

ECONOMIC REVIEW  
1993

GOVERNMENT OF KERALA

**ECONOMIC REVIEW**  
**1993**

**STATE PLANNING BOARD**  
THIRUVANANTHAPURAM

## CONTENTS

	<b>Pages</b>
<b>Chapter 1 General Review</b>	<b>1-10</b>
The National Economy	- 1
Trends in Kerala Economy	3
<b>Chapter 2 Income and Employment</b>	<b>11-16</b>
National Income and State Income	11
Unemployment	14
<b>Chapter 3 Prices, Cost of Living and Wages</b>	<b>17-24</b>
Prices	17
Public Distribution System	21
Wages	22
<b>Chapter 4 Agriculture</b>	<b>25-62</b>
Agricultural Income	25
Performance of Major Crops	27
Production Programmes	28
Supplies and Services	31
Animal Husbandry	50
Dairy Development	53
Fisheries	55
Agricultural Marketing	58
Agricultural Credit	60
Forests and Wild Life	61
<b>Chapter 5 Irrigation and Power</b>	<b>63-66</b>
Irrigation	63
Power	64
<b>Chapter 6 Industry</b>	<b>67-84</b>
Industrial Production	68
Working Factories and Employment	68
Joint Stock Companies in Kerala	69
Industrial Promotional Agencies	70
Manufacturing Industrial Enterprises under State Public Sector	72
Central Sector Industrial Investment in Kerala	74
Small Scale Industries	74

	<b>Pages</b>
Khadi and Village Industries	79
Mining	84
<b>Chapter 7 Transport and Communications</b>	<b>85-101</b>
Roads	86
Road Transport	88
Railways	93
Air Transport	94
Ports and Harbours	94
Inland Water Transport	96
Communications	98
Tourism	100
<b>Chapter 8 Export Import Trade</b>	<b>102-111</b>
India's Foreign Trade	102
Trade Through Kochi Port	103
<b>Chapter 9 Social Services</b>	<b>112-137</b>
Education	112
Health	117
Medical Education	121
Ayurveda	124
Homoeopathy	125
Family Welfare Programme	126
Water Supply and Sanitation	127
Housing	132
Urban Development	134
Industrial Training	135
<b>Chapter 10 Special Programme for Weaker Sections</b>	<b>138-154</b>
Integrated Rural Development Programme	138
Training of Rural Youth for Self Employment (TRYSEM)	139
Jawahar Rozgar Yojana	140
Land to the Landless	140
Development Programme of Panchayats	140
Social Security	143
Welfare of SC/ST	150
<b>Chapter 11 Institutional Finance</b>	<b>155-157</b>
<b>Appendix Tables</b>	<b>159-318</b>

## GENERAL REVIEW

*The National Economy*

According to the latest Economic Survey of the Government of India, while the economic reforms set in motion two and a half years ago have resulted in many accomplishments which have improved the nation's economic profile, there is much that remains to be done. The economy's record during the year 1993-94 has been a mixed one. While successes in some key variables have gone beyond expectations, there are areas where the performance has not been so very encouraging. The key economic indicators are presented in Table 1.1.

1.2 The biggest success has been the remarkable improvement in the country's external profile. Foreign exchange reserves which at one time in June 1991 were less than Rs.2000 crores (about 1 billion U.S. dollars) sufficient to cover import requirements of just about two weeks, showed sustained increase during the last two and a half years and they stood at a level of Rs.34225 crores equivalent to nearly 11 billion U.S. dollars in the first week of February, 1994. By the first week of March 1994, the reserves have increased to 13 billion U.S. dollars, sufficient to finance over six months of imports.

1.3 There has been a sharp fall in both the trade and current account deficits. Exports growth registered an increase of 21 per cent in dollar terms in the first ten months of 1993-94. This compares for the corresponding period with a decline of 3 per cent in 1991-92 and a rise of 2 per cent in 1992-93. Despite the earlier wide-ranging liberalisation of import policy, the dollar value of the country's imports during April-January, 1993-94 was less than 1 per cent higher than imports during the corresponding period of 1992-93. For the fiscal year 1993-94 imports are expected to be even lower. The deficit in the balance of payments on current account is anticipated to be less than 0.5 per cent of the GDP, compared to the unsustainable level of 3.3 per cent in 1990-91 and 2.1 per cent in 1992-93.

1.4 The conscious policy followed to reduce the quantum of short term external debt has also paid dividend as reflected in the sustained decline in the annual additions to the country's external debt. The share of short term debt in the total debt stock could be reduced from a level of 10.2 per cent in March 1991 to 7 per cent by the end of March 1993. The increase in external debt in 1991-92 and 1992-93 averaged around 3 billion U.S. dollars per annum against a much higher increase of about 6 billion U.S. dollars in the latter half of the eighties

and over 8 billion dollars in 1990-91. In the first half of 1993-94, the increase in external debt was limited to less than 300 million U.S. dollars. Though these are significant achievements, there is need to improve the situation further in-as-much as the size of external debt and debt service payment continue to remain formidable.

1.5 Another redeeming feature in the country's external profile is the sharp increase in foreign direct and portfolio investment which increased from a low level of 150 million U.S. dollars in 1991-92 to around 3 billion U.S. dollars in 1993-94. In the coming year, this is expected to show further substantial increases.

1.6 Unlike the external profile of the economy, its internal profile has not been so very encouraging despite several positive factors. On the growth front, the anticipated increase in GDP is estimated at 3.8 per cent which is less than the rate of growth of 4.3 per cent estimated for 1992-93. This fall is due to continued sluggishness in the industrial manufacturing sector. Though infrastructure sectors have done better, their growth remained low. A redeeming feature is the large increase in foodgrains stock thanks to a good agricultural performance in the last two years and increases in procurement prices. At the beginning of January 1994, the country had 23 million tonnes of food stocks, the highest in the last seven years. Foodgrain production which stood at a level of 168.4 million tonnes during 1991-92 increased to 180 million tonnes in 1992-93. For 1993-94, the production is placed at 179.1 million tonnes. Another positive feature is the good recovery of the unregistered manufacturing sector and the consumer and intermediate goods segments of the registered industry. The index of production for manufacturing for these segments grew by 1.9 per cent in 1992-93 and by 4.6 per cent in the first seven months of 1993-94. These sectors are also important from the employment perspective.

1.7 There has, however, been a slippage in certain other domestic areas more particularly in respect of the fiscal deficit which has shown a disconcerting rise during 1993-94. Though this deficit which stood at a level of 8.4 per cent of the GDP in 1990-91 could be brought down to 6 per cent in 1991-92, it increased to 6.1 per cent in 1992-93. The estimated deficit for 1993-94 is 7.3 per cent with little prospects of its going down in 1994-95 also. The increase in fiscal deficit has happened mainly because of two reasons. Firstly, growth in GDP was not as impressive as had been envisaged initially. Secondly, it has not been possible on the part of

the government to bring about any significant reductions in expenditure.

1.8 The price front remained under sustained pressure. While the annual inflation during 1993 (April-May) declined to 6.9 per cent and averaged around 7 per cent during March-July 1993, there was subsequent rise in the inflation levels. While the trucker's strike in August-September disrupting the movement and supplies of raw materials and the speculative increase in the prices of rice and oilseeds following localised dry spells in some regions might have partly contributed to the acceleration in inflationary rate to 8 per cent in August and September 1993, the fact remains that factors such as increase in fiscal deficit, and also the excess liquidity that is being created in the economy as a result of the sharp rise in foreign exchange reserves, would call for very close watch on the domestic price front. The latest rate of inflation of 8.5 per cent is 1.5 per cent higher than in the first half of 1993.

1.9 On the basis of the economic and fiscal trends in the last two years, there is need for a concerted effort to accelerate the growth process of the economy in the coming years. First of all, the macro-economic stability of the economy has to be ensured to sustain higher rates of savings and investments. There is need for containment of fiscal deficit which would entail several changes in both expenditure and revenue policies. Control of major subsidies and effective prioritisation of discretionary expenditures is the key issue. Among the major issues and priorities identified by the Government

of India are: changes in legislative and administrative framework to facilitate restructuring of industry, elimination of rigidity in labour laws, attracting direct foreign investment, phasing out import licencing and high tariffs, shifting the composition of external finance from borrowing to direct equity investment, prudent management of external debt and foreign exchange reserves, reforms in pricing, cost recovery and institutional changes in infrastructure.

1.10 The measures outlined above would also help in redressing the imbalance between the external and internal profile of the economy. On the domestic front, it is necessary that a strict watch is kept on the price situation. The latest Union budget has given a number of fiscal concessions and brought about many structural reforms in direct and indirect tax which are expected to push up effective demand in the economy. Unless this is matched by the necessary stimulus on the supply side, it is bound to result in inflationary pressures. It may also be noted in this context that while the revenue deficit in the Union budget was Rs.18574 crores in 1992-93, it increased to Rs.34058 crores during 1993-94 (RE), against the earlier budget estimate of Rs.17630 crores for that year. It is also significant that for 1994-95, the revenue deficit is placed as high as Rs.32727 crores. Although the overall budgetary deficit for next year is projected at Rs.6000 crores only the fact remains that bringing down current account deficit with the support of capital receipts is a step fraught with inflationary consequences. Such a trend would need to be arrested to ensure growth with stability.

TABLE - 1.1

## Key Indicators

	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	
					(P)	(P)	(P)					(P)	(P)	(P)	
	Absolute Value							Percentage Change Over Previous year							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<b>Gross National Products @ (Rs. thousand crores)</b>															
At current prices	292.2	348.2	402.9	468.1	540.1	618.5+	--	13.2	19.2	15.7	18.2	15.4	14.1+	--	
At 1980-81 prices	168.1	185.3	198.1	207.5	208.7	217.0+	225.96	4.1	10.2	6.9	4.7	0.6	4.3+	3.85	
<b>Gross Domestic Product (Rs. thousand crores)</b>															
At current prices	294.9	352.7	408.7	475.6	551.6	627.9+	--	13.4	19.6	15.9	18.4	16.0	13.8+	--	
At (1980-81) Prices @	170.3	188.5	201.5	211.3	213.8	222.1+	230.48	10.7	10.9	6.9	4.9	1.1	4.0+	3.85	
<b>Index of Agricultural Production</b>	151.3	153.2	157.0	162.2	168.5	166.8	164.0*	-0.8	21.0	2.1	2.8	-1.9	3.9	-0.9*	
<b>Foodgrain production (Million tonnes)</b>	140.4	169.9	171.0	178.4	168.4	180.0	179.1*	-2.1	21.0	0.6	3.2	-4.5	6.9	-0.5*	
<b>Industrial Production (2)</b>	166.4	180.9	196.4	212.6	212.5	218.3	209.8(3)	7.3	8.7	8.6	8.3	--	1.8	1.8(3)	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Electricity Generated (TWH)	202.1	221.4	245.4	264.3	287.0	301.4	237.8(8)	7.7	9.5	10.8	7.8	8.5	5.0	7.4(9)
Wholesale price index (4)	148.5	158.9	171.1	191.8	217.8	223.1	251.1(5)	10.7	5.7	9.1	12.1	13.8	7.0	8.2(6)
Consumer Price index for industrial workers (8)	153.0	168.0	177.0	201.0	229.0	243.0	284.0(7)	10.9	8.5	6.6	12.8	13.9	6.1	8.6(7)
Money supply (M3) (Rs. thousand crore)	184.3	193.5	231.0	265.8	317.5	362.7	413.9(10)	16.0	17.8	19.4	15.1	19.4	14.2	14.1(11)
Import at current prices (Rs. crore)	22244	28235	35328	43131	47851	63375	51477(8)	10.7	26.9	25.1	22.3	10.8	32.4	8.48(9)
Export at current prices (Rs. crore)	15674	20232	27658	32553	44041	53688	49182(8)	25.9	29.1	26.7	17.7	25.3	21.9	31.8(8)
Foreign currency assets (Rs. crore)	7287	6905	5787	4388	14578	21040	34225 (9)	-4.7	-9.4	-12.4	-24.2	232.2	36.2	69.9(9)

\* Anticipated (P) Provisional (+) Quick Estimates (8) At Factor Cost  
 \$ Advance Estimates

1. Index of Agricultural Production with base triennium ending 1969-70 = 100

2. Index of Industrial Production 1980-81 = 100

5. As on January 29, 1994

8. April-December 1993

10. As on January 7, 1994

3. April-October 1993

6. Index with 1992 = 100

9. As on January 31, 1994 for 1993-94 and at the end of March for previous years

11. April 1, 1993 - January 7, 1994

4. Index with 19981-82 = 100

7. As on December 1993

Source : Economic Survey relevant years.

### Trends in Kerala Economy

1.11 The policy initiatives taken during the last couple of years, particularly with the launching of the Eighth Five Year Plan, appear to have succeeded in bringing about economic and structural reforms and the economy of the State, based on available indicators, stands poised for a faster rate of agricultural and industrial growth. The shift in emphasis in favour of the commodity producing sectors and infrastructural development has started yielding results, as reflected in the rate of growth achieved in these sectors, particularly, agriculture. Investments in Irrigation, Power, Industry and Agriculture which are crucial for increasing output and employment continue to get high priority in the development programmes of the State.

1.12 Even though the programmes enunciated in industrial policy statement of the Government have not been implemented to the desired extent, the response to the efforts made by the Government in this direction have been encouraging, as the prospects of tie up with agencies in and outside the country seem to be bright. This is particularly true in regard to infrastructure development for industrial investments for which negotiations with outside agencies are in an advanced stage. The problem of identifying a funding agency for setting up the much delayed Kayamkulam Thermal Power Plant seems to have been sorted out with the willingness shown by an NRI group to provide the necessary funds for this project. There is urgent need for accelerating the tempo of efforts initiated in these areas also so that the projectisation of the various development programmes take place immediately.

1.13 In the transport sector, steps initiated to improve the working of the KSRTC will have to be vigorously pursued to enable the organisation to function on

self supporting basis. The fact that roads and road transport have been overstretched, there is urgent need for reviving and developing the inland water transport. Various surveys and studies conducted in this regard have been under consideration, but a decision on them should be expedited. Development of Airports at Trivandrum, Kochi and Kozhikode (the latter two being funded through non-governmental sources) and equipping them with international standards will be high on the agenda with a view to attract tourists. The fact that this part of the country is strategically placed, the development of these airports, apart from providing accessibility to tourists from abroad, could provide refuelling facility to international flights overflying the country. This would also help in generating employment opportunities and a host of related economic activities.

1.14 As part of decentralised planning, the new concept of Self Reliant Villages introduced last year aimed at accelerating development in rural areas with people's participation, enabling formulation and implementation of specific action plans at the grass root level, has been a success. This should be continued with higher budgetary support next year. This together with the Untied funds to the Panchayats provide large scope for public participation in the development process at the grass root level. In the context of the new dimension given to decentralised planning with the 73rd amendment of the Constitution, the outlook for the future is one of new hopes and aspirations. Necessary support to the Local Government Institutions has to be given to enable them function as efficient and vibrant economic units. On their part the restructured local Government units - rural and urban - have to mobilise local resources, and enlist local participation in drawing up and implementing development programmes. The powers,

authority and responsibility of Local Governments have to be clearly spelt out in the interest of decentralised development, responsive administration and effective utilisation of local resources and manpower. This will help them to become effective units of Local Self Governments as envisaged in the Constitutional amendments.

1.15 After a continuing spell of many years of severe financial constraints, there are signs of the State finances looking up. A series of resource raising and economy measures introduced during the past two to three years have helped in improving the situation. For the first time after many years, indications are that the plan outlay for the current year is expected to be utilised in full. However, the trek is still long and arduous as the dimension of revenue deficit continues to be large inhibiting generation of budgetary savings. The revenue deficit as percentage of total revenue expenditure is likely to be 14.4 per cent in 1993-94 compared to 12.6 per cent in the RE for 1992-93. Until such time the revenue deficit is wiped out and budgetary savings are generated, fiscal constraints are bound to persist hampering speedy economic progress. The poor growth in the productive sectors of the economy in the past has created a vicious circle in the economy. As a result, the much acclaimed achievements in the field of education

and health, have started losing their quality and lustre, and the task to maintain even the minimum standards has become quite daunting. If such a slide back is to be prevented, necessary additional resources would have to be found through a rational pricing policy for such services. The Resources Commission has also recommended such a step.

1.16 The alarming unemployment problem faced by the State is a direct result of the type of priorities and strategies followed in the past. Vigorous efforts at attempting basic correctives have to continue, if the economy of the State is to be given the required thrust to accelerate growth and to gradually reduce the backlog of unemployment, besides substantially increasing the income per capita. Decisions on economic and financial sector reforms have to be expedited. Dynamic policies to sharply enhance investment in agriculture (in its widest sense), agro industries, industries and services (especially related to tourism) have to be adopted if the State is not to be bypassed even during the second phase of development in the country. The growth rate in State income achieved in the last two years has to be consolidated and pushed forward to keep pace with the average performance at the national level and then surpass it. Selected indicators of the State's economy are presented in Table 1.2.

TABLE - 1.2  
*Important Indicators of the State Economy*

Item	1970-71	1980-81	1985-86	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. State Income at current prices (Rs. crores)	1255	3823	6436	9182	10165	12195 (P)	13535 (P)	15082 (Q)	16945 (A)
2. State Income (1980-81) prices (Rs. crores)	1255**	3823	4042	4584	5468	5269 (P)	5608 (P)	6023 (Q)	6485 (A)
3. Per Capita Income (at current price) (Rs.)	594	1508	2395	3251	3730	4207 (P)	4607 (P)	5065 (Q)	5615 (A)
4. Output of important commodities :									
(a) Rice-lakh tonnes	12.98	12.72	11.73	10.13	11.41	10.87	10.60	10.85	---
(b) Coconut - Million nuts	3981	3008	3377	4215	4358	4232	4641	4931	---
(c) Arecanut - Million nuts	12738	10805	10664	11450	11964	13074	13116	13206	---
(d) Pepper - 1000 tonnes	25.03	28.52	33.12	43.24	54.14	46.80	50.31	48.86	---
(e) Rubber - 1000 tonnes	78.73	140.33	184.70	238.41	275.40	307.52	343.11	368.65	---
(f) Tea -do-	41.45	50.72	52.63	65.77	57.08	63.42	66.08	56.25	---
(g) Coffee -do-	12.57	36.48	23.55	47.43	23.80	35.70	20.04	25.00	---
5. Prices									
(a) Wholesale price index of Agrl. commodities (Base 1952-53=100)	222	551	688	957	906	1028	1263	1377	1561*
(b) Consumer price Index Number (Base 1970 = 100) @@	264	202	314	395	413	435	497	553	597
6. Plan Outlay (Rs. crores) (Accounts)	59.35	311.31	411.95	543.13	620.28	662.70	719.53	791 (A)	1003 (BE)

(P) Provisional (Q) Quick Estimate (A) Anticipated

(\*) Eleven months average for 1993.

(@@) Relates to calendar years from 1980 onwards and eleven months average for 1993.

(\*\*) As 1970-71 prices



### State Income

1.17 According to preliminary estimates, the anticipated State income of Kerala for 1993-94 at current prices is Rs.16,945 crores, registering an increase of 12.35 per cent over Rs.15,082 crores in 1992-93. At constant prices, the State income is estimated at Rs.6485 crores in 1993-94 representing an increase of 7.67 per cent over Rs.6023 crores in 1992-93. The percapita income at current prices is placed at Rs.5615 compared to Rs.5065 in 1992-93. At constant prices, the estimated per capita income of Rs.2149 during 1993-94 which represented an increase of 6.23 per cent over that in 1992-93.

1.18 The tertiary sector continues to dominate the sectoral contribution of State income followed by primary sector. Contribution of the primary sector at constant prices has increased from 36.69 per cent in 1991-92 to 37.82 per cent in 1992-93.

### Employment Situation

1.19 Unemployment situation in the State continues to present a grim picture. Unemployment in general and educated unemployment in particular, has been growing rapidly. At the end of October 1993, there were nearly 43 lakh job seekers on the live registers of the employment exchanges in the State.

1.20 As on 31-10-93, there were 26.29 lakh job seekers having qualifications SSLC and above. The total number of professional technical job seekers were 1,17,388.

1.21 Of the total employment of 11.86 lakhs in the organised sector as on 31st March 1993, 6.47 lakhs were in the public sector and 5.39 lakhs in the private sector.

### Price situation

1.22 The public distribution system in the State functioned effectively in holding the price line for many essential commodities. The wholesale price index for agricultural commodities in Kerala rose by 183.7 points, from 1377.1 in 1992 to 1560.8 in 1993. This represented an increase of 13.34 per cent compared to an increase of 9.03 per cent in the previous year. The consumer price index rose from 553 in 1992 to 597 in 1993, an increase of 7.96 per cent over the previous year.

### Agriculture

1.23 The year that has just passed was a good year for agriculture in the State. The favourable monsoons for the sixth year in succession together with the peak yield from the fairly large areas, that were converted into plantation and perennial crops during early eighties, in the last two to three years contributed for a spurt in income from Agriculture sector. However the production of food crops presented a mixed trend. While rice production recorded an

increase of 25000 tonnes, production of pulses and tapioca declined. Rice production increased from 10.60 lakh tonnes in 1991-92 to 10.85 lakh tonnes in 1992-93. For the first time the productivity of rice crossed the 2 tonne mark, the average productivity for the year being 2018 kgs during 1992-93. The coverage of high yielding variety (HYV) has been steadily increasing over the years. By the end of 1992-93 about 1/3 of the total area under rice was under high yielding variety. But the productivity of HYV has been far below the potential. According to available indications, rice cultivation is getting stabilised in irrigated areas as well as in areas having natural endowments. Therefore, to increase productivity and production, especially that of HYV, it is necessary to have clear perspective to improve the economics of paddy-based farming system through a judicious combination of technological improvements, like appropriate mechanisation, introduction of multi-resistant varieties and provision of adequate irrigation facilities.

1.24 Production of coconut has increased significantly during the last few years, from 3008 million nuts in 1980-81 to 4931 million nuts in 1992-93. This has largely been contributed by the higher levels of productivity of 5730 nuts per hectare. But the fall in prices of coconut during the last one year has had a dampening effect on the farming community. A reasonable level of support price and the required market intervention by the KERAFED is crucial to sustain the interest of the farmers.

1.25 Production of cashew, the most important export oriented crop, continued to decline. The production has declined from 1 lakh tonnes in 1991-92 to 90000 tonnes in 1992-93. Similarly, production of cardamom, tea and pepper declined by 29.73 per cent, 14.87 per cent and 2.88 per cent respectively. But production of other commercial crops such as turmeric, arecanut, banana and plantains, groundnut, coffee and rubber recorded positive growth.

### Livestock

1.26 Out of the 34.24 lakhs cattle population, 17.02 lakhs, constituting about 50 per cent, is crossbred, this is a record for the country. During 1992-93, 12.34 lakh artificial inseminations were conducted in the State. The new births during the year through artificial inseminations was 2.6 lakhs. Milk production increased from 17.85 lakh tonnes in 1991-92 to 18.89 lakh tonnes in 1992-93. The per capita availability of milk was 175 gms. in 1992-93 as compared to 167 gms. in 1991-92. Similarly egg production increased from 1605 million in 1991-92 to 1661 million in 1992-93. But this an area in which there is greater potential. The Kerala Co-operative Milk Marketing Federation is the agency for implementing the Operation Flood Programme in Kerala. 1640 Amul pattern of Co-operative Societies have been registered in the State. These Societies have made a major impact on the production, procurement and marketing of milk in the State.

## *Fisheries*

1.27 The total fish production of 6.03 lakh tonnes in 1992 was marginally less than the catch of 6.05 lakh tonnes in 1991. Out of the total catch in 1992, marine sector contributed 5.61 lakh tonnes, as against 5.64 lakh tonnes in 1991. Export of marine products in value terms declined to Rs.414.25 crores in 1992-93 from Rs.444.47 crores in 1991-92. The Integrated Fisheries Development Project with NCDC assistance could make a major impact on the fisheries activity in the State.

## *Irrigation*

1.28 Till the end of 1992-93, the total investment on major, medium and minor irrigation schemes, amounted to Rs.1300 crores. The total area brought under irrigation was 3.51 lakh ha. (net) or 5.87 lakh ha. (gross). Out of this, the share of major and medium irrigation was 1.96 lakh ha. (net) or 4.04 lakh ha. (gross). Of the total investment, the share of major and medium irrigation projects is Rs.932.76 crores.

1.29 Area brought under irrigation through minor irrigation schemes upto the end of 1992-93 was 1.55 lakh ha. (net) or 1.83 lakh ha. (gross), while the expenditure on minor irrigation schemes amounted to Rs.367.24 crores.

1.30 The command area development programme received momentum only after 1986 when the necessary Act was introduced. There are 14 completed projects under the command area development programme, with the cultivable commands of 180000 ha. under these projects. Even though a heavy rainfall area for increasing productivity in different agricultural crops, efficient and economic use of water is essential. Newer forms of irrigation have to be introduced and there should be continuous evaluation of different sources and methods of irrigation. This is an area in which a great deal need to be done immediately.

## *Energy*

1.31 The total investment on power development till the end of 1992-93 amounted to Rs.1632.73 crores. Largely due to favourable monsoons during 1992-93, generation of electricity, stood at 6193 MU during the year, as compared to 5326 MU during the previous year. The quantum of power imported declined from 1856 MU to 1232 MU during the same period. The installed capacity remained unchanged in 1992-93 at 1476.5 MW as in the previous year. No new project was completed during the year. The per capita consumption of power in the State stood at 198 KWH which was far below the national average of 380-KWH. During 1992-93, there was tremendous improvement in revenue collection. The total revenue realised in 1992-93 amounted to Rs.438.75 crores as compared to Rs.290.62 crores in 1991-92.

1.32 Speedy development of the power sector in the State is vital for its economic development. Every source has to be harnessed for this purpose and expeditious decisions have to be taken in regard to erection of power projects in the State. It will not be an exaggeration to say that delay in decision making in this sector will be the costliest delay for the State's economy.

## *Industry*

1.33 The year 1992-93 recorded several achievements in the industrial sector in Kerala most of which could be attributed to the vigorous measures undertaken by the agencies involved in the speedy industrialisation of the State in line with those contained in the new Industrial Policy Statement announced in September, 1991. Though it is rather premature to assess the impact of the policy on the industrial growth of the State, the achievements during 1992-93, would indicate that, if properly implemented, the measures spelt out in the industrial policy statement would help the State in scaling new height on the industrial front in a short span of time.

1.34 During this period, against a target of 10000 new units, 11411 small scale units were registered in the State, enhancing the total number of small scale units to 95851 by the end of March, 1993. As against this the total number of new units registered in the previous year was only 10918. Of the total number of units registered during 1992-93, 2669 units were those promoted by women entrepreneurs and 898 by SC/ST entrepreneurs. The State Government launched an Intensive Industrialisation Programme in February, 1993 with the overall objective of starting 25,000 small units over a period of two years. Following this about 12500 units have been newly registered till the end of December, 1993. The State Government have since revised the target to 30,000, considering the encouraging response from the prospective entrepreneurs. Similarly, 585 new joint stock companies have been registered in Kerala during 1992-93 increasing the total number of such companies to 5228 by the end of March, 1993. Total number of working factories has also increased from 13403 in December, 1991 to 13946 by the end of 1992. Number of workers engaged thereon has also increased from 3.92 lakhs to 4.06 lakhs in 1992.

1.35 Among the 38 State Public sector Undertakings reviewed, 18 were working on profit during 1992-93. Performance of some of the units during this period such as Kerala Minerals and Metals Limited, Malabar Cements Limited, Transformers and Electricals Kerala Limited and Sitaram Textiles Limited, in terms of production and sales turnover was praiseworthy. As regards the promotion of medium and large scale units in the State, 33 new projects involving a total investment of Rs.84.80 crores were completed and commissioned during 1992-93 with financial support from Kerala Industrial Development Corporation.

The total number of units promoted/assisted by the Corporation as on 31-3-1993 stood at 258. Out of these, 189 units have completed/commissioned 235 projects. Another 69 projects were under various stages of implementation. During 1992-93, the corporation has signed Memoranda of Understanding with private parties for establishing 54 new projects involving an estimated cost of Rs.983 crores. Nearly 70 companies have registered with the Technopark at Trivandrum for setting up industrial units at the Park.

