were engaged in unclean occupation in the past	Families	1550		835	481	215
20	Post matriculation studies SC	Students	89093	83822	91306	98672	55746
21	Corpus fund	Families	10291		11004	12472	

Source : Scheduled Castes Development Department

Appendix 14.27

**Physical Achievements of Schemes for Scheduled Tribes Development Department for the period
2002-03 to 2006-07 (upto 31-12-2006)**

Sl.No	Name of Scheme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
1. State Sector Schemes							
1	IEC Project [Information, Education & Communication	Project		52	1	1	1
2	Improvement of Tribal Hostels	Hostel	37		16	8	4
3	Tutorial scheme for schoolGoing students and failedstudents	student	3899	10000	1722	782	318
4	Girls Hostels [50% State share]	Hostels	2			2	2
5	Boys Hostels [50% State share]	Hostels	2			1	1
6	Providing Better Educationfacilities for Talented Student	students	48	100	25		
7	Purchase of land for construction of tribal hostels	No. of plots	2		-	-	-
8	Bharat Darshan	students	53	60	44	49	710
9	Incentive to Specially Talented Youths in Arts and sports	youths	25	4	4	28	60
10	Health project Mananthavady under Article 275[1]	project			1 hospital	1 hospital & 6 OP clinics	3
11	Support to Group Farms	families			3	740	2
12	Grant in Aid to Attappady Co-op Farming Society for conductinga School and a Hospital	students			1	219	1
13	Grant in Aid to Ambedkar Memorial Rural Institute for Development [AMRID], Wayanad	beneficiaries			1	70	1
14	Modernisation of Tribal Development Department	Project			1	1	1
15	Share capital contribution toKerala State Development Corporation for SC/ST forImplementing Schemes benefittingScheduled Tribes [State share 51%]	Share Capital			Share Capital	Share Capital	share capital
16	Grant in aid to Kerala Institute forResearch Training and Developmentstudies for SC/ST [State share 50%]	Project			1	4	-
17	Provision of Additional Apprenticeship for ITC/ITI passed candidates.	Students		1	4	7	9
18	Special Programme for Primitive TribalGroups - Adiyas and Paniyas	Beneficiaries	5432	6000	7976	8758	4103
19	Tribal promoters	promoter	1000	1000	931	981	1000

Contd....

Sl.No	Name of Scheme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8
20	Conduct of Tribal Youth Festivals	Youth festivals			-	12	-
21	Special Incentive to Brilliant students	students	493	600	705	533	645
22	Enforcement of Prevention of Atrocities Act 1989 [State Share 50%]	claims			6 claims	23	13
23	Providing Health Care Package to Tribal Individuals affected by diseases	patients	1880	1615	7784	6721	4172
24	Implementation of Land Alienation Act 1975	-				-	-
25	Food Support Programme	families	35302	40131	62381	63099	32158
26	Assistance to Adikala Kendram	Institution			1		1
27	Health project Attappady [State Share 25%] Article 275[1]	OP clinics			2 OP clinics		
28	Post-matric Hostels for Tribals	students				62	3
29	Peripatetic education to the PTG's	students			21 Centres	618	37
30	Ayyankali Memorial Talent Search and Development Scheme	students	392	315	530	607	345
31	Organisation of Oorukuttom	Oorukkoottam	624	1422	1895, 34	607	286
32	Assistance to Non-Government Organisation	NGO's	10		-	-	-
33	Opening of Grain Banks	centres	3	39	6	-	
34	Trade & Arts Festivals of STs	Festival			1		
35	Resettlement of Landless Tribals	TRDM Project	328			1438	-
36	Model Residential Schools [18 Nos] [Revenue]	students	3004	3440	3731	3851	3862
37	Dr. Ambedkar Bhavan for Dalit empowerment	Building			-	-	
38	Corpus Fund for Tribal Sub Plan		4412			47	42
39	Peripatetic Education to the Primitive Tribes	Centres			21		
	Centrally Sponsored/Central Sector Schemes						
1	Construction of Building for Model Residential Schools [10 Schools 50% CSS]				15	9	5
2	Post Matric Scholarship [100% CSS]		3211		5000		
3	Vocational Training Institute [100% CSS]	students	3		3	72	3
4	Upgradation of Merits of ST students [100% CSS]				10	10	-
5	Construction of MRS, Idukki				1	1	1
6	Construction of Attappady Health project Hospital				1	1	1
7	Construction of MRS Pookote, Article 275[1]				1		-
8	Construction of MRS, Njaraneeli, Art. 275[1]				1	1	1
9	New Central Sector Scheme for PTG's [100% CSS] [Insurance coverage]				500		

Sl.No	Name of Scheme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6	7	8

Source :Scheduled Tribe Development Department

Appendix 15.1
Month-wise Consumer Price Index (Cost of Living Index Numbers) for
Agricultural and Industrial Workers - Kerala 2005 & 2006

(Base: 1998-1999=100)

Sl. No	Centre	2005				2006									
		Sep	oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept.	Oct
1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Thiruvananthapuram	133	133	134	136	136	136	136	137	138	138	139	139	139	139
2	Kollam	132	132	133	134	135	135	135	136	137	138	139	139	139	139
3	Punalur	123	123	124	125	126	126	126	127	128	129	131	132	133	134
4	Pathanamthitta	127	127	128	129	130	130	130	131	132	133	134	134	135	136
5	Alappuzha	125	125	126	128	129	129	129	130	131	132	133	134	133	134
6	Kottayam	126	126	127	128	128	128	128	128	129	130	132	133	134	134
7	Mundakkayam	122	122	123	124	125	125	125	125	125	126	127	128	127	128
8	Munnar	122	122	123	124	124	123	123	124	125	125	125	125	125	126
9	Ernakulam	127	127	129	130	131	131	131	131	132	133	134	134	133	133
10	Chalakkudy	124	125	126	127	127	127	127	127	128	129	130	131	130	131
11	Thrissur	124	124	125	127	127	127	127	127	128	129	130	131	131	132
12	Palakkad	126	126	127	128	129	129	129	129	130	131	132	133	135	136
13	Malappuram	126	126	127	128	128	128	128	129	128	129	130	131	132	133
14	Kozhikode	124	124	126	127	128	128	128	128	129	129	129	130	128	128
15	Meppady	123	123	124	125	126	126	126	127	128	129	130	131	129	129
16	Kannur	126	127	128	129	129	129	129	129	129	130	131	130	129	130
17	Kasaragod	131	131	132	133	133	132	132	132	133	133	134	134	133	134
	Average	126	126	127	128	129	129	129	129	130	131	132	132	132	133

Source: Directorate Economics & Statistics.

Appendix 15.2
Month-wise Average Retail Prices of Essential Commodities in Kerala - 2005 &2006

(Rs)

Sl. No.	Name of Commodity	Unit	2005			2006										
			Oct	Nov.	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	Cereals															
1	Rice Matta (OM)	Kg	13.29	13.51	13.56	13.70	13.72	13.72	13.56	13.75	13.81	13.91	13.98	14.21	14.46	14.63
B	Pulses															
2	Greengram	Kg	33.10	35.52	36.93	37.25	37.91	39.68	44.80	44.00	44.79	42.83	41.03	41.57	43.43	43.99
3	Blackgram split(without husk)	Kg	38.72	44.35	46.94	47.09	47.07	48.16	55.54	56.00	57.11	55.60	54.81	58.30	62.52	62.59
4	Redgram	Kg	22.63	25.21	27.00	27.15	26.25	25.23	28.40	28.25	30.40	31.04	30.41	30.67	31.65	32.14
5	Dhall (Tur)	Kg	34.42	34.99	34.76	33.68	32.96	32.71	34.91	34.00	34.35	34.11	34.29	35.44	36.89	36.34
C	Other Food Items															
6	Sugar (OM)	Kg	18.67	18.87	18.80	19.63	21.37	20.41	20.75	20.50	20.59	20.18	19.58	18.75	18.41	18.40
7	Milk(Cow's)	Ltr	14.93	14.94	14.93	14.93	14.93	14.93	14.93	15.00	14.93	14.93	14.93	14.93	14.93	14.93
8	Egg(Hen's Nadan)	Dozen	30.06	30.43	31.19	30.97	30.97	28.14	27.81	24.00	29.28	29.65	30.28	30.45	30.71	32.25
9	Egg Hen's White Legon)	Dozen	16.74	17.66	20.19	18.22	16.61	11.88	12.96	15.00	16.02	16.22	17.19	18.35	18.68	22.73
D	Oil and Oil seeds															
10	Coconut Oil	Kg	55.88	54.79	54.55	53.11	54.81	54.07	53.64	55.00	55.01	52.50	55.26	57.53	61.48	61.74
11	Groundnut Oil	Kg	68.60	69.06	68.75	68.58	68.21	68.74	68.88	88.00	68.58	68.56	69.17	71.31	73.18	73.40
12	Refined Oil (Postman)	Kg	84.53	84.91	82.87	80.64	79.53	79.38	78.69	55.00	77.30	77.05	76.98	77.27	77.56	77.94
13	Gingelly Oil	Kg	63.13	62.87	63.10	62.80	62.54	62.49	62.73	64.75	61.28	61.38	62.32	63.49	64.80	65.89
14	Coconut (without Husk)	100Nos	560.98	568.38	578.79	561.34	566.07	550.60	546.79	565.00	535.43	513.04	531.60	555.57	583.39	592.4
E	Spices and Condiments															
15	Corriander	Kg	29.88	30.51	32.35	33.18	33.14	33.83	36.59	38.00	40.58	40.45	40.76	41.34	41.36	41.91
16	Chillies (dry)	Kg	35.30	41.93	44.63	43.64	43.46	46.65	50.13	58.75	62.90	62.89	64.99	75.13	81.55	83.30
17	Onion (small)	Kg	14.51	18.13	22.52	17.41	15.64	14.80	17.25	15.50	17.51	15.60	13.68	14.24	16.64	18.96
18	Tamarind (without seed)	Kg	34.48	35.21	34.99	34.86	34.18	34.36	33.55	34.00	33.57	34.27	35.32	37.79	38.98	39.48
F	Tubers															
19	Chenal (Elephan Foot)	Kg	9.89	9.98	10.01	9.82	9.93	10.13	10.68	11.00	13.37	12.43	11.62	10.66	9.93	9.86
20	Tapioca (Raw)	Kg	6.36	6.40	6.47	6.50	6.46	6.41	6.48	7.00	6.54	6.67	6.78	6.91	7.07	7.14
21	Potato	Kg	10.04	12.91	15.95	16.10	13.55	12.16	11.94	12.25	14.03	14.12	12.43	12.16	13.78	14.04
22	Colocassia	Kg	16.55	17.29	16.03	14.95	13.88	14.00	15.19	14.00	15.95	16.15	16.53	18.10	17.64	17.78
G	Fruits & Vegetables															
23	Onion(Big)	Kg	17.47	18.44	12.89	9.22	7.61	6.88	6.79	6.25	7.57	8.11	8.29	8.26	8.79	10.10
24	Brinjal	Kg	11.79	18.39	16.74	13.91	13.16	10.88	10.52	12.75	10.67	12.09	11.68	12.24	10.98	14.57
25	Pumpkin	Kg	7.91	7.31	7.23	7.79	7.73	7.16	6.91	7.25	7.04	7.07	7.17	7.36	7.46	7.55
26	Cucumber	Kg	8.25	8.90	10.06	9.27	7.63	7.20	7.84	7.50	8.61	9.82	8.51	7.49	8.98	11.70
27	Lady's Finger	Kg	11.20	12.42	13.91	14.96	12.82	9.62	11.16	11.50	14.34	13.46	11.85	11.31	11.30	13.05
28	Cabbage	Kg	10.23	12.04	12.04	13.18	11.09	9.44	8.86	9.00	9.36	9.20	10.38	10.73	10.80	10.96
29	Bittergourd	Kg	18.09	18.57	18.76	16.45	15.07	13.89	14.98	16.75	17.74	19.98	19.70	18.27	17.25	16.80
30	Ashgourd	Kg	7.41	7.38	7.59	8.63	8.48	7.93	7.25	8.00	7.04	7.38	8.34	8.23	8.00	9.54
31	Snakegourd	kg	11.80	12.90	12.79	11.30	10.52	10.00	10.27	10.00	12.45	13.16	12.00	11.97	13.34	13.84
32	Chillies (Green)	Kg	14.18	20.54	17.83	16.64	15.82	14.40	14.36	15.00	16.34	15.79	16.39	15.41	14.11	18.11
33	Banana (Green)	Kg	15.52	14.01	12.79	14.91	14.96	14.96	15.55	14.00	16.84	18.52	18.56	15.50	14.80	14.93
34	Plantain (Green)	Kg	10.13	10.10	9.86	9.93	9.77	9.63	9.34	7.25	9.56	10.41	11.06	11.36	10.77	10.25

Appendix 15.3

Per 1000 distribution of persons in rural sector over MPCE classes for selected States and all-India - NSS 60th Round
(January - June 2004)

Schedule Type1

(Rural)

Sl. No.	State	MPCE(Rs)																				Average MPCE (Rs)				
		0-225	%	225-255	%	255-300	%	300-340	%	340-380	%	380-420	%	420-470	%	470-525	%	525-615	%	615-775	%		775-950	%	950& more	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	25	2.5	29	2.9	74	7.4	96	9.6	88	8.8	78	7.8	118	11.8	96	9.6	113	11.3	131	13.1	65	6.5	87	8.7	557.11
2	Assam	14	1.4	11	1.1	37	3.7	60	6.0	58	5.8	106	10.6	153	15.3	139	13.9	169	16.9	145	14.5	78	7.8	30	3	531.69
3	Bihar	25	2.5	37	3.7	117	11.7	129	12.9	140	14.0	127	12.7	131	13.1	98	9.8	85	8.5	57	5.7	31	3.1	22	2.2	442.49
4	Gujarat	7	0.7	10	1.0	38	3.8	105	10.5	74	7.4	66	6.6	127	12.7	78	7.8	154	15.4	110	11.0	104	10.4	126	12.6	613.21
5	Haryana	0	0	0	0	9	0.9	0	0	22	2.2	7	0.7	79	7.9	52	5.2	131	13.1	252	25.2	167	16.7	281	28.1	878.68
6	Karnataka	17	1.7	29	2.9	74	7.4	94	9.4	87	8.7	157	15.7	121	12.1	107	10.7	100	10.0	117	11.7	51	5.1	46	4.6	501.60
7	Kerala	7	0.7	19	1.9	7	0.7	7	0.7	22	2.2	15	1.5	71	7.1	71	7.1	126	12.6	143	14.3	146	14.6	364	36.4	990.22
8	Madhya Pradesh	56	5.6	50	5.0	83	8.3	118	11.8	165	16.5	74	7.4	99	9.9	98	9.8	117	11.7	96	9.6	31	3.1	11	1.1	437.34
9	Maharashtra	8	0.8	40	4.0	33	3.3	53	5.3	81	8.1	118	11.8	107	10.7	112	11.2	125	12.5	157	15.7	71	7.1	93	9.3	568.85
10	Orissa	112	11.2	64	6.4	179	17.9	96	9.6	122	12.2	65	6.5	66	6.6	63	6.3	93	9.3	96	9.6	23	2.3	21	2.1	414.08
11	Punjab	0	0	0	0	3	0.3	7	0.7	0	0	52	5.2	39	3.9	120	12.0	127	12.7	140	14.0	146	14.6	366	36.6	946.86
12	Rajasthan	0	0	12	1.2	19	1.9	57	5.7	92	9.2	116	11.6	130	13.0	106	10.6	164	16.4	122	12.2	75	7.5	108	10.8	580.47
13	Tamil Nadu	8	0.8	12	1.2	51	5.1	64	6.4	124	12.4	94	9.4	112	11.2	92	9.2	126	12.6	146	14.6	80	8	91	9.1	603.40
14	Uttar Pradesh	29	2.9	22	2.2	57	5.7	98	9.8	107	10.7	100	10.0	114	11.4	103	10.3	123	12.3	130	13.0	56	5.6	61	6.1	538.18
15	West Bengal	5	0.5	13	1.3	42	4.2	68	6.8	75	7.5	110	11.0	124	12.4	114	11.4	131	13.1	144	14.4	86	8.6	87	8.7	580.18
	All-India	24	2.4	27	2.7	64	6.4	83	8.3	96	9.6	96	9.6	108	10.8	100	10.0	122	12.2	126	12.6	67	6.7	88	8.8	564.70