1.36 A new Corporation viz. Kerala Industrial Infrastructure Development Corporation has been set up with statutory powers, for implementing projects for providing necessary infrastructure facilities required by new industries in the State. The Corporation has drawn up a number of projects for execution in association with large scale industrial houses. Steps have been taken to establish a Technology Bank in the State with the financial support of UNIDO and the Department of Science and Technology, Government of India. In the State sector, another corporation, 'Kerala Mineral Development Corporation' has been incorporated for the systematic exploitation of the mineral resources of the State on commercial basis.

1.37 Though the industries in the traditional sector were faced with the several problems such as scarcity of raw materials, shortage of working capital and hike in material cost, their performance in terms of production and sales during 1992-93 was encouraging when compared with those in 1991-92. The three point levy system adopted for the procurement of husk for producing coir products was discontinued and a new system for giving subsidy to the primary co-operative societies was introduced with a view to improving the availability of husk. Export of coir and coir products from Kerala has increased during the period under review. With consumer preference in developed countries and affluent sections in the country changing to natural products, away from artificial and synthetic products, there is large scope for the revival and expansion of coir products if only there could be adequate upgrading of technology production of blended products and marketing. Programmes similar to the one that is being done in the case of jute in eastern India seems to be called for in the case of coir products in Kerala. The major problem faced by cashew industry was non availability of adequate quantity of raw cashew resulting in low capacity utilisation and large scale underemployment. The monopoly procurement was discontinued during 1993. Export of cashew in 1992-93 went upto 53241 MT valued at Rs.745 crores compared to 47738 MT in 1991-92 valued at Rs.669 crores. Similarly import of raw cashew increased to 133293 MT valued at Rs.360 crores as against 106080 MT during 1991-92. Total production of handloom cloth in the co-operative sector also registered growth in 1992-93.

1.38 Under sericulture, priority has to be given to increase the productivity in the area already under mulberry cultivation instead of increasing the acreage.

1.39 The Central sector industrial investment in Kerala has increased to Rs.2000 crores by the end of march 1992 from Rs.1853 crores in March 1991. The percentage share of the State in the total Central investment in the country declined to 1.30 by the end of March, 1992 from 3.24 in March 1975. Several projects have been cleared by the Government of India during the year under review for implementation through the Central sector units working in Kerala. These projects are at various stages of implementation. The investments on these projects would result in substantial addition to the total central investment in the State.

#### *Transport*

1.40 Over the years Kerala developed good road and communication network. But in several parts the net work as well as the road width is not adequate. In several sections considerable improvement is required. Therefore in future a differential investment approach and innovative methods of financing heavier density of roads is necessary.

1.41 The total number of Motor Vehicles registered in the State stood at 7.81 lakhs at the end of 1992-93, as against 7.08 lakhs in the previous year.

1.42 During 1992-93 there were 16883 stage carriages in the State out of which 3456 were owned by KSRTC. Thus KSRTC serves only 21 per cent of the passenger service in the State. The KSRTC has been passing through very difficult times. Mounting accumulated losses, lack of adequate capital including working capital, overaged buses, high man-bus ratio, low productivity etc. have been some of the important factors adversely affecting the working of the corporation.

#### *Tourism*

1.43 The Tourism Department and the Kerala Tourism Development Corporation are the two official agencies engaged in the promotion of tourism in the State. Tourism Promotion Councils have been set up in almost all the Districts. The KTDC runs a chain of twelve hotels and nine other units such as motels and yatrivas. The foreign tourists arrival in the State stood at 92000 during 1993, as against 90624 in 1992. This represented an increase of only 1.5 per cent over the previous year, compared to 30 per cent increase in 1992 over 1991. It is seen that at the all India level the tourists arrivals in 1993 registered a decrease of 14 per cent over the previous year.

1.44 Improvement of infrastructure tourism and integrated development of different tourists centres is essential if the potential for tourism is to be exploited in full.

## Education

1.45 According to the 1991 census final figures, Kerala achieved a literacy rate of 89.81 per cent, as against 52.21 per cent for the country. The female literacy stood at 86.17 per cent as against the national level achievement of 39.29 per cent. The male literacy in the State was 93.62 per cent.

1.46 During the period under review there were 12182 schools in the State, comprising 6779 L.P.Schools, 2931 UP Schools and 2472 High Schools. Of the total number of schools 4488 were Government schools and 7330 private aided schools and 364 private unaided schools.

1.47 School enrolment in 1993 declined to 58.69 lakhs from 59.07 lakhs in the previous year. Out of the total student strength, girl students constituted 49.19 per cent.

1.48 As on 31-3-1993, the number of teachers stood at 1.90 lakhs, out of which 37 per cent were Government School teachers, 60 per cent private aided and 3 per cent private unaided. Vocational higher secondary education was imparted in 237 schools. The total intake in vocational courses stood at 13250 in 1992-93. Higher secondary course is offered in 86 schools. The intake in these schools was 8450 in 1993.

1.49 The rise in the number of uneconomic schools, schools with strength of less than 25 students per standard, is a phenomenon witnessed in the State in recent years. During 1993 there were 1165 uneconomic schools, out of which 448 were Government schools and 727 private schools. Yet another peculiar feature is the protected teachers whose number has marginally declined to 2011 in 1992 from 2051 in the previous year. At a time when the State Government is facing constraint in financial resources, there is hardly any justification for continuing these in the present form. Effective measures to close down these schools except in remote hilly and tribal areas and to absorb the protected teachers against retirement vacancies should be taken in a time bound manner.

1.50 As regards higher education, out of the 174 Arts and Science Colleges, 41 are Government Colleges and 133 private colleges. 45 Colleges were affiliated to Kerala University, 72 to Calicut University and 57 Colleges were under Mahatma Gandhi University. The student strength at the University level was 1.54 lakhs. The teaching faculty in Arts and Science Colleges had a total strength of 13541.

1.51 The technical education institutions in the State comprised of 9 Engineering Colleges (including two self financing colleges), 32 Polytechnics, one Technical Higher Secondary School and 47 technical high schools. The intake in Engineering Colleges at Degree level stood at 2879 in 1993, while 312 students were admitted to Post graduate courses. Similarly student strength in polytechnics was 13089, of which 3222 were girls.

1.52 The total anticipated expenditure on education during 1992-93 amounted to Rs.953.67 crores as against Rs.815.23 crores in 1991-92. Of this about 48 per cent was spent on primary education while about 31 per cent was on secondary education.

1.53 The most important problem that has arisen in the field of education in the State is the sharp increase in establishment expenditures, leaving very little allocation on items which are essential for ensuring quality. If the present trend continues for a few more years, all the efforts and sacrifices made to build up this service would become meaningless. Given the financial constraints of the State Government, finding larger resources would be rather difficult. To supplement its efforts, the emerging local government structure should be used to improve the facilities and the efficiency in the schools.

1.54 The State Government has to take an early decision regarding the intermediate stage between high school and college education. The current situation leads to considerable waste and there is inadequate focus on vocationalisation which alone can increase the prospects of employment.

## Health

1.55 Kerala has made notable achievements in health standards which are comparable to some of the most advanced countries in the World, as reflected in the achievements in respect of reduction in birth rates, death rates, and infant mortality rates. The decadal population growth rate during 1981-91 was 13.98 per cent compared to the national average of 23.5 per cent. The birth rate per thousand population in Kerala is 18.1 while the all India rate is 30.5, the death rate per thousand population in Kerala is 6 as against 10.2 at all India level. Infant mortality rate in Kerala has come down to 16 per thousand live births, whereas the all India rate is as high as 91.

1.56 The State's health care infrastructure comprises of 141 hospitals, 918 Primary Health Centres, 54

community health centres, 54 dispensaries, 22 T.B.clinics, 14 leprosy control units and one leprosy sanatorium. The total bed strength stood at 41018 in 1993. In addition there are private hospitals, clinics etc. According to provisional data, the number of hospital beds per lakh of population was 137 in 1993.

1.57 Medical education and training is offered through 5 Medical Colleges, 2 Dental Colleges and 3 Nursing Colleges. All the Medical Colleges put together have a bed strength of 7017.

1.58 During the reference period there were 107 Ayurveda hospitals with 2259 beds, 566 dispensaries and 173 grant-in-aid Vaidyasalas. During 1992-93, 17 dispensaries were started. There are three Government Ayurveda Colleges, and two private Ayurveda Colleges in the State.

1.59 As on 31-3-1993, there were 31 homoeopathic hospitals with 950 beds and 360 dispensaries. There are 5 homoeopathic medical colleges, of which two are in the Government sector and three owned by private sector.

1.60 The Family Welfare Programme in the State is implemented through a network of 918 Primary Health Centres and 5094 sub Centres. The achievements of the State Government in this regard is highly impressive. The couple protection rate in the State had reached 60 as against 48.2 at the all India level.

1.61 The anticipated expenditure on Health stood at Rs.238.57 crores in 1992-93 as against Rs.192.31 crores in 1991-92. The percapita expenditure on health amounted to Rs.96 in 1992-93.

1.62 Just as in the case of education, the quality of health services in the State is fast going down as the Government is unable to allocate adequate funds for this purpose when a lion's share has to be spent on salary and other establishment expenses. As suggested by the Resources Commission a rational pricing policy has to be adopted and also that the Primary Health Centres should have the essential medicines and other facilities required for treating ordinary ailments. The local bodies should be able to do all that is necessary to ensure the supply of these.

1.63 Each Medical College and attached hospitals should be made into separate financial unit with sufficient autonomy so that each one of them can grow and is equipped with modern facilities to provide specialised treatment.

1.64 The various Governmental agencies involved in housing activity in Kerala constructed/assisted 7.04 lakh housing units upto the end of 1992-93. The major agencies engaged in implementing housing programmes are Kerala State Housing Board, Revenue Board, Kerala State Co-operative Housing Federation, Rural Development and Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes. The main thrust of the Government's housing programme is directed towards the benefit of economically weaker sections. According to 1991 census there were 55.13 lakh households and 54.59 lakh houses in the State. The projected demand for housing during 1993-2000, based on the present trend in population growth, is 12.7 lakh dwelling units. It is estimated that about 60000 to 70000 houses are being constructed every year in the private sector.

1.65 Housing Board is the major public agency implementing housing programmes in the State, the important programmes being public housing scheme and cash loan scheme. During 1992-93 the Housing Board and the Kerala State Co-operative Housing Federation together have raised capital of about Rs.55 crores towards the housing programmes of the two agencies.

1.66 During 1992-93 the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes assisted construction of 1060 houses. Similarly the Scheduled Castes Development Department and Scheduled Tribe Development Department provided assistance for 1135 and 626 housing units respectively in 1992-93.

### *Water Supply*

1.67 According to latest estimates, about 71 per cent of the urban population and 43 per cent of the rural population could be provided with protected water supply. In the three Cities the coverage is nearly 90 per cent. As on 31-3-93, 2.26 lakh houses were connected with piped water supply which accounted for 4.18 per cent of the households in Kerala. Out of the 1720 ongoing rural water supply schemes, 128 schemes were completed during 1992-93. There are 1196 problem villages in the State, of which 70 villages are fully covered and 1126 partially covered.

### *Institutional Finance*

1.68 Kerala's share in the financial assistance extended by all India Financial institutions continues to



show declining trends. As the end of 1992-93, the share was 2.2 per cent the lowest among the major States, compared to 8.5 per cent for Tamil Nadu and Andhra Pradesh, and 6.1 per cent for Karnataka. Concerted efforts need to be made to ensure much larger flow of credit from institutional agencies in order not to fall behind the growth and employment targets set for the Eighth Five Year Plan of the State.

1.69 There has been phenomenal increase in the deposits mobilised by banks in Kerala. The total bank deposit has increased to Rs.13314 crores upto September 1993 from Rs.10646 crores in September 1992, an increase of 25 per cent during the period. As at the end of September 1993, the NRE deposits stood at Rs.5138 crores. This constituted over 14 per cent of the total all India NRE deposits on that date. However a matter of serious concern is the steady decline in the Credit Deposit (CD) ratio of the commercial banks in the State. The CD ratio has declined

to an all time low of 44.13 per cent in September 1993. To study this problem, the Reserve Bank of India has constituted a special task force which is expected to submit its report shortly.

#### *Plan Outlay*

1.70 The plan outlay provided in the budget for the State's Annual Plan 1993-94 amounts to Rs.1003 crores. This outlay is expected to be utilised in full despite financial constraints.

1.71 For the Annual Plan 1994-95 an outlay of Rs.1260 crores has been approved by the Planning Commission. This represents an increase of 25.6 per cent over the current year's outlay. The main thrust in the Plan is development of commodity producing sectors like agriculture and industry, physical infrastructure such as irrigation and power. Priority has been given for poverty alleviation and employment generation programmes.

## INCOME AND EMPLOYMENT

*National Income*

The gross domestic product (GDP) at factor cost at constant (1980-81) prices in 1992-93 is estimated at Rs.2,22,089 crores as against Rs.2,13,590 crores in 1991-92, registering a growth of 4.0 per cent during the year as against the growth rate of 1.1 per cent during the previous year. At current prices the GDP in 1992-93 is estimated at Rs.6,27,913 crores as compared to Rs.5,51,552 crores in 1991-92, showing an increase of 13.8 per cent during the year.

2.2 At constant (1980-81) prices the national income (net national product at factor cost) in 1992-93 is estimated at Rs.1,93,222 crores as against Rs.1,85,503 crores in 1991-92, registering an increase of 4.2 per cent during the year as against a marginal decline of 0.1 per cent in 1991-92. The anticipated growth rate of the national income for 1993-94 is 3.8 per cent. At current prices, the national income in 1992-93 stood at Rs.5,44,935 crores as compared to Rs.4,77,868 crores in 1991-92 showing a rise of 14.0 per cent during the year.

2.3 The relatively high growth rate of GDP during 1992-93 (4%) compared to the meagre growth rate observed in 1991-92 (1.1%) has been mainly due to the substantial expansion in agricultural production and improvement in sectors of trade, hotels and restaurants, transport other than railways, communication, finance, real estate, community and social services.

2.4 The per capita income in real terms is estimated at Rs.2,216 for 1992-93 as against Rs.2,167 for 1991-92, registering an increase of 2.3 per cent. The per capita income at current prices is estimated at Rs.6,249 in 1992-93 as against Rs.5,583 for 1991-92. (See Table 2.1)

*State Income*

2.5 The State Income of Kerala at constant prices during 1992-93 is estimated at Rs.6,023 crores as against Rs.5,608 in 1991-92 registering a growth rate of 7.4 per cent. The state income at current prices has risen from Rs.13,535 crores in 1991-92 to Rs.15,082 in 1992-93, the growth rate being 11.4 per cent.

2.6 The state income in real terms is anticipated to grow by 7.7 per cent to reach Rs. 6,485 in 1993-94 sustaining the high growth rate recorded during 1992-93. At current prices the anticipated state income for 1993-94 is estimated at Rs.16,945 crores, registering 12.4 per cent increase.

2.7 The state per capita income at constant prices has gone up by 6.0 per cent from Rs. 1,909 in 1991-92 to Rs. 2,023 in 1992-93 and is expected to reach Rs.2,149 in 1993-94, indicating a growth rate of 6.2 per cent. At current prices the state per capita income has increased by 9.9 per cent from Rs. 4,607 in 1991-92 to Rs. 5,065 in 1992-93. It is anticipated to reach Rs. 5,615 in 1993-94, indicating a growth rate of 10.9 per cent.

2.8 On the whole, the state is expected to do very well on the economic front during the year under review. The high growth rate of the per capita income at 6.2 per cent forecasted for the state for the current year may be viewed in the context of a low rate of growth of 1.9 per cent projected for the national per capita income for the same period. Although the per capita income of the state continues to be lower than the national per capita income, the gap between the two has been steadily declining in recent years. At constant prices the difference in 1992-93 stood at Rs.193 as against Rs.258 in 1991-92 and Rs.381 in 1990-91. The total per capita income of India and Kerala are given in Table 2.1.





### Regional Distribution of Income

2.10 The regional distribution of state income at current and constant prices for 1980-81 and 1990-91 to 1992-93 is given in Appendix 2.4 and Appendix 2.5.

2.11 Among the districts Ernakulam has the highest per capita income in 1992-93 in the state followed by

Idukki, Pathanamthitta, Wayanad, Kottayam and Alappuzha. Malappuram district has the lowest per capita income followed by Palakkad, Kasargode and Kannur. The details of the relative performance of the districts in terms of per capita income at current and constant prices for 1980-81, 1990-91, 1991-92 and 1992-93 are given in Table 2.3.

TABLE - 2.3

*District-wise Per Capita Income at Current and Constant Prices  
1980-81 and 1992-93*

Sl. No.	District	(Rupees)							
		Constant Prices				Current Prices			
		1980-81	1990-91	1991-92	1992-93	1980-81	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Ernakulam	2017 (1)	2536 (1)	2663 (1)	2819 (1)	2017 (1)	5984 (1)	6605 (1)	7309 (1)
2.	Idukki	1995 (2)	2376 (2)	2489 (2)	2636 (2)	1995 (2)	5368 (2)	5785 (2)	6321 (2)
3.	Pathanamthitta	-	2108 (3)	2213 (3)	2348 (3)	-	4720 (3)	5133 (3)	5620 (3)
4.	Wayanad	-	2100 (4)	2200 (4)	2336 (4)	-	4551 (4)	4854 (5)	5263 (4)
5.	Kottayam	1452 (8)	1916 (5)	2018 (5)	2146 (5)	1452 (8)	4264 (8)	4652 (8)	5102 (5)
6.	Alappuzha	1311 (9)	1879 (6)	1976 (6)	2097 (6)	1311 (9)	4427 (5)	4863 (4)	5362 (9)
7.	Thiruvananthapuram	1484 (6)	1868 (7)	1964 (7)	2080 (7)	1484 (6)	4285 (7)	4723 (6)	5173 (4)
8.	Kollam	1536 (5)	1846 (8)	1949 (8)	2080 (8)	1536 (5)	4303 (6)	3913 (13)	5201 (7)
9.	Thrissur	1462 (7)	1821 (9)	1912 (9)	2022 (9)	1462 (7)	4242 (9)	4657 (7)	5130 (6)
10.	Kozhikode	1588 (3)	1724 (10)	1799 (10)	1892 (10)	1588 (3)	4082 (10)	4485 (9)	4937 (8)
11.	Kannur	1571 (4)	1642 (11)	1725 (11)	1828 (11)	1571 (4)	3815 (11)	4194 (10)	4620 (10)
12.	Kasargode	-	1585 (13)	1661 (12)	1756 (12)	-	3723 (12)	4043 (11)	4436 (12)
13.	Palakkad	1307 (10)	1590 (12)	1661 (13)	1750 (13)	1307 (10)	3600 (13)	3914 (12)	4278 (13)
14.	Malappuram	1045 (11)	1091 (14)	1151 (14)	1228 (14)	1045 (11)	2584 (14)	2824 (14)	3107 (14)
	State	1508	1818	1909	2023	1508	4207	4607	5065

### Regional variation in Sectoral Growth Rates

2.12 District-wise growth rates of sectoral and total income at constant prices during 1992-93 is given in Table 2.4. Kollam district registered the highest growth rate of income (8.11%) during 1992-93 followed by Malappuram (8.09%), Kottayam (7.78%), Alappuzha (7.58%), Wayanad (7.57%) and Pathanamthitta (7.48%). The lowest growth rate was observed in Kozhikode

(6.56%) followed by Palakkad (6.85%), Thrissur (7.23%) and Ernakulam (7.25%).

2.13 As regards sectoral growth rates of income, the primary sector shows only marginal variation across the districts. However, there is marked variation in the growth of secondary and tertiary sectors among the districts.

TABLE 2.4  
Growth Rate of District Income  
During 1992-93 at 1980-81 Prices

(Per cent)					
Sl.No.	District	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)
1.	Kollam	11.61	0.81	8.29	8.11
2.	Malappuram	10.53	2.63	7.06	8.09
3.	Kottayam	10.10	0.02	7.93	7.78
4.	Alappuzha	12.33	0.13	7.63	7.58
5.	Wayanad	9.66	0.80	7.67	7.57
6.	Pathanamthitta	9.60	0.51	8.81	7.48
7.	Idukki	9.58	2.84	7.51	7.38
8.	Thiruvananthapuram	10.46	0.60	8.72	7.37
9.	Kannur	10.67	1.05	7.82	7.34
10.	Kasaragod	11.26	0.97	4.87	7.27
11.	Ernakulam	11.67	1.80	8.82	7.25
12.	Thrissur	10.44	1.48	7.90	7.23
13.	Palakkad	9.97	0.01	7.47	6.85
14.	Kozhikode	11.22	0.86	7.11	6.56
State		10.72	1.08	7.93	7.39

### Unemployment

2.14 Despite concerted efforts to promote more employment opportunities, Kerala continues to face severe unemployment. The chronic unemployment, particularly among the educated manpower, has been rapidly growing in the state. According to the live register figures of employment exchanges there were 19 lakh job seekers in 1981. It rose to nearly 43 lakhs by the end of October 1993. (See Appendix 2.6). However, this may be treated only as an indicator rather than the precise estimate of the level of unemployment. This is due to the fact that many of the registrants already employed or occupied otherwise get themselves registered with the employment exchanges for better job prospects. The District-wise distribution of job seekers as on 31-10-1993 is given in Table 2.5.

TABLE 2.5

### District-wise distribution of Total Work Seekers - 1993

Sl.No.	Districts	No.
(1)	(2)	(3)
1.	Thiruvananthapuram	8166450
2.	Kollam	423964
3.	Alappuzha	354696
4.	Pathanamthitta	145930
5.	Kottayam	334888

(1)	(2)	(3)
6.	Idukki	132306
7.	Ernakulam	469736
8.	Thrissur	338904
9.	Palakkad	269800
10.	Malappuram	210425
11.	Kozhikode	384338
12.	Wayanad	71428
13.	Kannur	243319
14.	Kasaragod	81671
Total		4278055

Note : As on 31-10-1993

Source : Directorate of Employment & Training

### Distribution of Work Seekers by Educational Levels

2.15 The proportion of educated work seekers (S.S.L.C and above) is steadily on the increase over the years. From 50 per cent in 1983 it has gone up to 61 per cent in 1993. This increase is attributed to the rapid growth in the levels of education in the state. There were 26.29 lakh work seekers having S.S.L.C and higher qualification at the end of October 1993. This consisted of 21.11 lakh matriculates, 3.08 lakhs PDC holders, 1.76 lakh graduates and 33,215 post graduates. The distribution of work seekers by educational level in Kerala is given in Appendix 2.6.

2.16 The number of technical and professional work seekers has also been growing over the years. There were 1,17,388 technical and professional work seekers as on 31-10-1993. The details are given in Appendix 2.7.

### Employment in the Organised Sector

2.17 Employment trends in the public and private organised sector in the State are given in Appendix 2.8. Employment in the organised sector remained almost stagnant in the early eighties. However, there has been a marginal increase in recent years. Employment in the organised sector in the state is 11.85 lakhs as on March 1993 consisting of 6.47 lakhs in the public sector and 5.39 lakhs in the private sector. The share of the public sector in the organised sector employment has gone up from 41.7 per cent in 1970 to 48.5 per cent in 1980 and further to 54.5 per cent in 1992.

### Placement through Employment Exchanges

2.18 The placement through employment exchanges to be insignificant compared to the total number of registered job seekers. Of the total of 42.78 lakh job seekers in the state, placement was provided to 16,748

persons during 1992-93 as against 15,640 persons in 1991-92.

2.19 During 1992, on an average, about 404 employers per month have made use of the services of employment exchanges as against 392 employers per month during the previous year as can be seen from Table 2.6.

TABLE - 2.6

*Placements through Employment Exchanges*

Year	No. of Placements	Monthly average no. of employers using the employment exchange
(1)	(2)	(3)
1985-86	13700	403
1986-87	15571	454
1987-88	13869	492
1988-89	15504	473
1989-90	17514	441
1990-91	14280	540
1991-92	15640	392
1992-93*	16748	404

\* As on December, 1993

*Placement through ODEPC*

2.20 Overseas Development and Employment Promotion Consultants Ltd., (ODEPC) is a government agency to provide placements to persons seeking employment abroad. During 1992-93 this agency helped in securing jobs to 114 persons out of 7896 total registrants. Of the 114 persons, 106 were helped to secure jobs in Saudi Arabia and the remaining in Kuwait, UAE, Bahrain and Cyprus. In 1991-92, the agency could secure jobs to 336 persons. The country-wise deployment is furnished in Appendix - 2.9.

*Self Employment Assistance Scheme*

2.21 So far 3,01,507 applications were received under this scheme. Out of these, 61,812 applications were pending disposal at various levels. Till the end of March 1993, 1,27,470 persons were benefited by the scheme. While 27,763 persons got loans from banks, 99,707 persons availed of lumpsum assistance of Rs.600/-. The banks have advanced a sum of Rs.9.04 crores and a sum of Rs.7.65 crores was paid as seed money/lumpsum assistance up to March 1993.

2.22 The Scheme of providing assistance for self-employment seems to have lost its vigour in recent years. While an amount of Rs.79.48 lakhs was disbursed in 1988-89 benefiting nearly 1.3 lakhs persons, it was progressively reduced to Rs.15.92 lakhs in 1991-92 benefiting 2,653 persons only. In 1993-94 (as on 31-12-1993) only 100 persons were given lumpsum assistance of Rs.600 each. The year-wise details of beneficiaries and amount disbursed under this scheme are given in Table 2.6

TABLE - 2.6

*Self Employment Assistance Scheme*

Year	Application received	No. of benefici-	Amount disbursed (Rs. lakhs)
(1)	(2)	(3)	(4)
1987-88	18241	1042	6.25
1988-89	13556	13248	79.48
1989-90	10042	4965	29.79
1990-91	10127	4665	27.99
1991-92	10279	2653	15.92
1992-93	—	—	—
1993-94*	6382	100	0.60

\* as on 31-12-1993

Source : Directorate of Employment and Training, Thiruvananthapuram.

*Unemployment Assistance Scheme*

2.23 From 1982 to 1993 about 10.5 lakh applications were received at the employment exchanges under this scheme. Out of this, 8.5 lakh applications were disposed off and 2 lakh applications are pending for disposal at various levels. Number of beneficiaries as on 31-8-1993 is 4.25 lakhs. Under this scheme 2.84 lakh persons were benefited in 1993-94 (as on 31-12-1993). An amount of Rs.13.04 crores was disbursed during the year. Year-wise details of the scheme are given in Appendix 2.10.

*Birth Rate, Death Rate and Infant Mortality Rate*

2.24 The district-wise area and population density and the rural-urban distribution of population according to the 1991 census are given in Appendix 2.11 and Appendix 2.12 respectively.

2.25 During 1992 the estimated birth and death rates per 1000 population for the state were 17.5 and 6.3

respectively. The corresponding estimates for the country were 29 and 10. These figures substantiate the spectacular achievements of the state in controlling the birth and death rates. The low infant mortality rate of 17 in the state as against 79 for the country in 1992 also reveals the commendable progress made by the state in health and family welfare.

2.26 Appendix 2.13 gives the trends in birth and death rates and Appendix 2.14 gives the infant mortality rates for the state and the country for the period 1981 to 1992.

2.27 The unique status of the state in the demographic transition (which also favourably compares with that of some of the developed regions in the world) in comparison to the rest of the country is brought out in Appendix 2.15.

TABLE - 2.7  
*Birth, Death and Infant Mortality Rates  
Kerala and India (1992)*

(Per mille)

Region	Kerala			India		
	CBR	CDR	IMR	CBR	CDR	IMR
Rural	17.4	6.2	17	30.7	10.8	85
Urban	18.3	6.5	13	23.1	7.1	53
Combined	17.5	6.3	17	29.0	10.0	79

Note : *Provisional*

CBR : *Crude Birth Rate*

CDR : *Crude Death Rate*

IMR : *Infant Mortality Rate*

Source : *Sample Registration Bulletin, January 1994.  
Vol. XXVIII, No.1*

*Office of the Registrar General of India, New Delhi.*

CHAPTER 3

PRICES COST OF LIVING AND WAGES

*Wholesales Prices*

The wholesale price index for agricultural commodities in Kerala (base 1952-53 = 100) during 1993 rose from 1377.1 in 1992 to 1560.8 in 1993, an increase of 13.34 per cent compared to 9.03 per cent in the previous year (Details in Table 3.1). While prices of food crops increased by 33.86%, the prices of non-food crops went down by 3.68% during the year under review as against 5.07% increase in the case of food crops and 12.53% increase in respect of non-food crops in the previous year. It is disturbing to note that price of rice, Molasses, fruits and vegetables went up sharply in 1993 as against modest increases in the previous year. On the basis of available price index, prices of fruits and vegetables went up by nearly 55 per cent during 1993 over the previous years level. Price of molasses stood at 1785.7 in 1993 compared to 1161.0 a year before. Another notable factor during the year under review was the

increase in the price of rice.. While the index for rice remained constant in 1991 and 1992, there was a steep rise in 1993 from 638.1 to 835.5 showing 31% increase. Among the non-food crops, while the price of oilseeds declined by about 6%, that of plantation crops increased by 9.67% during 1993.

3.2 The month-wise wholesale price index for agricultural commodities is given in Appendix 3.1. The index which stood at 638.1 in January 1993, suddenly went up to 855.2 in February, but there after it remained constant throughout the year. The price of molasses reflected a steady increase throughout the year reaching a peak of 2283.7 in November 1993 as against 1376.1 in January 1993. The index of condiments and spices reached a peak in June 1993 at 2643.4 and then continued to decline in the following months. It is refreshing to note that the index for oilseeds showed a steady decline from February 1993 onwards from 2765 to 2124.8 in November 1993.

TABLE - 3.1

*Wholesale Price Index of Agricultural Commodities 1993*

(Base - 1992-93 = 100)

Crops	Weight	Wholesale Price Index			% change over previous year	
		1991	1992	1993*	1992	1993
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. Food Crops</b>	63.5	936.1	983.6	1316.6	5.07	33.86
Rice	40.4	638.1	638.1	835.5	Nil	30.94
Condiments and spices	10.4	1542.4	1688.4	1939.7	9.47	14.88
Fruits and vegetables	10.7	1449.3	1570.5	2437.4	8.36	55.20
Molasses	2.0	1061.2	1161.0	1785.7	9.40	53.81
<b>B. Non-food crops</b>	36.5	1832.0	2061.6	1985.7	12.53	- 3.68
Oil seeds	25.5	2240.1	2543.3	2395.0	13.54	- 5.83
Plantation crops	11.0	888.1	948.1	1039.8	6.76	9.67
<b>C. All Crops</b>	100.0	1263.1	1377.1	1560.8	9.03	13.34

Source : Department of Economics and Statistics

\* Average of eleven months.

### Retail Price

3.3 The retail prices of 22 essential commodities as at the end of 1991, 1992 and 1993 are given in Table 3.2. Price of essential commodities like Potato, Onion, Sugar and Redgram showed sharp increases. Potato Price went up from Rs.4.55 Kg. in 1992 to Rs.7.96 in 1993, that of onion from Rs.6.99 to Rs.8.25, sugar from Rs.0.66 to Rs.13.09 a kg in 1993. Rice price increased by 10% during 1992 but went down by 1.04% at the end of 1993. Likewise price of edible oils, chilly and coconut continued to decrease during 1993. Price of dry chillies went down sharply by about 47% in 1993 over that in 1992. While on the one hand the price of essential commodities was increasing, it was a matter of serious concern that prices of coconut per 100 No. and coconut oil were declining. Price of coconut went down from Rs.478.49 in 1992 to Rs.351.79 in 1993. Month-wise retail prices of essential commodities are given in Appendix 3.2.

### Consumer Price Index

3.4 The consumer price index (cost of living index) numbers for industrial workers in selected Centres witnessed a modest increase of less than 9% compared to 12% increase in the previous year. The percentage variation in State average in 1993 was 7.96% as compared to 11.27% during the previous year. (See Table 3.3). This shows that the rate of inflation in 1993 was less than that in 1992. The monthly average consumer price index for 15 selected centres is given in Appendix 3.3.

### Parity Index

3.5 The price parity index in 1993, between price received and price paid by farmers for the last 8 years is given in Table 3.4. During the year under review price received by farmers declined by 2 points 8 in 1992 over that in 1991, and further by seven points during 1993. Thus the index number of parity between prices received and prices paid by farmers continued to be relatively less favourable to farmers.

TABLE - 3.2

#### Average Retail Prices of Essential Commodities

		(Rupees)				
Commodities	Unit	Price as at the end of December			% of variation	
		1991	1992	1993	1992 over 1991	1993 over 1992
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Rice	Kg.	6.99	7.69	7.61	10.01	(-) 1.04
2. Green Gram	"	11.99	14.20	15.52	18.43	9.30
3. Blackgram	"	13.85	13.89	13.95	0.29	0.43
4. Redgram	"	9.34	10.25	14.06	9.74	37.17
5. Dhall	"	20.28	19.53	20.96	(-) 3.70	7.32
6. Coconut Oil	"	56.04	51.94	37.02	(-) 7.32	(-) 28.73
7. Groundnut oil	"	44.46	40.61	39.45	(-) 8.66	(-) 2.86
8. Refined oil	"	65.18	62.27	58.75	(-) 3.46	(-) 5.65
9. Tapioca	"	2.16	2.71	2.81	25.46	3.69
10. Banana (Green)	"	6.64	6.90	7.24	3.92	4.93
11. Milk (Cow)	Litre	6.75	7.68	7.82	13.78	1.82
12. Egg (hen)	Dozen	10.57	13.02	13.93	23.18	6.99
13. Potato	Kg	5.79	4.55	7.96	(-) 21.42	74.95
14. Corriander	"	17.61	18.39	19.39	4.43	5.44
15. Chillies (dry)	"	54.14	45.48	24.14	(-) 16.00	(-) 46.92
16. Onion	"	4.26	6.99	8.25	64.08	18.03
17. Sugar	"	8.46	9.66	13.09	14.18	35.51
18. Coconut (without husk)	100	472.14	478.49	351.79	1.34	(-) 26.48
19. Firewood (Local Split)	Quintal	72.50	84.29	84.38	16.26	0.11
20. Washing soap (Sunlight)	Each	4.48	5.00	5.30	11.61	6.00
21. Electric Bulb	"	8.21	8.95	9.52	9.01	6.37
22. Baby Food	Kg.	74.08	81.50	82.00	10.02	0.61

Source : Department of Economics & Statistics.

TABLE - 3.3

*Annual Average Consumer Price Index Numbers in Selected Centres of Kerala*

(Base 1970 = 100)

Centres	Annual Average		Index Numbers	% Variation	
	1991	1992	1993 *	1992 over 1991	1993 over 1992
1. Thiruvananthapuram	498	552	594	10.84	7.61
2. Kollam	515	571	613	10.87	7.36
3. Punalur	488	544	585	11.48	7.54
4. Alappuzha	493	552	597	11.97	8.15
5. Kottayam	500	555	597	11.00	7.57
6. Mundakayam	497	552	598	11.07	8.33
7. Munnar	487	541	588	11.09	8.69
8. Ernakulam	481	540	586	12.27	8.52
9. Chalakudy	499	559	606	12.02	8.41
10. Thirssur	482	539	585	11.83	8.53
11. Palakkad	486	543	589	11.73	8.47
12. Malappuram	516	572	615	10.85	7.52
13. Kozhikode	501	553	595	10.38	7.59
14. Meppady	513	565	609	10.14	7.79
15. Kannur	499	554	600	11.02	8.30
State Average	497	553	597	11.27	7.96

Source : Department of Economics &amp; Statistics

\* : 11 months average

TABLE - 3.4

*Index Number of Prices Received and Prices paid by the Farmers*

(Base 1952-53 = 100)

Year	Price received by farmers	Farm cultivation cost	Domestic expenditure	Price paid by farmers	Party as 2 to 5
(1)	(2)	(3)	(4)	(5)	(6)
1986	921	1299	745	984	93
1987	1063	1413	804	1066	100
1988	1044	1520	860	1143	91
1989	1017	1604	897	1200	85
1990	1072	1728	945	1277	84
1991	1315	1910	1078	1435	92
1992	1486	225 <sup>c</sup>	1202	1646	90
1993 x	1505	254	1291	1812	83

Source : Department of Economics and Statistics.

(x - Average upto 9/93)

### Farm Commodity Prices

3.6 The average farm commodity prices in general showed an increasing trend in 1992-93. Excepting pepper and cashewnut, all other important commodities like Paddy, Tapioca, Ginger, Arecanut and Banana recorded increasing trends. The highest increase was in Tapioca (27.43%) followed by banana (16.24%), Ginger (13.77%) and paddy (12.28%). The fall in prices of pepper and Cashew was to the tune of -11.21% and -6.30% respectively.

3.7 The drastic and continued fall in prices of pepper from around Rs.39/Kg in 1988-89 to Rs.25.90/Kg in 1992-93 prompted the Government to declare a support price of Rs.33/Kg for pepper and under the market intervention operation that followed 2976 tonnes of pepper was procured by the Market Fed during the period from 6-5-1993 to 30-6-1993. The fall in price of pepper was mainly due to the fall in export front consequent to the disintegration of USSR which was a major buyer of Indian pepper. The timely measures taken by Government of India including the market intervention programme and provision of technical credit to Russia for import helped to avert further fall in prices. The prices started picking up and the present indications are that the country will be regaining the lost grounds in the international market soon.

3.8 Even though the State is deficient in paddy production, prices tend to fall during harvest seasons in major paddy producing centres like Kuttanad & Palakkad

due to poor market arrangements. During 1992-93 the PACS operating in such areas were motivated to organise procurement of paddy by offering an incentive of Rs.30/quintal. A quantity of 10556 tonnes of paddy was thus procured and marketed. The scheme also provides an additional amount of Rs.5/quintal as incentive if the paddy is processed into rice and sold by the agency. The scheme which was in operation in Alappuzha and Thrissur districts during 1992-93 has been extended to Palakkad in 1993-94 with a target for procurement of 5000 tonnes in Viruppu and 5000 tonnes in the Mundakan season.

3.9 In the case of coconut, the prices ranged at a fairly high level of more than Rs.4 per nut throughout 1992-93. Although Government had announced a support price of Rs.2150 per quintal of copra, as the market price ruled much above this level, market intervention of any sort was not required. But during 1993, coconut price remained much lower than that in 1992, which cause a dampening effect on the producers. Efforts are on to fix a reasonable support price for coconut. In the plantation sector, the average wholesale price of rubber rose to Rs.2381/quintal. Based on the cost of cultivation of rubber in 1991, benchmark price of rubber was fixed by Government of India as Rs.23.45/Kg for RMA-4 and Rs.22.95/Kg for RMA-5.

3.10 The monopoly procurement operations of cashew was discontinued in 1992-93. Trend of prices of important commodities are given in table 3.5.

TABLE - 3.5

#### Average Farm Prices of Principal Crops

Commodity	Unit	1988-89	1989-90	1990-91	1991-92	1992-93	Change over previous year	% change
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Paddy	Rs/Qtl.	295.07	290.47	299.61	374.77	420.80	46.03	12.28
Tapioca	"	99.37	138.67	150.68	158.16	201.55	43.39	27.43
Coconut	Rs/100 Nos.	262.59	203.81	301.23	393.31	420.14	26.83	6.82
Pepper	Rs/Qtl.	3927.39	3415.06	3212.75	2918.06	2590.85	- 327.21	- 11.21
Ginger	Rs/Qtl.	1569.74	2201.03	2528.02	2143.71	2438.92	295.21	13.77
Cashewnut	"	1154.73	1177.51	1379.90	2093.44	1961.51	- 131.93	- 6.30
Sugarcane	Rs/MT	238.42	308.61	328.63	338.21	347.93	9.72	2.87
Arecanut	Rs/100 Nos.	12.24	14.27	26.40	31.22	32.84	1.62	5.19
Banana	"	59.33	70.05	75.41	80.77	93.89	13.12	16.24

Source : Directorate of Economics & Statistics.



### Public Distribution system

3.11 Public Distribution System (PDS) plays an important role in ensuring the availability of essential commodities and price stability. The public distribution system in Kerala reaches all the households in the State through a well-designed network of ration shops. This is quite important for a consumer state like Kerala deficient in food grains and other essential consumables.

3.12 As on 30-11-1993 there were 13,309

authorised retail outlets for the distribution of rationed articles. At present a rational norm of 250 cards per outlet is adopted for sanctioning new retail outlets by de-linking the cards from existing nearby authorised retail distributors having more than 300 ration cards. Now, on an average, there is one outlet for every 409 card holders covering a population of about 2121. There were 54,47,509 ration cards as on 30-11-1993 covering a population of 2,82,13,334 with 2,27,47,298 adults and 54,66,036 non-adults as shown in the Table 3.6

TABLE - 3.6

### Public Distribution System in Kerala - A Profile : 1988 to 1993

Sl.No.	Item	Unit	1988	1989	1990	1991	1992	1993
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	No. of ration cards and permits as on 1-11-1993							
	a) Ration cards for families	No.	4807111	4907648	4997944	5056336	5322115	5447509
	b) Ration permits for institutions	No.	6873	7523	8193	8542	10108	10931
2.	No. of FCI Sub Depots as on 1st November	No.	15	19	20	19	20	19
3.	No. of wholesale shops as on 30-11-1993							
	a) Co-operatives	No.	48	47	47	50	49	49
	b) Others	No.	249	247	262	248	249	249
	c) Total wholesale shops	No.	297	294	309	298	298	298
4.	No. of retail shops as on 30-11-1993							
	a) Co-operatives	No.	1251	1252	1234	1183	1160	1134
	b) Others	No.	11577	11653	11745	11831	11983	12175
	c) Total retail shops	No.	12828	12905	12979	13014	13143	13309
5.	Quantity of Coarse cloth (allotted)	—	133	—	—	—	—	—
6.	Sugar (allotted)	M.T.	140853	148353	150853	144507	152153	154760
7.	Palm oil (allotted)	M.T.	64350	30500	71000	2900	—	—
8.	Kerosine (allotted)	K.L.	307386	321575	338462	334446	341086	342972

Source : Directorate of Civil Supplies.

3.13 During the year 1993, the distribution of rice through PDS declined from 18,04,421 tonnes in 1992 to 16,46,819 tonnes indicating a reduction of 8.72 per cent:

The distribution of wheat also declined marginally from 2,71,505 tonnes in 1992 to 2,18,630 tonnes in 1993 as seen from the table 3.7.

TABLE - 3.7

## Distribution of Rice &amp; Wheat through the Public Distribution System 1988-89

Month	Wheat distributed											
	1988	1989	1990	1991	1992	1993	1988	1989	1990	1991	1992	1993
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
January	142596	125000	199950	133509	133058	132201.4	9013	14691	19900	28564	20241	14362.1
February	134605	99999	125000	125622	157474	119231.2	10819	15360	19679	19950	23752	14469.7
March	124886	100000	123809	135850	154953	132886.1	8812	15659	18911	23722	17096	17122.6
April	125000	100000	121983	136108	135277	136899.6	10517	14891	15269	28966	22682	12586.0
May	124226	100000	124999	105786	153477	130125.0	11345	14868	19200	28632	20840	14910.1
June	124970	100000	125000	133584	154506	126017.4	13554	14999	19718	28409	28519	16846.1
July	124994	100000	134616	139959	166985	137250.9	14824	15000	20000	28140	26167	20069.3
August	144997	100000	154997	162013	175579	189578.0	14783	15000	19974	29480	25431	18620.0
September	125000	120000	132382	149840	171574	109698.1	14778	19044	19838	29993	16930	21380.4
October	125000	100000	136665	149520	138772	136340.1	14743	24847	19931	29983	27980	27400.6
November	125000	124986	139014	150000	132226	139836.5	13931	24879	19970	29994	24404	20881.9
December	124990	100000	130858	149607	130331	156754.9	13331	20000	19942	26873	17463	19981.6
Total	1546264	1269985	1649273	1671398	1804212	1646819.2	150450	209238	232332	332706	271505	218630.4

Source : Directorate of Civil Supplies

3.14 The allotment of rice, wheat, sugar and kerosene from the central pool for the public distribution system in the state for the year 1993 is given in Table 3.8.

TABLE - 3.8

*Allotment of Rice, Wheat, Sugar and Kerosine Oil for 1993*

	(Tonnes)			
	Rice	Wheat	Sugar	Kerosine Oil K.Lrs.
January	150000	25000	12557.5	28878
February	150000	25000	12557.5	28378
March	150000	25000	12557.5	28378
April	150000	25000	12557.5	28378
May	150000	25000	12557.5	28378
June	150000	25000	12557.5	28378
July	150000	25000	12556.8	28378
August	175000	40000	18056.8	28378
September	150000	30000	12556.8	28862
October	150000	30000	12081.8	28862
November	150000	30000	12081.8	28862
December	150000	30000	12081.8	28862
Total	1825000	335000	154760.8	342972

Source : Directorate of Civil Supplies.

3.15 The government are closely monitoring the price situation and availability of all essential commodities. Food Advisory Committees at State, District, Taluk and Panchayat Levels were constituted and meetings of these committees were being conducted regularly to monitor the price situation and distribution of essential commodities. Moreover, monitoring cells and surprise squads headed by District Collectors are conducting raids and surprise inspections in order to curb the malpractice. People's Assembly (Janakeeya Sabha) along with Taluk Sabha are conducted to deal with grievances of the public senior officials who are attending to the complaints received in the sabha. The month of January 1994 was observed as quality month and 29 programmes were carried out to strengthen and revamp the public distribution system.

3.16 To ensure the protection of consumers interest qualitatively and quantitatively and to provide an effective and speedy redressal to consumer's complaints against unfair trade practices and defective goods the state commission and 14 District Fora have been constituted and are functioning effectively.

3.17 With a view to providing food stuffs of good quality at the reasonable rate, it was decided to open one Annapoorna Hotel each in every Assembly Constituency. At present 118 Annapoorna Hotels are functioning and action is in progress to open the remaining ones.

### *Kerala State Civil Supplies Corporation*

3.18 Kerala State Civil Supplies Corporation is also engaged in the distribution of essential commodities at reasonable prices throughout the state to supplement the Public Distribution System by operating 9 super markets, 2 mini-super markets, 536 maveli stores, 18 mobile maveli stores, 1 vegetable store, 9 petrol bunks and 2 L.P.G. outlets, besides extending its assistance to 1043 Sahakarana Maveli Stores run by co-operative societies, 34 maveli stores run by matsyafed, 15 maveli stores run by local bodies and 1171 selected authorised ration depots.

3.19 Festival bazaars and fairs are also being organised by the Corporation in all urban and rural areas during Onam and other festival seasons to control prices. Essential commodities worth Rs.3.94 crores were distributed through Onam bazaars in the state during 1993 including provisions and stores worth Rs.259 lakhs and Vegetables for Rs.78.17 lakhs.

### *Wages*

3.20 As a consequence of higher rate of increase in wholesale price of agricultural commodities and increase in consumer price index, the wages also have gone up. The average daily wages of skilled workers in the agricultural sector increased by about 16% in 1993 (see Table 3.9). The daily wages of Carpenter increased from Rs.59 in 1992 to Rs.68.28 in 1993 and that of Mason from Rs.58.55 to Rs.67.63 during this period. Average daily wages of unskilled workers in Agriculture sector increased by 20% during the period under review (see Table 3.10). Corresponding increase was noticed in the wage rates of skilled as well as unskilled worker in the construction sector (see Table 3.11 and 3.12).

TABLE - 3.9

*Average daily wage of rates of skilled workers in Agricultural Sector*

Year	Average Daily Wage rates (rupees)		% of variation over the previous year	
	Carpenter	Mason	Carpenter	Mason
(1)	(2)	(3)	(4)	(5)
1980-1981	19.82	19.78	--	--
1981-1982	22.42	22.50	13.12	13.75
1982-1983	23.40	23.52	4.37	4.53
1983-1984	26.11	26.22	11.84	11.48
1984-1985	38.74	38.69	48.03	47.56
1985-1986	42.84	42.80	10.58	10.62
1986-1987	45.93	45.93	7.21	7.31
1987-1988	47.50	47.21	3.42	2.79
1988-1989	49.80	49.55	4.84	4.96
1989-1990	51.82	51.45	4.06	3.83
1990-1991	54.47	53.98	5.11	4.92
1991-1992	59.00	58.55	8.32	8.47
1992-1993	68.28	67.63	15.73	15.51

Source : Department of Economics and Statistics.

TABLE - 3.10

*Average Daily Wage rates of Unskilled Workers in the Agricultural Sector*

Year	(Rupees)			
	Average Daily Wage rates of paddy field workers		% of variation over the previous year	
	Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)
1980-1981	11.13	7.91	—	—
1981-1982	12.74	8.83	14.47	11.63
1982-1983	13.29	9.65	4.32	8.15
1983-1984	15.86	11.02	19.34	15.39
1984-1985	23.60	11.89	48.80	7.89
1985-1986	26.06	15.10	10.51	27.00
1986-1987	28.36	16.39	8.74	8.54
1987-1988	30.36	17.68	7.05	7.87
1988-1989	31.95	18.59	5.24	5.15
1989-1990	33.31	19.63	4.26	5.59
1990-1991	35.77	21.11	7.39	7.54
1991-1992	41.38	26.30	15.68	24.59
1992-1993	48.40	32.31	16.97	22.85

Source : Department of Economics & Statistics.

TABLE - 3.11

*Average Daily Wage rates of Skilled Workers in the Construction Sector*

Year	(Rupees)			
	Carpenter		Mason	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
1980-1981	18.66	19.33	18.75	19.36
1981-1982	22.52	22.87	22.66	23.01
1982-1983	27.99	30.68	28.13	30.80
1983-1984	33.43	35.00	33.29	35.12
1984-1985	36.71	37.97	36.65	38.03
1985-1986	40.91	40.67	41.10	42.01
1986-1987	43.90	45.39	44.24	45.91
1987-1988	49.30	50.08	49.32	50.04
1988-1989	51.08	51.92	51.17	52.00
1989-1990	53.30	53.66	53.23	53.87
1990-1991	57.00	56.00	56.00	56.00
1991-1992	60.00	61.00	59.00	61.00
1992-1993	68.89	70.92	68.07	70.23

Source : Department of Economics & Statistics.

TABLE - 3.12

*Average Daily Wage rates of Unskilled Workers in the Construction Sector*

Year	(Rupees)			
	Men		Women	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
1980-1981	12.30	13.07	9.62	10.22
1981-1982	15.22	15.94	11.40	12.22
1982-1983	17.85	19.09	13.53	14.44
1983-1984	20.29	21.18	14.81	16.10
1984-1985	21.90	22.80	16.37	17.38
1985-1986	25.31	25.70	19.08	19.42
1986-1987	27.66	28.42	21.05	21.93
1987-1988	31.31	32.23	23.26	25.34
1988-1989	32.92	33.55	25.32	26.79
1989-1990	34.15	34.94	26.88	28.26
1990-1991	37.00	37.00	30.00	28.78
1991-1992	39.71	41.63	31.64	34.32
1992-1993	46.34	28.66	37.23	39.38

Source : Department of Economics & Statistics.

## AGRICULTURE

The overall performance of the agricultural sector in Kerala during 1992-93 reveals that it is being relieved of the stresses and strains of the structural transformation that it was undergoing during the last one and a half decades. Although the shift in cropping pattern from seasonal and annual food crops to perennial commercial crops still continues, it is only in a mild form compared to the previous years. The agricultural income which was stagnant throughout the Eighties is on the path of revival recording substantial growth during the last 3 years in succession. The areas brought under perennial crops like coconut & rubber consequent to the shift from annual crops like rice and tapioca during early eighties have started giving output after their long gestation periods. The consistent growth of agricultural income during the last 3 years suggests that the agricultural economy has turned the corner. Both coconut and rubber found new peaks in production during the year. Thanks to the special efforts launched by the State, the rice production has started picking up with clear signs of deceleration in the rate of decline in the area under the crop during the year.

### *Agricultural Income*

4.2 The trends in agricultural income in Kerala during the recent past indicate good recovery from the past stagnancy. The annual growth rates recorded during the last 3 years have been impressive. The agricultural sector was in the process of a structural transformation in favour of commercial/perennial crops during the period from mid seventies to mid eighties. Shift in cropping pattern was mostly from paddy to coconut and from tapioca to rubber. Coconut and rubber being perennial in nature, they have gestation lags of seven to ten years and they could not have made any contribution to the income stream from the areas converted from annual crops to these categories during the initial years. The perceptible improvement in agricultural income recorded in succession during the last years may be due to the additional income that could have started yielding flow from such converted areas. The steady and continuous improvement during the last three years has raised agricultural income from a stagnant level of Rs.1300 crores in the early eighties to over Rs. 2092 crores in 1992-93. However, the share of agriculture in the SDP continues to stagnate around 34%. Relevant data are furnished in Table 4.1.

4.3 The performance of the agricultural sector in the recent past heralds a brighter future for the State's economy and reaffirms that the farm front continues to hold the key to a faster economic growth in Kerala.

### *Rainfall*

4.4 The rainfall in Kerala which was above normal consistently for two years in succession during 1991

and 1992 fell below the normal level in 1993. The total rainfall for the year averaged to only 2818.6 mm which was lower by 229.27 mm (8%) from the normal. The shortfall was entirely in the South West Monsoon (-12%) while the North East Monsoon continued to be more active with excess rainfall (+32%) during 1993 as well. The high degree of temporal variation typical of Kerala's rainfall pattern is clearly visible during 1993 also with the bulk of the rainfall concentrating in the five months from June to October. The heavy down-pour during October caused floods in certain parts of the State. In spatial distribution also there was wide variations with Kasargode, Idukki, Ernakulam, Thrissur, Kannur, Kottayam and Alappuzha receiving rainfall above normal. Kasargode recorded the highest rainfall of 3538.7 mm and the lowest was in Palakkad (1877.9 mm). The southern districts in general received larger share of the North East Monsoon. Data relating to the season-wise departure from normal, monthly distribution trend and district-wise and month-wise as well as the weekly intensity of rainfall are given in Table 4.2 to 4.6.

### *Land Use*

4.5 Data on Land Use Pattern in the State for 1992-93 are yet to be finalised. The latest estimates available for the year 1991-92 are presented in Table 4.7. The percentage of land put to agricultural use during the year was 85.69%, which comprises of 57.86% used for cultivated crops and 27.83% for forests. The net area under cultivation has increased by 1193 ha. in 1992-93 though there was a slight decrease in the category of area sown more than once. The cropping intensity remained at 134.39% as in the previous year. The positive features of land use pattern included sustenance of the forest cover without further reduction, progressive reductions in the extent of land under the categories "barren and uncultivated" (-3172 ha.), "cultivable waste" (-1816 ha.) and "current fallows" (-243 ha.).

### *Overall Trend in the performance of different categories of crops*

4.6 The indices of area, production and productivity of major categories of crops for the last 12 years are given in Table 4.9. The index of overall production which was 100.17 for the triennium ending 1978-79, though declined to 85.31 in 1990-91 increased sharply to 127.90 in 1991-92 and to 129.29 in 1992-93. While the area index marginally declined from 104.03 in 1991-92 to 102.28 in 1992-93 the productivity index has increased from 122.95 in 1991-92 to 126.40 in 1992-93. The near stagnancy in the area index during the last decade clearly shows the limited scope for horizontal growth of agricultural production in Kerala.

4.7 Even though the overall area index for the sector is more or less stagnant there was considerable fluctuation in the indices relating to the different categories of crops. The most striking feature has been the sharp fall in area under food crops as revealed by the index which declined from 102.55 in 1976-79 to 67.22 in 1991-92 and further to 66.19 in 1992-93. Obviously the non-foodgrain category gained substantially in the process with its index climbing up from 101 to 120.96 in 1991-92 and 118.89 in 1992-93. The productivity index relating to foodgrains presents a different picture witnessing spectacular increase from 96.22 for the triennium ending on 1978-79 to 122.67 in 1991-92 and further to 126.77 in 1992-93. It appears that the cultivation of foodcrops is getting stabilised in relatively more productive areas. Among food grains, pulses as a group could not sustain the increasing trend during 1992-93 as the index number has declined from 136.55 to 122.59 in 1992-93 resulting in a sharp decline in productivity.

4.8 The indices in respect of area, production and productivity of non-foodgrains as a category show that although the index for area was much higher (118.89) in 1992-93 than in the base period (101), there was a marginal decline during 1992-93 compared to 1991-92 (120.96). However with increase in productivity from 99.52 in the base period to 114.45 in 1991-92 and 117.60 in 1992-93, the increasing trend in production could be maintained. The index number on production rose from 100.52 to 138.44 in 1991-92 and 139.82 in 1992-93. Condiments and spices, drugs and narcotics, and fruits and vegetables are some of the groups that have shown decline in productivity from 1991-92 to 1992-93. This decline is also reflected in the production indices of these categories. The indices relating to oil seeds and plantation crops have registered very impressive growth from 148.67 to 157.98 and 194.14 to 204.14 respectively.