Source: NSS Report No.505

Appendix 15.4

**Per 1000 distribution of persons in rural sector over MPCE classes for selected States and all-India - NSS 60th Round
(January-June 2004)**

Schedule Type2

(Rural)

Sl. No.	State	MPCE(Rs)																				Average MPCE (Rs)				
		0-225	%	225-255	%	255-300	%	300-340	%	340-380	%	380-420	%	420-470	%	470-525	%	525-615	%	615-775	%		775-950	%	950& more	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	29	2.9	11	1.1	37	3.7	64	6.4	77	7.7	86	8.6	104	10.4	126	12.6	142	14.2	152	15.2	69	6.9	103	10.3	589.30
2	Assam	0	0	6	0.6	18	1.8	25	2.5	33	3.3	51	5.1	110	11.0	126	12.6	155	15.5	254	25.4	146	14.6	76	7.6	642.87
3	Bihar	12	1.2	32	3.2	88	8.8	102	10.2	147	14.7	82	8.2	138	13.8	145	14.5	113	11.3	81	8.1	35	3.5	24	2.4	462.72
4	Gujarat	0	0	11	1.1	22	2.2	40	4.0	66	6.6	115	11.5	99	9.9	129	12.9	131	13.1	138	13.8	99	9.9	149	14.9	653.07
5	Haryana	0	0	0	0	6	0.6	13	1.3	2	0.2	31	3.1	41	4.1	128	12.8	143	14.3	169	16.9	212	21.2	255	25.5	790.85
6	Karnataka	10	1.0	7	0.7	44	4.4	24	2.4	57	5.7	102	10.2	97	9.7	133	13.3	180	18.0	199	19.9	73	7.3	74	7.4	586.65
7	Kerala	0	0	0	0	1	0.1	14	1.4	13	1.3	23	2.3	35	3.5	33	3.3	71	7.1	170	17.0	194	19.4	447	44.7	1058.54
8	Madhya Pradesh	30	3.0	32	3.2	72	7.2	174	17.4	98	9.8	97	9.7	99	9.9	83	8.3	158	15.8	84	8.4	50	5.0	24	2.4	465.80
9	Maharashtra	6	0.6	22	2.2	47	4.7	55	5.5	66	6.6	61	6.1	78	7.8	90	9.0	99	9.9	190	19.0	134	13.4	151	15.1	672.06
10	Orissa	91	9.1	45	4.5	55	5.5	97	9.7	131	13.1	85	8.5	113	11.3	81	8.1	111	11.1	84	8.4	48	4.8	59	5.9	493.74
11	Punjab	0	0	0	0	8	0.8	0	0	12	1.2	34	3.4	30	3.0	61	6.1	81	8.1	119	11.9	173	17.3	481	48.1	1015.40
12	Rajasthan	13	1.3	8	0.8	7	0.7	35	3.5	50	5.0	90	9.0	153	15.3	160	16.0	158	15.8	150	15.0	95	9.5	80	8.0	604.03
13	Tamil Nadu	12	1.2	14	1.4	64	6.4	52	5.2	37	3.7	81	8.1	91	9.1	94	9.4	152	15.2	122	12.2	109	10.9	173	17.3	711.00
14	Uttar Pradesh	13	1.3	18	1.8	51	5.1	73	7.3	87	8.7	95	9.5	112	11.2	107	10.7	143	14.3	136	13.6	80	8.0	84	8.4	574.08
15	West Bengal	5	0.5	11	1.1	32	3.2	49	4.9	81	8.1	62	6.2	111	11.1	102	10.2	152	15.2	177	17.7	102	10.2	116	11.6	633.38
	All-India	17	1.7	17	1.7	45	4.5	67	6.7	74	7.4	81	8.1	102	10.2	109	10.9	134	13.4	146	14.6	91	9.1	117	11.7	616.57

Source: NSS Report No.505

Appendix 15.5

Per 1000 distribution of persons in urban sector over MPCE classes for selected States and all-India - NSS 60th Round (January - June 2004).

Schedule Type1

Urban

Sl. No.	State	MPCE(Rs)																								Average MPCE (Rs)
		0-300	%	300-350	%	350-425	%	425-500	%	500-575	%	575-665	%	665-775	%	775-915	%	915-1120	%	1120-1500	%	1500-1925	%	1925 & more	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	24	2.4	66	6.6	102	10.2	67	6.7	87	8.7	88	8.8	110	11.0	58	5.8	94	9.4	118	11.8	49	4.9	139	13.9	1101.71
2	Assam	0	0	0	0	35	3.5	0	0	125	12.5	102	10.2	164	16.4	107	10.7	205	20.5	155	15.5	27	2.7	81	8.1	1019.47
3	Bihar	10	1.0	61	6.1	143	14.3	21	2.1	123	12.3	128	12.8	199	19.9	112	11.2	28	2.8	94	9.4	41	4.1	39	3.9	784.02
4	Gujarat	0	0	0	0	38	3.8	13	1.3	73	7.3	76	7.6	210	21.0	103	10.3	161	16.1	146	14.6	82	8.2	98	9.8	1092.00
5	Haryana	0	0	41	4.1	19	1.9	21	2.1	72	7.2	51	5.1	132	13.2	180	18.0	271	27.1	70	7.0	57	5.7	85	8.5	1050.27
6	Karnataka	13	1.3	59	5.9	71	7.1	77	7.7	117	11.7	87	8.7	77	7.7	108	10.8	122	12.2	132	13.2	88	8.8	49	4.9	937.06
7	Kerala	28	2.8	4	0.4	73	7.3	18	1.8	90	9.0	108	10.8	111	11.1	72	7.2	87	8.7	179	17.9	86	8.6	143	14.3	1371.51
8	Madhya Pradesh	32	3.2	40	4.0	61	6.1	107	10.7	170	17.0	87	8.7	133	13.3	136	13.6	82	8.2	73	7.3	33	3.3	46	4.6	793.36
9	Maharashtra	12	1.2	10	1.0	70	7.0	59	5.9	65	6.5	49	4.9	72	7.2	97	9.7	156	15.6	144	14.4	91	9.1	178	17.8	1258.92
10	Orissa	95	9.5	0	0	100	10.0	51	5.1	70	7.0	47	4.7	75	7.5	185	18.5	102	10.2	189	18.9	69	6.9	17	1.7	872.09
11	Punjab	39	3.9	0	0	41	4.1	68	6.8	85	8.5	50	5.0	87	8.7	132	13.2	150	15.0	212	21.2	53	5.3	83	8.3	1058.82
12	Rajasthan	16	1.6	35	3.5	46	4.6	68	6.8	51	5.1	119	11.9	125	12.5	111	11.1	151	15.1	138	13.8	72	7.2	68	6.8	994.81
13	Tamil Nadu	17	1.7	34	3.4	55	5.5	50	5.0	103	10.3	83	8.3	126	12.6	80	8.0	128	12.8	121	12.1	78	7.8	126	12.6	1130.53
14	Uttar Pradesh	47	4.7	45	4.5	66	6.6	140	14.0	129	12.9	103	10.3	114	11.4	94	9.4	85	8.5	84	8.4	50	5.0	44	4.4	826.96
15	West Bengal	11	1.1	15	1.5	65	6.5	68	6.8	70	7.0	128	12.8	118	11.8	87	8.7	106	10.6	106	10.6	81	8.1	145	14.5	1133.40
	All-India	20	2.0	30	3.0	64	6.4	69	6.9	91	9.1	85	8.5	117	11.7	103	10.3	123	12.3	123	12.3	70	7.0	106	10.6	1060.16

Source: NSS Report No.505

Appendix 15.6

**Per 1000 distribution of persons in urban sector over MPCE classes for selected States and all-India - NSS 60th Round
(January - June 2004).**

Schedule Type2

(Urban)

Sl. No.	State	MPCE(Rs)																				Average MPCE (Rs)				
		0-300	%	300-350	%	350-425	%	425-500	%	500-575	%	575-665	%	665-775	%	775-915	%	915-1120	%	1120-1500	%		1500-1925	%	1925- & more	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Andhra Pradesh	11	1.1	7	0.7	36	3.6	103	10.3	87	8.7	90	9.0	101	10.1	118	11.8	91	9.1	157	15.7	73	7.3	126	12.6	1147.20
2	Assam	27	2.7	71	7.1	0	0	50	5.0	42	4.2	20	2.0	69	6.9	89	8.9	187	18.7	275	27.5	84	8.4	87	8.7	1107.75
3	Bihar	68	6.8	90	9.0	164	16.4	63	6.3	84	8.4	113	11.3	80	8.0	81	8.1	90	9.0	101	10.1	21	2.1	24	2.4	723.00
4	Gujarat	0	0	0	0	39	3.9	18	1.8	48	4.8	94	9.4	185	18.5	100	10.0	165	16.5	180	18.0	66	6.6	103	10.3	1129.96
5	Haryana	0	0	24	2.4	9	0.9	45	4.5	40	4.0	115	11.5	150	15.0	125	12.5	120	12.0	173	17.3	82	8.2	118	11.8	1145.85
6	Karnataka	21	2.1	0	0	68	6.8	84	8.4	56	5.6	109	10.9	90	9.0	132	13.2	143	14.3	70	7.0	120	12.0	106	10.6	1066.33
7	Kerala	0	0	49	4.9	2	0.2	75	7.5	55	5.5	72	7.2	107	10.7	110	11.0	99	9.9	150	15.0	93	9.3	187	18.7	1403.89
8	Madhya Pradesh	56	5.6	26	2.6	80	8.0	107	10.7	61	6.1	111	11.1	155	15.5	120	12.0	84	8.4	136	13.6	42	4.2	21	2.1	830.34
9	Maharashtra	4	0.4	8	0.8	30	3.0	41	4.1	33	3.3	61	6.1	111	11.1	139	13.9	128	12.8	174	17.4	93	9.3	179	17.9	1369.25
10	Orissa	31	3.1	32	3.2	99	9.9	59	5.9	126	12.6	47	4.7	116	11.6	132	13.2	78	7.8	175	17.5	63	6.3	43	4.3	907.33
11	Punjab	0	0	0	0	0	0	6	0.6	37	3.7	163	16.3	110	11.0	232	23.2	148	14.8	140	14.0	52	5.2	113	11.3	1182.90
12	Rajasthan	6	0.6	3	0.3	74	7.4	70	7.0	43	4.3	96	9.6	197	19.7	142	14.2	101	10.1	158	15.8	61	6.1	50	5.0	947.39
13	Tamil Nadu	4	0.4	7	0.7	36	3.6	46	4.6	96	9.6	78	7.8	65	6.5	99	9.9	175	17.5	172	17.2	83	8.3	139	13.9	1253.64
14	Uttar Pradesh	46	4.6	10	1.0	71	7.1	118	11.8	81	8.1	110	11.0	137	13.7	124	12.4	91	9.1	114	11.4	39	3.9	59	5.9	918.04
15	West Bengal	0	0	15	1.5	10	1.0	54	5.4	75	7.5	115	11.5	108	10.8	147	14.7	117	11.7	139	13.9	72	7.2	148	14.8	1375.13
	All-India	16	1.6	13	1.3	44	4.4	66	6.6	64	6.4	93	9.3	116	11.6	128	12.8	121	12.1	150	15.0	74	7.4	114	11.4	1149.52

Source: NSS Report No.505

Appendix 15.7
Month-wise Wholesale Price Index of Agricultural Commodities - Kerala (2005 & 2006)

Base 1952-53 = 100

Sl. No	Crops	2005						2006						
		July	August	September	October	November	December	January	February	March	April	May	June	July
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rice (Red)	2597.33	2599.05	2568.82	2561.33	2664.92	2690.25	2702.65	2717.17	2709.71	2681.45	2691.02	2730.11	2754.80
2	Molasses	2896.01	3088.79	3108.12	3023.66	3319.70	3247.40	3116.66	2876.97	2781.90	2779.48	2735.56	2694.28	2686.24
3	Condiments & Spices	3092.88	2456.10	2502.96	2524.08	2458.64	2256.74	2442.74	2593.00	2765.43	3020.22	3186.58	3228.55	3397.54
4	Fruits & Vegetables	3491.99	3550.03	3624.88	3586.39	3605.79	3571.92	3645.48	3627.70	3646.86	3696.42	3725.94	3709.90	3812.02
5	Food Crops	2838.86	2752.14	2753.82	2743.29	2811.26	2786.42	2832.87	2855.92	2879.48	2911.33	2948.12	2975.76	3036.04
6	Oil Seeds	3293.07	3455.55	3448.02	3281.50	3443.06	3386.70	3173.64	3287.08	3141.33	3079.52	3217.82	3152.32	3078.65
7	Plantation Crops	1728.44	1744.15	1733.25	1713.00	1708.27	1783.32	1834.04	1927.04	1974.88	2019.47	2066.43	2133.83	2072.79
8	Non-food Crops	2820.55	2938.71	2930.16	2807.84	2919.15	2902.48	2769.08	2876.35	2789.06	2759.38	2870.10	2844.74	2774.88
9	All Crops	2832.18	2820.24	2818.18	2766.84	2850.64	2828.78	2809.59	2863.38	2846.48	2855.87	2919.64	2927.94	2940.72

Source: Directorate of Economics & Statistics

Appendix 15.8

Public Distribution Systems in India - Procurement , Off-Take and Stocks - 1996-97 to 2005-06

(Million tonnes)

Sl.No	Year	Procurement			Off-take			Stocks		
		Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
1	2	3	4	5	6	7	8	9	10	11
1	1996-97	11.86	8.16	20.02	12.31	13.32	25.63	13.17	3.24	16.41
2	1997-98	14.52	9.3	23.82	11.2	7.76	18.96	13.05	5.08	18.12
3	1998-99	11.56	12.65	24.21	11.83	8.9	20.73	12.16	9.66	21.82
4	1999-00	17.28	14.14	31.42	12.42	10.63	23.05	15.72	13.19	28.91
5	2000-01	20.1	16.35	36.45	10.42	7.79	18.21	23.19	21.5	44.98
6	2001-02	22.13	20.63	42.76	15.32	15.99	31.31	24.91	26.04	51.02
7	2002-03	19	19.03	38.03	24.85	24.99	49.84	17.16	15.65	32.81
8	2003-04	20.78	15.8	36.58	25.04	24.29	49.33	43.07	6.93	20.65
9	2004-05	24.04	16.8	40.84	23.2	18.27	41.47	13.34	4.07	17.97
10	2005-06	26.9	14.79	41.69	25.04	17.16	42.21	13.68	2.01	16.62