#### *Area under crops*

4.9 Out of a gross cropped area of 30.21 lakh ha. in 1992-93 the share of food crops comprising of cereals and millets (5.463 lakh ha.) pulses (0.179 lakh ha.) and tapioca (1.297 lakh ha.) was only 22.97 percent. Even though the declining trend in area under food crops continued in the year 1992-93 also, it was mostly confined to pulses and tapioca. In the case of rice the degree of reduction in area has come down considerably, the area recording a reduction of 3719 ha. only in 1992-93 as against a much higher decline of 18123 ha. observed in the previous year. However, tapioca, the other food crop of Kerala continues to face the threat of replacement by crops like rubber. The reduction in the area under the crop during 1992-93 was to the extent of 12184 ha. as against the previous year's decline of 4612 ha. The fact that such a steep decline in area is happening in spite of a very comfortable price situation for the commodity speaks of the unfavourable environment through which the commodity is passing. So also is the case of pulses which are

facing more or less similar situation despite all-out efforts by the State for promoting their cultivation. The area which was stagnating all these years around 23000 ha. suffered a serious set back (-5029 ha.) in 1992-93.

4.10 Among the commercial crops, the area under rubber increased by 3096 ha. during 1992-93, while the area under coconut (-2557 ha.) and arecanut (-3135 ha.) marginally declined. Declining trend of a higher order was observed in the case of major spices like pepper (-7475 ha.) and cardamom (-3740 ha.) Positive trends in area have been observed for banana and to some extent for groundnut and chillies also.

#### *Production of Major Crops*

4.11 Rice production, which was continuously declining during the last decade, with the only exception of 1989-90, has shown clear signs of recovery. In 1992-93 rice production increased by nearly 25,000 tonnes, compared to previous year. The performance of other food crops, particularly pulses and tapioca, was poor with steep fall in area, production and productivity. The fall in pulses production is likely to add new dimensions to the problem of the State's dependence on import of foodgrains in general. Coconut production which was static around 4000 million nuts during the last decade has shown strong recovery, recording impressive increases in production during the last three years in succession. During 1992-93 coconut production increased by 290 million nuts (+6.24%), contributed entirely by improvement in productivity. Among the other commercial crops, turmeric, arecanut, banana and plantains, groundnut, coffee and rubber also recorded positive growth in production. The performance of the latter two crops was commendable with 24.75% increase in production in the case of coffee and 7.44% increase in production for rubber. Production of other cash crops like cardamom, tea and pepper declined drastically by 29.73%, 14.87% and 2.88% respectively.

#### *Productivity of Principal Crops in Kerala*

4.12 The persistent improvement in the productivity of a number of major crops even in the midst of declining trends in their area under cultivation is a note worthy feature. Rice and coconut, the most important small holder crops in Kerala scaled new heights in productivity during 1992-93. Other crops that witnessed productivity improvements were groundnut (8.88%), arecanut (5.92%), coffee (39.75%) and rubber (6.69%). While pepper, turmeric, plantains and tobacco have recorded marginal increases in productivity there was drastic decline in per hectare yields in the case of cardamom (-22.78%), tea (-14.87%) and cashewnut (-11.46%). Even in respect of commodities which registered improvement in the recent years the level of production attained remains sub-optimal. Even though the State is well endowed with favourable climate, productive soil, educated manpower, widespread input delivery systems and extension net work etc. as cata-

lysts for a highly productive and efficient agriculture, they have not been able to create the desired impact in improving the productivity of most crops.

### *Performance of Major Crops*

#### *Rice*

4.13 Despite a steep and continuous decline in area under cultivation, productivity of rice has shown improvement throughout the last decade. The level of productivity attained by the State is also higher compared to the national level. However the improvement in productivity was not adequate enough to compensate the loss in production consequent to the decline in area since 1980-81. The mere fact that Kerala could maintain a good track record in the matter of productivity shows that the future of rice in Kerala is not as bleak despite the declining trend in area. The indications are that rice cultivation is getting stabilized in irrigated areas as well as in areas having the required natural endowments for productivity improvement. A close look at the Taluk-wise area under rice cultivation during the period from 1975-76 to 1986-87 reveals that the shift from rice to other crops is mostly in the unirrigated taluks. Improving the irrigation facilities through minor irrigation support is therefore one of the effective means of stabilising paddy cultivation in Kerala.

4.14 The recent performance of rice crop at the national level shows that the shift from paddy to other remunerative crops is not a phenomenon singular to Kerala. At the national level also, data for 1992-93 show a fall in area resulting in considerable decline in production compared to the previous year. Relevant statistics for the State vis-a-vis national level is given in Table 4.10.

4.15 The recent shifts from rice to other crops in important rice producing States also stress the need for the deficit states like Kerala to pay more attention in conserving the existing area under rice for ensuring food security. The area statistics relating to rice for the year 1992-93 raise new hopes and confidence in stabilizing paddy cultivation in Kerala.

4.16 Past experience with the innovative group farming programme also suggests that distribution of input subsidies may not help in stabilising paddy cultivation. The problems confronting rice cultivation are many and the solutions should also be multi-pronged. Some of the problems common to all rice growing tracts in the State are the non-availability of work animals for completing the tillage operations in time, seasonal shortages for human labour during peak transplanting and harvesting seasons, disproportionate increase in wages compared to product prices, absence of any effective system for supply of quality HYV seeds for timely replacement,

high cost of fertilizers consequent to the hike in fertilizer prices, deteriorating productivity of rice lands due to poor replenishment of organic base etc. The Group Farming Smithies should transform themselves as viable self supporting institutions capable of providing assured support in all these directions on a continuous basis. Minor irrigation support, selective mechanisation and seed multiplication and distribution should receive high priority in their agenda. To make these institutions viable and sustainable, their number has to be brought down considerably by making them serve comparatively larger rice areas.

#### *Season-wise Performance*

4.17 Season-wise area, production and productivity of rice during the last two years are given in Table 4.11. Decline in area was only marginal (16 ha.) in the Viruppu season (Autumn) while in Mundakan season (Winter) the area had gone down by 9925 ha. The area in Punja season on the other hand increased by 6182 ha.

4.18 In productivity also the trend is more or less similar. The Viruppu and Punja seasons account for the overall improvement in the productivity of the crop from 1959 Kg/ha. to 2018 Kg/ha recorded during 1992-93. The productivity during Viruppu was 1992 Kg/ha. against 1835 Kg/ha. in 1991-92. It was the highest during summer season (2305 Kg/ha) and incremental yield during the season (100 Kg/ha) was also higher than the remaining two seasons. The winter crop had a fall in productivity from 1998 to 1953 Kg/ha. Thus the real constraints inhibiting paddy production during the Mundakan season need very close study for appropriate corrective measures.

#### *HYV Coverage*

4.19 In HYV coverage there was slow but steady improvement during the last four years. By the end of 1992-93, about one third of the total rice area was under HYV's. However the season-wise variation in coverage and yield levels continued to persist in 1992-93 as well. Maximum coverage of high yielding varieties was in the Viruppu season (44.59%) followed by Punja (29.46%) and Mundakan (25.93%). The relevant data are given in Table 4.13. Surprisingly, the coverage under High Yielding Varieties was maximum in the Viruppu season which had the lowest productivity (2058 Kg/ha.) Punja and Mundakan seasons had recorded higher productivities of 2555 Kg/ha. and 2350 Kg/ha. respectively. The average productivity of High Yielding Varieties in 1992-93 was just 2280 Kg/ha. which was only marginally higher than the average productivity of rice for the State inclusive of local varieties (2018 Kg/ha.). This means that even the high yielding varieties are not receiving the needed attention and management for securing the



optimal productivity. There is a wide gap between potential yields of the high yielding varieties as established in experimental farms and those realised under field conditions.

4.20 It is evident that the State has to rely heavily on external sources to meet the requirements of rice. The disparity in net income per unit area in respect of rice vis-a-vis other commercial crops, combined with the operational problems the rice grower is confronted with, make it very difficult to sustain the existing area under the crop. The problem has to be tackled with a long term perspective of improving the economics of paddy based farming systems through a judicious combination of technological improvements like appropriate mechanisation, introduction of stable and multi-resistant varieties with potential for better yields and popularisation of summer cultivation in rice fallows with catch crops like pulses or vegetables to supplement the income.

#### *Production Programmes*

4.21 Promotion of Group Farming was the major strategy adopted for stabilising paddy cultivation. Group Farming Samithies constituted for the purpose were given financial assistance for taking up long term development in productivity. The pattern of expenditure reported shows that the assistance was by and large utilised for subsidising inputs and equipment. Important activities taken up are given below.

a) Community nurseries	:	19619	ha.
b) Distribution of weedicides			
i) Solid	:	20052	Kg.
ii) Liquid	:	15064	lit.
iii) Granules	:	1832	Kg.
c) Area covered under plant protection	:	109091	ha.
d) Distribution of sprayers	:	3921	nos.
e) Distribution of power tillers	:	175	nos.
f) Distribution of tractors	:	117	nos.
g) Distribution of petty & para	:	45	nos.
h) Soil ameliorants	:	27315	M.T.

4.22 By the end of 1992-93 a total of 7734 Group Farming Samithies are reported to have been organised. The year 1993 has been declared as a rice development year. A massive programme for providing the basic infrastructural facilities like minor irrigation, drainage, land reclamation and development etc. was taken up giving priority for areas offering scope for additional cropping as part of this mission. So far, 1098 works involving an outlay of Rs.52.27 crores have been sanctioned. On completion, additional area of 32396 ha. under rice cultivation is anticipated. Distribution of 1000 power tillers and 1000 threshers to the group farming samithies was also done under this scheme.

4.23 An Integrated Programme for Rice Development with central support was implemented in Alappuzha, Ernakulam, Thrissur, Kottayam, Pathanamthitta, Palakkad and Malappuram districts covering the following activities.

a) Certified seed distribution	:	10627	Qtl.
b) Distribution of p.p. equipment	:	5339	nos.
c) Distribution of power tillers	:	488	nos.
d) Distribution of herbicides	:	16864	Kg/lt.
e) Distribution of pesticides	:	56945	Kg.

#### *Coconut*

4.24 Coconut holds a dominant position in coverage of area as well as contribution to agricultural income in the State. In 1992-93, the crop covered more than 38 per cent of the net cropped area in Kerala. Data relating to the trends in area, production and productivity of coconut are given in Table 4.14.

4.25 The trend of increase in area under coconut started slowing down after 1990-91, with marginal decrease in area during 1991-92 and 1992-93. The fall in prices of coconut from around Rs.4 - 4.50 per nut, prevailing in the early Nineties, to the present level of around Rs.2 to 2.50 is likely to adversely affect the prospects of this crop. Apart from ensuring a remunerative price, the KERAFED may have to enlarge its market operations through procurement and processing to provide the necessary support to this crop. Thanks mainly to the very favourable rainfall distribution during the last 3 years, the production of coconut which was just 3008 million nuts in 1980-81 has slowly but steadily increased to 4931 million nuts in 1992-93. The increase in production was largely contributed by the steady increase in the productivity from 4618 nuts to 5730 nuts/ha. However, even this productivity which is around 30 to 31 nuts per tree per year is low compared to the potential of around 60 nuts per tree which can be easily achieved under average management. Coconut being the mainstay of the rural economy of the State supporting around 10 million people, it is high time that the State launched a major rehabilitation programme in a well planned and co-ordinated manner. Since majority of the growers are small and marginal, promotion of massive operations in this direction is feasible only with the active involvement and support of bank credit. Area based and time bound location specific projects for irrigated development of coconut holdings have to be developed for all the major coconut producing panchayats.

#### *Production Programmes*

4.26. Comprehensive coconut development programme was the major scheme taken up under this category. The activities supported under the scheme were



distribution of 2610 nos. of pumpsets, 548 nos. of sprayers, 32.78 MT of green manure seeds, and 2990.35 M.T of Magnesium sulphate. Cutting and removal of 1.40 lakh senile and diseased palms, establishment of 545 nos. of irrigation sources, distribution of 1360 nos. of pumpsets and covering 6012 ha. under multi species cropping were the other programmes and activities undertaken.

### *Pepper*

4.27 Pepper cultivation which was characterised by very low levels of productivity in recent years, is facing another serious threat on account of the rapid spread of quick wilt disease in important pepper producing pockets of Kannur, Wayanad and Idukki districts. Consequently, even the marginal improvement in productivity recorded during the late eighties has become unsustainable. Data on area, production and productivity of pepper in the recent past is given in Table 4.15. The emerging trend is negative in coverage of area and production.

4.28 Export of pepper has shown signs of improvement during 1992-93 after the severe set back it suffered in 1991-92, consequent to the lower purchases by Soviet Union. The export during 1992-93 was 23752 tonnes against 20565 tonnes in 1991-92. The withdrawal of export cess by Government of India and the granting of additional technical credit to U.S.S.R. and the State's initiative for launching a market intervention programme for purchasing 5000 tonnes has helped in averting a major price fall during 1992-93. The disease problem which is assuming serious proportions needs priority attention. A major rehabilitation programme with adequate health cover and scientific management aiming at doubling the productivity of the crop alone can make pepper production competitive and sustainable for export.

### *Production Programmes*

4.29 Among the spices, pepper received the maximum development support. The Central Sector outlay for spices development has been considerably raised. The emphasis was mainly on rehabilitation of pepper gardens and distribution of quality planting materials. Major activities supported include production and distribution of 50 lakh rooted pepper cuttings for replanting and new planting; scientific manuring and management in 8213 ha. of pepper area rehabilitated in 1991-92, fresh rehabilitation of 9415 ha., distribution of 2.99 lakhs of input kits to small and marginal farmers production of 43,300 nos. of clove seedlings and 20512 nos. of nutmeg seedlings. Area expansion of pepper in selected panchayats with a view to trail all the trees and standards available in homesteads with pepper was also given focus. During 1992-93 the programme was taken up in

200 panchayats for bringing an additional area of 2070 ha. under the crop.

### *Cashew*

4.30 The performance of cashew in the recent past also has shown a disturbing trend with the area recording continuous decline and the productivity showing wide fluctuations. The area has come down from 1.4 lakh ha. in 1980-81 to 1.10 lakh ha. in 1992-93. The improvement in productivity achieved in 1991-92 (933 Kg) could not be sustained. So also the production which after touching a level of 1 lakh tonnes in the first years of the nineties has slumped to 0.9 lakh tonnes in 1992-93. The fall in production could be attributed to both decline in area and fall in productivity. The trends in area, production and productivity of cashew is given in Table 4.16.

4.31 According to the Directorate of Cashewnut Development, Cochin, more than 50% of the cashew plantations in Kerala require replanting with high yielding clones. Varieties capable of yielding 5 times the productivity of trees in Kerala are now available.

4.32 An area of 716 ha. has been brought under new planting with cashew in 1992-93. Plant protection measures were also organised in 6810 ha.

### *Oil Palm*

4.33 Kerala has a total planted area of 3645 ha. under oil palm, owned by Oil Palm India Ltd. All the areas have started yielding, though the production has not fully stabilised. Year-wise production and sale of crude palm oil over the last six years are given in Table 4.17.

### *Plantation Crops*

4.34 Kerala is the only State in the country which has substantial area under all the four important plantation crops namely Tea, Coffee, Rubber and Cardamom. The State accounts for around 45% of the total area under these crops in the country and they together account for more than 25% of the net cropped area in Kerala. Over 3.6 lakh workers are reported to be under permanent employment in the plantation sector.

4.35 Among the plantation crops, rubber is the predominant one accounting for about 85% of the area and 93% of the production in the country. The production of natural rubber in the state during 1992-93 was 3.68 lakh tonnes which constituted about 93.6% of the production (3.93 lakh tonnes) at the national level.

4.36 With the international rubber prices declining at an alarming rate the pricing policy for rubber was a subject widely debated during 1992-93. This has helped

to maintain the price regime more or less at comfortable levels. The prices of RMA IV grade has touched a level of Rs.2730 per qtl. in June 1993 even though it has stabilized around RS.2400 subsequently. Excepting 16,498 tonnes of imports allowed for production of rubber goods for re-export, the import of rubber was totally eliminated. The commodity has been removed from the negative list for the purpose of export making it freely exportable without any license and limit.

4.37 The Rubber Board is vigorously implementing various measures like financial and technical assistance, supply of high yielding planting materials and other supporting activities to enhance the production and productivity of natural rubber in the country. The World Bank Assisted Rubber Development Project is set to double the rubber production during the next 10 years through replanting in 40000 ha. and new planting in 30000 ha. Area, production, consumption and price statistics pertaining to Rubber are given in Tables 4.19, 4.20 and 4.21.

4.38 Coffee which ranks second in area coverage among the plantation crops in Kerala is faced with many problems. Even though the area remained stable around 74794 ha. during the last four years the production is highly fluctuating. The year 1992-93 is destined to have a production of 25000 tonnes against 20040 tonnes obtained in 1991-92. The increase in production is entirely due to the rise in productivity from 239 Kg/ha. to 334 Kg/ha. during the period.

4.39 Consequent to the collapse of the International quota system in 1989 the monopsonic marketing system of the Coffee Board also crumbled. The prolonged impasse which was hanging in the air for long is gradually giving way to a process of decontrol. The change in policy has helped in regaining the lost ground and pushing the export to 1.13 lakh tonnes in 1992-93 against 1 lakh tonnes in 1990-91 and 1.11 lakh tonnes in 1991-92. While bulk of India's Coffee Export comprises of raw or green coffee there is now growing demand for soluble coffee popularly known as instant coffee. The future international coffee scenario thus appears to be one of free trade entailing concerted effort for improvement in productivity and quality.

4.40 The year 1992-93 has not been commendable for tea production in the State. Though there was no much change in area under the crop, production declined severely from 66080 tonnes in 1991-92 to 56,250 tonnes in 1992-93. This was largely contributed by the fall in productivity of the crop from 1909 Kg/ha. to 1625 Kg/ha during the period. Even though there was marginal increase in area under the crop in the All India level, the production and productivity followed the same pattern as in Kerala. Export trends are also not very promising. Consequent to the significant drop in export surpluses in

recent years, Government of India has asked the tea producing States to step up the area under tea cultivation. In Kerala the area under tea was more or less constant during the last decade with annual fluctuations in production due to seasonal factors. As the tea production in Kerala is largely concentrated in the corporate sector with larger holdings of 50 ha. and above, organisation of production enhancement programmes, with appropriate incentives and services by the Tea Board is easier. There is scope for increasing the area also. Productivity could be stepped up considerably by establishing/replanting with hybrid clones. A major programme for replanting and fresh planting in and around the existing tea plantations is long overdue.

4.41 Cardamom is another plantation crop which was in doldrums from the point of view of production and export during 1992-93. The area under the crop declined to 39930 ha in 1992-93 as against 43670 ha in 1991-92 and the production plummeted from 3450 tonnes in 1991-92 to 2424 tonnes in 1992-93. The average productivity of the crop which has recorded a very impressive performance of 79 Kg/ha in 1991-92 declined to 61 Kg in 1992-93. Similarly on the export front the signs of revival witnessed in 1991-92, when the exports reached 553 tonnes, could not be sustained in the following year as the export has again declined to 175 tonnes. In unit value realisation there was a spurt in average export price from Rs.290.60 per Kg. to Rs.388.60 per kg. The extent of erosion in the export of cardamom can be measured from the fact that the export has scaled a high of 3270 tonnes valued at Rs.53.46 crores in 1985-86. Poor performance last year was mainly due to the higher prices prevailing in the domestic market.

4.42 As a sequel to the economic reforms initiated by Government of India and the reforms under way in the international trade in respect of many of the agricultural commodities, new opportunities for export will be available for developing countries like India. Immediate steps are therefore necessary to utilise the opportunity and retain a sizeable share of these emerging markets through effective measures to make our production and export of these commodities cost and quality conscious.

### *Other Development Programmes*

#### *Vegetable and Fruits Development*

4.43 Even though promotion of vegetable cultivation in selected panchayats with a view to phase out the imports from neighbouring States was one of the important objectives set out in the State's Agricultural policy, the performance was not satisfactory. The activities taken up include distribution of 10 lakh vegetable seed kits, lay out of vegetable gardens in 302 schools and by 400 mahila samajams.

4.44 Development of indigenous fruits like pineapple, banana/plantain, jack, mango etc. on homestead basis in selected potential pockets is another programme envisaged. Even though the scheme was taken up, it was on a very limited scale. The Horticultural Project assisted by EEC is expected to commence its extension and development activities for promotion of vegetables, banana and pineapple during 1993-94 which would give a big boost for fruit development.

#### *Pulses Development*

4.45 Subsidised distribution of 160 tonnes of seeds and distribution of 2017 packets of Rhizobium culture were the major activities taken up for the development of pulses.

#### *Supplies and Services*

##### *Improved Seeds*

4.46 Seed industry in Kerala is still in a nascent stage with governmental farms dominating the scene. Commercial orientation and private initiatives are totally lacking. The activities in the seed sector thus have all the limitations of Government sponsored programmes. Functional linkages in the production front and continuity of supplies are not adequate. Replacement of HYV seeds is not regular for want of systematic and well planned supplies. Varietal upgradation through organised efforts on an area basis has not received the needed attention. The progeny base in the departmental farms have to be strengthened by inducting all promising cultivars into our production stream, organised through registered growers and supplemented from agencies like NSC. During 1992-93 a total of 2865 tonnes of paddy seeds were distributed, as against 1675 tonnes in 1991-92. The distribution of planting materials of tree crops is largely from the departmental farms and quite often linked with some development programme involving an element of subsidy. The supply is thus regulated by resources that could be made available through State budget. The achievements reported for 1992-93 are not encouraging. Number of coconut seedlings distributed has come down from 14.08 lakhs in 1991-92 to 3.90 lakhs in 1992-93. The number of pepper cuttings distributed also slumped from 39 lakhs in 1991-92 to 35.99 lakhs in 1992-93. Cashew seedlings are the only exception. The trends do not depict a healthy environment for building up a viable and sustainable seed industry. The multiplication and distribution arrangements have to be decentralised and practised with the active support of the Department of

Agriculture. Through the private nursery promotion programme recently launched by the Department of Agriculture the State has made a good beginning in this direction. The nurseries organised under the scheme require further care and support especially during the initial years till they become viable.

#### *Fertilizers*

4.47 Consequent to the changes in fertilizer policy announced by the Government of India the positive trend in fertilizer consumption that prevailed in the past few years has been disturbed. The decontrol of P&K fertilizers with effect from August 1992 had many adverse consequences. There was considerable fall in consumption during 1992-93 (202968 tonnes) compared to 1990-91 (244380 tonnes) and 1991-92 (225937 tonnes). The average fertilizer use per ha. of gross cropped area also fell from 81.5 Kg. in 1990-91 to 74.8 Kg. in 1991-92 and 67.2 Kg. in 1992-93. After the decontrol the consumption of P&K fertilizers has declined considerably. The reduction in phosphatic fertilizers was to the tune of 8% and that of potash 22%. Imbalance in the use of major plant nutrients has been accentuated which will have very serious repercussions particularly in regard to the cultivation of tree crop and also on the export front.

#### *Plant Protection*

4.48 The strategy of need based application of plant protection chemicals pursued by the State helped to reduce the consumptions of p.p. chemicals and the trend is continuing. The consumption of fungicides in terms of technical grade has decreased from 374.46 tonnes in 1991-92 to 349.01 tonnes in 1992-93 while in the case of insecticides, consumption has come down to 302.17 tonnes in 1992-93 from 325.24 tonnes in 1991-92. The consumption of weedicides on the other hand has picked up in recent years. It has increased from 20.46 tonnes to 36.72 tonnes in 1992-93. In the context of rice growers finding it difficult to get adequate labour for cultural operations in rice fields, herbicidal weed control deserves further promotional support. Distribution of p.p. equipment diminished slightly to 9936 numbers as against 12944 nos. in 1991-92. The area under plant protection coverage has increased from 7.25 lakh ha. in 1991-92 to 8.10 lakh ha. in 1992-93. Selected indicators of progress are given in table 4.22.

4.49 Farm Information Bureau provides the necessary information and communication support in the developmental and extension activities in the Farm Sector

of Kerala. The activities of the Bureau for 1992-93 include 1123 news bulletins broadcast through All India Radio incorporating 5960 news items, publication of the book "Krishideepam", publication of 161 articles through twenty prominent dailies as weekly farm features, 336 press releases, 50 rural exhibitions and 20 Kissan meals. The Bureau also produced 4 video films of 15 - 20 minutes duration on farm subjects for showing them to the farmers and conducted 42 film shows. Publication of the Farm journal "Kerala Karshakan" was continued with more than 25000 copies in circulation.

4.50 The supply of agro machineries through the Agro Industries Corporation in 1992-93 include tractors (Rs.20.23 lakhs), power tillers (Rs.272.23 lakhs), trailers (Rs.26.28 lakhs) pumpsets and accessories (Rs.66.90 lakhs), Drip and sprinkler irrigation units (Rs.7.32 lakhs) and sprayers (Rs.4.60 lakhs). The corporation continued to manufacture paddy threshers, winnowers, copra driers, trailers and tankers for tractors and power tillers, storage bins, garbage bins, sales bunks, wheel barrows, hand carts, dust bins etc. The corporation has designed a kit of tools for rubber tapping with the technical advice of the Rubber Board and fabricated and sold kits worth Rs.1.08 lakhs in 1992-93. An efficient and economically priced mini paddy thresher to suit the need of small paddy farmers in the State has also been developed.

4.51 After a long gap, Government of India has provided assistance for the development of arecanut and 40 irrigation units were established during 1992-93, fruit rot disease control was taken up in 2760 ha. and 2115 palms affected with yellow leaf disease were cut and removed during 1992-93.

4.52 Under the newly introduced scheme for development of cocoa, 3891 new demonstration plots were laid out and 157 irrigation plots were established.

4.53 Under the National Biogas Development Programme, 2303 biogas plants were constructed, 100 nos. of users' trainings and 2 refresher trainings were organised.

4.54 Considering the hike in fertilizer prices and the increasing consciousness of the importance of organic manures, a scheme for development of organic manures through farmers' organisations was implemented and in 1992-93 436 M.T. of green manure seeds were distributed, 23000 M.T. of urban compost and 2.96 lakh M.T. of rural compost were produced and distributed. Pepper, arecanut and cashewnut under the State scheme

for community action against serious pests and diseases received plant protection support. 50,000 ha. were covered against quick wilt of pepper, 5000 ha. against tea mosquito of cashew, 835 ha. against Mahali of arecanut, all benefiting a total of 2.16 lakh farmers.

4.55 Under Special component Plant and Tribal Sub Plan, location specific development programmes benefiting the habitats of the targeted group were continued during 1992-93. All the required inputs were made available free of cost to the participating beneficiaries and the investment on infrastructural development by way of irrigation, land development etc., were supported in full under these schemes. During 1992-93 a total of 101493 families (6888 tribal families and 94605 Scheduled Caste families) have benefited from the programme. Details of physical achievements under these schemes are given in Table 4.24 and 4.25.

#### *Soil and Water Conservation*

4.56 The high rainfall of around 3000 mm, with its high intensity in 3 or 4 months, coupled with the undulating terrain makes Kerala very vulnerable to soil erosion. It is estimated that more than 12 to 15 lakh ha. of agricultural lands and forest lands need effective soil conservation measures. The conservation measures will be effective and perfect only if they are organised on a watershed basis. In view of the predominance of relatively small sized holdings, massive operations on a contiguous area basis are feasible only with liberal Government support. With the meagre resources that could be made available under the State Plan it is difficult to make any dent into this problem.

4.57 The 100 percent Centrally Sponsored "National Watershed Development Programme" is the major programme currently under implementation for soil and water conservation. It aims at developing 54025 hectares of rainfed area over a period of five years. As part of the programme 114 watersheds have been selected and conservation measures involving an outlay of Rs.35.84 crore was approved. During 1992-93 all the pre-project activities such as conduct of training to farmers and functionaries, establishment of Kissan and composite nurseries, treatment of drainage lines and purchase of scientific and cartographic equipments were continued. The project activities like conservation measures and production system of arable and non-arable land also commenced.