Source: RBI- 2005-06

Appendix 15.9
District-wise Foodgrain Distribution Under PDS in Kerala - 2005

(Tonnes)

Sl.No	Name of District	BPL Scheme						APL Scheme					
		Wheat			Rice			Wheat			Rice		
		Lifting	AS % of allocation	Off-take	Lifting	As % of allocation	Off-take	Lifting	As % of allocation	Off-take	Lifting	As % of allocation	Off-take
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	12610	101.48	12796	38240	98.38	37621	14350	27.85	13675	3739	1.81	2888
2	Kollam	12388	98.43	12193	33370	99.23	33321	8687	24.28	8513	2916	1.64	1744
3	PTA	4795	110.16	5282	13826	98.1	13348	5307	24.15	5051	697	0.38	241
4	Alappuzha	10610	101.38	10767	31680	99.07	31189	7509	25.71	7174	4495	5.47	4972
5	Kottayam	7800	98.79	7706	23321	99.37	23472	15957	53.32	14770	3682	3.79	3318
6	Idukki	4930	100.09	4934	15069	117.27	16957	18380	74.91	17147	2154	2.85	1411
7	Ernakulam	7910	100.91	7982	24368	102.78	23711	35633	68.01	33733	4451	2.72	4261
8	Thrissur	12430	99.73	12396	37794	96.17	36345	41410	98.01	40773	2838	0.94	1191
9	Palakkad	7320	101.89	7458	22025	102.56	22229	21767	58.14	20453	7269	3.92	4476
10	Malappuram	11370	99.89	11357	34875	99.26	34618	23690	59.6	23600	1302	1.36	1527
11	Kozhikkode	9730	102.87	10009	29605	98.22	29079	22040	58.75	21346	5929	3.84	4307
12	Wayanad	1896	106.22	2014	6124	106.2	6504	2650	28.7	2565	2432	6.07	1786
13	Kannur	7155	100.08	7161	21770	98.96	21545	18833	65.69	18262	7028	6.83	6129
14	Kasargod	3795	102.94	3907	11505	100.23	11532	3135	21.77	3175	3220	7.34	3026
	KSCSC							3721			4306	48.96	
	Total	114739	101.06	115962	343572	100.02	341471	243069	51.4	230237	56458	3.06	41277

Source: Civil Supplies Department

Appendix 15.10
Monthly Distribution of Kerozene and Sugar in Kerala 2001-2005

Sl.No.	Month	Kerozene (in KL)					Sugar (in MT)				
		2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
1	2	3	4	5	6	7	8	9	10	11	12
1	January	33275	28658	25098	24159	23766	11299.72	3677.64	156.8	52.41	2752.34
2	February	33127	28816	25417	24075	26838	3924	3103.04	63.57	116.82	1713.7
3	March	33313	28397	24839	23960	27836	3705.23	2986.04	46.91	245.01	2489.91
4	April	30640	26400	24397	22876	24268	3752.91	2044.63	45.55	310.63	2068.57
5	May	29378	25547	23792	22529	24052	3696.45	1176.75	22.94	1935.25	2532.1
6	June	29013	25180	23666	22631	23650	3696.39	1253.47	13.89	2130.34	1941.12
7	July	28875	25394	23979	22688	23406	3673.48	501.95	94.66	2029.75	2936.71
8	August	28697	25412	24155	22622	23350	12245.28	3638.95	1098.3	6469.31	2894.67
9	September	28786	25389	24304	22607	23191	3560.62	1352.28	2903.96	2446.83	6337.07
10	October	28649	25427	24338	22565	23239	3584.98	1350.74	473.12	1869.7	2864.17
11	November	28781	25260	24229	22667	23146	3705.42	913.41	188.47	1391.74	2308.82
12	December	28787	24778	24267	22633	23200	144501.82	473.04	95.13	2587.51	1681.91
	Total	361321	314658	292481	276012	289942	201346.3	22471.9	5203.3	21585.3	32521.1

Appendix 16.1

Exports, Imports and Trade Balance of India 1990-91 to 2005-06

(Rs. Crore)

Sl. No.	Year	Exports (including re-exports)	Imports	Trade Balance	Rate of Change (Per cent)	
					Export	Import
	1	2	3	4	5	6
1	1990-91	32558	43193	-10645	17.7	22.3
2	1991-92	44041	47851	-3810	35.3	10.8
3	1992-93	53688	63375	-9687	21.9	32.4
4	1993-94	69751	73101	-3350	29.9	15.3
5	1994-95	82674	89971	-7279	18.5	23.1
6	1995-96	106353	122678	-16325	28.6	36.4
7	1996-97	118817	138920	-20103	11.7	13.2
8	1997-98	130100	154176	-24076	9.5	11
9	1998-99	139752	178332	-38580	7.4	15.7
10	1999-2000	159561	215236	-55675	14.2	20.7
11	2000-01	203571	230873	-27302	27.6	7.3
12	2001-02	209018	245200	-36182	2.7	6.2
13	2002-03	255137	297206	-42069	22.1	21.2
14	2003-04	293367	359108	-65741	15	20.8
15	2004-05	375340	501065	-125725	27.9	39.5
16	2005-06	454800	630527	-175727	21.2	25.8

Source: CMIE

Appendix 16.2
Commoditywise export from India -2001-02 to 2005-06

(Rs. Lakh)

Sl. No.	Commodity	Year				
		2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
1	Agriculture and allied products	28143.99	32473.34	34615.73	38078.11	45154.2
2	Ores and minerals	6020.6	9659.92	10884.62	22818.77	27401.3
3	Leather and manufactures	9109.76	8945.02	9939.43	10880.57	11625.5
4	Chemicals and related products	28861.99	36080.32	43405.48	55911.4	64255.3
5	Engineering goods	33182.92	43715.41	57004.88	77948.69	95396.9
6	Textiles and textile products	48676.59	56220.78	58778.8	60905.81	71011.6
7	Gems and Jewellery	34845.06	43700.65	48586.07	61833.71	68830.1
8	Handicrafts (excluding handmade carpets)	2618.06	3800.64	2296.13	1695.79	1817.19
9	Other manufactured goods	1852.02	2301.7	2818.06	3696.26	5016.6
10	Petroleum Products	10106.58	12469.22	16397.44	31404.15	50979.1
11	Others	5600.4	5770.27	8640.12	10166.27	13312.2
	Total exports	209017.97	255137.27	293366.76	375339.5	454800

Source: CMIE

Appendix 16.3
Commoditywise import of India - 2001-02 to 2005-06

(Rs. Lakh)

Sl.No.	Commodity	Year				
		2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7
1	Petroleum, crude and Products	66769.9	85367	94520	134094	194640
2	Cereals and cereal preparations	86.8	118.6	89.2	118.7	154.5
3	Edible oils	6465	8779.6	11683.2	11076.9	8716.3
4	Pulses	3160.2	2737.1	2284.9	1777.6	2346.9
5	Sugar	32.6	32.8	62.7	976.2	651.8
6	Fertilisers	3238.4	3028.4	3312.1	6187.7	9158.9
7	Non - ferrous metals	3086.9	3225.6	4359.8	5887.3	8157.3
8	Paper including news ptints	2131.2	2175	3022.1	3269.5	4167.8
9	Crude rubber, including synthetic	831.4	883	1290.2	1838.7	1813.8
10	Pulp and waste paper	1405.3	1661.8	1880.1	2199.5	2471.4
11	Matelliferrous ores metal scrap etc	5454.6	5022.4	5954.9	11091.3	16693.4
12	Iron and steel	3976.2	4566.9	6921	11995.3	19621.6
13	Capital goods	47130.2	65325.1	83994.3	112935.5	140244.7
14	Pearls, precious and semi-precious stones	22046	29340.9	32757.3	42337.7	40469.2
15	Organic and inorganic chemicals	13351.9	14640.4	18527.1	25610.3	30500.8
16	Textile yarn, fabrics made-ups etc	3564.8	4696.1	5779.7	7059.5	8993.6
17	Cashew nuts	431.1	1236.2	1371.8	1805	2089.8
18	Gold and Silver	21853.8	20753.1	31506.1	50098.6	49539.6
19	Artificial resins and plastic materials etc	3214.9	3783.7	4972	6545.9	9895.3
20	Professional scientific controlling	4965.1	5484.1	5653.4	6876.5	8746.8
21	Coal, coke and briquittes, etc	5452.7	5999.3	6482.7	14370.9	16380.1
22	Medical and pharmaceutical Products	2026.6	2865.2	2958	3169.3	4515.2
23	Chemical meterials and products	2119.6	2187.4	2902.3	3681.5	4599.8
24	Non-metalic mineral manufactures	1048.8	1135.7	1504.4	2120.2	2760.7
25	Others	21356	22160.4	25318.2	33941	43197.4
	Total Imports	245200	297205.8	359107.5	501064.6	630526.7

Source: CMI

Appendix 16.4

Commodity-wise Export through Kochi Port, 2001- 02 to 2005-06 (Quantity in M.T, Value Rs. Crore)

Sl. No.	Commodity	2001-02		2002-03		2003-04		2004-05		2005-06	
		Quantity	value	Quantity	value	Quantity	value	Quantity	value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Tea	96155	205.48	103544	325.23	86794	269.93	86589	96.2	31985	253.48
2	Cashew Kernels	66104	1466.66	84764	1585.47	88994	1147.24	91729	1717.3	80775	1651.12
3	Sea Foods	111070	1233.33	84216	623.76	101517	986.93	103721	1157.89	100256	1173.97
4	Coir Products	60861	394.73	99319	428.92	113638	259.27	88470	1.07	73391	7.73
5	Spices	34031	608.81	46284	673.76	25419	141.86	24846	53.55	65321	252.91
6	Coffee	146166	973.33	115156	387.37	119384	443.42	115265	462.97	68960	603.23
7	Miscellaneous	1453977	1368.86	1591876	2508.25	2019910	2731.8	2642724	4544.75	2499129	6187.76
	Total	1968364	6251.20	2125159	6532.76	2555656	5980.45	3153344	8033.73	2919817	10130.2

Source:- Cochin Port Trust

Appendix 16.5
Commodity-wise Import through Kochi Port, 2001- 02 to 2005- 06(Quantity in M.T)

Sl. No.	Commodity	2001-02		2002-03		2003-04		2004-05		2005-06	
		Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)
1	2	3	4	5	6	7	8	9	10	11	12
1	Fertilizers & Raw materials	645515	3.8	630778	-2.28	504264	20.06	566358	12.31	726933	28.35
2	Foodgrains	9218	40.93	0	-100	0	0.00	0	0	0	0
3	Iron, Steel & Machinery	144787	7.29	231033	59.57	61427	-73.41	76278	24.18	308468	304.4
4	Newsprint	36471	47.85	40682	11.55	67311	65.46	46926	-30.28	406502	766.26
5	Cashewnut	217249	241.9	259736	19.56	309095	19.00	280483	-9.26	315679	12.55
6	Miscellaneous	9037516	-11.4	9736627	7.74	10074562	3.47	9980101	-0.94	9210060	-7.72
	Total	10090756	-8.7	10898856	8.01	11016659	1.08	10950146	-0.6	10967642	0.16

Source: Cochin Port Trust

Appendix 16.6
Item-wise Export of Marine Products from India,2001-02 & 2005-06

(Quantity in MT, Value in Rs. Crore)

Sl.No.	Item	2001-02		2002-03		2003-04		2004-05		2005-06	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Frozen Shrimp	127709	4139.92	134815	4608.31	129768	4013.07	138085	4221	145180	4272
2	Frozen Fish	174976	713.11	196322	841.65	138023	620.73	159689	759	182344	999
3	Frozen Cuttlefish	30568	280.07	41381	417.09	39610	435.18	44239	474	49651	549
4	Frozen Squid	39790	329.67	37838	384.37	37832	372.92	48124	477	52352	575
5	Dried Items	8307	67.96	8178	84.23	12574	145.68	9692	121	14167	133
6	Live Items	1628	405.7	2115	536.6	2341	5.11	2262	51	2568	62
7	Chilled Items	3284	63.66	3350	59.14	3779	64.04	3988	68	5060	82
8	Others	38209	322.09	43298	432.86	48090	389.23	55250	476	60842	573
	Total	424470	5957.05	467297	6881.31	412017	6091.95	461329	6647	512164	7245

Source: Marine Products Export Development Authority

Appendix 16.7

Market - wise Export of Marine Products from India, 2001-02 to 2005-06

(Qty in Tonnes & Value in Rs. Crore)

Sl.No.	Market	2001-02		2002-03			2003-04		2004-05		2005-06	
		Qty	Value	Qty	Value	% total	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Japan	64905	1820.69	54916	1534.76	22.3	50020	1163.69	57832	1202.45	59785	1156
2	USA	49041	1421.38	61703	2051.12	29.8	53153	1682.06	50045	1556.09	55817	1639
3	Europe	82572	1145.49	94541	1388.47	20.2	96284	1470.99	117742	1819.28	136842	2134
4	China	134767	597.23	170811	752.48	11.1	123738	676.46	124826	693.25	137076	849
5	S.E.Area	52424	538.75	44097	642.38	9.3	50670	545.77	63842	628.83	60140	586
6	Middle East	19159	181.06	19668	204.74	3	14711	201.52	16624	244.42	22270	308
7	Others	21602	252.45	21561	297.36	4.3	23441	351.48	30418	502.37	40234	573
	Total	424470	5957.05	467297	6881.31	100	412017	6091.95	461329	6646.69	512164	7245

Source: MPEDA

Appendix 16.8
Kerala's Share in the Export of Marine Products from India,
1990-91 to 2005-06

(Qty. in Tonnes & Value in Rs. Crore)

Sl.No.	Year	India		Kerala		Kerala's Share (%)	
		Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8
1	1990-91	139419	893.37	50997	313.79	36.58	35.12
2	1991-92	171820	1375.89	58743	444.47	34.19	32.3
3	1992-93	209025	1768.56	49094	414.25	23.49	23.42
4	1993-94	243960	2503.62	63848	622.12	26.17	24.85
5	1994-95	307337	3573.27	74653	817.09	24.29	22.85
6	1995-96	296277	3501.11	78895	856.9	26.63	24.48
7	1996-97	378199	4121.36	92288	936.22	24.4	22.72
8	1997-98	385818	4697.48	89366	948.02	23.16	20.18
9	1998-99	302934	4626.87	70641	816.55	23.32	17.65
10	1999-2000	343031	5116.67	92148	1146.96	26.86	22.42
11	2000-01	440473	6443.89	88852	1046.47	20.17	16.24
12	2001-02	424470	5957.05	72756	950.55	17.14	15.97
13	2002-03	467297	6881.31	81393	1045.82	17.42	15.2
14	2003-04	412017	6091.95	76627	1099.13	18.6	18.04
15	2004-05	461329	6646.69	87331	1157.42	18.94	17.42
16	2005-06	512164	7245	97311	1258	1.9	17.36