4.58 As part of the new strategy for the Eighth Plan the financial assistance under the Soil Conservation

Programme has been rationalised. Government used to provide both loan and grant through budgetary support for soil conservation in arable lands. The scheme has since been modified as a credit linked one making it possible to utilise the entire budgetary resources for subsidy support. This would facilitate larger coverage of area. Under this modified scheme 206.54 ha. were covered during 1992-93. The cumulative coverage of area brought under soil conservation measures during the year works out to 1669.43 ha.

### Soil Survey

4.59 The State Soil Survey Organisation under the Department of Agriculture continued the appraisal of the soil and land resources of the State to assess their innate character, distribution and extent, in order to put the land to its best use without degradation. With the above objective, an area of 1,56,060 ha. was covered by Reconnaissance Soil Survey work in the backward districts of Kasargode, Wayanad and Idukki and detailed soil survey is in progress in the remaining districts. Soil survey of 114 watersheds under National Watershed Development Project for Rainfed areas and 6 watersheds under Western Ghat Development Programme were also completed. A collaborative project with the Kerala Agricultural University on "Adaptive Research on Bench Mark Soils of the State" to evolve crop and fertility management recommendations, was also taken up during 1992-93.

4.60 The Land Use Board has completed the Natural Resources Inventory of the districts of Kasargode and Palakkad, in collaboration with Department of Space by using remote sensing satellite data. Another project for monitoring the command area using satellite data was also taken up in the Malampuzha command area.

TABLE - 4.1  
*Growth of Agricultural Income in Kerala*

Year	Agricultural income in 1980-81 prices (Rs. in crores)	Rate of growth (%)	Percentage contribution to State income
(1)	(2)	(3)	(4)
1986-87	1309.49	- 5.05	32.79
1987-88	1366.01	4.32	32.79
1988-89	1568.94	14.86	34.23
1989-90	1547.30	- 1.38	31.67
1990-91	1761.35	13.83	33.43
1991-92	1902.25	7.99	33.92
1992-93	2092.47	9.99	34.74

TABLE - 4.2  
*Percentage Departure of Rainfall*

Year	Annual	South West Monsoon	North East Monsoon
(1)	(2)	(3)	(4)
1982	- 44	- 16	- 43
1983	- 73	2	- 33
1984	- 13	- 13	- 30
1985	- 8	- 17	- 26
1986	- 51	- 21	- 20
1987	- 55	- 31	30
1988	- 15	- 1	- 64
1989	- 30	- 9	- 18
1990	- 28	- 25	- 4
1991	- 39	18	- 21
1992	- 37	15	35
1993	- 08	- 12	32

TABLE - 4.3

*Month-wise Distribution of normal rainfall and average rainfall for last 9 years*

Month	Normal rainfall	1985	1986	1987	1988	1989	1990	1991	1992	1993	Deviation from normal rainfall during 1993
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
January	15.64	63.3	4.1	0.3	1	6	15	14	3.4	0.0	- 15.64
February	16.21	5.2	15.0	0.7	19	0	5	6	1.0	18.1	+ 1.89
March	37.14	41.5	5.3	3.5	49	19	17	34	0.1	21.0	- 16.14
April	109.78	66.7	65.3	57.6	144	107	42	97	44.8	70.6	- 39.18
May	252.42	268.7	122.7	118.8	142	153	489	119	226.1	169.5	- 82.92
June	711.35	861.0	264.4	559.0	585	725	603	1084	813.3	688.8	- 22.55
July	720.71	424.1	318.2	187.8	608	577	652	837	802.3	804.6	83.89
August	433.31	293.2	349.7	394.2	427	354	349	471	503.6	293.2	- 140.51
September	248.57	132.3	261.7	150.7	498	294	106	50	296.5	91.7	-156.87
October	297.28	190.9	156.3	261.2	76	313	326	291	318.4	442.7	145.42
November	162.71	82.6	200.8	214.3	79	87	174	100	338.7	169.1	6.39
December	42.35	52.3	8.9	91.6	25	7	2	3	4.8	49.3	6.95
Total	3047.87	2481.8	1772.4	2039.7	2653	2642	2780	3106	3353	2818.6	- 229.27
Average	253.98	206.82	147.7	169.98	221	220	232	259	279.41	234.9	- 19.08

TABLE - 4.4

*District-wise Average monthly rainfall in (mm) for the year 1993*

Sl. No.	District	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1.	Thiruvananthapuram	0	5.9	27.3	113.8	190.6	416.9	330.2	61.2	55.8	324.0	466.2	103.8	2095.7
2.	Kollam	0	50.3	49.1	158.6	179.8	571.0	587.3	204.7	162.3	477.3	368.0	91.1	2899.5
3.	Alappuzha	0	18.1	9.2	53.9	184.6	757.0	767.4	184.6	142.2	581.5	253.7	51.2	3003.4
4.	Pathanamthitta	0	29.3	41.3	161.2	287.5	630.9	718.5	193.9	85.9	549.2	247.2	47.6	2992.5
5.	Kottayam	0	14.6	13.2	76.5	222.1	837.6	816.1	174.1	109.6	593.4	190.1	60.2	3107.5
6.	Idukki	0	42.4	23.4	107.5	141.0	562.3	910.3	527.5	165.3	440.3	137.4	31.3	3087.7
7.	Ernakulam	0	32.8	18.0	75.9	216.5	837.1	908.1	262.4	115.5	487.6	103.5	49.4	3118.8
8.	Thrissur	0	10.2	07.8	37.4	221.6	909.3	878.5	242.7	90.3	539.0	103.6	15.0	3055.4
9.	Palakkad	0	21.8	01.0	21.5	111.4	361.8	560.7	301.4	33.3	355.5	96.1	13.5	1877.9
10.	Kozhikode	0	2.0	0.3	15.0	134.9	846.5	862.9	310.5	52.6	384.3	120.1	57.3	2785.5
11.	Malappuram	0	22.7	22.3	56.3	137.3	589.6	693.8	304.2	46.3	407.0	117.3	9.4	2406.2
12.	Waynad	0	3.9	23.3	81.4	114.3	488.9	828.0	467.2	62.1	334.6	37.2	31.6	2472.5
13.	Kannur	0	0	0.3	0.4	101.9	844.0	1086.5	426.6	74.4	337.6	49.5	108.4	3029.6
14.	Kasaragod	0	0	57.2	29.0	130.1	990.5	1316.1	443.4	88.5	386.1	77.2	20.6	3538.7

Source : Meteorological Centre, Observatory, Thiruvananthapuram.



TABLE - 4.5

*Weekly Rainfall of Kerala in cm. for Consecutive Weeks of North East Monsoon  
(October - December) for last five years*

Year	Week in the Season											
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1989	3	13	5	5	9	2	1	0	0	0	0	0
1990	3	11	16	12	1	2	1	1	0	0	0	0
1991	5	3	5	13	4	4	3	0	0	0	0	0
1992	13	4	2	4	5	21	43	0	0	0	0	0
1993	15	14	7	7	4	5	6	2	1	4	0	0

Note : Week refers to the seven days from Thursday to Wednesday.

Source : Meteorological Centre, Thiruvananthapuram.

TABLE - 4.6

*Weekly rainfall in cm. in Kerala for Consecutive Weeks of South West Monsoon  
(June - September) for last five years*

Year	Weeks in the Season																	
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th
1989	5	11	22	11	19	5	5	12	29	8	9	9	11	5	3	6	12	8
1990	14	15	12	16	19	13	13	6	10	15	6	3	3	4	0	3	2	0
1991	29	34	23	15	17	21	15	11	29	11	12	16	7	1	0	1	2	3
1992	20	17	17	29	13	17	6	24	27	17	11	11	5	13	11	2	3	12
1993	8	30	17	8	123	25	19	15	16	13	4	9	3	4	2	1	1	3

Note : Week refers to seven days from Thursday to Wednesday

Source : Meteorological Centre

TABLE - 4.7

*Land Use Pattern in Kerala (Area in Ha.)*

Classification of Land	1990-91		1991-92		Change in area between 1990-91 and 1991-92	
	Actual	%	Actual	%		%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Total Geographical area	3885497	100	3885497	100	-	0
2. Forest	1081509	27.83	1081509	27.83	-	0
3. Land put to non-agricultural uses	297381	7.65	301371	7.76	3990	0.10
4. Barren and Uncultivated Land	58308	1.50	55136	1.42	- 3172	- 0.08
5. Permanent Pastures and Grazing land	1912	0.05	1779	0.046	- 133	- 0.004
6. Land under miscellaneous tree crops not included in net area sown	34375	0.88	34294	0.88	- 81	- 0.002
7. Cultivable waste	94608	2.43	92792	2.38	- 1816	- 0.05
8. Fallow other than current fallow	26466	0.68	26728	0.69	262	0.007
9. Current Fallow	44164	1.14	43921	1.13	- 243	- 0.0062
10. Net area sown	2246774	57.87	2247967	57.86	1193	0.04
11. Area sown more than once	773206	19.90	773149	19.90	- 57	- 0.0015
2. Total cropped area	3019980	77.72	3021116	77.75	1136	0.03
3. Cropping intensities	-	134.41	-	134.39	-	- 0.02

Source : Directorate of Economics & Statistics

TABLE - 4.8

Area, production and productivity of principal crops in Kerala  
(Area in Ha., production in tonnes and productivity in Kg./ha)

Sl. No.	Crops	Area						Production						Productivity					
		1990-91	1991-92	1992-93	Change over previous year	%	1990-91	1991-92	1992-93	Change over previous year	%	1990-91	1991-92	1992-93	Change over previous year	%			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
1.	Rice	559450	541327	537608	-3719	0.68	1086578	1050350	1084878	24528	2.31	1942	1959	2018	59	3.01			
2.	Jowar	4527	5152	5152	0	0	2305	2623	2351	-272	-10.36	509	509	456	-53	-10.41			
3.	Ragi	1272	1635	1603	-32	-1.95	1042	1323	1157	-166	-12.54	819	809	722	-87	-10.75			
4.	Other millets	1455	1936	1917	-19	-0.98	1131	1505	1079	-426	-28.30	777	777	563	-214	-27.5			
5.	Pulses	23385	22921	17892	-5029	-21.94	16544	16185	11340	-4845	-29.93	707	706	634	-72	-10.19			
6.	Sugar cane	7625	6237	6237	0	0	51977	42822	42578	-244	-0.56	6816	6866	6827	-39	-0.56			
7.	Pepper	168507	178126	170672	-7454	-4.18	46802	50309	48858	-1451	-2.88	278	282	286	4	1.41			
8.	Chillies	551	531	551	20	3.76	544	526	517	-9	-1.71	987	991	938	-53	-5.34			
9.	Binger	14143	15400	14690	-710	-4.6	45685	50274	47713	-2561	-5.09	3230	3265	3248	-17	-0.52			
10.	Turmeric	2669	2738	2733	-5	-0.18	5123	5230	5256	26	0.49	1919	1910	1923	13	0.68			
11.	Cardamom	66890	43670	39930	-3740	-8.56	3450	3450	2424	-1026	-29.73	52	79	61	-18	-22.78			
12.	Betalnuts	64817	63437	60302	-3135	-4.94	13074	13116	13206	90	0.68	201706	206756	218998	12242	5.92			
13.	Banana	22099	22602	22850	248	1.09	295145	303090	303435	345	0.11	13355	13410	13279	-131	-0.97			
14.	Other plantains	43538	42467	42283	-184	-0.43	196790	193315	193829	514	0.26	4519	4552	4584	32	0.70			
15.	Cashewnut	115621	112059	110168	-1891	-1.68	102771	104601	90979	-13622	-13.02	888	933	826	-107	-11.46			
16.	Tapioca	146493	141881	129697	-12184	-8.58	2803001	2657865	2419788	-23807	-10.09	19134	18733	18657	-76	-0.40			
17.	Sweet potato	2603	2457	2404	-53	-2.15	21611	19951	19051	-900	-4.51	8302	8120	7925	-195	-2.40			
18.	Ground nut	12819	14041	14322	281	2.00	9527	10436	11584	1148	11.00	742	743	809	66	8.88			
19.	Sesamum	9433	9006	8963	-43	-0.47	2063	1986	1962	-24	-1.20	218	221	219	-2	-0.90			
20.	Coconut*	870022	863061	860504	-2557	-0.29	4232	4641	4931	290	6.24	4864	5377	5730	353	6.56			
21.	Cotton	10731	11922	11922	0	0	1732	19242	19242	0	0	1614	1614	1614	0	0			
22.	Tobacco	252	204	173	-31	-15.19	472	382	340	-42	-10.99	1873	1873	1965	92	4.91			
23.	Coffee	75057	84016	74794	-9222	-10.97	35700	20040	25000	4960	24.75	475	239	334	95	39.75			
24.	Tea	34706	34623	34622	-1	-0.002	63416	66080	56250	-9830	-14.87	1827	1909	1625	-284	-14.87			
25.	Rubber	384000	425768	428864	3096	0.72	307521	343109	368648	25539	7.44	800	806	860	54	6.69			

Source :- Directorate of Economics & Statistics.

\* Production in million nuts and productivity in nuts/ha.



TABLE - 4.9

*Index of Area, production and productivity of Crops in Kerala :*  
*Base average of Triennium ending 1979-80*

	Area			Production			Productivity					
	Average of 3 years 1976-77 to 1978-79	1990-91	1991-92	1992-93	Average of 3 years 1976-77 to 1978-79	1990-91	1991-92	1992-93	Average of 3 years 1976-77 to 1978-79	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>A. All Crops (A+B)</b>	101.48	103.49	104.03	102.28	100.17	85.31	127.90	129.29	98.71	82.40	122.95	126.40
<b>A. Food Grains (1+2)</b>	102.55	69.24	67.22	66.19	98.67	84.69	82.46	83.91	96.22	122.31	122.67	126.77
1. Cereals	102.59	69.40	67.36	66.90	98.85	84.41	82.39	84.26	96.35	121.62	122.31	125.94
2. Pulses	101.53	65.45	64.15	50.07	87.06	89.55	87.60	61.38	85.25	136.82	136.55	122.59
<b>B. Non Food Grains (3 to 8)</b>	101.00	119.24	120.96	118.89	100.52	85.45	138.44	139.82	99.52	71.66	114.45	117.60
3. Oil Seeds	101.66	128.15	127.26	126.93	103.48	134.02	148.67	157.98	101.79	104.58	116.82	124.46
4. Plantation Crops	95.04	159.51	175.30	173.10	93.84	193.57	194.14	204.14	98.74	124.48	110.74	117.93
5. Condiments & Spices	100.65	133.39	127.65	121.33	89.40	136.17	148.77	131.17	88.82	102.08	116.50	108.11
6. Drugs and Narcotics	82.29	78.55	77.83	77.37	89.54	58.22	36.58	34.83	108.85	74.11	46.99	45.0
7. Fruits and Vegetables	103.20	80.69	81.00	78.57	105.94	75.05	88.32	82.45	102.65	93.01	109.03	104.93
8. Miscellaneous Crops	103.59	141.78	140.26	140.26	98.02	103.74	106.87	106.92	94.62	73.16	76.19	76.22

TABLE - 4.10

*Area, Production and Productivity of Rice in Kerala & India*

Year	Area ('000 ha.)		Production ('000 tonnes)		Productivity (Kg/ha.)	
	Kerala	India	Kerala	India	Kerala	India
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1980-81	801.699	40152	1271.962	53631	1587	1336
1985-86	678.281	41137	1173.051	63825	1729	1552
1990-91	559.450	42690	1086.578	74290	1942	1740
1991-92	541.327	42640	1060.350	74680	1959	1751
1992-93	537.608	41640	1084.878	72610	2018	1744

*Source : Directorate of Economics and Statistics, Ministry of Agriculture.  
Government of India and Directorate of Economics & Statistics.  
Government of Kerala.*

TABLE - 4.11

*Season-wise Area, Production and Productivity of Rice in Kerala  
(Area in ha., Production in tonnes and productivity in Kg/ha.)*

Season	Area		Production		Productivity	
	1991-92	1992-93	1991-92	1992-93	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Autumn	218767	218751	401610	435794	1835	1992
Winter	253981	244056	507525	476748	1998	1953
Summer	68579	74761	151215	172336	2205	2305
All Seasons	541327	537608	1060350	1084878	1959	2018

*Source : Directorate of Economic & Statistics.*

TABLE - 4.12

**District-wise Area, Production and Productivity of Rice in Kerala**  
(Area in ha., Production in tonnes and productivity in Kg/ha.)

District	Area				Production				Productivity					
	1991-92	(2)	(3)	(4)	1992-93	(5)	(6)	(7)	1991-92	(8)	(9)	1992-93	(10)	(11)
			Change over previous year	%		Change over previous year	%		Change over previous year	%		Change over previous year	%	
1. Thiruvananthapuram	19604	18361	- 1243	- 6.34	33553	34816	1263	3.76	1712	1896	184	10.74		
2. Kollam	27619	28460	841	3.04	46086	54576	8490	18.42	1669	1918	249	14.91		
3. Pathanamthitta	13153	12892	- 261	- 1.98	30517	33826	3309	9.78	2320	2624	304	13.10		
4. Alappuzha	55872	53344	-2528	- 4.52	116089	123178	7089	6.11	2078	2309	231	11.11		
5. Kottayam	23855	25448	1593	6.69	55166	60798	5632	10.21	2313	2389	76	3.28		
6. Idukki	4851	4397	- 454	- 9.35	10932	9188	- 1744	- 15.95	2254	2090	- 164	- 7.27		
7. Ernakulam	65001	66158	+ 1157	1.77	109484	113927	4443	4.05	1684	1722	38	2.26		
8. Thrissur	69065	67151	- 1914	- 2.77	121723	119337	- 2386	- 1.96	1762	1777	15	0.85		
9. Palakkad	147066	146095	- 971	0.66	344738	335646	- 9092	- 2.64	2344	2297	- 47	- 2.00		
10. Malappuram	50361	50908	547	1.09	80346	82132	1786	2.22	1595	1613	18	1.13		
11. Kozhikode	11535	10755	- 780	- 6.76	13781	13008	- 773	5.61	1195	1209	14	1.17		
12. Waynad	19582	21135	1553	7.93	42,803	50,337	7,534	17.60	21,86	23,82	1,96	8.97		
13. Kannur	20333	18334	-1999	-9.83	31249	28750	-2499	-7.99	1557	1568	31	2.02		
14. Kasaragod	13430	14170	740	5.51	23883	25359	1476	6.18	1778	1790	12	0.67		
<b>State</b>	<b>541327</b>	<b>537608</b>	<b>-3719</b>	<b>-0.69</b>	<b>1060350</b>	<b>1084878</b>	<b>24528</b>	<b>2.31</b>	<b>1959</b>	<b>2018</b>	<b>59</b>	<b>3.01</b>		

Source : Directorate of Economics &amp; Statistics

TABLE - 4.13

## District-wise Area, Production and Productivity of HYV of rice in Kerala 1992-93

Sl. No.	District	Autumn			Winter			Summer			Total		
		Area (Ha.)	Production (tonnes)	Productivity (Kg/ha.)	Area (Ha.)	Production (tonnes)	Productivity (Kg/ha.)	Area (Ha.)	Production (tonnes)	Productivity (Kg/ha.)	Area (Ha.)	Production (tonnes)	Productivity (Kg/ha.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Thiruvananthapuram	4487	9532	2124	2906	5470	1882	61	50	820	7454	15052	2019
2.	Kollam	11596	23975	2068	2069	4326	2091	154	188	1221	13819	28439	2062
3.	Pathanamthitta	2732	5557	2034	2502	6162	2463	4034	14254	3533	9268	25973	2802
4.	Alappuzha	14133	29732	2104	10403	31220	3001	15876	45194	2847	40412	106146	2627
5.	Kottayam	7085	16551	2336	6274	14669	2338	8868	23025	2596	22227	54245	2441
6.	Idukki	129	287	2225	667	1451	2175	-	-	-	796	1738	2183
7.	Ernakulam	10573	19747	1868	3532	6842	1937	7552	13319	1764	21657	39908	1843
8.	Thrissur	4701	8093	1722	5346	10498	1964	7178	17359	2418	17225	35950	2087
9.	Palakkad	7777	19520	2510	882	1808	2050	750	1523	2031	9409	22851	2429
10.	Malappuram	5671	11092	1956	3464	6449	1862	3244	7645	2357	12379	25186	2035
11.	Kozhikode	816	1076	1319	769	1028	1337	1014	1708	1684	2599	3812	1467
12.	Wayanad	-	-	-	4585	12998	2835	2567	6968	2714	7152	19966	2792
13.	Kannur	5935	10057	1695	1459	2634	1805	73	130	1781	7467	12821	1717
14.	Kasaragod	2455	5452	2221	559	1186	2122	218	437	2005	3232	7075	2189
	State	78090	160671	2058	45417	106741	2350	51589	131800	2555	175096	399212	2280

Source : Directorate of Economics &amp; Statistics

TABLE - 4.14

*Area, Production and Productivity of Coconut in Kerala and India*

Year	Area ('000 ha.)		Production (million nuts)		Productivity (nuts/ha.)	
	Kerala	India	Kerala	India	Kerala	India
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1985-86	704.68	1225.6	3377	6770.3	4792	5524
1990-91	870.02	1513.9	4232	9700.2	4864	6407
1991-92	863.06	1518.0	4641	10043.2	5377	6616
1992-93	860.50	--	4931	--	5730	--

Source : Directorate of Economics and Statistics, Government of India and Directorate of Economics and Statistics, Government of Kerala.

TABLE - 4.15

*Area, Production and Productivity of Pepper in Kerala & India*

Year	Area ('000 ha.)		Production ('000 tonnes)		Productivity (Kg/ha.)	
	Kerala	India	Kerala	India	Kerala	India
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1987-88	146.08	149.93	46.82	48.09	320	321
1988-89	157.01	160.74	43.24	44.16	275	275
1989-90	167.10	171.49	54.14	55.19	323	322
1990-91	168.51	173.43	46.80	47.95	278	276
1991-92	178.13	--	50.31	--	282	--
1992-93	170.67	--	48.86	--	286	--

Source : Directorate of Economics and Statistics, Government of India and Directorate of Economics and Statistics, Government of Kerala.

TABLE - 4.16

*Area, Production and Productivity of Cashewnut in Kerala*

Year	Area ('000 ha.)	Production ('000 tonnes)	Productivity (Kg/ha.)
1980-81	141.27	81.90	580.00
1985-86	137.74	80.20	582.25
1989-90	123.66	106.25	859.20
1990-91	115.62	102.77	888.86
1991-92	112.05	104.60	933.00
1992-93	110.17	90.97	826.00
<b>India *</b>			
1992-93	539.72	349.39	647.35

Source : Directorate of Economics & Statistics, Government of Kerala

\* Source : Directorate of Cashew Development, Government of India

TABLE - 4.17

*Production and Sale of Crude Palm Oil in Kerala*

Year	Quantity of oil Produced	Quantity sold by Oil Palm India Ltd. (tonnes)	Revenue (Rs. in lakhs)
(1)	(2)	(3)	(4)
1987-88	1105	960	131.12
1988-89	2035	2196	314.56
1989-90	2108	1986	307.06
1990-91	2518	2478	376.98
1991-92	2323	2482	518.35
1992-93	2232	2121	403.61

₹

*Source : Oil Palm India Limited.*

TABLE - 4.18

## Area, Production, Productivity and Export of Plantation Crops for the Last Five Years

	1988-89		1989-90		1990-91		1991-92		1992-93	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>Area (Hect.)</b>										
Tea	34,694	414,347	34,671	414,953	34,706	416,563	34,623	418,961	34,622	419,600
Coffee	75,057	243,909	74,794	246,794	75,057	246,794	84,016	246,794	74,794	246,794
Rubber	383,562	440,584	396,467	460,341	384,000	475,083	425,768	488,514	428,864	499,374
Cardamom	74,000	105,000	44,008	81,003	66,890	81,003	43,670	81,000	39,930	81,000
<b>Production (Tonnes)</b>										
Tea	65,771	700,014	55,347	697,700	63,416	717,400	66,080	742,500	56,250	702,800
Coffee	47,425	215,000	21,200	118,053	35,700	169,726	20,040	180,000	25,000	161,500
Rubber	238,414	259,172	275,397	297,300	307,521	329,615	343,109	366,745	368,648	393,490
Cardamom	2,820	4,250	1,900	3,100	3,450	4,750	3,450	5,000	2,424	3,000
<b>Productivity (Kg/Hect.)</b>										
Tea	1,896	1,689	1,597	1,638	1,827	1,722	1,909	1,772	1,625	1,675
Coffee	665	979	298	531	475	764	239	810	334	727
Rubber	967	974	1,025	1,029	800	1,076	806	1,130	860	1,154
Cardamom	44	40	43	38	52	59	79	62	61	37
<b>Export * Qty. (Tonnes)</b>										
Tea	47,300	201,747	42,800	212,662	39,000	210,024	45,500	202,918	35,800	170,820
Coffee	98,266	98,266	134,052	134,052	100,110	100,110	111,457	111,457	113,150	113,150
Rubber	-	-	-	-	-	-	-	-	-	-
Cardamom	787	787	180	180	400	400	553	553	175	175
<b>Export Value (Rs./Cro.)</b>										
Tea	115.10	619.00	140.20	848.98	182.90	1,113.35	208.90	1,134.55	164.60	9242.04
Coffee	337.72	337.72	363.15	363.15	278.89	278.89	349.01	349.01	379.03	379.03
Rubber	-	-	-	-	-	-	-	-	-	-
Cardamom	10.29	10.29	3.07	3.07	10.89	-10.87	16.07	16.07	6.80	6.80

(\* Since State-wise export figures are not available, Kerala figures refer to South India)

Notes: 1. Figures relating to tea refer Calendar Year. 2. Productivity for Coffee and Rubber is based on bearing area and tappable are respectively.  
 3. the area figures for Coffee, Cardamom and Rubber from the year 1990-91 are repeated.

TABLE - 4.19

*Area, Production and Productivity of Rubber, Kerala & India*

Year	Kerala			India		
	Area ('000 ha.)	Production (M.T)	Productivity (Kg/ha.)	Area ('000 ha.)	Production (M.T)	Productivity (Kg/ha.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1986-87	342.6	202,129	924	388.6	219520	926
1987-88	355.0	216,562	942	406.4	235197	944
1988-89	383.562	233,414	967	440.5	259172	974
1989-90	396.467	275,397	1025	460.341	297300	1029
1990-91	407.821	307,521	1079	475.083	329615	1076
1991-92	419.174	343,109	1139	488.514	366745	1130
1992-93	428.864	368,648	1164	499.374	393490	1154

Source : The Rubber Board, Kottayam.