Source : Marine Products Export Development Authority

Appendix 16.9
Item-wise Export of Spices from India, 2001-02 to 2005-06

(Qty in M.T: Value in Rs. Lakhs)

Sl.No	Item	2001-02		2002-03		2003-04		2004-05		2005-06	
		QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
1	2	3	4	5	6	7	8	9	10	11	12
1	Pepper	22,877	20368.79	21,609	17887.98	16,700	14350.5	14,150	12140	16,700	14050
2	Cardamom (small)	1,031	6169.8	682	4707.42	757	3691.7	650	2389.5	875	2700.5
3	Cardamom (large)	1,577	2391.66	1,450	2057.08	924	1234.46	950	1134	1,025	1060
4	Chilli	69,998	25244.02	81,022	31514.68	86,575	36687.81	138,000	49900.5	113,250	40350
5	Ginger	6,464	2311.47	8,461	2396.59	4,696	2275.45	13,000	5950	7,250	4075.5
6	Turmeric	37,778	9073.71	32,402	10337.99	37,044	13111.73	43,000	15650	46,500	15300
7	Coriander	15,925	4833.87	18,065	5564.64	21,018	7200.95	33,750	8266	22,750	6410
8	Cumin	17,248	14818.03	10,422	9326.33	7,957	5883.79	13,750	10190	12,000	8800
9	Celery	4,251	1236.59	3,960	1225.43	4,815	1520.33	4,100	1300.5	3,400	1265
10	Fennel	4,374	1695.82	4,160	1783.75	5,007	2211.48	7,100	2529.5	4,100	1960
11	Fenugreek	6,582	1617.14	13,193	2551.06	6,932	1554.56	13,750	2660.5	12,250	2400
12	Other Seeds (1)	9,979	2790.79	14,920	3617.36	14,031	3396.85	11,100	2613.5	6,250	1700
13	Garlic	1,106	409.78	1,539	698.68	3,691	1422.64	2,250	560.5	29,250	3450
14	Tamarind	7,707	1778.24	12,590	2275.35	12,077	1852.11	7,500	2000	10,250	2750
15	Nutmeg&Mace	1,346	1990.19	1,381	2847.36	1,420	2638.14	1,250	2235	1,630	3255
16	Vanilla	27	1750.61	25	2225.72	27	3872.04	43	2875.9	72	1211
17	Other Spices (2)	12,822	4738.33	11,307	5107.76	7,214	4096.64	8,495	3843.1	6,750	3588.5
18	Curry Powder	6,305	5052.61	8,492	6893.67	8,318	6805.28	7,750	6610	9,000	7699.5
19	Mint Products (3)	11,295	48474.34	13,589	56557.94	10,110	39435.51	9,300	40776.5	11,000	57500
20	Oils & Oleoresins	4,510	37311.1	4,839	39094.23	5,133	37991.76	5,600	46375	6,225	50000
	Total	243,202	194056.89	264,108	208,671.02	254,446	191233.73	335,488	220,000	320,527	229,525
	Value in Milln.US\$		407.85		431.45		416.56		490.6		517.9

Source: Spices Board

- (1) Include Bishops Weed (Ajwanseed), Dill Seed, Poppy Seed, Aniseed, Mustard etc
- (2) Include Asafoetida, Cinnamon, Cassia, Cambodge, Saffron, Spices etc.
- (3) Include Menthol, Menthol Crystals and Mint Oils

Appendix 16.10
Market-wise Export of Cashew Kernels from India - 2004-05 & 2005-06

(Qty. in Tonnes & Value in Rs. Crore)

Sl.No.	Country	2004-05				2005-06			
		Qty.	% to total	Value	% to total	QTY	% of Tot Qty	Value	% Of Tot Value
1	2	3	4	5	6	7	8	9	10
1	U.S.A	61546	48.59	1288.49	47.56	43149	37.8	958.33	38.11
2	Netherland	15693	12.39	345.67	12.76	18736	16.41	408.82	16.26
3	U.A.E	6690	5.28	148.23	5.47	8274	7.25	184.41	7.33
4	U.K	7108	5.61	158.34	5.84	6238	5.46	140.88	5.6
5	Japan	5047	3.98	111.21	4.1	4685	4.1	110.2	4.38
6	France	3329	2.63	66.49	2.45	3470	3.04	75.79	3.01
7	Saudi Arabia	2998	2.37	61.55	2.27	2827	2.48	59.61	2.37
8	Spain	2870	2.27	64.8	2.39	2648	2.32	61.09	2.43
9	Belgium	2497	1.97	53.18	1.96	2378	2.08	54.48	2.17
10	Germany	1966	1.55	42.39	1.56	1991	1.74	42.21	1.68
11	Russia	2331	1.84	43.41	1.6	1990	1.74	38.77	1.54
12	Greece	1511	1.19	33.74	1.25	1859	1.63	42.61	1.69
13	Canada	1540	1.22	31.39	1.16	1558	1.36	33.14	1.32
14	Italy	1119	0.88	23.72	0.88	1236	1.08	25.2	1
15	Australia	873	0.69	18.36	0.68	1114	0.98	25.29	1.01
16	Norway	1318	1.04	29.15	1.08	873	0.76	19.89	0.79
17	Kuwait	574	0.45	12.78	0.47	863	0.76	19.76	0.79
18	Hong Kong	719	0.57	17.71	0.65	788	0.69	17.28	0.69
19	Isreal	964	0.76	23.26	0.86	752	0.66	17.4	0.69
20	Singapore	510	0.4	11.6	0.43	694	0.61	13.61	0.54
21	Lebanon	655	0.52	14.95	0.55	470	0.41	9.61	0.38
22	Bahrain	362	0.29	7.08	0.26	393	0.34	7.8	0.31
23	Korea. Rep	213	0.17	5.22	0.19	255	0.22	5.85	0.23
24	New Zealand	201	0.16	4.46	0.16	204	0.18	4.62	0.18
25	Malaysia	62	0.05	1.39	0.05	191	0.17	4.05	0.16
26	Others	3973	3.14	90.68	3.35	6505	5.7	134.17	5.34
	Total	126667	100	2709.24	100	114143	100	2514.86	100

Source: Cashew Export Promotion Council of India

Appendix 16.11
Countrywise Export of Coffe from India - 2001-02 to2005-06

(Qty MT, Value Rs. Crore)

Sl.No.	Country	2001-02		2002-03		2003-04		2004-05		2005-06	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Italy	41842	173.89	45594	184.64	52197	231.7	49232	254.81	53393	365.72
2	Russia	40301	325.74	36578	307.74	33592	225.42	34459	235.74	29432	228.25
3	Germany	27589	126.28	23344	102.6	25680	123.46	16518	106.16	16742	147.41
4	Belgium	15661	49.02	17430	70.14	18777	86.64	9204	47.34	11190	84.72
5	Spain	12209	44.58	11142	42.46	13898	53.92	11499	48.16	10292	63.33
6	Slovenia	8933	26.18	8698	28.32	10795	38.06	8441	30.54	7458	41.46
7	U.S.A	5600	22.66	3505	15.06	3237	14.66	5646	27.8	2448	20.86
8	Japan	4968	23.56	4899	25.37	3538	17.72	5918	40.49	4147	37.27
9	Greece	4444	14.09	4936	18.37	4224	15.33	5642	22.44	4392	26.17
10	Kuwait	3767	23.88	3088	17.82	3150	20.74	2657	21.71	2877	28.56
11	Switzerland	3313	17.34	2872	15.99	3301	19.31	3244	22.79	2440	23.83
12	Jordan	3190	13.12	1519	8.29	3169	14.97	2727	15.85	1784	15.76
13	Netherlands	3122	11.53	2566	9.92	3205	15.31	3604	26.1	2949	26.03
14	France	3104	11.97	3676	17.16	6214	28.47	4283	22.41	3811	26.75
15	Israel	3006	11.96	1487	7.61	1853	8.66	1529	8.33	1581	13.02
16	Saudi Arabia	2945	17.26	1714	10.19	1041	6.28	1181	8.33	1012	10.93
17	Canada	2454	8.04	1422	5.7	2665	9.41	1263	5.66	1169	8.19
18	Australlia	2312	9.06	1743	8.21	2469	12.04	2393	13.52	2576	20.66
19	Portugal	2258	7.87	2967	11.1	3218	12.29	3253	13.5	3504	20.44
20	Hungary	2167	10.74	1606	6.94	2479	11	2607	12.22	2976	17.96
21	Algeria	2055	6.25	4123	14.44	4293	15.51	614	2.22	1306	8.38
22	Egypt	1650	5.36	1913	7.16	1754	6.44	966	4.21	593	4.18
23	Finland	1420	11.46	875	6.71	4762	36.01	3677	26.76	4245	33.48
24	United Arab Emirates	1280	8.03	2840	16.81	2120	13.57	1781	15.25	1530	16.53
25	Poland	1251	5.96	1846	9.67	1018	6.06	1302	8.83	1021	6.63
26	Ukraine	12042	2.22	2908	22.56	3190	25.16	6131	49.61	6920	60.91
27	Others	12745	62.31	12042	60.47	16845	90.31	21994	133.89	19710	152.14
	Total	225628	1050.36	207333	1051.45	232684	1158.45	211765	1224.67	201498	1509.57

Source: Coffee Board

Appendix 16.12

Export of Coir and Coir Products from India 2001-02 to 2005-06

(Quantity in Tonnes, Value in Rs. Lakh)

Sl. No.	Items	2001-02		2002-03		2003-04		2004-05		2005-06	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Coir Fibre	1010.30	122.15	1036.87	103.81	1120.75	142.44	1350.45	186.03	1552.98	196.05
2	Curled Coir	572.52	80.63	492.37	80.05	76.54	14.02	69	11.97	0	0
3	Coir Pith	13725.65	1014.3	21064.2	1493.01	29179.35	1975.92	43420.54	3042.41	53444.48	3872.6
4	Coir Rope	348.64	108.04	332.4	102.05	308.88	111.46	299.67	116.91	162.73	70.41
5	Coir Yarn	13206.9	3728.59	11482.47	2996.78	12364.43	3498.71	10987.59	3358.16	9582.52	3019
6	Coir Geo-Textiles	1752.05	780.13	2140.69	985.22	2599.54	1184.74	2323.19	1049.76	2512.32	1140.56
7	Coir Rugs	1329.97	1039.76	1327.08	932.42	1654.56	1071.36	1727.34	1002.64	1242.7	730.38
8	Handloom Mats	26147.89	17009.85	33058.75	20711.80	36306.99	22133.69	40127.35	25129.27	42516.42	26698.73
9	HandloomMattings	4423.27	2921.04	4772.62	3191.41	4545.56	2838.66	3518.9	2334.04	2915.91	1913.38
10	Powerloom Mats	686.51	458.19	954.85	585.52	1026.28	672.13	1433.22	931.16	1609.94	1027.1
11	Powerloom Mattings	274.05	226.1	183.18	111.78	309.04	215.44	188.94	138.92	155.95	118.89
12	Tufted Mats	7129.54	4112.38	6429.03	3434.74	11772.50	6359.52	16502.26	9499.05	19671.49	11605.96
13	Rubberised Coir	454.62	350.38	535.22	403.42	461.78	334.67	475.92	340.57	536.5	377.05
14	Coir Other Sorts	272.9	106.82	372.85	138.56	490.21	196.9	502.4	199.38	123.03	74.65
	Total	71334.81	32058.36	84182.58	35270.6	102253.41	40749.66	122926.77	47340.27	136026.97	50844.76

Source: Coir Board

Appendix 16.13

Major Country wise Export of Coir and Coir products from India 2005-06

(Quantity in Tonnes & Value in Rs. Lakh)

Sl.No	Country	Quantity	Value	Quantity %	Value %
	Total	136026.27	50844.75		
1	USA	35709.88	20469.77	26.25	40.26
2	UK	9319.51	4846.41	6.85	9.53
3	Germany	6693.03	3815.3	4.92	7.5
4	Netherlands	20329.53	3539.77	14.95	6.96
5	Italy	4774.05	2130.24	3.51	4.19
6	Spain	8243.09	1947.23	6.06	3.83
7	France	3530.02	1793.4	2.6	3.53
8	Canada	2716.49	1291.22	2	2.54
9	Belgium	2395.69	1052.4	1.76	2.07
10	Australia	3940.65	963.2	2.9	1.89
11	South Korea	13287.32	843.87	9.77	1.66
12	Sweden	1270.67	714.2	0.93	1.4
13	Japan	1052.75	651.81	0.77	1.28
14	UAE	3893.91	559.37	2.86	1.1
15	South Africa	1319.02	470.24	0.97	0.92
16	Turkey	826.06	452.88	0.61	0.89
17	Greece	767.03	376.02	0.56	0.74
18	Denmark	696.2	344.36	0.51	0.68
19	Portugal	922.18	331.99	0.68	0.65
20	Brazil	653	323.08	0.48	0.64

Source: Coir Board

Appendix 17.1
State wise Financial Assistance Disbursed by
NABARD during 2005-06

(Amount Rs. Crore)

Sl. No.	Name of State	Disbursement by NABARD	
		Amount	%
1	2	3	4
1	Andhrapradesh	751.70	8.72
2	Assam	74.62	0.87
3	Bihar	117.21	1.36
4	Gujarat	278.77	3.23
5	Haryana	598.53	6.94
6	Karnataka	453.00	5.25
7	Kerala	414.84	4.81
8	Madyapradesh	527.52	6.12
9	Maharashtra	599.95	6.96
10	Orissa	280.06	3.25
11	Panjab	948.85	11.00
12	Rajasthan	407.89	4.73
13	Tamil Nadu	429.49	4.98
14	Uttarpradesh	1548.99	17.96
15	West Bengal	598.14	6.94
	Total	8029.56	93.12
	All India Total	8622.37	100

Source: Annual Reports of NABARD 2005-06

Note: Percentages are to All India Total.

Appendix 17.2
State wise Cumulative Financial Assistance Disbursed by
NABARD as at the end of March 2006
(Amount Rs. Crore)

Sl. No.	Name of State	Disbursement by NABARD	
		Amount	%
1	2	3	4
1	Andhrapradesh	8963.51	9.98
2	Assam	1137.06	1.27
3	Bihar	2660.09	2.96
4	Gujarat	4383.62	4.88
5	Haryana	5485.55	6.11
6	Karnataka	5961.97	6.64
7	Kerala	3990.45	4.44
8	Madyapradesh	5033.37	5.61
9	Maharashtra	8010.28	8.92
10	Orissa	3159.43	3.52
11	Panjab	7431.14	8.28
12	Rajasthan	4969.29	5.53
13	Tamil Nadu	6519.99	7.26
14	Uttarpradesh	14209.48	15.83
15	West Bengal	4301.29	4.79
	Total	86216.52	96.02
	All India Total	89788.84	100

Source: Annual Reports of NABARD, 2005-06

Note: Percentages are to All India Total

Appendix 17.3
State-wise Distribution of Commercial Bank Branches and Population per Bank Office

States	Number of Banks as at the end of							Percentage to total number of offices as at the end of							Average Population per bank branch(in '000s)						
	Jun-69	Jun-01	Jun-02	Jun-03	Jun -04	Jun-05	Jun-06	Jun -69	Jun-01	Jun-02	Jun-03	Jun -04	Jun-05	Jun-06	Jun-69	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.Andhra Pradesh	567	5171	5207	5267	5284	5393	5487	6.9	7.8	7.8	7.9	7.9	7.9	7.9	74	15	15	15	14	14	14
2.Assam	74	1237	1223	1220	1221	1235	1243	0.9	1.9	1.8	1.8	1.8	1.8	1.8	193	22	22	22	22	22	21
3.Bihar	273	3561	3564	3564	3569	3587	3586	3.3	5.4	5.4	5.3	5.3	5.3	5.2	207	21	21	21	22	23	23
4.Gujarat	852	3670	3657	3670	3668	3705	3749	10.3	5.6	5.5	5.5	5.5	5.4	5.4	34	13	14	14	23	14	14
5.Haryana	172	1516	1551	1591	1615	1668	1764	2.1	2.3	2.3	2.4	2.4	2.5	2.6	97	13	13	13	14	13	12
6.Karnataka	756	4761	4779	4804	4834	4948	5033	9.2	7.2	7.2	7.2	7.2	7.3	7.3	37	11	11	11	13	11	11
7.Kerala	601	3298	3334	3370	3404	3493	3569	7.3	5.0	5.0	5.1	5.1	5.1	5.2	34	10	10	10	11	9	9
8.Madhya Pradesh	343	3456	3458	3450	3453	3486	3471	4.2	5.2	5.2	5.2	5.2	5.1	5.0	116	18	18	19	10	17	17
9.Maharashtra	1118	6294	6320	6317	6334	6439	6524	13.5	9.5	9.5	9.5	9.5	9.5	9.4	43	15	15	15	18	15	15
10.Orissa	100	2220	2227	2227	2240	2267	2295	1.2	3.4	3.4	3.3	3.3	3.3	3.3	211	s	16	17	15	16	16
11.Punjab	346	2534	2573	2615	2641	2755	2781	4.2	3.8	3.9	3.9	3.9	4.0	4.0	42	9	9	9	17	9	9
12.Rajasthan	364	3323	3336	3342	3350	3408	3441	4.4	5.0	5.0	5.0	5.0	5.0	5.0	68	17	17	17	9	16	16
13.Tamil Nadu	1060	4785	4748	4746	4757	4846	4898	12.8	7.2	7.2	7.1	7.1	7.1	7.1	37	13	13	13	17	13	13
14.Uttar Pradesh	747	8155	8169	8212	8213	8299	8393	9.0	12.3	12.3	12.3	12.3	12.2	12.1	114	20	20	20	13	20	20
15.West Bengal	504	4424	4430	4446	4466	4519	4581	6.1	6.7	6.7	6.7	6.7	6.6	6.6	85	18	18	19	20	18	18
TOTAL	7877	58405	58576	58841	59049	60048	60815	95.3	88.3	88.3	88.2	88.2	88.2	88.0	-	-	-	-	18	15	15
All India Total	8262	66119	66355	66692	66970	68116	69104	100.0	100.0	100.0	100.0	100.0	100.0	100.0	65	15	16	16	15	15	15

Source: Banking Statistics, Quarterly (various issues), RBI.

Appendix 17.4
State-wise Deposits, Credits and Credit- Deposit Ratio of Public Sector Banks. (Rs. Crore)

States/ Months	Jun-69			Mar -04			Jun - 04			Mar -05			Jun - 05			Mar -06			Jun - 06		
	Deposit	Credit	C-D Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio	Deposit	Credit	C.D. Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.Andhra Prades	121	122	101	71489	48399	67.7	71951	48431	67	84005	63469	75.55	84523	64884	76.765	98019	81969	83.63	100054	84482	84.44
2.Assam	33	13	39.4	14543	4543	31.2	14413	4578	32	17223	6103	35.44	17096	6561	38.377	19980	8466	42.37	20267	8674	42.80
3.Bihar	169	53	31.4	35697	9224	25.8	34048	8718	26	40735	11400	27.99	38541	11368	29.50	45863	14013	30.55	45342	13981	30.83
4.Gujarat	401	195	48.6	74128	31093	41.9	74804	30101	40	82659	37677	45.58	80272	37624	46.871	89595	49152	54.86	89434	49801	55.68
5.Haryana	49	23	46.9	26527	16627	62.7	26495	14002	53	30038	18021	59.99	30371	18014	59.313	39384	26610	67.57	40744	26829	65.85
6.Karnataka	188	143	76.1	67246	46823	69.6	69070	48019	70	81884	62918	76.84	81275	64966	79.934	97710	80959	82.86	100339	82833	82.55
7.Kerala	117	77	65.8	45193	22553	49.9	44329	23529	53	47274	28079	59.40	46592	29092	62.44	53015	34831	65.70	54224	35903	66.21
8.Madhya Pradesh	107	63	58.9	42120	20156	47.9	44269	19827	45	44620	24975	55.97	45935	25286	55.047	52417	31560	60.21	52694	31837	60.42
9.Maharashtra	903	912	101	188022	139852	74.4	200238	139404	70	232635	207111	89.03	237280	212285	89.466	281312	285715	101.57	300027	292316	97.43
10.Orissa	29	15	51.7	21947	12148	55.4	21584	12244	57	25542	16116	63.10	25475	16401	64.381	30280	20061	66.25	31332	20747	66.22
11.Punjab	185	50	27	57098	25227	44.2	55995	24435	44	59998	27904	46.51	59553	29690	49.855	65669	38278	58.29	67208	38857	57.82
12.Rajasthan	74	38	51.4	33366	19943	59.8	32932	20132	61	36517	26393	72.28	36632	26977	73.643	41421	33841	81.70	43081	34677	80.49
13.Tamil Nadu	233	311	134	69841	58053	83.1	70370	58201	83	79049	73594	93.10	79536	76119	95.70	93631	95911	102.44	95069	98607	103.72
14.Uttar Pradesh	337	154	45.7	113502	38616	34	111950	37910	34	127215	48243	37.92	125633	47646	37.925	142884	60741	42.51	145256	61841	42.57
15.West Bengal	456	526	115	81948	40330	49.2	84699	39697	47	93068	49539	53.23	94794	50191	52.947	104358	60020	57.51	105844	61025	57.66
Total	3402	2695	79.2	942667	533587	56.6	957147	529228	55.3	1082462	701542	64.81	1083508	717104	66.1835	1255538	922127	73.44	1290915	942410	73.00
All India Total	3897	3035	77.9	1175439	648912	55.2	1193914	645593	54.1	1358760	848463	62.44	1365446	867392	63.5244	1574664	1111474	70.58	1620235	1132858	69.92

Source: Banking Statistics :Quarterly Handout, RBI (various issues)

Appendix 17.5
Banking Statistics of Kerala – 1990-2006.

(Rs. crore)

Ending March	State Bank Group				Other Nationalised Banks				Gramin Bank				Total Public Sector Banks			
	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1990	2406.71	800.3	1551.12	64.45	2718.06	832.34	1595.29	58.69	87.74		179.83	204.96	5212.51	1632.64	3326.24	63.81
1991	2854.66	949.58	1797.91	62.98	3205.41	997.48	1749.2	54.57	109.78		195.81	178.37	6169.85	1947.06	3742.92	60.66
1992	3410.27	1196.69	1850.95	54.28	3865.81	1262.86	1830.93	47.36	142.3		213.37	149.94	7418.38	2459.55	3895.25	52.51
1993	4285.29	1779.54	2146.1	50.08	4743.08	1815.06	2064.89	43.53	171.56		232.16	135.32	9199.93	3594.6	4443.15	48.30
1994	5312.22	2369.6	2404.91	45.27	5753.17	2418.4	2126.1	36.96	211.59		262.75	124.18	11276.98	4788	4793.76	42.51
1995	6154.52	2696.96	2934.99	47.69	6516.3	2806.37	2387.69	36.64	260.7		313.9	120.41	12931.52	5503.33	5636.58	43.59
1996	6935.66	3059.13	3135.42	45.21	7261.92	3140.39	2890.17	39.8	263.39		351.71	133.53	14460.97	6199.52	6377.3	44.10
1997	7736.39	3648.94	3604.73	46.59	8380.93	3872.82	3262.32	38.93	334.85		439.27	131.18	16452.17	7521.76	7306.32	44.41
1998	8965.43	4310.78	4131.4	46.08	9728.35	4763.39	4084.84	41.99	404.99		515.73	127.34	19098.77	9074.17	8731.97	45.72
1999	10498.17	5299.59	4670	44.48	10141.59	4491.7	4082.02	40.25	510.72		613.52	120.13	21150.48	9791.29	9365.54	44.28
2000	12617.34	6755.85	5580.48	44.23	13536.21	6708.45	5192.63	38.36	649.00		755.89	116.47	26802.55	13464.3	11529	43.01
2001	14663.45	7588.28	6508.93	44.39	15175.61	7786.79	5868.13	38.67	796.85	21.53	967.16	121.37	30635.91	15396.6	13344.22	43.56
2002	16894.74	8874.44	7660.15	45.34	17080.96	8032.07	6973.01	40.82	1000.14	70.36	1086.68	108.65	34975.84	16976.87	15719.84	44.94
2003	19510.64	10124.41	9040.24	46.33	19944.88	9506.81	8744.20	43.84	1271.06	165.45	1202.23	94.58	40726.58	19796.67	18986.67	46.62
2004	21473.4	10764.57	10544.34	49.10	21712.62	9778.45	10716.95	49.36	1511.51	198.96	1456.07	96.33	44697.53	20741.98	22717.36	50.82
2005	22990.85	10545.72	13021.89	56.64	22408.00	9260.74	13169.57	59.27	1752.84	190.12	1862.38	106.25	47151.69	19996.58	28053.84	59.50
2006	25506.07	11513.83	16399.11	64.29	24611.70	9229.90	16342.86	66.40	2100.54	199.16	2295.89	109.30	52218.31	20942.89	35037.86	67.10

Appendix - 17.5 (Contd.)

Ending March	Co-operative Banks				Private Banks				Foreign Banks				Grand Total			
	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio	Total Deposit	Of which NRE Deposits	Total Advance	CD Ratio
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1990					1407.58	286.09	791.92	56.26	39.47	14.19	68.97	174.74	6659.56	1932.92	4187.13	62.87
1991					1687.81	357.29	895.27	53.04	77.12	12.25	77.15	100.04	7934.78	2316.6	4715.34	59.43
1992					2252.55	579.33	1107.71	49.18	115.82	77.12	90.43	78.08	9786.75	3116	5093.39	52.04
1993					2912.31	904.31	1374.84	47.21	149.2	100.48	42.52	28.50	12261.44	4599.39	5860.51	47.80
1994					3664.17	1226.63	1647.79	44.97	197.19	137.73	43.31	21.96	15138.34	6152.36	6484.86	42.84
1995					4526.39	1382.71	2159.94	47.72	236.39	157.67	46.04	19.48	17694.3	7043.71	7842.56	44.32
1996					5710.33	1903.88	2583.61	45.24	247.66	152.93	45.75	18.47	20418.96	8256.33	9006.66	44.11
1997					6576.22	2434.92	3175.5	48.29	324.48	221.41	83.28	25.67	23352.87	10178.09	10565.1	45.24
1998					8065.02	3385.64	3542.4	43.92	408.27	275.17	89.87	22.01	27572.06	12734.98	12364.24	44.84
1999					9914.39	3204.45	4107.97	41.43	466.97	332.79	103.16	22.09	31531.84	13328.53	13576.67	43.06
2000					11442.39	4948.17	4312.79	37.69	373.9	311.14	99.07	26.50	38618.84	18723.61	15940.86	41.28
2001					13848.15	5791.53	5741.5	41.46	366.09	242.7	94.55	25.83	44850.15	21430.83	19180.27	42.77
2002					16302.23	7329.28	6248.91	38.33	377.71	227.56	93.19	24.67	51655.78	24533.71	22061.94	42.71
2003					18293.05	8641.09	7875.67	43.05	379.73	257.81	144.19	37.97	59399.36	28695.57	27006.53	45.47
2004					20891.72	9146.59	8981.31	42.99	371.86	211.82	168.64	45.35	65961.11	30100.39	31867.31	48.31
2005	2276.84	1.68	3048.94	133.91	22037.99	8928.32	12670.78	57.50	393.96	194.82	223.87	56.83	71860.48	29121.40	43997.43	61.23
2006	2838.22	1.17	3395.58	119.64	25012.45	9477.57	16641.75	66.53	446.31	251.02	238.90	53.53	80515.29	30672.65	55314.09	68.70

Source: Banking Statistics of Kerala, Reported by State Level Bankers' Committee.

Note: Details of Co-operative Bank statistics are available through SLBC from 2004-05 onwards.

Appendix 17.6

District Wise distribution of number of branches, aggregate deposits, gross bank credit and CD Ratio of sheduled commercial banks-Kerala, March 2006

(Rs. Crore)

Sl. No.	District	State Bank Group				Nationalised Banks				Regional Rural Banks				Other Commercial Banks				All Commercial Banks			
		No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	CD Ratio	No. of branches	Deposits	Credits	C D Ratio
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Thiruvananthapuram	121	4761	3072	64.5	154	3762	3607	95.9					92	3205	1558	48.6	367	11728	8237	70.2
2	Kollam	49	1785	1208	67.7	91	1370	1066	77.8					61	1465	822	56.1	201	4620	3096	67.0
3	Pathanamthitta	64	2661	835	31.4	83	2028	527	26.0	9	18	23	127.8	100	2573	617	24.0	256	7280	2002	27.5
4	Alappuzha	71	1838	1367	74.4	66	1494	698	46.7	7	8	8		81	1641	689	42.0	225	4981	2762	55.5
5	Kottayam	108	2465	1862	75.5	60	1229	732	59.6	8	47	35	74.5	104	2190	943	43.1	280	5931	3572	60.2
6	Idukki	39	388	487	125.5	30	193	324	167.9					32	297	301	101.3	101	878	1112	126.7
7	Ernakulam	117	5165	3388	65.6	197	4484	4259	95.0	12	119	51	42.9	207	7697	4863	63.2	533	17465	12561	71.9
8	Thrissur	67	2081	1056	50.7	101	2773	1083	39.1	22	177	105	59.3	208	4385	1903	43.4	398	9416	4147	44.0
9	Palakkad	51	1222	822	67.3	112	1648	1048	63.6	14	55	71	129.1	83	754	564	74.8	260	3679	2505	68.1
10	Malapuram	37	1169	490	41.9	64	1265	456	36.0	80	526	530	100.8	56	768	399	52.0	237	3728	1875	50.3
11	Kozhikode	44	1239	856	69.1	98	1601	982	61.3	67	393	479	121.9	55	855	947	110.8	264	4088	3264	79.8
12	Wayanad	12	122	235	192.6	27	167	219	131.1	27	89	227	255.1	9	77	104	135.1	75	455	785	172.5
13	Kannur	31	1184	587	49.6	83	1839	760	41.3	75	421	440	104.5	38	579	404	69.8	227	4023	2191	54.5
14	Kasaragod	10	247	137	55.5	55	760	396	52.1	48	223	305	136.8	16	166	207	124.7	129	1396	1045	74.9
	Total	821	26327	16402	62.3	1221	24613	16157	65.6	369	2076	2274	109.5	1142	26652	14321	53.7	3553	79668	49154	61.7

Source: Reserve Bank of India, March 2006.