TABLE - 4.20

*Production, Import and Consumption of Rubber (Metric Tonnes)*

Item	India					
	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Production</b>						
Natural Rubber	235197	259172	297300	329615	366745	—
Synthetic Rubber	44468	54389	53482	57293	424448	—
Reclaimed Rubber	40535	40960	44500	45785	54185	—
<b>Import</b>						
Natural Rubber	53685	52835	44445	51942	14500	—
Synthetic Rubber	30100	33950	39000	51880	39800	—
<b>Consumption</b>						
Natural Rubber	287480	313830	341840	364310	350150	414105P
Synthetic Rubber	76410	84150	93550	104735	105650	107440
Reclaimed Rubber	41140	41200	43935	52500	54015	62470
Total Consumption	405030	439180	429325	521545	509815	584015 P

Source : Rubber Board, Kottayam

P : Provisional



TABLE - 4.21

*Average Market Price of Indigenous & Natural Rubber in Kottayam Market (Rs./Quintal)*

Year & Month		RMA - 4
1985-86		1732
1986-87		1660
1987-88		1791
1988-89		1815
1989-90		2131
1990-91		2129
1991-92		2141
1992-93		2550
April	1993	2552
May	1993	2606
June	1993	2737
July	1993	2681
August	1993	2668
September	1993	2564
October	1993	2390
November	1993	2412
Average		2576

*Source : Rubber Board, Kottayam*

TABLE - 4.22

## Selected Indicators of Agricultural Development

Sl. No.	Programme	Unit	1980-81	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	Change over 1980-81
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>1. Fertiliser Consumption</b>										
a)	Nitrogen	Tonnes	41697	70730	80238	78638	93805	82874	83926	42229
b)	Phosphorus	"	23402	49350	50884	47252	55420	51109	47250	23848
c)	Potash	"	32432	62410	82805	86564	95155	91954	71792	39360
<b>2. Plant Protection</b>										
a)	Seed treated	000 Tonnes	5288	2618	-	-	-	-	-	- 5288
b)	Area under seed treatment	Lakh ha.	0.622	0.374	0.380	0.483	0.355	-	-	- 0.622
c)	Fungicide (Liquid & Solid) in terms of technical grade	Tonnes	304.17	488.81	469.08	445.97	465.85	374.46	349.01	44.84
d)	Insecticides (Liquid & Solid) in terms of technical grade	"	615.76	556.54	667.72	547.08	436.93	325.24	302.17	- 313.59
e)	Weedicides (in terms of technical grade)	"	153.62	25.73	27.68	23.40	29.84	20.46	36.72	- 116.9
f)	Rodenticides (in terms of technical grade)	"	18.52	7.92	11.02	12.55	12.88	4.09	17.65	- 0.87
g)	Area under plant protection coverage	Lakh ha.	10.98	5.366	7.58	6.303	8.310	7.25	8.10	- 2.88
h)	Rodent Control Operation	"	0.63	1.784	0.799	1.055	1.069	0.989	0.81	0.18
i)	Biological Control of Nephantia Sernopa Parasites Liberated	Lakh Nos.	262.59	177.266	216.488	207.47	225.576	233.814	200.53	- 62.06
j)	Weed Control	"	0.775	1.578	1.317	1.040	1.345	1.432	1.39	0.615

TABLE - 4.22 (Continued)

(1.)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
k)	Trees Sprayed for the Control of Coconut leaf disease	Lakh No.	80.774	9.972	--	6.652	51.229	--	--	- 80.775
l)	P.P. equipments distributed	No.	--	845	844	2856	5518	12944	9936	9936
3.	High yielding varieties of paddy seeds distributed from State Seed Farm and other Government agencies	Tonnes	1376.42	2450.22	1980.14	4184	2344	1675	2865.74	1489.32
4.	Quality Planting Material distributed									
a)	Coconut									
	i) W.C.T.	Lakh Nos.	9.265	13.43	12.64	15.94	16.86	13.12	2.81	- 6.455
	ii) T x D	"	4.931	0.30	0.64	0.64	0.90	0.84	0.79	- 4.141
	iii) D x T	"	1.180	0.09	0.14	0.099	0.14	0.12	0.30	- 0.88
b)	Rooted Pepper Cuttings									
	i) Panniyoor 1	Lakh Nos.	8.32	4.98	10.67	13.58	--	--	--	- 8.32
	ii) Other Varieties	"	18.26	12.55	--	--	4549	39.00	35.00	16.74
c)	Cashew layers	"	0.098	0.01	0.15	0.15	0.14	--	0.79	0.692
d)	Nutmeg seedlings	"	0.241	0.05	0.19	0.15	0.66	0.64	0.205	- 0.036
e)	Seedlings	"	0.694	0.56	0.40	0.75	--	--	--	- 0.694
5.	Soil Testing	Lakh Nos.								
a)	Soil samples collected	"	--	235427	253048	233558	237621	239937	257201	257201
b)	Soil sample analysed	"	1.24	204505	220998	235346	212685	213441	186425	186425

Source : Directorate of Agriculture

TABLE - 4.23

*Consumption of fertilizers per ha. of cropped area in Kerala and India (Kg/ha.)*

Year	N fertilizers		P fertilizers		K fertilizers		N : PK ratio	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989-90	256.05	42.72	15.65	17.44	28.67	6.76	58.78	177.0
1990-91	31.06	46.40	18.35	18.35	31.51	7.69	62.29	178.2
1991-92	27.43	--	16.92	--	30.44	--	57.92	--
1992-93	27.78	--	15.64	--	23.76	--	70.51	--

Source : 1) *Fertilizer Statistics, FAI, New Delhi.*  
2) *Directorate of Agriculture, Kerala.*

TABLE - 4.24

*Physical Achievement under Special Component Plan*

Sl. No.	Particulars of benefit given	Unit	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	No. of Colonies benefited	No.	3468	4849	481	2540	2644	1975
2.	No. of families benefited	"	111427	150105	--	144069	201025	94605
3.	Area Benefited	Ha.	11656	1178	--	7949.77	6594.117	11470.74
4.	Coconut Seedlings	No.	275986	219894	251561	685519	230994	17513
5.	Rooted pepper cuttings	"	167114	639133	404230	595880	385229	76885
6.	Clove seedlings	"	1890	4502	2540	773	2958	5139
7.	Mango Grafts	"	898	5994	3289	6870	8043	1184
8.	Nutmeg seedlings	"	--	--	16238	4000	6873	1076
9.	Paddy seeds	Kg.	--	3036	7850	3248	--	--
10.	Land reclamation work	M3	--	--	--	5968.92	19560	--
11.	Soil conservation work	Ha.	--	24.00	--	17814.26	17600	--
12.	Construction of new well	M2	--	--	--	58086	--	--
13.	Knapsack sprayers	No.	4079	520	3370	611	794	561
14.	Rocker sprayers	"	1088	--	1073	392	322	358
15.	Power sprayers	"	17	--	23	13	--	12
16.	Paddy thrashers	"	--	--	--	14	10	2
17.	Power Tillers	"	77	61	63	21	15	8
18.	Tractor	"	6	7	1	14	11	43
19.	Metallic storage bin	"	--	--	--	1623	2045	1161
20.	Rubber roller	"	--	--	--	3	10	1
21.	Construction of Biogas Plant	"	--	--	--	224	252	558
22.	Smokeless oven	"	--	--	--	207	263	430
23.	Renovation of irrigation well	"	165	210	85	587	1624	861

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
24.	Pump House	"	--	--	--	6	--	--
25.	Agro Service Centre	"	29	14	47	8	4	8
26.	Pumpsets installed	"	50	19	26	--	180	--
27.	Groundnut Seeds	Kg.	--	--	20	--	--	--
28.	Vegetable Seeds	pkt.	11438	6622	612	6058	4394	11641

Source : Directorate of Agriculture.

TABLE - 4.25

*Physical Achievement under Tribal Sub Plan*

Sl. No.	Particulars of benefit given	Unit	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	No. of Colonies benefited	Nos.	3468	603	225	417	395	424
2.	No. of families benefitted	"	12175	13579	5740	12077	6871	6888
3.	Area benefitted	Ha.	9780	2595	1068.87	3226.89	2133.15	4390.09
4.	Coconut seedlings	Nos.	42731	61367	36029	91782	59952	4543
5.	Rooted pepper cuttings	"	82160	252818	123179	79805	53105	45208
6.	Clove seedlings	"	900	--	--	--	3120	323
7.	Mango Grafts	"	1698	--	965	443	50	75
8.	Nutmeg seedlings	"	--	--	322	--	120	123
9.	Paddy seeds	Kg.	--	1010	680	375	--	--
10.	Land reclamation work	M3	--	--	1600	--	--	--
11.	Soil conservation work	Ha.	--	2400	--	--	--	--
12.	Construction of mud wall	M3	--	--	--	10410	--	--
13.	Knapsack sprayers	No.	67	422	--	6	68	222
14.	Rocker sprayers	No.	242	363	34	25	32	120
15.	Power sprayers	"	3	--	--	--	--	--
16.	Paddy threshers	"	--	--	--	--	--	--
17.	Power tillers	"	12	5	--	--	5	--
18.	Tractors	"	3	7	--	--	1	--
19.	Mettalic storage bins	"	--	--	32	--	16	32
20.	Rubber rollers	"	--	--	--	--	3	--
21.	Construction of Bio-gas Plants	"	--	--	--	--	11	5
22.	Smokeless ovens	No.	--	--	--	--	58	--
23.	Renovation of irrigation wells	"	16	25	14	8	102	--
24.	Pump Houses	"	--	--	--	--	--	--
25.	Agro service centres	No.	3	5	--	2	--	--
26.	Pump sets installed	"	10	--	--	1	5	--
27.	Groundnut seeds	Kg.	--	--	1400	1600	2000	--
28.	Vegetable seeds	Pkt.	6950	900	200	1192	762	--

Source : Directorate of Agriculture.

## Animal Husbandry

4.61 As a supplementary avocation in the highly dispersed settlement pattern of Kerala and in view of potential for sustainability under the management of women, livestock rearing has been rightly recognised as an important instrument for rural prosperity. The Agricultural policy announced by the State also lays emphasis on the need for developing animal husbandry on a sound footing for augmenting the income and employment opportunities in the farm front. Consequent to the fast changes taking place in the land use pattern and in the social outlook towards farming, livestock sector is facing new challenges for sustenance as a viable activity. Even activities like dairying and poultry rearing which were considered as easy and convenient sources of additional income for a very long time are being pushed out in the changing agricultural scenario. The livestock development efforts therefore need a new orientation from a commercial angle for all round improvement in productivity. The livestock population has to be contained within the carrying capacity of the land based resources and at the same time the additional output for meeting the growing demand has to be secured through herd improvement and better management.

4.62 According to the Livestock census 1987, Kerala's livestock wealth included 37 lakhs of bovine, 15.81 lakhs of goats, 1.37 lakhs pigs and 179 lakhs fowls. Out of the 34.24 lakh cattle population, 17.02 lakhs are crossbred animals which include 11.57 lakh breedable females and 1.99 lakh males. The trend in livestock population over the quinquennium 1982 to 1987 is presented in table - 4.26.

TABLE - 4.26

### Trend in Livestock Population in the State

Year	Over the Quinquennium							
	Cattle	Breedable Crossbred Females	Crossbred Males	Buffaloes	Goats	Pigs	Poultry	Ducks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1982	30.97	9.13	2.17	4.09	20.04	1.27	145.1	5.33
1987	34.24	11.57	1.99	3.29	15.81	1.37	170.92	8.46

Source: Livestock Census 1982 and 1987.

4.63 Livestock Development activities in Kerala were mostly centered around the crossbreeding programme. The herd improvement efforts vigorously pursued by associating the agencies concerned during the last 3 decades paid rich dividends for upgrading the genetic base of dairy cattle and set the ground for increased milk production. It is the frozen semen technology pioneered by the Indo-Swiss Project

and later perfected by the KLD Board which paved the way for this silent revolution. The artificial insemination programme that was launched, based on this technology, was a joint effort of the KLD Board which undertook the responsibility for large scale production and supply of frozen semen and the Department of Animal Husbandry which implemented the Artificial Insemination Programme through the ICD Projects. Till the end of 1992-93 ICD projects were established which supported 1638 artificial insemination centres. The number of inseminations conducted through these centres during 1992-93 was 12.34 lakhs. The new births through artificial insemination was 2.6 lakhs during 1992-93. Progress of the AI Programme is given in table - 4.27.

TABLE - 4.27

Number of Artificial Insemination done and the calvings recorded during the period from 1986-87 to 1992-93.

Years	AI Done	Calvings Recorded
1986-87	10,72,468	1,57,616
1987-88	11,70,887	1,95,929
1988-89	12,03,755	2,38,473
1989-90	12,51,492	2,43,055
1990-91	13,12,613	2,21,876
1991-92	13,76,761	2,62,549
1992-93	12,33,760	2,61,286

Source: Animal Husbandry Department

4.64 Apart from the technology and input support provided for the AI Programme the KLD Board is also engaged in livestock research and development activities like embryo transfer, production of liquid nitrogen, fodder seed production and training. The Board maintains 3 bull stations one each at Mattupetty, Dhoni and Kulattupuzha. 29.43 lakh doses of frozen semen were produced by the Board during 1992-93 as against 26.57 lakh produced in 1991-92. Year-wise details are given in table - 4.28.

TABLE - 4.28

Production and Distribution of Frozen Semen and Artificial Inseminations conducted from 1986-87 to 1992-93.

Period	(Lakh doses)		
	Production of frozen semen	Distributed inside the State	Distributed outside the State
1986-87	18.92	13.64	2.74
1987-88	15.29	13.80	2.44
1988-89	20.12	13.64	6.48
1989-90	23.46	14.29	7.80
1990-91	25.52	15.92	6.75
1991-92	26.57	15.92	8.15
1992-93	29.43	14.61	9.90

4.65 Unfortunately the increase in the production of frozen semen is not seen reflected in its utilisation. The utilisation of frozen semen during 1992-93 declined to 14.61 lakhs from 15.92 lakhs in 1991-92 resulting in a sharp fall of 1.31 lakh doses accompanied by a synchronising reduction of 1.24 lakhs in the number of artificial inseminations. This is despite an increase of 145 in A.I. Centres during the year. This clearly shows that the infrastructure built up by the State is not optimally utilised. A detailed account of the production and utilisation of frozen semen and the number of artificial inseminations done during the last five years is furnished in table - 4.29.

TABLE - 4.29

*Production and utilisation of Frozen Semen and the Number of Artificial Inseminations conducted during the period from 1986-87 to 1992-93*

Year	Production of frozen semen (lakh doses)	Utilisation of frozen semen in Kerala (lakh doses)	No. of artificial inseminations conducted (lakh No.)
(1)	(2)	(3)	(4)
1986-87	18.92	13.64	12.96
1987-88	15.29	13.80	13.11
1988-89	20.12	13.64	12.96
1989-90	23.46	14.29	13.58
1990-91	25.52	15.95	15.00
1991-92	26.57	15.92	15.12
1992-93	29.43	14.61	13.88

Source: KLD Board

4.66 While the KLD Board is responsible for the production and supply of frozen semen, the A.I. service is rendered by various agencies. The Department of Animal Husbandry which controls 1635 A.I. Centres continues to hold the lead. Centres operated by other agencies like Milk Unions and private agencies such as the TATA TEA accounts for 213 and the total number of A.I. Centres in the State at the end of 1991-92 was 1848. Agency-wise distribution of A.I. centres is given in table - 4.30.

TABLE - 4.30

*A.I. Centres in the State during 1992-93*

Department/ Institution	No. of A.I. Centres
Department of Animal Husbandry (Both ICDP and Non-ICDP)	1635
Department of Dairy Development	87
APCOS	61
Tata Tea	27
Other Voluntary Agencies	38
Total	1848

Source: KLD Board

4.67 The production of various livestock products during 1992-93 was in keeping with the upward trend maintained all throughout the plan periods. Milk production increased to 18.89 lakh MTs. during 1991-92. Consequently the per capita availability of milk has also increased from 167 gms in 1991-92 to 175 gms. in 1992-93. The increase in egg production from 1605 million to 1661 million in 1992-93 was also impressive. Meat production also increased from 120645 MT to 131000 MT during the year under review. However this estimate takes into account only the authorised slaughters in the State. The annual flow of cattle for slaughter purpose is reported to be around 9,00,000 from the neighbouring State and the actual production of meat in the State should therefore be much more than those recorded which accounts for only 1/3 of the total. The relevant production details are furnished in the table - 4.31.

TABLE - 4.31

*Year-wise estimates of Milk, Egg and Meat production in Kerala during the past five years (from 1988-89 to 1992-93)*

Year	Milk (Lakh tonnes)	Egg (Million Nos.)	Meat Other than Poultry (tonnes)	Poultry Meat (tonnes)
(1)	(2)	(3)	(4)	(5)
1988-89	15.07	1470	88386	18832
1989-90	16.00	1500	90000	20000
1990-91	16.90	1550	95000	22000
1991-92	17.85	1605	96645	24000
1992-93	18.89	1661	105000	26000

Source: Department of Animal Husbandry.

4.68 Though the infrastructure and supporting facilities built up over the years helped in attaining a breakthrough in the production of milk, the productivity remained far below the potential. The average productivity of crossbreds in Kerala is 5.26 Kg. which is below the potential of 8 to 10 Kg. easily attainable through better management. Kerala State has a very fragile fodder base to support a vibrant dairy industry. Another grey area in cattle management is in regard to cattle feed supply. The supplies are not only inadequate but also exorbitantly costly.

4.69 Production and distribution of fodder seed received considerable attention during 1992-93. The KLD Board was able to collect 68.30 MT of fodder seed after quality testing. From the Dhoni farm 1108 Kg. nucleus seeds were distributed to certified seed growers and 51.58 MTs. of fodder seeds were distributed to the developmental agencies like the



Department of Dairy Development and Milk Unions during the year.

4.70 Under the central sector scheme of progeny testing for the selection of superior cross breeding bulls, 40 cross breeding bulls were tested and 57082 test inseminations were carried out during the year.

4.71 The animal health care programmes are implemented by the Department of Animal Husbandry through the network of Veterinary Institutions comprising Veterinary Polyclinics, Veterinary Hospitals, Mobile Farm Aid Units and District Veterinary Centres. The reduction in the frequency of outbreak of diseases and also in the number of cases treated by veterinary institutions during the year under review points to the comfortable animal health cover prevalent in the State. During the year only 32.9 lakh cases were attended against 37.83 lakh cases in the previous year and 38.67 lakh cases in the year before. Similarly in the case of vaccinations also there was considerable reduction in the number showing a downward trend in the incidence of contagious/infectious diseases among cattle. The number of vaccination during the year has come down to 17.75 lakhs from a high of 20.30 lakhs in the previous year showing a reduction of 12%. The number of A.H. institutions in the State during 1992-93 totalled to 1882. This shows an increase of 94 institutions over the previous year. The setting up of 39 new ICDP sub centres during the year bringing the total ICDP sub-centres in the State to 912 is another commendable achievement deserving special mention. The district-wise distribution of various animal husbandry institutions in the state as on 31-3-1993 is given in Appendix - 4.2. Appendix 4.3 gives a summary of veterinary aid provided and domiciliary services rendered through these institutions during 1993. The steady increase in the production of preventive vaccines shows the increasing realisation about the importance of preventive care side by side with curative measures. The Institute of Veterinary Biologicals, Palode has produced 130 lakh doses of vaccine against various contagious/infectious diseases during 1992-93. The Department organised 174 camps to manage infertility problem in cross-bred animals and 8316 animals were examined and treated. Besides, 40326 rabies vaccination were conducted during the year.

4.72 Kerala, once considered to be the egg basket of South India has lost its position over the years. Eventhough production has been showing an upward trend, the gap between demand and supply is widening. According to the sample survey conducted in 1991-92 the per capita availability of egg in Kerala is estimated as 72 eggs per year including the imports

from the neighbouring states. This may be seen against the standard recommended by nutrition experts which is 180 eggs per adult per year. The survey revealed that more than 47 percent of the households in Kerala maintain poultry almost entirely under the backyard system and that 86 percent of the poultry units are found concentrating on rearing poultry layers. The efforts for commercialising egg production on the lines of neighbouring State have not been successful. The economics of egg production in Kerala is facing serious threat in view of the ever increasing wage and feed cost. This has resulted in large scale import of eggs to meet the requirements. Estimates show that around 400 million eggs are imported into the State from the neighbouring States annually. In view of the fact that poultry rearing is an activity which could be profitably organised as a supplementary income generating activity in households, involving the women folk and utilising their spare time, a thorough overhauling and re-orientation of the existing arrangements with appropriate institutional rearrangements at different levels seems to be an immediate necessity. The inadequate development support provided to this important sector is glaring. Despite growing demand the Departmental Poultry Farms are operating below their capacity. The departmental farms, however, made a slight improvement in the production of chicks during the current year over the previous year. The production figures were 8.07 lakhs for 1990-91, 6.37 lakhs for 1991-92 and 8.83 lakhs for 1992-92. As regards the manufacture of poultry feed the performance of the departmental farms was much lower compared to the previous year. It has plummeted to 369.59 tonnes from a high of 1172 MT in 1991-92.

4.73. Livestock Insurance Scheme introduced through the United India Insurance Company is getting popular among the small and marginal farmers. Under the scheme 67407 calves were enrolled so far and it is targeted to enrol 25000 during 1993-94. The details of progress achieved under this scheme are furnished in table - 4.32.

TABLE - 4.32  
*Year-wise Details of Calf Insurance*

Year	No. of Calves insured under feed subsidy	Amount subsidised (Rs. lakhs)
(1)	(2)	(3)
1986-87	2174	0.983
1987-88	1432	0.654
1988-89	2186	0.992
1989-90	4115	2.007
1990-91	4769	2.385
1991-92	11431	5.717
1992-93	1673	0.800

Source : Department of Animal Husbandry

4.74 The extension support being provided by the Animal Husbandry Department through their different training programmes for transfer of technology to farmers is worth mentioning. Through the 3 Livestock Management Training Centres located at Kodappanakunnu, Aluva and Mundayad and the Poultry Training Institute at Chengannur they could impart training in various animal production practices to 1732 farmers, 1070 women, 1430 unemployed youth, 535 Sc/ST beneficiaries and 5 ex-service personnel during the year.

4.75 The Animal Husbandry Department also implements schemes benefiting the SC and ST families. During the year 1992-93, 3721 Scheduled Caste families and 341 Scheduled Tribe families were benefited.

4.76 The average market prices of the different Livestock products as well as livestock feeds for the last three years are given in Appendix 4.4. Though both the product price and the input price show an increasing trend, the rate of increase in the prices of inputs was higher than product prices.

#### *Dairy Development*

4.77 The policy of systematic artificial insemination programme pursued during the last 3 decades has set the ground for a viable and sustainable dairy industry in Kerala. Despite a large proportion of cross-bred animals (57%), in the breedable stock, the average productivity of milk remains low. Obviously the production potential of the cross bred animals has not been optimised. The reason for this could be traced to the gross inadequacies in two vital areas in regard to production of fodder and concentrate feed within the State. As the production is almost entirely concentrated in the small farm sector, regular extension services covering live stock management, health cover and nutrition of dairy cattle are also important for promoting further growth in the dairy sector. The Dairy Development Department and the Kerala State Co-operative Milk Marketing Federation are engaged in these endeavours.

4.78 Promotion of fodder cultivation is one of the major responsibilities assigned to the Dairy Department. Past experience shows that cultivation of fodder, as a component of the existing cropping system in the homesteads, is a difficult proposition particularly among small and marginal farmers. Commercial fodder production initiated by the Department involving selected dairy co-operatives and arranging the market tie up through them is the only bright spot in an otherwise gloomy scenario of fodder

development in Kerala. Along with cultivation aspects emphasis is being given for procurement and utilisation of all kitchen wastes, plant residues and foliages for feeding dairy cattle after appropriate treatments. Conservation of fodder material with a view to preserving them for use during lean season is also given importance in the dairy extension programmes.

4.79 During 1992-93, 15 Dairy Societies and 60 private individuals have participated in the commercial fodder production programme. Assistance was provided to these societies to cultivate fodder in an area of 5 ha. of land each and for individuals in an area of 1 ha. each. The two fodder farms at Valiyathura and Kottayam engaged in the production and procurement of fodder have procured 4608 M.T. and 47.5 MT. of fodder besides cultivating fodder in about 88 acres and 7 acres of land respectively during the year. Details of fodder production and procurement are given in Table - 4.33.

TABLE - 4.33

*Production/procurement of fodder seed and area under Fodder Cultivation*

Year	KLD Board		Dairy Department	
	Quantity of seeds produced (MT)	Quantity of seeds supplied to farmers (MT)	Area covered under cultivation (ha.)	Quantity of fodder produced (MT)
(1)	(2)	(3)	(4)	(5)
1988-89	17.03	70.00	1773.00	44325
1989-90	36.16	150.00	4060.00	101500
1990-91	48.01	100.00	3800.00	100000
1991-92	50.73	100.00	3780.00	99500
1992-93	68.30	140.00	6844.00	151000

*Source: KLD Board and Dairy Department*

4.80 Both the Dairy Department and KLD Board have continued their training programmes during 1992-93. In the Training Institute of the K.L.D. Board 478 professionals and technicians and 3128 others were given training in the field of fertility management, frozen semen technology, artificial insemination, progeny testing of breeding bulls, fodder seed production and fodder production programme during the year. In the four Dairy Training Centres run by the Dairy Department, viz., Kozhikode, Palakkad, Kottayam and Thiruvananthapuram, 3910 persons were given training.

4.81 As part of the Dairy extension programme 9000 discussion classes/Seminars and 166

cattle shows were conducted and 94 filmshows were arranged. Assistance was also given from the establishment of 28 model dairy farm units during the year.

4.82 During the year 101 new milk co-operative societies were registered taking the total number of societies to 2248 with a total membership of 5,24,900.

4.83 Under the Special Component Plan 1440 Scheduled Caste families and under the Tribal Sub Plan 200 Scheduled Tribe families were assisted for purchase of milk cows and construction of cattle sheds.

#### Supply of Cattle Feed

4.84 The KCMMP produced and sold 42626 MT of cattle feed during 1992-93 against 47653 MT to the previous year. The processing capacity of Thuravoor cattle feed plant has been enhanced to 300 MT from the existing capacity of 100 MT per day.

#### Milk Marketing

4.85 Kerala Co-operative Milk Marketing Federation is the implementing agency of Operation Flood Programme in Kerala, with technical and financial assistance from National Dairy Development Board. The Federation operates through the 1640 Anand Pattern Co-operative Societies under it. The membership of these Societies is 3.73 lakhs. The performance of the federation in the field of procurement and sale of milk during the year under review was commendable. The growth in procurement of milk during the year was 17.4% while the sales increased by 14.86%. The average procurement during the year was 3.64 lakh litres per day. The average daily sale was 3.68 lakh litres. About 57 lakh litres of milk were sent outside the State during flush season for conversion. The processing capacity of the Kannur Dairy Plant was expanded from 10000 litres to 30,000 litres per day. Along with the existing chilling plant at Nilambur a new chilling plant with a capacity of 30000 litres per day has also been set up during the year.

4.86 A record of performance of the dairies during 1992-93 is presented in table No. 4.34.

TABLE 4.34

#### Record of Performance of the Various Dairies during 1992 & 1993

Name of Dairy	Capacity (LPD)	Procurement				Sales			
		Progressive 1992	Total 1993	Average per day 1992	Average per day 1993	Progressive total 1992	Average per day 1993		
1	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	10000	16534905	20119565	45177	55122	27742873	29930259	75800	82001
Kollam	60000	22433972	21852391	61295	59870	13116481	15300192	35837	41918
Allappuzha	60000	7011907	7326489	19158	20073	6950654	8406025	18991	23030
Kottayam	5000	2776958	3530641	7587	9673	6788250	8049319	18547	22053
Ernakulam	100000	30121010	35336179	82298	96811	26445143	27617698	72254	75665
Thrissur	60000	6961799	6813413	19021	18667	7242350	8662556	19788	23733
Palakkad	9000	10662320	13274987	29132	36370	7098353	8458081	19394	23173
Kannur	10000	11732221	17633100	32055	48310	11564810	14618322	31598	40050
Kozhikode	40000	5126652	6862228	14007	18801	10450538	13443836	28553	36832
<b>Total</b>	--	113361744	132748993	309732	363696	11739452	134486288	320764	368456

Source : - KCMF

The price paid by KCMMP for procurement and price received for sale of milk during the last three years are given in table 4.35.

TABLE - 4.35

#### Average price of milk paid by KCMMP

Year	Procurement/litre	Sale/Litre
1990-91	Rs.4.14	Rs.6.00
1991-92	Rs.4.95	Rs.7.00
1992-93	Rs.5.66	Rs.8.00

4.87 The services rendered by KCMMP in the field of veterinary health care deserve special mention. They regularly operate 18 veterinary routes providing free treatment to the farmer members at the Society. More than 2 lakh cases are being handled by the regular routes. Apart from this 15 emergency routes are operated where a doctor is on call always and at a nominal fee. Veterinary Service is available at the farmers door step. During 1993 a total of 38000 cases were handled by the emergency services. The important achievements of KCMMP from 1989 to 1993 are furnished in the table 4.36.

TABLE - 4.36  
Performance of KCMMF

Sl. No.	Particulars	1989	1990	1991	1992	1993
1.	Number of APCOS registered (Cum)	1067	1151	1305	1500	1630
2.	Number of APCOS functional	963	1068	1283	1471	1502
3.	Number of members in APCOS (cum)	206893	254183	300433	351883	372825
4.	Number of women in APCOS	20864	27419	35083	44287	47600
5.	No. of SC/ST members in APCOS	13743	16984	18952	22976	25121
6.	Average milk procured/day by KCMMF (lit.)	236517	233739	224818	309732	355200
7.	Average milk marketed/day (lit.)	238857	269765	291685	320763	390700
8.	Direct Employment Generated (persons)	2245	2595	2903	3283	3608
9.	Average price paid to SOC/Lit. (Rs./ps.)	4.26	4.27	5.31	6.34	6.34
10.	Average price paid to produ/lit. (Rs./ps.)	4.14	4.15	5.18	6.15	6.15
11.	Mobile regular vety. route	19	19	19	18	18
12.	No. of cases treated by regular routes (yearly)	20914	25103	29786	35205	38096
13.	No. of emergency vety. routes	12	13	13	13	15
14.	No. of cases treated yearly	206189	225132	194444	206718	228255
15.	Cattle feed sales (MT)	34173	45931	44161	47439	42626
16.	Quantity of Ghee sold (MT)	829017	616086	794990	830805	862080

Source: KCMMF

### Fisheries

4.88 Kerala State endowed with a long coastline of over 590 Kms. and an economic zone consisting of around 36000 Sq. Kms. of marine water spread, accounts for one fourth of the fish production in the country. The marine wealth in this zone is also rich in its diversity with more than hundred varieties of economic importance. Due to high pressure of population the percapita availability of fishable area in the marine sector is only 10 ha. in Kerala as against 177 ha. in Gujarat and 37 ha. at the national level. The State is also rich in inland water areas suitable for culture fisheries.

4.89 The fishermen population of 9.80 lakhs in Kerala represents 3.37% of the total population. Alappuzha District has the maximum concentration (16.99%) followed by Thiruvananthapuram (16.42%). District-wise details of population are given in Appendix 4.5.

4.90 In the marine sector, fishing is largely concentrated in the inshore areas of 50 metre depth. After a spurt in production reaching a level of around

6.5 lakh tonnes consistently for two years during 1989 and 1990, the marine fish production has declined to 5.64 lakh tonnes in 1991 and 5.61 lakh tonnes in 1992. This clearly shows that indiscriminate exploitation of fisheries wealth beyond a maximum limit is not sustainable. The depletion in marine wealth is much more glaring in its species diversity. Eventhough the physical output has recorded considerable decline, it does not appear to have its adverse impact on the income side. The income from the sector at 1980-81 prices on the contrary shows an increase of Rs.23.45 crores during 1991-92 and Rs.30.48 crores during 1992-93. The net domestic product from the fisheries sector at constant prices during 1992-93 was Rs.147.73 crores against Rs.117.25 crores for 1991-92 and Rs.43.80 crores for 1990-91. The increase in income despite fall in output is due to the sharp decline in low value fishes like oil sardine and mackerel with significant increase in the catches of high value fishes like Lactarius, seer fish, pomfrets etc. Though the potential for prawn in the coastal waters of Kerala has been estimated to be around 56000 tonnes the catch during 1992 was far below this level. It was 51131 tonnes in 1992 against 60594 tonnes during 1991. On the other hand the inland fisheries sector which offers tremendous potential still remain largely under exploited. Inland sector is lingering under low levels of investment and productivity. The production is more or less stagnant around 42000 tonnes during the last decade. Trend of marine and inland fish production in Kerala compared to all India performance during the last decade is given in Table 4.37. Species-wise details are presented in Appendices 4.6 and 4.7.

TABLE - 4.37

### Fish Production in Kerala and India

Year	('000 tonnes)					
	Inland Production		Marine Production		% of Kerala to All India	
	Kerala	India	Kerala	India	Inland	Marine
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1981	26.0	999.2	274.4	1444.8	2.60	18.96
1982	26.5	939.6	325.4	1427.4	2.82	22.78
1983	27.0	987.4	385.3	1519.3	2.73	25.35
1984	27.3	1082.1	424.7	1779.3	2.52	23.87
1985	28.5	1090.1	332.5	1734.1	2.61	19.17
1986	29.0	1214.1	335.8	1708.0	2.38	19.66
1987	26.5	1259.1	283.1	1652.0	2.10	17.14
1988	27.8	1369.4	468.8	1775.0	2.03	26.41
1989	32.5	1381.05	647.5	2230.2	2.35	29.03
1990	34.7	1483.63	662.9	2162.3	2.34	30.66
1991	40.6	N.A.	564.1	--	--	--
1992	42.3	N.A.	560.7	--	--	--

4.91 The fishery resource potential of the continental shelf of Kerala as per an earlier estimate (1976) was of the order of around 8 lakh tonnes of which 4 lakh tonnes was considered to be of the inshore area. The working group constituted by Government of India in 1991 estimated the potential in the inshore area as 5.70 lakh tonnes. As the fish landings in Kerala are almost entirely from the inshore area there is no doubt that the level of exploitation in this zone has exceeded far above the maximum sustainable limit. As per the latest estimate of the Fisheries Department (1993) there are 3773 mechanised, 15336 motorised and 27873 traditional crafts operating in the marine waters. With the enormous increase in the number of mechanised crafts the share of traditional crafts in the total fish landings has considerably eroded over the years. As per the data published by the Fisheries Department for the year 1989 the share of non-mechanised sector was only 5.25%. Kerala coastal waters had therefore been witnessing continuous bouts of confrontation between traditional fishermen and trawler operators, as it is believed that bottom trawling destroys the eggs and nets with small mesh sizes which are usually used by trawlers lead to heavy depletion of the fisheries wealth and they therefore demand a total ban on trawling during the monsoons extending from June to August which is the spawning season of fish. Based on expert opinion Government imposed partial ban on trawling in monsoon period during the last four years in succession. The proliferation of the mechanised boats and trawlers along the coastline of the State and the indiscriminate use of gears and net in violation of the marine fisheries act need effective regulatory measures on an urgent basis. The pressure on the inshore areas has to be reduced through appropriate policy measures and adequate incentive packages for diverting atleast a portion of the mechanised boats to offshore and deep sea fishing. The scheme launched by MPEDA for providing financial assistance for remodelling the craft and gear to suit their requirement is a step in the right direction. The scope and coverage of this scheme need to be enlarged for getting speedier results. It is also advisable to introduce a new component under the ongoing Centrally Sponsored Scheme for motorization of country crafts for providing attractive financial assistance for modification of mechanised crafts for offshore fishing.

4.92 The inland waterspread available in the State is estimated to be around 3.60 lakh ha. consisting of rivers (85000 ha.), tanks and ponds (3300 ha.), reservoirs (29635 ha.) and brackish water lakes, back waters and estuaries (242600 ha.) A recent study by the Centre for Earth Science using remote sensing data shows that the conversion of back waters and

other waterbodies for agriculture purposes is being resorted to at an alarming rate. Thus there was considerable shrinkage in the wet land ecosystem available for aquaculture in Kerala. Further the bunds and barriers constructed with a view to prevent the entry of salt water also resulted in considerable distortions in the ecosystem leading to distortions in the aquatic wealth. The indiscriminate use of pesticides and the growing environmental and water pollution makes a large proportion of the water system in Kerala unsuitable for large scale fisheries culture. Identification of areas which are amenable for culture fisheries with the available technology at reasonable level of investment is perhaps the first step before organising any commercial venture.

4.93 The Agency for Development of Aquaculture, Kerala (ADAK) which has been set up under the Fisheries Department has already organised an elaborate survey covering the important water spread in Kerala to identify areas suitable for brackish water prawn culture in Kerala. According to this study about 65000 ha. are suitable for the purpose, out of which 40000 ha. are in the districts of Kollam (8600 ha.), Alappuzha (15000 ha.) and Ernakulam (16200 ha.). This includes about 12000 ha. pokkali land in Ernakulam District, where paddy-cum-prawn filtration is already in vague in such areas where the production is very low. However the consultants engaged under the Kuwaiti Fund Project are of the view that the water spreads available in Kerala offering immediate potential for commercial exploitation with reasonable level of investment is only around 15000 ha. Even in this limited area of around 15000 ha. a wide range of technologies comprising of extensive, modified extensive and semi-intensive technology are necessary. The Kuwaiti Fund assisted prawn culture project is being reoriented on these lines to attract private investment for commercial brackish water prawn culture in those identified tracts. The activities of the Brackish water Fish Farmers Development Agencies also have to be reoriented and directed for concentrating efforts in contiguous areas having potential for semi intensive culture. Eventhough Brackish water Fish development agencies are functioning in 6 districts and fish farmers development agencies in 14 districts the cumulative area that could be brought under culture fisheries is only around 500 ha. which is very meagre. It is high time that the BFDA in Ernakulam concentrate their activities in the pokkali areas with the required technology for standardising the culture and institutional arrangements for supply of inputs.

4.94 The performance on the export front is also not encouraging as there was a sharp decline of



around 9649 tonnes in export during 1992-93 compared to the previous year. The quantity exported during the year was only 49094 tonnes valued at Rs.414.25 crores against 58743 tonnes valued at Rs.444.46 crores in 1991-92. The share of Kerala in the export of marine products from the country during 1982-83 was 41.6% which has gradually come down to 34.19% during the last decade. Year-wise details of exports are given in Table 4.38.

TABLE - 4.38

*Export of Marine Products from Kerala/India  
1982-83 to 1992-93*

Year	Quantity exported			Value of exports		
	Kerala	India	%	Kerala	India	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1982-83	32525	78175	41.61	1414900	3613600	39.16
1983-84	32840	92691	35.43	1408543	3730204	37.76
1984-85	31570	86187	36.63	1481344	3842897	38.55
1985-86	29580	83651	35.36	1380765	3979998	34.69
1986-87	33906	85843	39.50	1645663	4606728	35.72
1987-88	35576	97179	36.61	1839378	5312039	34.63
1988-89	45614	99777	45.72	2213124	5978538	37.02
1989-90	47245	110843	42.62	2409412	6349926	37.94
1990-91	50997	139419	36.58	3137900	8933700	35.12
1991-92	58743	171820	34.19	4444673	13758900	32.30
1992-93	49094	--	--	4142500	--	--

4.95 Kerala State Co-operative Federation for Fisheries Development Ltd. (MATSYAFED), the apex body of the Fishermen Co-operatives started functioning from November 1984 onwards with twin objectives of promotion of fish production, processing and marketing in the artisanal sector and improving the well being and quality of life of the fishermen. The MATSYAFED has seven district offices and 81 village fishermen welfare and development co-operatives. (Appendix 4.8).

4.96 Among the various schemes implemented by Matsyafed, the NCDC assisted Integrated Fisheries Development Project is the major one. Phase I of the project with a total outlay of Rs.555.84 lakhs was completed during the period 1985-86 to 1990-91, covering 23 primary co-operatives and enabling 3158 fishermen to become owners of fishing inputs. Phase II of the project was taken up with an estimated cost of Rs.1034.28 lakhs in 1986-87. The project covered 37 selected primary co-operatives and have benefited 6659 fishermen so far. As the Phase I and II of the project did not envisage the coverage of all the primary societies, Matsyafed started implementing a third phase at a total estimated cost of Rs.3560 lakhs in 1991. An amount of Rs.1262.20 lakhs has been spent as on

30.6.1993. The physical and financial achievement of the three phases of the project are furnished in Appendix 4.9.

4.97 Two housing schemes for the benefit of fishermen are also being implemented. One with the assistance of HUDCO and the other with the assistance of NFWF. Till the end of March 1993, a total of 28150 houses have been completed under the three phases of the Subsidised Housing Scheme assisted by HUDCO. Out of 1604 houses sanctioned, 810 houses have been constructed by March 1993 under the NFWF assisted scheme.

#### *Fishing Harbours and Landing Centres*

4.98 Construction of Fishery Harbours and landing centres is the responsibility of the Harbour Engineering Department. Vizhinjam, Neendakara, Thankassery, Munambam, Puthiyappa, Mopla Bay and Chombal are the Harbours under construction. Of these, Neendakara Harbour has been commissioned. The works on all other harbours are in progress. As part of the strategy for time bound completion of ongoing projects approved by the State the pace of implementation of Thankassery, Munambam, Mappila Bay and Puthiyappa has been accelerated so as to complete them by the end of 8th Plan. New Mahe, Thottappally, Palacode, Cheruvathur, Dharmadom, South Paravoor and Chettuvali are the seven centres taken for the construction of landing centres for mechanised boats. Three centres (New Mahe, Dharamdom and Cheruvathur) have been commissioned and works in other three are going on. The South Paravoor Project has been deferred for want of required land. Landing centres for traditional fishermen at Vizhinjam south, Vallikkunnu, Vellayil Beach, Chalil Gopalapettah, Quilon Port, Arthungal and Quilandy are under various stages of implementation. Besides these, construction of brackish water fish farms, National Seed Farms, setting up of nurseries etc. are the other works undertaken by the Harbour Engineering Department. The details of physical and financial achievement as on 31.03.1993 are furnished in Appendix 4.10.

4.99 The Marine Products Export Development Authority is the national agency for dealing with export production fish and fish products. The Authority also gives assistance for introducing sophisticated technology in processing and packaging of sea foods. All technical assistance for aquaculture from the time of site selection till the harvest and marketing of produce is being provided by authority besides acting as a centre for providing information, guidance to farmers and entrepreneurs.

4.100 The Central Institute of Fisheries Technology has taken up a number of research programmes under fishing, fish processing, construction of fishing crafts, fabrication of gears etc. and many of them could be completed successfully. Some of the important achievements of the Institute include design of Fibreglass boats of 7.64m for pole and line fishing; computer software for design three bladed and four bladed marine screw propellers; opening trawl designed for simultaneous and effective exploitation of both bottom and off-bottom fishes etc.

4.101 The Kerala Fishermen Welfare Fund Board implemented a number of schemes with the aim of giving security and relief to fishermen. The physical and financial achievements of the Board as on 31.11.1993 are furnished in Appendix 4.11.

### *Agricultural Marketing*

4.102 As the cropping pattern of Kerala is predominated by export oriented cash crops, marketing support is critically important for Kerala's Agriculture. In the context of the emphasis on liberalised market oriented economy, the export front would be facing new challenges. Eventhough the State holds virtual monopoly in the production of a large number of agricultural commodities like pepper, ginger, rubber, cardamom and cashewnut many of them are facing severe competition in the global market as well as in the domestic market. As the production is spread over millions of tiny holdings mobilising marketable surpluses, primary processing, transport etc. are all costly and difficult. Eventhough co-operatives are operating in the market they are yet to gain any effective control on the market forces.

4.103 The main agencies functioning in the co-operative sector for the marketing of agricultural produce are Kerala State Co-operative Marketing Federation, Rubber Marketing Federation, RAIDCO, CAMPCO, KERAFED and Cashew Apex Industrial Co-operative Society. The commodities handled by the General Marketing Federation include copra, pepper and other spices. During the year under report, the Federation handled 2005 tonnes of copra valued at Rs.4.06 crores, 615 tonnes of coconut oil costing Rs.2.66 crores, oil cake 420 tonnes valued at Rs.0.17 crores, pepper 202 tonnes valued at Rs.0.41 crores and other spices valued at Rs.0.58 crores, cashew 25402 tonnes valued at Rs.63.88 crores and cardamom 7 tonnes valued at Rs.0.28 crores. The quantum of copra and pepper dealt by the Federation is quite meagre. In the distribution of agricultural inputs, the performance is better. The Federation handled 44022 tonnes of fertilizer valued at Rs.15.54 crores, pesticides costing Rs.1.91 crores, sprayers valued at

Rs.0.75 crores and 70 tonnes of cement costing Rs.0.10 crores.

4.104 The Rubber Marketing Federation, together with the 33 member societies, is engaged in the procurement and marketing of rubber. About 8% of rubber produced in the State is marketed through the Federation. The activities of the Federation include procurement and marketing of rubber, distribution of fertilizer, and agricultural inputs etc. During 1992-93 the Federation marketed 29184 M.T. of rubber valued at Rs.76.75 crores, fertilizer 27000 M.T. valued at Rs.9.24 crores and agricultural inputs Rs.0.98 crores.

4.105 The Central Arecanut and Cocoa Marketing and Processing Co-operative Ltd. (CAMPCO) is a joint venture of Kerala and Karnataka Governments engaged in the procurement and marketing of arecanut and cocoa. As on March 1993 Campco had a network of 59 procurement centres and 17 sale depots for arecanut. The CAMPCO handled 1628.41 tonnes of arecanut valued at Rs.108.39 crores, against 1445.78 tonnes valued at Rs.99.84 crores during 1991-92. A network of 25 procurement centres were in operation for the collection of cocoa under CAMPCO. During the year under report, CAMPCO procured 13.30 tonnes of Cocoapods valued at Rs.4.26 lakhs, wet beans 85.25 tonnes costing Rs.127.26 lakhs and Dry Beans 147.30 tonnes. The chocolate making unit of CAMPCO produced 573.6 mts. of finished products and 439.0 mt. of semi-finished products and sold 629.8 MTs. of finished products valued at Rs.580.4 lakhs and 387 tonnes of semi-finished products valued at Rs.384.9 lakhs.

4.106 RAIDCO is a co-operative organisation engaged in the production and distribution of agricultural implements. During 1992-93, the agency distributed 5760 pump sets, 2229 sprayers, 7 power tillers, 508 rubber rollers and 1 tractor. The business turn over of the Organisation aggregated to Rs.624 lakhs in 1992-93.

4.107 The Kera Karshaka Sahakarana Federation Limited is an agency for implementing the integrated project for coconut development with assistance from EEC. By the end of 1992-93, the Federation could enlist 898 PACS as members against 900 PACS originally targetted. Share capital assistance amounting to Rs.172 lakhs was mobilized from the member societies. As part of its production enhancement, 3578 demonstration plots were laid out in farmers fields, quality coconut seedlings numbering 80,000 and extension materials to the tune of 64116 numbers were distributed to farmers through



member societies. Training programmes were arranged to 115 PACS personnel on production/processing/marketing of coconut. During 1992-93, the procurement of Copra was to the tune of 25000 tonnes. Out of this 8652 tonnes were used for oil crushing. The Federation marketed 8312 tonnes of copra to up country markets. The turnover from the business is reported to be Rs.19 crores. As regards the processing units, the first oil mill was commissioned at Karunagapally in Kollam District. The construction work for the second complex at Calicut is in progress and for the complex at Cochin, the site selection is over and the preliminary works for the site development is progressing. KERAFED's first product "2 stage filtered Kera" has captured the market and another product Kera-kesh Ayurvedic hair oil is being released in the market.

4.108 The State Warehousing Corporation is set up to provide scientific facilities to farmers, co-operatives, producers, public sector undertakings etc. and to act as an agent of the Central Warehousing Corporation or the Government for the purpose of purchase, sale, storage and distribution of agricultural produce, manures, fertilizers, agricultural implements and notified commodities. As on 31.3.93 the Corporation constructed godowns with a capacity of 1,43,531 MTs. and hired capacity of 31,105 MT. Besides providing storage facilities, the Corporation has

diversified their activities such as clearing and transportation, disinfestation services, procurement of rubber under the Price support scheme, construction of buildings for other public sector undertakings.

4.109 The grading of agricultural commodities under 'Agmark' scheme was continued through the State Agmark Grading Labs functioning in the State. The grading of the agricultural commodities done through the labs and private laboratories are furnished in Table 4.39.

TABLE - 4.39

Commodities graded under Agmark 1986-87 to 1992-93

Year	Coconut Oil	Gingelly Oil	Honey	(Quantity in Qtls.)	
				Ground spices	Ghee
(1)	(2)	(3)	(4)	(5)	(6)
1986-87	33697	7459	366	1391	-
1987-88	66990	10270	1496	1157	-
1988-89	27840	404	615	511	-
1989-90	27294	842	1964	511	-
1990-91	15239	698	1467	1069	-
1991-92	13289	4504	868	5117	164
1992-93	21005	851	777	3906	344

Source: Directorate of Agriculture.

TABLE 4.40

Marketing Services Rendered by Co-operative Institutions

Sl No.	Agency	Commodity	1992-93	
			Quantity (MT)	Value (Rs. in lakhs)
(1)	(2)	(3)	(4)	(5)
I.	General Marketing Federation	1. Copra	2005	406.00
		2. Pepper	202	41.00
		3. Defence Supply & Other spices	-	58.00
		4. Fertilizer	44022	1554.00
		5. Pesticides	-	191.00
		6. Sprayer	-	75.00
		7. Coconut oil	615	266.00
		8. Oil Cake	420	17.00
		9. Cashew	25402	6388.00
		10. Cardamom	7	28.00
		11. Cement	70	10.00
II.	Rubber Marketing Federation	1. Rubber	29184	7675.00
		2. Fertilizer	26937	924.00
		3. Aerial spraying	-	-
		4. Pesticides	-	98.00
III.	Central Arecanut and Cocoa Marketing & Processing	1. Arecanut	1628	10839.00
		2. Cocoa pods	13	4.00
		3. Wet Beans	85	127.00
		4. Dry Beans	147	977.00
IV.	RAIDCO	1. Pumpsset	5760	624.00
		2. Sprayers	2229	
		3. Power tillers	7	
		4. Rubber rollers	508	
		5. Tractors	1	
V.	KERAFED	1. Copra	14642	3600.00
		2. Coconut oil	(in '000 tonnes)	

### Agricultural Credit

4.110 In Kerala, credit needs of the agricultural and allied sectors are largely met by the organised sector consisting of co-operatives and commercial banks. The credit operation of the sector include those financed from the funds raised by the banks and refinanced by NABARD.

4.111 NABARD provides refinance support for both co-operatives and commercial banks. The refinance assistance through NABARD has steadily increased from Rs.58.06 crores in 1987-88 to Rs.84.57 crores in 1991-92 and reached a level of Rs.103.91 crores in 1992-93. In percentage terms it works out to 4.4% of the All India disbursements. The growth in the quantum of refinance to Kerala during the last decade was much faster than the growth in All India disbursements. The growth rate in 1992-93 was 22.86% for Kerala compared to 14.85% for the country. The agency-wise disbursements is given in Appendix 4.13. The State Co-operative Agricultural and Rural Development Bank has absorbed the largest share of refinance (37.94%) followed by Commercial Banks (35.98%), State Co-operative Bank (19.68%) and Regional Rural Banks (6.60%). During 1992-93 the share of the Kerala State Co-operative Agricultural and Rural Development Bank improved by 3 percentage where as that of commercial banks and State Co-operative Bank declined by 1&2 percentages respectively. Purpose-wise disbursement during the years 1991-92 and 1992-93 are given in Appendix 4.14. The farm sector including IRDP accounted for about 70% of the disbursement. Eventhough the non-farm sector accounts for only 30% its share in the total refinance is accounted for 18% in 1991-92, and increased further to 30% in 1992-93. Purpose-wise analysis of the refinance disbursement shows that the major share was absorbed by Plantation & Horticulture (20%) followed by IRDP (14.32%) & Minor Irrigation (13.99%) and farm mechanisation (4.52%). Compared to the previous year, the percentage share of plantation and horticulture has declined from 27% to 20%, minor irrigation from 18% to 14% and IRDP from 17% to 14% - all the three categories are of critical importance for the State's agricultural economy.

4.112 During the year under review, the Commercial Banks performed reasonably well in the dispensation of rural credit. The disbursement to the priority sectors during 1992-93 was to the tune of Rs.1202.47 crores against Rs.1139.03 crores during 1991-92; registering a growth of 5.57%. Agriculture and allied sectors accounted for the major share Rs.614.26 crores (51.08%) followed by the tertiary sector Rs.363.16 crores (30.2%) and the SSI sector Rs.225.05 crores (18.71%). Compared to the

previous year, the percentage share for agriculture has declined marginally from 55% to 51% whereas the share to the tertiary sector remained more or less stagnant and that for SSI sector increased by 4%.

Relevant data is given below:

TABLE - 4.41

*Disbursements under Priority Sector by Commercial Banks*

Sl. No.	Year	Priority Sectors			
		Agriculture and Allied	SSI	Tertiary	Total
1.	1989-90	502.17	118.83	293.15	914.15
2.	1990-91	488.87	148.09	346.45	983.41
3.	1991-92	622.99	171.76	344.28	1139.03
4.	1992-93	614.26	225.05	363.16	1202.44

*Short & Medium term Co-operative Credit*

4.113 The Kerala State Co-operative Bank with its 14 DCBs and 1581 PACS catered to the S.T. & M.T. co-operative credit requirements. Being the Apex Bank, the KSCB coordinates the working of the DCBs and the primaries in their lending programmes as well as in the mobilisation of deposits. The resource position (share capital, reserves, deposits & borrowings) of the Bank had increased from Rs.453.92 crores in 1991-92 to Rs.553.29 crores in 1992-93 and the working capital from Rs.449.67 crores to Rs.539.35 crores. The loan disbursement through the Apex Bank was also encouraging. The disbursement was to the tune of Rs.495.48 crores against Rs.285.65 crores in 1991-92. Out of the total loan disbursed ST comprised of Rs.455.60 crores (91.96%), MT Rs.6.84 crores (1.38%) and LT Rs.33.04 crores (6.66%). The share of loan to agriculture purpose alone aggregated to Rs.87.86 crores representing 17.76% of the total disbursement. The purpose wise disbursement through the Bank during 1992-93 is furnished below.

TABLE - 4.42

*Purpose-wise Disbursement during 1992-93*

Sl. No.	Purpose	Loan disbursed during 1992-93
1.	Agriculture (Production & Investments)	8194.94
2.	Procurement/Marketing/Distribution	29729.14
3.	Cottage & Small Scale Industries	532.63
4.	Other industries	71.27
5.	Consumer Activities	1104.63
6.	Consumption purposes	1002.43
7.	Housing	1413.83
8.	Other Purposes	7499.72
Total		49548.59

4.114 The loan outstanding and overdue during 1992-93 were to the tune of Rs.343.28 crores and Rs.10.95 crores respectively. The Bank earned a net profit of Rs.79.87 lakhs in 1992-93 against Rs.69.51 lakhs in the previous year.

4.115 The primary agricultural credit societies are the institutions at the grass root level for dispensation of ST credit to agriculturists. As on 30.6.92, 1581 PACS with a membership of 92.05 lakhs and a resource base (share capital, deposits and working capital) of Rs.3494 crores were engaged in providing credit to the farmers. The performance of the credit societies during 1991-92 was encouraging. The average membership per society has come to 5822 with an average share capital base of Rs.6.46 lakhs and an average working capital of Rs.140.05 lakhs. The average deposit per society has increased to Rs.74.48 lakhs from Rs.60.40 lakhs. The average loan per member has increased to Rs.1336/- from Rs.1008/-. The percentage of borrowing members increased from 37.16 to 39.1%. The loan disbursed through the PACS during 1991-92 was to the tune of Rs.1229.85 crores registering a growth of 35% over the previous year. In the deployment of loans, S.T. loans comprise more than 80% (Rs.990.43 crores), M.T. 15.86% (Rs.195.02 crores) and L.T. 3.61% (Rs.44.40 crores). The dispensation of ST, MT & LT recorded 33.55%, 41% & 39.58% growth rates during 1991-92. The credit for agriculture purpose increased from Rs.350.38 crores (38%) to Rs.538.13 crores (44%), the percentage increase being 6%. However, the shift in favour of non-farm sector lending is still continuing.

4.116 The remarkable progress showed by the co-operatives in their functioning was due to the successful deposit mobilisation drive launched by the co-operatives with the active support of Government.. During 1992-93, the co-operatives were able to mobilise Rs.346.82 crores against a target of Rs.60.00 crores. The percentage of overdue to outstanding which stood at 20.13% in 1988-89 has gone upto 28.02% in 1990-91, and in 1991-92, the percentage has come down to 20.89%. The data on the working of the PACS reveals that out of the 1581 PACS, 712 societies were running on profit and 809 on loss and 22 dormant. There are 1562 societies having paid secretaries and 1423 societies have own godowns. The selected indicators of the credit operations and performance of the primary agricultural credit societies are given in Appendices 4.15 & 4.16.

#### *Long term credit*

4.117 The long term credit structure consists of the Kerala State Co-operative Agricultural and

Rural Development Bank at the apex level and 43 primary agricultural development banks at the taluk level. The various developmental activities covered by the Bank's lending includes minor irrigation, farm mechanisation, land development including soil conservation, cultivation of horticulture/plantation crops like coconut, rubber, cashew, coffee, pepper, cardamom etc. The bank also advanced loans for non-farm sector lending consisting of composite loan, small road, transport operation scheme and integrated loan scheme with 100% assistance from NABARD. During 1992-93, the Bank had disbursed a sum of Rs.69.48 crores. The advances include Rs.12.43 crores under ordinary lending Rs.27.25 crores under schematic lending, Rs.18.45 crores for non-farm and Rs.11.35 crores for rural housing. The Bank mobilises resources for lending by floating debentures on Government guarantee. During 1992-93, the Bank had floated debentures to the tune of Rs.64.54 crores against Rs.53.75 crores during 1991-92. Out of this, ordinary debentures comprise of Rs.12.40 crores, scheme debentures Rs.24.74 crores, non-farm Rs.17.75 crores and Rural housing Rs.9.65 crores. the purpose-wise classification at the KSCARDB level and loan advanced and debentures floated by the Bank are given in Appendices 4.17, 4.18, 4.19.