Appendix 17.7
Bank wise performance 2005-06, Kerala (Rs. crore)

Sl. No.	Name of Bank	Total Deposit	NRE Deposit	Total Advances	CD Ratio
1	2	3	4	5	6
A	State Bank Group				
1	State Bank of India	8339.87	4001.47	5603.49	67.19
2	State Bank of Bikania & Jaipur	48.6	1.28	17.47	35.95
3	State Bank of Mysore	113.4	17.05	64.58	56.95
4	State Bank of Sourashtra	21.59	1.48	28.33	131.22
5	State Bank of Hyderabad	71.74	10.93	75.58	105.35
6	State Bank of Travancore	16910.87	7481.62	10609.66	62.74
	Total: Stat Bank Group	25506.07	11513.83	16399.11	64.29
B	Nationalised Banks				
1	Alahabad Bank	43.03	4.39	98.21	228.24
2	Andhara Bank	224.76	13.49	221.92	98.74
3	Bank of Baroda	1282.02	829.48	546.61	42.64
4	Bank of India	850.46	252.34	821.87	96.64
5	Bank of Maharashtra	42.07	1.18	15.6	37.08
6	Canara Bank	7326.50	3445.36	4932.27	67.32
7	Central Bank of India	1273.7	386.52	852.78	66.95
8	Corporation Bank	866.02	273.31	513.36	59.28
9	Dana Bank	96.35	9.72	76.32	79.21
10	Indian Bank	1813.93	733.91	792.17	43.67
11	Indian Overseas Bank	2659.80	1358.10	1145.80	43.08
12	Oriental Bank of India	205.36	14.22	114.70	55.85
13	Punjab National Bank	1511.08	220.95	990.24	65.53
14	Punjab & Sind Bank	15.82	0.79	18.98	119.97
15	Syndicate Bank	1958.91	544.66	1376.58	70.27
16	Union Bank of India	2943.61	851.69	2672.70	90.80
17	United Bank of India	29.19	0.74	78.48	268.86
18	Uco Bank	310.90	40.54	388.22	124.87
19	Vijaya Bank	924.36	215.17	555.43	60.09
	Total: Nationalised Banks	24377.87	9196.56	16212.24	66.50
C	Regional Rural Banks				
1	North Malabar Gramin Bank	890.45	92.36	918.57	103.16
2	South Malabar Gramin Bank	1210.09	106.80	1377.32	113.82
	Total: Regional Rural Banks	2100.54	199.16	2295.89	109.30
	TOTAL-PUBLIC SECTOR BANKS	51984.48	20909.55	34907.24	67.15
D	Private Sector Banks				
1	Bharat Overseas Bank	54.60	945.83	75.33	137.97
2	Catholic Syrian Bank	2957.32	268.02	1272.30	43.02
3	Dhanalekshmi Bank	1808.22	21.01	825.7	45.66
4	Federal Bank	9463.61	2.45	5582.19	58.99
5	Karnataka Bank	165.72	73.22	115.78	69.86
6	Karoor Vysya Bank	99.81	21.80	85.23	85.39
7	Lekshmi Vilas Bank	35.56	258.23	10.21	28.71
8	Lord Krishna Bank	731.29	0.03	272.32	37.24
9	South Indian Bank	5587.19	319.68	2574.36	46.08
10	Tamil Nadu Mercantile Bank	160.5	0.02	54.79	34.14
11	ING Vysya Bank	410.79	151.29	385.04	93.73
12	IDBI Bank	233.82	33.34	130.63	55.87
13	City Union Bank	117.29	16.49	52.55	44.80
14	Centurian Bank	446.56	4476.03	308.11	69.00
15	Inus Ind Bank	278.06	6.71	295.91	106.42
16	HDFC Bank	749.55	150.12	655.14	87.40
17	Bank of Rajasthan	3.68	3.98	3.83	104.08
18	ICICI Bank	1459.28	2628.80	3792.98	259.92
19	Jamm & Kashmir Bank	5.05	13.90	12.07	239.01
20	UTI Bank	478.37	119.95	267.91	56.00
	Total-Private Sector Banks	25246.27	9510.90	16772.38	66.44
E	Foreign Banks				
1	Stan Chart Grindlays	117.39		91.72	78.13
2	HSBC	274.26	200.78	146.64	53.47
3	Oman Intl. Bank	54.66	50.24	0.54	0.99
	Total - Foreign Banks	446.31	251.02	238.9	53.53
	TOTAL - COMMERCIAL BANKS	77677.06	30671.47	51918.52	66.84
F	Co-operative Banks				
1	KSCARDB	0	0	1746.06	
2	Kerala State Co-op. Bank	2838.22	1.17	1649.52	58.12
	Total: Co-op. Bank	2838.22	1.17	3395.58	119.64
	TOTAL BANKING SECTOR	80515.28	30672.64	55314.10	68.70

Source: SLBC - Kerala, 2006

Appendix 17.8
Districtwise Flow of Credit (2002-03 to 2005-06 March)

(Rs. lakh)

District	Agriculture Advances				Total Advances to Priority Sector			
	2002-03	2003-04	2004-06	2005-06	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9
Thiruvananthapuram	28566	36334	56686	85498	82685	121738	182863	264877
Kollam	26125	22013	30466	42080	159642	175378	224750	255433
Pathanamthitta	14445	19450	30717	43689	35814	53984	77011	102146
Alappuzha	20093	25198	43164	48645	69055	88033	115152	147679
Kottayam	30099	40568	56240	80756	76590	109217	147280	207354
Idukki	18962	24807	30844	46262	46534	60248	71463	89213
Ernakulam	20517	33063	53002	71811	136672	160205	197262	221098
Thrissur	26839	44726	62956	77569	95168	142111	184565	230758
Palakkad	27905	34868	62889	93980	63057	76285	127779	176326
Malappuram	32638	48990	82499	84124	61764	88233	140521	139823
Kozhikode	30503	41669	59144	101639	64098	87041	110372	186225
Wayanad	31201	30802	45963	52400	40666	40273	56244	66352
Kannur	25029	29325	41756	47206	92582	115724	148346	173830
Kasaragod	18495	23099	29112	39502	31990	41127	55112	69230
State Total	351417	454912	685438	915161	1056317	1359597	1838720	2330344

Source: SLBC

Appendix 17.9
Operations of the Kerala State Co-operative Bank Limited (1996-97 to 2005-06)

(Rs. Lakh)

Sl.No	Particulars	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11	12
1	Share Capital	1851.46	2073.53	2073.53	2127.85	2195	2268	2269	2269	2269	2269
2	Reserves	2656.07	2846.91	3081.50	3633.25	4174	5131	6994	7230	8384	11140
3	Deposits	57915.93	77522.27	123616.97	153972.09	168724	191501	232676	242747	240734	286404
4	Borrowings	22960.66	19984.82	9351.17	8440.35	14598	20973	8779	16430	37568	42458
5	Working Capital	84893.35	101957.59	137566.39	180810.00	189174	216173	250179	267134	286907	347827
6	Loans & Advances	52219.64	51809.69	46811.19	101905.94	117931	122643	123713	111750	137230	199818
7	Investments	19093.64	23549.84	41738.70	45581.24	52004	54691	71233	118050	107523	79352
8	Net Profits	69.55	81.38	126.13	25.06	50	71	612	505	419	
9	Total Assets	-	-	-	-	204894	235400	263421	281071	302282	245457
10	Own fund	-	-	-	-	6369	7400	9263	9499	10653	13453
11	Interest spread	-	-	-	-	0.98%	1.22%	1.46%	0.07		4018
12	Operational expenses	-	-	-	-	1156	1222	1438	1192	1267	2751

Source: Kerala State Co-operative Bank Ltd.

Appendix 17.10

Purpose - wise Disbursed Loans in the Kerala State Co-operative Bank Limited (1997-98 to 2005-06)

(Rs.Crore)

Sl.No.	Purpose	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8	9	10	11
1	Agriculture	167.61	155.36	175.72	120.69	79.88	114.39	113.85	219.57	574.14
2	Procurements/Marketing/ Distribution	102.69	98.59	103.71	176.47	84.89	82.74	176.91	192.12	404.43
3	Cottage and Small Scale Industries	68.47	70.65	53.01	66.65	66.22	58.12	60.12	82.34	112.68
4	Other Industries	22.68	15.67	11.49	30.11	33.95	40.70	68.55	68.61	11.62
5	Consumer Activities	1.91	6.43	1.02	0.12	2.92	13.96	5.70	13.72	15.44
6	Consumption Purpose	59.21	29.69	42.00	110.45	115.74	136.92	184.14	240.15	102.68
7	Housing	50.04	55.83	23.58	113.99	128.82	140.21	192.32	253.87	162.29
8	Other Purposes	45.49	35.89	608.52	560.83	714.00	650.09	315.92	301.9	443.65
	Total	518.10	468.11	1019.05	1179.31	1226.42	1237.13	1117.51	1372.28	1846.93

Source: Kerala State Co - operative Bank Ltd.

Appendix 17.11

Operational Indicators of District Co-operative Banks during 2005-06

(Rs. Lakh)

District	Paid of Share Capital	Reserves and Other Funds	Deposits	Borrowings	Working Capital	Investments in Govt. & Other Securities	Investments in Share of Other Institutions	Loan & Advances	Total NPA	Net Profit
1	2	3	4	5	6	7	8	9	10	11
Thiruvananthapuram	1709.48	15644.64	110865.53	13641.61	144972.59	96.00	59.34	107256.58	27497.01	61.87
Kollam	682.44	4565.22	65117.33	8647.69	75246.53	25.00	186.55	58361.22	10474.89	161.57
Alappuzha	711.10	4975.55	45137.12	5117.18	56967.67	11941.04	65.80	36630.70	5762.32	110.24
Pathanmthitta	324.19	1652.10	37722.07	564.86	38868.94	360.94	40.59	21120.10	3403.65	15.28
Kottayam	678.69	5191.97	65712.98	2757.37	68428.39	310.00	129.66	44469.46	11764.54	2521.30
Idukki	968.70	2962.96	36041.98	7914.03	51215.03	10380.00	292.34	36131.09	3872.99	327.17
Ernakulam	1727.84	10189.27	136496.54	353.65	143295.72	6869.80	101.32	76280.14	7495.42	3161.56
Trichur	650.30	8505.42	83170.01	2664.27	97272.27	4474.47	59.35	45019.42	9856.33	588.65
Palakkad	785.45	6672.09	42322.51	3297.28	55726.00	40.23	108.82	38701.37	7122.52	239.17
Malappuram	546.24	1437.43	60858.74	1086.30	62941.81	30.00	107.82	38701.37	7122.52	239.17
Kozhikod	453.60	3356.77	52570.09	6815.51	59849.86	12515.17	131.83	46898.63	6035.45	201.41
Wayanad	475.80	2131.30	11521.55	7310.89	19276.48	100.00	95.69	16764.62	1972.79	8.57
Kannur	1173.56	6289.99	61673.15	14055.08	91623.24	255.00	381.44	56975.02	6750.82	410.07
Kasargod	511.61	1376.06	19508.08	6791.09	27304.73	40.00	142.88	21133.97	1002.10	36.88

(Accumul ated loss)

(loss)

Appendix 17.12

**Annual Long Term Loan Disbursement and Debentures floated by
Kerala State Co-operative Agricultural and Rural Development Bank Ltd.**

(Rs. Crore)

Year	Loan advanced								Debenture Floated				
	Ordinary	Scheme	NFS*	Rural Housing	Gold Loan	KCC NABARD	NCDC Loans	Total	Ordinary	Scheme	NFS	Rural Housing	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1993-94	11.80	31.76	27.64	13.71	-	-	-	84.91	11.50	30.65	26.92	24.32	93.39
1994-95	10.63	45.60	30.77	24.31	-	-	-	111.31	10.00	30.46	25.07	14.86	80.39
1995-96	10.44	67.54	40.53	35.49	-	-	-	154.00	11.00	45.78	37.65	40.53	134.96
1996-97	17.96	80.93	61.51	47.06	-	-	-	207.46	12.00	90.19	51.09	24.32	177.60
1997-98	10.84	79.38	51.01	95.07	-	-	-	236.30	17.25	102.82	61.33	60.98	242.38
1998-99	4.64	94.75	45.85	86.70	-	-	-	231.93	4.10	80.28	37.22	69.07	190.67
1999-2000	4.44	100.97	72.84	123.03	-	-	-	301.28	4.24	95.59	66.61	98.66	265.11
2000-01	6.65	121.51	81.37	123.79	-	-	-	333.32	3.25	104.31	77	86.18	270.74
2001-02	7.66	117.4	74.2	119.81	-	-	-	319.07	9.85	146.89	86.83	133.64	377.21
2002-03	7.67	98.77	65.72	121.15	-	-	-	293.31	2.40	104.89	69.76	187.76	364.81
2003-04	6.56	86.05	49	126.95	-	-	-	268.56	-	82.72	48.86	118.72	250.30
2004-05	5.40	98.06	73.62	141.62	-	-	-	332.86	-	72.87	37.19	114.29	224.35
2005-06	3.96	99.66	68.13	160.65	20.23	17.58	60.48	430.70	-	74.17	65.16	92.07	245.67

Source: Kerala State Co-Operative Agricultural and Rural Development Bank Ltd.

*NFS - Non Farm Sector

Appendix 17.13
Purpose-wise Classification of Long Term Loans Issued by
Primary Co-operative Agricultural & Rural Development Banks (1998-99 to 2005-06)

(Rs. Lakh)

Sl.No	Purpose	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05 (Tentative)	2005-06
1	2	3	4	5	6	7	8	9	10
I	Ordinary Loan								
1	Construction of Wells/Tanks	11.41	20.63	55.34	149.91	17.33	20.12	33.24	28.77
2	Renovation of Wells/Tanks	0.40	1.10	9.31	2.34	4.71	0.37	1.91	2.10
3	Pumpsets	2.44	1.98	9.71	8.79	2.10	-	-	0.45
4	Plantation & Horticulture	93.49	141.33	217.05	114.44	186.22	163.86	136.18	56.24
5	Agricultural Mechinary	-	-	-	-	-	0.45		
6	Animal Husbandary	109.90	46.12	74.92	48.09	80.93	57.27	36.95	20.80
7	Land Development	133.05	105.26	107.49	160.30	231.61	120.48	105.24	120.45
8	Construction of Godowns/Cattle	42.81	57.86	92.83	178.49	110.53	157.33	151.71	174.93
9	Barbed wire or stonefencing	12.95	18.28	36.51	42.36	61.84	33.21	29.74	7.28
10	Construction of drainage channels	1.50	0.15	3.62	3.83	-	5.01		
11	Loans for Redemption of prior debts	-	-	-	-	-	-	-	
12	Others	62.18	70.84	46.06	83.70	66.61	53.34	70.11	5.72
	Total	470.13	463.55	652.84	792.25	761.88	611.44	565.08	416.74
II	Scheme Loan								
1	Minor Irrigation	1496.15	1572.75	1899.84	2086.31	2094.05	1314.021	1303.75	1521.59
2	Plantation & Horticulture	3613.84	4276.50	4637.57	5187.60	3186.15	2242.39	3048.06	3165.09
3	Agricultural Mechinary	676.34	890.04	1268.60	337.74	653.93	78.54		83.09
4	Dairy & Animal Husbandry	24.65	23.14	24.70	12.55	15.40	850.27	626.15	506.13
5	Land Development	1688.53	1471.79	2308.23	2360.40	2204.50	2478.27	2421.17	3107.50
6	Poultry	1477.73	1554.53	1585.21	1228.97	1042.31	-		304.86
7	Fisheries	202.82	200.32	229.85	375.44	176.15	172.25	118.1	66.23
8	Others	342.43	235.49	194.41	169.92	522.40	1518.26	2066.21	1411.32
	Total	9522.49	10224.56	12148.41	11758.93	9894.89	8654.00	9583.44	10165.81

Source: Kerala State Co-operative Agricultural & Rural Development Bank Ltd.

Appendix 17.14

Agency-wise Disbursement of Refinance Assistance by NABARD in Kerala 2000-01 to 2005-06)

Sl. No.	Agency	2000-01		2001-02		2002-03		2003-04		2004-05		2005-06	
		Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	KSCARD Bank Ltd.	172.47	72.90	303.36	81.30	264.66	86.00	225.90	66.00	205.99	46	240.00	58.00
2	Commercial Banks	32.72	13.80	22.66	6.10	9.53	3.00	27.40	8.00	29.88	7	19	5
3	State Co-op. Banks	-	-	24.29	6.50	12.10	4.00	67.18	20.00	145.10	32	87.00	21.00
4	Regional Rural Banks	31.46	13.30	22.98	6.10	21.41	7.00	21.57	6.00	67.04	15	69	16
	Total	236.65	100.00	373.29	100.00	307.70	100.00	342.05	100.00	448.01	100.00	415.00	100.00

Source: NABARD

Appendix 17.15
Purpose-wise Refinance by NABARD (2000-01 to 2005-06)

Sl. No.	Purpose	2000-2001		2001-2002		2002-03		2003-04		2004-05		2005-06	
		Refinance	%	Refinance	%	Amount	%	Amount	%	Amount	%	Amount	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Minor Irrigation	18.52	7.80	28.99	7.80	19.40	6.30	13.59	4.00	11.18	2.50	11.00	2.70
2	Land Development	23.56	10.00	27.16	7.30	29.57	9.60	28.62	8.00	25.60	5.70	31.03	7.50
3	Farm Mechanisation	3.12	1.30	1.69	0.40	1.22	0.50	0.63	0.20	0.25	0.06	0.61	0.15
4	Plantation & Horticulture	39.49	16.70	53.54	14.30	30.68	10.00	19.91	6.00	17.15	3.83	17.26	4.16
5	Dairy Development	14.16	6.00	14.49	3.90	8.04	2.60	4.87	1.40	9.78	2.18	9.73	2.34
6	Fisheries	2.79	1.10	2.55	0.70	2.47	0.80	1.61	0.50	0.79	0.18	1.28	0.31
7	Poultry	5.96	2.50	7.12	1.70	3.86	1.00	2.16	0.80	1.73	0.39	283.87	68.40
8	Bio-gas	0.21	0.10	0.71	0.20	0.49	0.30	0.29	0.10	0	0	5.09	1.23
9	I.R.D.P	-	-	-	-	-	-	-	-	-	-	-	-
10	Non Farm Sector	110.25	46.60	210.57	56.40	187.76	61.00	226.96	66.40	343.01	76.56	55.18	13.30
11	SC & ST Action Plan	0.01	-	-	-	-	-	-	-	-	-	-	-
12	SGSY	5.64	2.40	7.40	2.00	2.67	0.90	0.94	0.30	1.37	0.31	-	-
13	Self Help groups	4.39	1.90	6.56	1.70	11.27	4.00	9.97	3.00	20.92	4.67	-	-
11	Agro Processing	-	-	-	-	-	-	-	-	-	-	-	-
12	Others	8.55	3.60	12.51	3.40	10.27	3.00	32.47	9.30	16.23	3.62	-	-
	Total	236.65	100.00	373.29	100.00	307.70	100.00	342.02	100.00	448.01	100.00	415.00	100.00

Source: NABARD

Appendix 19.1
Total Work Seekers in Kerala

Year(at the end of December)	General Work Seekers	Professional /Technical Work Seekers	Total Work Seekers
1	2	3	4
1996	3158515	128959	3287474
1997	3412211	138597	3550808
1998	3629499	154750	3784249
1999	3748493	152148	3900641
2000	4049082	166201	4215283
2001	4254307	177032	4431339
2002	3499774	180118	3679892
2003	3845641	158897	4004538
2004	3579675	176638	3756313
2005	3492776	176922	3669698
9/2006	3800883	186152	3987035

Source: Directorate of Employment and Training

Appendix 19.2
Distribution of Work Seekers in Kerala by Educational Level

Year (at the end of December)	Below SSLC	SSLC	PDC	Degree	PG	SSLC & above	% to total work seekers	Total work seekers
1	2	3	4	5	6	7	8	9
1996	822183	1984136	287766	161962	31427	2465291	75	3287474
1997	858219	2144636	327753	182555	37645	2692589	76	3550808
1998	935092	2224481	372921	206243	45512	2849157	75	3784249
1999	904194	2300026	415298	228976	52147	2996447	77	3900641
2000	952434	2416709	530231	256772	59137	3262849	77	4215283
2001	966914	2574722	542815	280618	66270	3464425	78	4431339
2002	711714	2162627	510063	242060	53428	2968178	80	3679892
2003	746129	2364016	564939	268124	61330	3258409	81	4004538
2004	673301	2222940	559854	239701	60517	3083012	82	3756313
2005	628788	2181488	574634	229684	55104	3040910	83	3669698
9/2006	656234	2389615	643520	240205	57461	3330801	84	3987035

Source: Directorate of Employment & Training

Appendix 19.3
Number of Professional and Technical Work Seekers

Year (at the end of December)	Medical Graduates	Engineering Graduates	Diploma holders in Engg.	ITI Certificate Holders	Agricultural Graduates	Veterinary Graduates	Total
1	2	3	4	5	6	7	8
1996	1976	7274	28565	89847	1265	32	128959
1997	2158	7059	31787	96241	1327	25	138597
1998	2126	7314	37201	106690	1324	95	154750
1999	1698	8334	39408	101384	1205	119	152148
2000	2455	9858	42991	109592	1284	21	166201
2001	2691	10349	46377	115736	1496	383	177032
2002	3736	8506	43128	123387	881	480	180118
2003	3567	8116	40660	105221	897	436	158897
2004	3910	9213	42539	118518	1662	796	176638
2005	3428	6389	41345	124410	803	547	176922
9/2006	2724	8455	43220	130404	738	611	186152

Source: Directorate of Employment & Training

Appendix 19.4
District-wise Distribution of Work Seekers (as on 31.03.2006)

SI.No.	District	General Work Seekers	Professional/ Technical	Total	Men	Women
1	2	3	4	5	6	7
1	Thiruvananthapuram	518516	30673	549189	213115	336074
2	Kollam	381978	16723	398701	163946	234755
3	Pathanamthitta	336259	13071	349330	152566	196764
4	Alappuzha	140422	6420	146842	57645	89197
5	Kottayam	209019	9773	218792	91882	126910
6	Idukki	113933	3419	117352	49116	68236
7	Eranakulam	345932	25944	371876	161090	210786
8	Thrissur	323966	13868	337834	125206	212628
9	Palakkad	250940	30682	281622	130607	151015
10	Malappuram	252782	7027	259809	122487	137322
11	Kozhikode	350798	17081	367879	155825	212054
12	Wayanad	78983	1692	80675	37236	43439
13	kannur	213221	7748	220969	91882	129087
14	Kasaragod	90021	2292	92313	42386	49927
	Total	3606770	186413	3793183	1594989	2198194

Source: Directorate of Employment & Training

Appendix 19.6
Employment in Organised Public and Private Sectors – All India

(in lakhs)

Sl. No.	Year	Public Sector			Private Sector			Public and Private Sector (Total)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	1996	167.94	26.35	194.29	67.2	17.92	85.12	235.14	44.26	279.41
2	1997	168.31	27.28	195.59	67.77	19.09	86.86	236.08	46.37	282.45
3	1998	166.55	27.63	194.18	67.37	20.11	87.48	233.92	47.74	281.66
4	1999	166.04	28.11	194.15	66.8	20.18	86.98	232.84	48.29	281.13
5	2000	164.57	28.57	193.14	65.8	20.66	86.46	230.37	49.23	279.6
6	2001	162.79	28.59	191.38	65.62	20.9	86.52	228.4	49.49	277.89
7	2002	158.86	28.87	187.73	63.83	20.49	84.32	222.71	49.35	272.06
8	2003	158.75	29.05	185.8	63.57	20.64	84.21	220.32	49.68	270
9	2004	153.07	28.9	181.97	62.02	20.44	82.46	215.09	49.34	264.43

Source: Economic Survey

Appendix 19.5
Unemployment Assistance and Self Employment Scheme

Sl. No.	Year (at the end of December)	Unemployment Assistance			Self Employment Scheme		
		Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)	Application received	No of Beneficiaries	Amount Disbursed (Rs. Lakhs)
1	2	3	4	5	6	7	8
1	1996	140003	297253	1464.84	144	438	2.42
2	1997	138277	294568	3206.69	1985	26	0.03
3	1998	147380	271959	1926.89	3548	1582	9.52
4	1999	188584	369863	2366.09	3384	885	7.09
5	2000	56906	346114	3689.39	17097	469	29.75
6	2001	65245	351685	2175.97	7114	330	12.69
7	2002	180586	332287	2516.4	nil	416	29.69
8	2003	186029	348027	1423.10	7659	668	36.61
9	2004	192796	387370	7398.43	1920	734	50
10	2005	170972	387370	10243.38	4172	489	44.78
11	2006	65976	339879	3667.71	2370	1040	124.44

Source: Directorate of Employment & Training

Appendix 19.7
Employment in the Public and Private Sectors in Kerala

Year (at the end of December)	Public Sector				Private Sector				Total					
	Men	Women	Total	Index	Men	Women	Total	Index	Women	Index	Men	Index	Total	Index
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1997	433717	188258	621975	100	296343	259898	556241	100	448156	100	730060	100.00	1178216	100
1998	452037	191747	643784	103.51	303529	272272	575801	103.52	464019	103.54	755566	103.49	1219585	103.51
1999	452023	191904	643927	103.53	302377	285960	588337	105.77	477864	106.63	754400	103.33	1232264	104.59
2000	457374	193867	651241	104.71	306901	293390	600291	107.92	487257	108.72	764275	104.69	1251532	106.22
2001	450711	194959	645670	103.81	299235	289200	588435	105.79	484159	108.03	749946	102.72	1234105	104.74
2002	445932	192064	637996	102.58	300768	281540	582308	104.69	473604	105.68	746700	102.28	1220304	103.57
2003	429208	190055	619263	99.56	275407	274163	549570	98.80	464218	103.58	704615	96.52	1168833	99.20
2004	427228	187973	615201	98.91	265333	265337	530670	95.40	453310	101.15	692561	94.86	1145871	97.26
2005	422563	186985	609548	98	249130	243360	492490	88.54	430345	93.53	671693	92.005	1102038	93.53

Source: Directorate of Employment

Appendix 19.8

District-wise Employment both in Public and Private Sectors in Kerala as on 31st March

Sl.No	District	2001	2002	2003	2004	2005	2006
1	Thiruvananthapuram	179327	182508	185154	184978	183649	183878
2	Kollam	103746	101780	99232	93476	91673	92756
3	Pathanamthitta	42031	40937	42067	48986	50601	47221
4	Alappuzha	60415	59013	59347	58111	41819	41324
5	Kottayam	62445	61604	62028	61362	60524	60291
6	Idukki	92263	96761	97760	88222	78544	61953
7	Ernakulam	160995	159010	158835	162166	163871	163767
8	Thrissur	110252	107677	105898	106381	106298	97947
9	Palakkad	80150	79160	76393	63412	67554	71550
10	Malappuram	69600	67237	63399	76315	62553	62493
11	Wayanad	32250	18751	30507	35131	72922	51661
12	Kozhikode	95648	89755	88712	90147	30678	50560
13	Kannur	91331	89595	88679	82491	79614	77077
14	Kasargod	61241	60215	53388	53245	49473	39052
	State	1241694	1214003	1211399	1204423	1139773	1101530

Source: Directorate of Employment

Appendix 19.9
Employment in the Public Sector by Industry - All India
(Lakh persons as on 31st March)

SI.No	Industry	1981	1991	2001	2002	2003
1	Agriculture,hundting etc	4.63	5.56	5.02	4.83	5.06
2	Mining and quarrying	8.18	9.99	8.75	8.61	8.47
3	Manufacturing	15.02	18.52	14.3	13.5	12.6
4	Electricity,gas and water	6.83	9.05	9.35	9.23	9.13
5	Construction	10.89	11.49	10.81	10.26	9.48
6	Wholesale and retail trade	1.17	1.5	1.63	1.57	1.82
7	Transport,storage&communications	27.09	30.26	30.42	30.09	29.39
8	Finance,insurance,real estate etc.	7.48	11.94	12.81	12.3	13.77
9	Community,Social&personal services	73.55	92.27	98.3	97.35	96.09
	Total	154.84	190.58	191.38	187.73	185.8

Source: Economic Survey

Appendix 19.10

Number of Placement through Employment Exchanges and Monthly Average No. of Employers using Employment Exchanges in Kerala

Year	No. of Placements	Monthly average no. of Employers using employment Exchanges
1	2	3
1960	10574	198
1970	18150	
1980	36543	
1990	14230	540
1996	16996	486
1997	18268	374
1998	19375	350
1999	19661	447
2000	23012	388
2001	15750	376
2002	12409	312
2003	9902	223
2004	8711	225
2005	11450	244
9/2006	8434	240

Source: Directorate of Employment & Training

Appendix 20.1
Score and Rank of Various Indicators in Human Development of Big States in India

Sl. No.	Name of State	Agriculture	Infrastruc ture	Primary Education	Primary Health	Consumer Market	Budget and Prosperity	Investment Scenario	Law and Order
1	2	3	4	5	6	7	8	9	10
1	Kerala	0.94 (13)	3.09 (3)	4.25 (2)	2.70 (2)	2.04 (5)	1.99 (7)	1.12 (16)	3.83 (1)
2	Tamil Nadu	2.31 (3)	2.77 (5)	3.06 (4)	2.38 (3)	1.85 (7)	1.85 (10)	1.89 (8)	2.06 (2)
3	Rajasthan	1.13 (9)	2.07 (13)	1.33 (17)	0.95 (14)	1.17 (12)	1.65 (12)	1.28 (11)	1.41 (5)
4	Karnataka	1.52 (6)	2.66 (7)	2.61 (7)	1.87 (4)	1.64 (9)	1.80 (11)	1.95 (7)	1.43 (4)
5	Madhya Pradesh	1.02 (11)	2.07 (12)	1.72 (16)	0.99 (12)	0.83 (14)	1.19 (15)	1.14 (15)	1.45 (3)
6	Himachal Pradesh	0.64 (16)	3.34 (2)	4.34 (1)	2.80 (1)	2.27 (2)	2.77 (2)	2.23 (2)	1.40(6)
7	Gujarat	1.78 (4)	2.65 (9)	1.94 (13)	1.49 (9)	1.87 (6)	2.27 (4)	2.39 (1)	1.24 (7)
8	Andhra Pradesh	1.77 (5)	2.54 (10)	2.42 (9)	1.44 (10)	1.23 (11)	1.90 (9)	1.50 (10)	1.05 (8)
9	Maharashtra	1.10 (10)	2.86 (4)	3.02 (5)	1.62 (6)	2.06 (4)	2.03 (5)	2.15 (4)	1.02 (9)
10	Chhattisgarh	0.30 (18)	1.82 (14)	1.77 (15)	0.94 (15)	0.68(17)	1.31 (14)	1.51 (9)	0.92 (10)
11	Haryana	3.14 (2)	2.76 (6)	2.34 (11)	0.71 (16)	2.16 (3)	2.31 (3)	2.18 (3)	0.84 (11)
12	Punjab	5.38 (1)	3.37 (1)	2.72 (6)	1.67 (5)	2.60 (1)	2.96 (1)	2.02 (6)	0.48 (13)
13	Orissa	0.49 (17)	1.78 (16)	1.83 (14)	0.67 (17)	0.51 (19)	0.98 (18)	0.84 (19)	0.57 (12)
14	West Bengal	1.32 (7)	1.82 (15)	2.13 (12)	1.39 (11)	0.99 (13)	1.57 (13)	0.86 (16)	0.46 (14)
15	Uttaranchal	0.96 (12)	2.66 (8)	3.41 (3)	1.54 (8)	1.60 (10)	1.97 (8)	2.14 (5)	0.40 (15)
16	Jharkhand	0.26 (19)	1.53 (19)	1.03 (19)	0.51 (19)	0.67 (18)	0.95 (19)	1.24 (13)	0.32 (18)
17	Jammu & Kashmir	0.65 (15)	2.44 (11)	2.36 (10)	1.58 (7)	1.74 (8)	2.03 (6)	1.27 (12)	0.36 (17)
18	Assam	0.18 (20)	1.70 (17)	2.59 (8)	0.97 (13)	0.82 (15)	1.07 (17)	0.96 (17)	0.37 (16)
19	Bihar	0.79 (14)	1.31 (20)	0.68 (20)	0.41 (20)	0.28 (20)	0.49 (20)	0.43 (20)	0.27 (20)
20	Uttar Pradesh	1.25 (8)	1.68 (18)	1.28 (18)	0.54 (18)	0.78 (16)	1.16 (16)	1.21 (14)	0.27 (19)

Source: India Today Special issue, September 2006.

Note: Col.3 to 10 - Score and number in bracket is rank (Figures are as on 2006)

Appendix 20.2
Gross Enrolment Ratio in Classes I -V and VI-VIII and I-VIII
2003-2004

Sl. No.	States/Uts	Classes I - V (6 - 11Years)			Classes VI - VIII (11 - 14 years)			Classes I - VIII (6 - 14 years)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	87.42	88.03	87.72	67.10	62.49	64.86	79.80	78.58	79.20
2	Arunachal Pradesh	115.35	103.47	109.56	67.99	59.06	63.60	98.68	87.64	93.29
3	Assam	88.22	88.09	88.16	66.02	61.15	63.65	80.10	78.32	79.23
4	Bihar	80.20	64.20	72.57	30.64	19.21	25.33	62.37	48.50	55.82
5	Chattisgarh	123.69	122.86	123.29	78.51	62.21	70.52	106.99	99.97	103.58
6	Goa	100.30	95.50	97.96	104.77	97.55	101.23	102.07	96.31	99.26
7	Gujarat	117.67	108.62	113.41	81.88	57.40	70.40	104.19	89.38	97.23
8	Haryana	73.53	77.31	75.25	68.24	62.40	65.51	71.53	71.49	71.51
9	Himachal Pradesh	106.10	106.88	106.47	99.91	96.49	98.24	103.62	102.61	103.13
10	Jammu&Ksshmir	87.47	76.42	82.10	65.20	52.95	59.28	78.77	67.31	73.21
11	Jharkhand	86.70	71.10	79.09	42.47	32.19	37.54	70.51	57.15	64.04
12	Karnataka	110.53	107.23	108.91	78.95	73.32	76.20	97.95	93.76	95.89
13	Kerala	97.25	96.59	96.92	95.69	91.49	93.46	96.61	94.51	95.58
14	Madhya Pradesh	112.11	100.68	106.59	71.78	53.88	63.30	96.89	83.43	90.44
15	Maharashtra	108.32	106.84	107.60	89.41	85.52	87.55	100.71	98.31	99.56
16	Manipur	139.30	135.64	137.51	86.95	81.57	84.33	118.85	114.60	116.77
17	Meghalaya	104.19	106.88	105.51	60.27	62.02	61.14	88.01	90.34	89.16
18	Mizoram	122.54	117.71	120.17	77.25	76.70	76.98	105.10	101.86	103.51
19	Nagaland	80.95	79.97	80.48	43.56	45.85	44.66	66.11	66.50	66.30
20	Orissa	114.23	107.44	110.91	58.13	49.69	54.01	93.28	85.86	89.65
21	Punjab	71.04	76.38	73.45	59.31	60.93	60.06	66.52	70.25	68.22
22	Rajasthan	120.18	109.41	115.07	74.30	47.22	61.54	103.65	87.19	95.87
23	Sikkim	116.54	116.48	116.51	52.02	61.63	56.75	90.63	94.77	92.68
24	Tamil Nadu	117.47	115.49	116.51	102.28	98.44	100.41	111.57	108.88	110.26
25	Tripura	125.73	119.68	122.76	75.34	70.23	72.84	105.01	99.41	102.27
26	Uttar pradesh	96.69	92.58	94.75	53.61	42.97	48.64	81.09	74.86	78.16
27	Uttaranchal	106.10	107.66	106.85	81.08	79.59	80.36	96.57	96.88	96.72
28	West Bengal	107.45	107.21	107.33	65.90	62.57	64.28	91.57	90.20	90.90
29	Andaman & Nicobar Island	118.78	113.23	116.05	100.13	91.41	95.85	111.27	104.47	107.92
30	Chandigarh	72.00	70.77	71.44	69.19	69.85	69.50	70.95	70.42	70.71
31	Dadar & Nagar Havoli	133.92	117.88	126.06	95.75	66.08	81.64	120.14	99.86	110.30
32	Daman & Diu	111.66	111.01	111.35	100.85	94.11	97.62	107.76	104.81	106.36
33	Delhi	90.34	89.81	90.10	84.83	85.91	85.34	88.26	88.33	88.30
34	Lakshadweep	111.65	100.93	106.37	104.04	89.77	97.09	108.51	96.38	102.56
35	Pondicherry	121.94	118.72	120.37	121.89	117.37	119.68	121.92	118.18	120.09
	India	100.75	95.67	98.31	66.87	57.69	62.49	88.02	81.51	84.91

Source: (1) Selected Educational Statistics, 2003-04, Ministry of HRD, Government of India.
(2) Economic Survey 2005-06, Government of India

Appendix 22.1

Local Governments - Budgetted Outlay, Release, Expenditure and Percentage of Expenditure

(Rs. Crore)

Year	Outlay				Release				Expenditure				Percentage of Expenditure (based on release)			
	General	SCP	TSP	Total	General	SCP	TSP	Total	General	SCP	TSP	Total	General	SCP	TSP	Total
1997-98	516.00	194.00	39.00	749.00	513.49	192.91	38.80	745.20	485.25	178.20	35.16	698.61	94.50	92.37	90.62	93.75
1998-99	716.00	195.00	39.00	950.00	680.95	192.92	36.45	910.32	456.22	113.85	20.79	590.86	67.00	59.01	57.04	64.91
1999-00	780.00	200.00	40.00	1020.00	641.70	157.15	31.66	830.51	724.08	181.04	36.38	941.50	112.84	115.20	114.91	113.36
2000-01	785.00	217.00	43.00	1045.00	579.06	151.71	30.61	761.38	588.54	125.04	27.13	740.71	101.64	82.42	88.63	97.29
2001-02	668.00	182.00		850.00	494.05	126.00	0.00	620.05	390.49	85.36	8.54	484.39	79.04	67.75	--	78.12
Total	3465.00	988.00	161.00	4614.00	2909.25	820.69	137.52	3867.46	2644.58	683.49	128.00	3456.07	90.90	83.28	93.08	89.36
2002-03	992.52	268.50		1261.02	795.42	199.07		994.49	439.34	94.00	2.78	536.12	55.23	47.22		53.91
2003-04	1009.23	263.33	44.44	1317.00	1129.03	271.10	38.02	1438.15	1098.02	223.78	24.05	1345.85	97.25	82.55	63.26	93.58
2004-05	1016.67	285.20	48.13	1350.00	878.05	245.54	40.13	1163.72	709.88	190.27	30.48	930.63 *	80.85	77.49	75.95	79.97
2005-06	990.36	334.47	50.17	1375.00	990.36	334.47	50.17	1375.00	--	--	--	--	--	--	--	--
2006-07	936.50	403.00	60.50	1400.00	--	--	--	--	--	--	--	--	--	--	--	--
Total	4945.28	1554.50	203.24	6703.02	3792.86	1050.18	128.32	4971.36	2247.24	508.05	57.31	1881.97	59.25	48.38	44.66	37.86

Source: Information Kerala Mission

* Provisional

Appendix 22.2

Selected Physical Achievements of the Local Governments 2005-06

Sl. No.	Item	Unit	Achievement
1	Area brought under cultivation	Hectre	17706
2	Beneficiaries of vegetable cultivation	Nos	410312
3	Benefitaries who received/Pesticides distributed through integrated agricultural development programmes	Nos	436925
4	Manures/distributed through integrated agricultueal development programmes	K.g	3421454
5	Pesticides/distributed through integrated agricultural development programmes	K.g	161202
6	Seed distributed through integrated agricultural development programmes	K.g	679231
7	Beneficiaries who received planting materials distributed through integrated agricultural development programmes	Nos	106876
8	Pumpset distributed through integrated agricultural development programmes	Nos	10517
9	Sprayers distributed through integrated agricultural development programmes	Nos	4306
10	Agricultural implements distributed through integrated agricultural development programmes	Nos	2226
11	Construction of bunds in Koleland	Metre	26460
12	Construction of bunds in Padasekharams Below Sea Level	Metre	2677
13	Distribution of tractors Under agricultural development projects	Nos	106
14	Distribution of tillers under agricultural development projects	Nos	125
15	Removal of diseased coconut trees	Nos	164126
16	Poultry-egg rearing units	Nos	16663
17	Poultry- broiler units	Nos	98
18	Fresh water fish culture (Area)	Hectre	215
19	Construction of cattlesheds	Nos	10020
20	Fodder production	Tone	1386
21	Watershed development projects	Nos	7798
22	Land brought under cultivation through watershed development projects	Hectre	11491
23	Distribution of sewing machines	Nos	100
24	New industrial units	Nos	419
25	Rehabilitation of traditional industrial units	Nos	178
26	Enterpreneurial development training (persons trained)	Nos	1905
27	Persons who received industrial entrepreneurship training	Nos	2334
28	Skill development (Persons trained)	Nos	9531
29	Micro enterprises started	Nos	2115
30	Self employment units started	Nos	2490
31	Self employed persons	Nos	9994
32	Self employment units started by poor people	Nos	2816
33	Self employment units for destitutes	Nos	390
34	Employment training programems for destitutes	Nos	44
35	Destitutes trained (Persons)	Nos	171
36	Computer training (Persons trained)	Nos	160923

Sl. No.	Item	Unit	Achievement
<i>Contd....</i>			
37	Distribution of land to land less (beneficiaries)	Nos	5691
38	Area of land distributed to landless	Hectre	4749
39	Houses constructed	Nos	38186
40	Distribution of house plots	Nos	4088
41	Renovation of houses	Nos	33131
42	Shelter upgradation	Nos	7008
43	Renovation of SC/ST houses	Nos	6767
44	Integrated development SC habitates	Nos	524
45	Hostals constructed for scheduled caste sections	Nos	31
46	Construction of sanitation units	Nos	86563
47	Electric wiring of houses	Nos	8336
48	Drinking water projects	Nos	5813
49	Beneficiaries of drinking water projects	Nos	112446
50	Drinking water projects implemented with beneficiary contribution	Nos	754
51	New wells	Nos	11154
52	New public water tap connection installed	Nos	3285
53	New water tap connection to households	Nos	2813
54	Renovation of ponds	Nos	1673
55	Pump sets	Nos	3258
56	Ordinary Roads (Nos)	Nos	7100
57	Ordinary Roads (Length)	K.Metre	12054
58	Other District roads (Number)	Nos	237
59	Other District roads (Length)	K.Metre	679
60	Roads above 8M width (Number)	Nos	769
61	Roads above 8M width (Length)	K.Metre	1843
62	Roads between 6 and 8 M width (Number)	Nos	1083
63	Roads between 6 and 8 M width (Length)	K.Metre	2746
64	Roads below 6 M width (Number)	Nos	3141
65	Roads below 6 M width (Length)	K.Metre	5657
66	Other roads (Number)	Nos	1113
67	Other roads (Length)	K.Metre	1659
68	New culverts	Nos	482
69	New bridges	Nos	315
70	New school buildings	Sq.Metre	4398
71	Anganwadi Buildings	Nos	689
72	Baby friendly toilets	Nos	210
73	Hospital buildings (extension)	Sq.Metre	7149
74	Office buildings (extension)	Sq.Metre	12825
75	Marketing complexes	Sq.Metre	3216
76	Markets renovated	Sq.Metre	1030
77	Renovation of school buildings	Sq.Metre	3194
78	Renovation of hospital buildings	Sq.Metre	1183
79	Renovation of drinking water projects	Sq.Metre	467
80	Renovation of other institutions	Sq.Metre	4296
81	Land acquired (Area)	Sq.Metre	318
82	IT @ School programme implemented (No. of schools)	Nos	29
83	Computer installed under IT @ School programme	Nos	36
84	Town planning projects	Nos	54
85	Solid waste disposal projects	Nos	599
86	Solid waste disposed (quantity)	Tone	1777

Sl. No.	Item	Unit	Achievement
<i>Contd....</i>			
87	Rehabilitation of puramboke dwellers (projects)	Nos	296
88	Beneficiaries of rehabilitation of puramboke dwellers	Nos	361
89	Slum development projects	Nos	143
90	Mobility assistants devices, Crutches, Walkers	Nos	1387
91	WheelChair, Tricycle, Mechanised threewheeler vehicles	Nos	739
92	Hearing aids	Nos	833
93	Braille kit, Study materials	Nos	424
94	Milk refrigerators/preservatives	Nos	320
95	Automatic milk packing machine	Nos	3
96	Automatic milk collection units	Nos	3
97	Instrument for testing purity of milk	Nos	10
98	Milk Container - Stainless steel	Nos	173
99	Vehicle - Fish sales	Nos	0
100	Fish Landing centre	Nos	2
101	Fish Auction Hall	Sq.Metre	1202
102	Financial assistance to co-operative societies	Nos	849
103	Trade centre	Nos	424
104	Handlooms	Nos	78
105	Ratt (Coir Spinning wheel)	Nos	90
106	SC, ST co-operative societies	Nos	0
107	Financial assistance to self-employment units	Nos	750
108	No. of persons working in self-employment units financially assisted by LSGIs	Nos	1136