4.118 NCDC is an agency providing finance for the development of co-operative movement. The finance from the Corporation is mainly based on long term projects covering, production, procurement, processing, storage and marketing of agricultural commodities as well as for the supply of consumer goods in rural areas. The flow of credit from NCDC has declined substantially during 1992-93. The release to Kerala during 1992-93 was only Rs.9.00 crores against Rs.25.66 crores in 1991-92. The percentage share of Kerala in the All India disbursement by NCDC is only 2.64%. The releases made during the year constitute only a portion of the assistance due to the State and proposals submitted by the State in respect of Schemes like ICDP, Fisheries, Marketing, EEC assisted coconut project etc. were not approved for release of assistance before the end of the financial year. The purpose-wise release is shown in Appendix-4.20.

#### *Forestry and Wildlife*

4.119 The area under forest in Kerala in 1993 was 11220.62 Sq. Km. which represented a marginal decrease from 11222.92 Sq. Km. reported in 1992. This decrease could be mainly attributed the dis-reservation of the vested forest lands as a result of a court order. Out of 11220.62 Sq. Km. now available under forests, reserve forest accounts for 9150.39 Sq.

Km. An area of 183.08 Sq. Km. is proposed to be brought additionally under reserve forests. Division-wise details of forests in Kerala are furnished in Appendix-4.21.

4.120 The area under forest plantations has increased from 153758 ha. in 1992 to 155088 ha. in 1993. Teak accounts for 48.30% of the area under forest plantations. Species-wise area under forest plantations over the last six years is given in Appendix 4.22.

4.121. As part of the protection and conservation measures, forest boundaries are surveyed and demarcated by constructing cairns and kayyalas. Out of 6500 Kms. of boundaries, about 5453 Kms. have been demarcated and 88560 cairns erected. This activity has been given top priority for completion on a time bound manner. With a view to make the forest surveillance and protection more effective, 88 forest stations have been set up. Clear felling and selection felling have been completely stopped. A watershed approach integrating all the essential elements for effective eco-preservation is being brought in so as to make them sustainable. Eco-preservation in Attappady, Kallar watershed Development, Operation waterspread are some of the new location specific programmes taken up. With these objective special programmes like 'Project Rosewood' 'Silvan valley Fern Sanctuary' have been taken up for regenerating and sustaining endangered species.

4.122 Consequent to the ban on felling trees, the revenue from forest has come down considerably in the eighties. However through effective measures for forest protection and prevention of poaching of forest based products revenue collection has considerably improved. Upto 1990-91, the revenue from forest remained around 35 crores a year. In 1991-92 and 1992-93 it went up to Rs.55.64

crores and 78.61 crores respectively. The major source of revenue earned during 1992-93 was from the sale of Timber (Rs.67.94 crores). Details of forest produces sold and revenue earned during the last six years are furnished in appendices 4.23 and 4.24.

#### Social Forestry

4.123 The World Bank aided Social Forestry Project, which was due for completion by December 1990, was extended upto 1993 in order to facilitate utilisation of the entire assistance offered for the project. The project was completed in March 1993.

4.124 During 1992-93 afforestation activities were taken up in 6792.90 ha. for which 169.80 lakh seedlings were produced. In addition 115.20 lakh seedlings were distributed in support of farm forestry. The physical and financial achievements under Social Forestry during 1991-92 and 1992-93 are furnished in Appendices 4.25 and 4.26. Out of 707 buildings targetted for construction, under the project, 515 buildings were completed as on 31.3.1993. The details are furnished in Appendix 4.27.

4.125 The research activities of the Kerala Forest Research Institute were also continued during 1992-93.

#### Wild Life

4.126 The two National parks, eleven Wildlife Sanctuaries and one Tiger Reserve maintained under the 50% Centrally sponsored Scheme cover an area of 24% (2311.67 Sq. km.) of the total forest area in Kerala. A new scheme 'Project Elephant' for the conservation of elephant reserves is also under implementation from 1992-93 onwards. Sanctuarywise details are furnished in Table No. 4.43.

Table 4.43  
Details of Wildlife Sanctuaries

Sl No.	Name of Wildlife Sanctuary/park	Area (Ha.)	District	Head Quarters	Year of formation
(1)	(2)	(3)	(4)	(5)	(6)
1.	Eravikulam National Park	9700	Idukki	Painavu	1976
2.	Silent Valley National Park	8952	Palakkad	Mannarkkad	1985
3.	Neyyar Wild Life Sanctuary	12800	Trivandrum	Neyyar dam	1958
4.	Peppara " "	5300	"	Peppara dam	1983
5.	Shenduriny " "	10032	Quilon	Thenmala	1984
6.	Idukki " "	7760	Idukki	Painavu	1976
7.	Chinnar " "	9044	Idukki	Chinnar	1984
8.	Thattakkad Bird " "	2516	Idukki	Thattakkad	1983
9.	Peechi-Vazhani " "	12500	Thrissur	Peechi	1958
10.	Chimmoni " "	1000	Thrissur	Chimmony	1984
11.	Parambikulam " "	27414	Palakkad	Parambikulam	1985
12.	Wayanad " "	34444	Wayanad	Sultan Battery	1985
13.	Aralam " "	5500	Kannur	Aralam	1984
14.	Periyar Tiger Reserve	77754	Idukki	Thekkady	1950

Source: Forest Department.

## IRRIGATION AND POWER

*Irrigation*

The total investment in the irrigation sector till the end of March 1992 amounted to Rs.118921 lakhs. The area benefited is 3.388 lakh ha. (net) or 5.689 lakh ha. (gross) till March 1992. The physical achievements of the sector was not commensurate with the quantum of financial investment. During 1992-93, the area brought under irrigation through major and medium and minor irrigation schemes was 12138 ha. (net) or 18173 ha. (gross) by spending Rs.8546.37 lakhs. The cumulative expenditure till the end of 1992-93 in the irrigation sector was reported as Rs.1,30,063 lakhs. The total cumulative benefits gained till March 1993 is 3.508 lakhs ha. (net) or 5.869 lakhs ha. (gross). The outlay and expenditure on irrigation sector during the various Plan periods are given in Appendix 5.1.

*Major and Medium Irrigation*

5.2. The progress of the implementation of the major and medium irrigation projects during the Seventh Plan and in the subsequent Annual Plans and in the first year of the Eighth Five Year Plan remained tardy. The schemes which were targeted to be completed during these plan periods could not be completed and commissioned owing to a variety of reasons. This has resulted cost escalation and very negligible physical achievement in these periods. The details of completed and ongoing major and medium irrigation schemes in the State as on 1993 is given in Appendix 5.2.

5.3. The cumulative expenditure on the major and medium irrigation schemes till the end of 1991-92 is Rs.85,921 lakhs. The total physical benefit under irrigation during the above period comes to 1.91 lakh ha. (net) or 3.95 lakh ha. (gross). But the expenditure on these projects during the year 1992-93 is Rs.7355 lakhs as against Rs.6754 lakhs in 1991-92. The physical achievement was only 4831 ha. (net) or 9503 ha. (gross) during 1992-93 as compared to that of 5257 ha. (net) or 8088 ha. (gross) in 1991-92. The particulars of physical and financial achievements during 1992-93 are shown in Appendix 5.3. The major works on the schemes, Periyar Valley, Pamba, Chitturpuzha and Kuttiady Schemes were completed. During 1992-93 the actual physical achievements recorded was only in 5 major and medium irrigation schemes. Kallada 1995 ha. (net) or 2993 ha. (gross), Periyar Valley 1395 ha. (net), 3625 ha. (gross), Chitturpuzha 661 ha. (net) 1230 ha. (gross), Kanjirapuzha 384 ha. (net) or 863 ha. (gross) and Pazhassi 396 ha. (net) or 792 ha. (gross). All the other schemes were under various stages of implementation.

*Minor Irrigation*

5.4. Substantial progress has been achieved during 1992-93 in the field of Minor Irrigation. The total area brought under irrigation during the year 1991-92 including ground water development was 8552 ha. (net) or 10125 ha. (gross). The works taken up under Minor Irrigation along with the physical and financial achievements are presented in Appendices 5.4 and 5.5. The total amount spent on Surface Water Development was Rs.1193.49 lakhs as against the budget outlay of Rs.1650 lakhs during 1992-93. The average per ha. cost of irrigation under various categories of Minor Irrigation schemes during 1992-93 worked out to Rs.16333 (net) or Rs.13766 (gross) against the average per ha. cost of Rs.16423 (net) or Rs.13872 (gross) during 1991-92. Average cost per ha. is maximum for the categories of Minor Irrigation Class I. The number of works completed under Minor Irrigation Class I is to the tune of 24; Minor Irrigation Class II - 48; Lift Irrigation 12; IPD Yelah Unit-11 and the area benefited accounted for 3239 ha. (net) or 5292 ha. (gross) in the year 1992-93. In the case of Special Component Plan and Tribal Sub-Plan, the completed works numbered to 31 and 8 respectively in 1992-93. The total area benefited is 640 ha. under Special Component Plan and 287 ha. under Tribal Sub-Plan in the year under review as against 561 ha. and 269 ha. respectively in the preceding year.

5.5. The Ground Water Department took active measures in the development of ground water exploration and other developmental activities such as hydrological survey, resources evaluation, selection of sites for construction of different types of wells etc. The amount spent by the Ground Water Department during the year under review accounted for Rs.259.62 lakhs as against the budget allocation of Rs.350.00 lakhs. The department has undertaken 76 sq. kms. hydrogeological survey during 1992-93 as against 75 sq. kms. during 1991-92. The technical assistance and site selection were done for 7400 open wells as against the target of 8000 open wells during the year 1992-93. In the case of siting and construction of different types of drilled wells, the achievement was 538 numbers during 1992-93 with that of the target of 499 numbers. The additional irrigation potential created was 10770 ha. during the year 1992-93 as against 10071 ha. in the preceding year.

*Flood Control and Anti-sea Erosion Programme*

5.6. The major activities coming under the Flood Control Programme are the construction of embankment, retaining walls, bed bars, permeable groynes etc. to pro-



tect the river banks from the ravages of flood. The cumulative financial and physical achievement till 1992-93 came to Rs.2737.90 lakhs and 39692 ha. of land protection. The total expenditure during 1992-93 amounted to Rs.210.47 lakhs as against the budget outlay of Rs.227.00 lakhs. But during the preceding year 1991-92, the expenditure was Rs.383.46 lakhs with a budget outlay of Rs.400.00 lakhs. The area benefited by implementing the programmes during 1992-93 was 2500 ha. 4 total number out of 19 works were completed during 1992-93.

5.7. An amount of Rs.11271.13 lakhs was spent for the construction of 320.42 kms. new sea wall and to reform 49.38 kms. old sea wall to a standard size under the Anti-sea Erosion programmes till the end of 1991-92. By the end of 1992-93 the respective figures were Rs.12224.34 lakhs, 327.22 kms. and 42.03 kms. During 1992-93, an amount of Rs.953.21 lakhs was expended (including the share of Central Assistance). The physical achievement was 6.80 kms. of new sea wall construction and 2.65 km. of old sea walls reformation to standard size. 22 works were completed during the year 1992-93.

5.8. The physical and financial achievements of Flood Control and Anti-sea Erosion Programmes are appended in Appendices 5.6 and 5.7.

#### *Command Area Development Programme*

5.9. The Command Area Development Programme was introduced in the State during the year 1980. But the programmes were actively taken up only after 1986 when the Kerala Command Area Development Act was effectively introduced in the State. There are 14 completed projects under the Command Area Development Programme. They are Chalakkudy, Cheerakkuzhi, Gayathri, Malampuzha, Mangalam, Neyyar, Peechi, Pothundy, Vazhani, Walayar, Chitturpuzha, Kuttiady, Pamba and Periyar Valley. The cultivable command area coming under these fourteen projects is about 1,80,000 hectares.

5.10. The major activities of the command area development are preparation of plans and designs, construction of field channels, field drains, land development programmes, introduction of warabandhi system, construction of markets and roads in the command area, demonstration and adaptive trials for better water management practices, scientific and improved methods of water use, etc. An amount of Rs.3795.94 lakhs was spent till the end of the March 1992 and a total area of 69709 ha. was completed under the C.A.D. The cumulative financial and physical achievement up to March 1993 accounted for Rs.5715.94 lakhs and 78961 ha. respectively. By spending an amount of Rs.1920 lakhs, the area benefited under all the schemes coming in C.A.D. programme

comes to 9252 ha. during the year 1992-93. The physical and financial achievements of C.A.D. Programme are presented in Appendix 5.8. An area of 10717 ha. has been effected in the preparation of plans and designs, 9252 ha. fields channels and 2633 field drains were constructed; warabandhi system has been introduced in an area of 8140 ha. and adaptive trials were conducted in an area of 8 ha. during the year 1992-93. Demonstrations were conducted in 7689 ha. and a number of Beneficiary Farmers Association have been formed in order to involve farmers participation in the year under review.

5.11. The full irrigation potential can be achieved only by the effective implementation of the CADA Programmes and the ultimate whole-hearted co-operation of beneficiaries under the Command Area Development Programmes.

#### *Power Development*

5.12. The year 1992-93 was a relatively good period with regard to the performance of Kerala State Electricity Board in the areas of generation of power and earnings of revenue realisation. The installed capacity remained unchanged as in the previous year as no new projects were commissioned. But generation of power registered an increase of 15.6% over the previous year mainly due to favourable monsoons during the year. The major indicators of the growth of Kerala power system during 1991-92 and 1992-93 are given in Appendix 5.9. Import of power, being the share, from the Central Sector Power Projects viz., NTPC Ramagundam Super Thermal Power Station, Neyveli Lignite Corporation and Madras Atomic Power Project was 1232.49 MU which was 623.33 MU less than that of the previous year. The total electricity sold during 1992-93 was 5838.55 MU as against 5596 MU during the previous year. The total revenue receipt from sale of power soared to a record of Rs.438 crores exceeding that of the previous year by Rs.148 crores.

5.13. The total investment on power development till the end of 1991-92 was Rs.143613 lakhs. The budget outlay for 1992-93 was Rs.18500 lakhs and the expenditure was Rs.19660 lakhs. Till the end of 1992-93 the total expenditure on power development was Rs.163273 lakhs. The outlay and expenditure on power development during the various plan periods are given in Appendix 5.10.

5.14. The percapita power consumption in the State was way behind the national average and that of the neighbouring States. The percapita consumption of power during 1992-93 was 198 kwh as against the national average of 380 kwh.

The transmission and distribution loss during 1992-93 was estimated at 21% which is 0.75% less than that

of the previous year. The total connected load of the system has been increased from 5526.01 MW to 6575.94 MW during the year 1992-93.

5.15. The project wise details of power generation during 1992-93 is given in Appendix 5.11. Generation in all the stations except Pallivasal and Sholayar recorded a substantial increase. The total power generated during 1992-93 was 6192.73 MU as against 5325.70 MU during the previous year registering an increase of 866.94 MU.

5.16. The details of ongoing power projects in Kerala as on 31.3.1993 are shown in Appendix 5.12. In the case of most of the projects the original scheduled date of commissioning has slipped due to various reasons. This has resulted in cost escalation. Kakkad which was originally scheduled for commissioning in 1992-93 has not been commissioned so far. The cost has increased by more than 4 times the original estimated cost on this project.

5.17. The pattern of power consumption and revenue collected from various categories of consumers is given in Appendix 5.13. In all the categories except that in the industrial (High and Extra High Voltage) there is an increasing trend in the consumption. In the case of the industrial category (High and Extra High Voltage) the percentage of consumption declined from 43.02% during 1991-92 to 37.02% in 1992-93.

5.18. As regards transmission and distribution the major achievements during 1992-93 are the following:

Transmission lines	Voltage (KV)	Route length (MU)
1. Idukki-Mysore line to Thrissur North Substation	220 KV	1.5 DC
2. Tapline to Athani	110 KV	1.2 DC
3. Line interconnecting Thrissur North Substation to Shornur	110 KV	4 DC
4. Tapline to Malayattur	110 KV	0.86 DC
5. Tapline to Bharat Petroleum	110 KV	1.42 DC
6. Kallada - Edamon	66 KV	8.8 DC

5.19 Three substations at Athani (upgrading) Malayattur and Edathala have been completed and commissioned during the year under review.

5.20 About 22200 agricultural connections, 3544 industrial connections, 26229 non-domestic connections and 184485 domestic connections were given during the year 1992-93. 23707 numbers of street lights were installed during 1992-93. 568 numbers of Harijan colonies and 42 numbers of Tribal colonies and 9 new karas were

electrified during 1992-93. Apart from the above, 50 MVAR capacitors were installed in Malabar area for reactive compensation and voltage improvement using loan assistance from Power Finance Corporation.

5.21. Load shedding/power cut were not resorted to during the year 1992-93 except, load shedding at periods of exigencies. However the low voltage problem continued during the year.

5.22. The average realisation from the sale of power from all categories of consumers has increased during 1992-93 as compared to that of the previous year. The average realisation from the sale of power during 1991-92 and 1992-93 is furnished in Appendix 5.14.

#### *Financial position of K.S.E.B.*

5.23. According to the audited accounts, the value of assets of Kerala State Electricity Board were Rs.80805 lakhs and capital works to progress amounted to Rs.61350 lakhs in 1992-93. The revenue receipts of KSEB soared to a record of Rs.444.64 lakhs in 1992-93 exceeding that of the previous year by Rs.10138 lakhs. The total income stood at Rs.44464 lakhs in 1992-93 and Rs.34326 lakhs in 1991-92. Out of this the revenue from the sale of power is Rs.43875 lakhs, revenue subsidy and grants Rs.1.82 lakhs and other income Rs.587.23 lakhs. The revenue subsidy and grant showed a decrease of Rs.154.04 lakhs over the previous year. It was Rs.1.82 lakhs in 1992-93 and Rs.156.46 lakhs in 1991-92. The total expenditure excluding the expenses capitalised works out to Rs.38804 lakhs in 1992-93 as against Rs.37599 lakhs during 1991-92. The major chunk of the expenditure is towards the employees cost and increase in interest and finance charges which amounted to Rs.29836 lakhs in 1992-93 as against Rs.24665 lakhs in 1991-92. Profit before accounting tax is placed at Rs.5659 lakhs in 1992-93 as against a loss of Rs.3273 lakhs in 1991-92. Net profit during the year was Rs.4841 lakhs. The surplus as a percentage of the value of the fixed asset of the Board during the year works out to 4.13% as against the 3% minimum specified.

#### *Non-Conventional Sources of Energy*

5.24. In the field of non-conventional energy sources, ANERT is functioning as the nodal agency for implementation of the following programmes in the state using Central assistance.

1. National Programme on Improved Chulahs
2. Solar Thermal Extension Programme
3. Solar Photo Voltaic Programme
4. Wind Energy Programme
5. Biomass Gasifier Programme and
6. Integrated Rural Energy Programme



5.25. The total expenditure of the department till the end of 1991-92 to implement the above mentioned programmes was Rs.520.35 lakhs. The expenditure during 1992-93 was Rs.243.60 lakhs.

### 1. *National Programme on Improved Chulahs*

5.26. Till last year, 1991-92, the National Programme on Improved Chulahs was a 100% Centrally Sponsored Scheme. But from 1992-93, a portion of the expenditure is to be borne from state funds. From 1992-93, there has been a drastic reduction in the Central assistance towards subsidies for chulahs as well as for infrastructural support to the nodal agencies. During 1992-93, 50273 numbers of chulahs (fixed 22031, portable 26856, and community 1386) against the target of 70000 chulahs were distributed. A special programme for installation of community chulahs was launched during the same year. The programme is for installation of community chulahs in schools, anganwadies etc. having noon-feeding programme.

### 2. *Integrated Rural Energy Programme*

5.27. The most important programme taken up under IREP during 1992-93 was the installation and propagation of improved chulahs. Accordingly, 8324 fixed chulahs were installed followed by the installation of 397 community chulahs, 62 SPV lamps, 10 Solar TVs, 5 Solar Water Heating Systems and 22 Wind mill pumping systems. During the year 13211 portable chulahs, 3 solar lanterns, 134 solar radio modules, 14 frictionless foot valves, 1262 reducers, 3153 kerosene stoves and 85 grameen sheethals were distributed.

### 3. *Solar Thermal Extension Programme (STEP)*

5.28. Under STEP, 42 Solar Water Heating Systems with a total capacity of 8300 litres per day were installed in the State. ANERT has also installed a solar water heating system for the Swimming Pool at Motel of Hotel, Thiruvananthapuram using 45 solar collector. During 1992-93, 9 solar cookers were distributed. ANERT has conducted a training programme on Industrial solar water heater for Engineers and Technical personnel and a Seminar on solar water heating systems.

5.29. Under Solar Photo Voltaic Programme (SPV) during 1992-93, 30 solar photo voltaic street lighting systems and 88 solar photo voltaic domestic lighting systems were installed through ANERT. 15 solar photo voltaic lanterns were distributed and 10 solar TV sets were installed. Other major achievements under the SPV programme include one SPV Power Plant of 1 KW capacity, 4 SPV powered wireless sets, 2 SPV battery charging systems and 2 SPV electric fencing systems.

5.30. Under wind monitoring projects, nine wind monitoring stations are under operation. Seven new wind mills were also installed. So far forty two wind mill water pumping units have been established. So far eleven wind monitoring units were established in the State. Under Wind Mapping programme fourteen stations are under operation.

5.31. A 3KW Wind Electricity Generator (stand alone unit) was installed at Karayoor, Agali, Palakkad in 1992-93. Detailed wind data has been published for the use of wind farm developers, based on the wind studies conducted by ANERT.

## INDUSTRY

*An Overview*

The year 1992-93 witnessed many developments in the industrial sector in Kerala. Most of them could be attributed to the vigorous measures undertaken by the agencies involved in the speedy industrialisation of the State in line with those contained in the new Industrial Policy Statement announced in September, 1991. Though it is too early to assess the impact of the Policy on the industrial front of the State, the performance during 1992-93, would indicate that if properly implemented, the measures spelt out by the State Government would help the State in achieving new heights in the industrial sector in a short span of time.

6.2 During this period, against a target of 10000 new units, 11411 small scale units have been registered in the State enhancing the total number of small scale units to 95851 by the end of March, 1993. Total number of new units registered in the previous year was only 10918. Of the total number of units registered during 1992-93, 2669 units were those promoted by women entrepreneurs and 898 were those by SC/ST entrepreneurs. The State Government launched an Intensive Industrialisation Programme in February, 1993 with the overall objective of starting 25,000 small units over a period of two years. It is noticed that since then about 12500 units have been newly registered till the end of December, 1993. The State Government have revised the target to 30000, considering the encouraging response from the prospective entrepreneurs to this programme. Similarly, 585 new joint stock companies have been registered in Kerala during 1992-93 increasing the total number of such companies to 5228 by the end of March, 1993. Total number of working factories has also increased from 13403 in December 1991 to 13946 by the end of 1992. Number of workers engaged thereon has also increased from 3.92 lakhs to 4.06 lakhs in 1992.

6.3. Among the 38 State public sector undertakings reviewed, eighteen were working on profit during 1992-93. Performance of some of the units such as Kerala Minerals and Metals Ltd, Malabar Cements Ltd., Transformers and Electricals, Kerala Ltd., and Sitaram Textiles Ltd. during this period, in terms of production and sales turnover was praiseworthy. As regards the promotion of medium and large scale units in the State, the activities of the Kerala State Industrial Development Corporation during the period under review was worth mentioning. Under this sector, 33 new projects

involving a total investment of Rs.84.80 crores were completed and commissioned during 1992-93 with the financial support of this corporation. The total number of units promoted/assisted by the Corporation as on 31-3-1993 stood at 258. Out of these, 189 units have completed/commissioned 235 projects. Another 69 projects were under various stages of implementation. During 1992-93, the Corporation has signed Memoranda of Understanding with private parties for establishing 54 new projects involving an estimated cost of Rs.983 crores.

6.4. The Central sector industrial investment in Kerala has increased to Rs.2000 crores by the end of March 1992 from Rs.1853 crores in March, 1991. The percentage share of the State in the total Central investment in the Country declined to 1.30 by the end of March, 1992 from 3.24 in March, 1975. It is understood that several projects have been cleared by the Government of India during the year under review for implementation through the Central sector units working in Kerala. These projects were at various stages of implementation. The State Government have taken active steps for the speedy completion of the 'Technopark' at Thiruvananthapuram. Nearly 70 companies have been registered for starting their units in this 'Park'.

6.5. A new Corporation viz. Kerala Industrial Infrastructure Development Corporation has been incorporated with statutory powers, for implementing projects for providing necessary infrastructure facilities required by new industries in the State. The Corporation has drawn up a number of projects for execution in association with large scale industrial houses. Steps have been taken to establish a Technology Bank in the State with the financial support of UNIDO and the Department of Science and Technology, Government of India. In the State sector, another corporation, 'Kerala Mineral Development Corporation' has been incorporated for the systematic exploitation of the mineral resources of the State on commercial basis.

6.6. Under the traditional industries sector, much improvements have been noticed during the period under review. Though these industries were being faced with several problems such as scarcity of rawmaterials, shortage of working capital and hike in material cost, their performance in terms of production and sales during 1992-93 was encouraging when compared with those in 1991-92. Under the coir sector three point levy system adopted for the procurement

of husk was fully discontinued and a new system for giving subsidy to the primary co-operative societies introduced for improving the availability of husk. Export of coir and coir products from Kerala has increased during the period under review. Similarly, export of cashew kernels and allied products has also increased during this period. Total production of handloom cloth in the co-operative sector also registered growth in 1992-93. Under sericulture, steps have been taken to increase the productivity in the area already under mulberry cultivation instead of enhancing the acreage, for the time being. Thrust has been given for implementing projects for providing necessary infrastructure facilities as contemplated under this programme.

#### Industrial Production

6.7. The index of industrial production in Kerala, according to latest available information, increased to 216.21 in 1991-92 (Base year 1980-81) from 190.45 in 1990-91 and 166.98 in 1989-90. From a level of 188.24 in the quarter ended March, 1991 the index declined to 180.89 during the quarter ended in June 1991. It reached the highest level of 236.68 during the quarter ended in September, 1991. But it decreased to 226.80 in the third quarter and to 220.48 in the quarter ended in March, 1992. The major industrial sector which recorded highest level of production during 1991-92 was that engaged in the manufacture of machinery and equipment other than transport equip-

ment. The industry wise indices for the years 1990-91 and 1991-92 are furnished in Appendix 6.1.

#### Working Factories and Employment

6.8. At the end of December 1992, there were 13946 registered working factories in Kerala. The total number of factories increased by 543 during the year 1992 from 13403. It shows an increase of 4.05 percent over the previous year. Except in Thiruvananthapuram, Idukki and Wayanad districts there has been a growth in the number of factories during this period. In the case of total number of factories, Ernakulam district stood first in 1992 also with 2137 factories. Maximum increase in the number of factories was noticed in Palakkad district where it increased from 1381 in December, 1991 to 1467 by the end of 1992.

6.9. The total number of workers employed in the registered factory sector in the State has increased in 1992 by 13874 showing an increase of 3.53 percent over the previous years' level of 3.92 lakhs. It stood at 4.06 lakhs as at the end of 1992. The number of workers in all the districts except Waynad has increased during this year. Maximum increase in the number of workers was noticed in Kollam district where it increased by 4270 from 135673 in December 1991 to 139943 as on 31st December 1992. The district wise distribution of registered working factories and workers employed thereon during 1991 and 1992 is furnished in Table 6.1.

Table 6.1

#### Number of Registered Working Factories and Employment in Kerala as on 31st December 1992

Sl. No.	District	No. of Factories		Employment (Nos.)	
		1991 (R)	1992 (P)	1991 (R)	1992 (P)
1.	Thiruvananthapuram	716	713	28043	28062
2.	Kollam	1242	1318	135673	139943
3.	Pathanamthitta	292	304	8080	8432
4.	Alappuzha	791	823	18998	21277
5.	Kottayam	1027	1080	16543	17197
6.	Idukki	285	283	7019	7137
7.	Ernakulam	2085	2137	62571	63843
8.	Thrissur	1825	1898	28547	29667
9.	Palakkad	1381	1467	21076	22385
10.	Malappuram	712	762	8919	9549
11.	Kozhikode	1447	1512	28355	29536
12.	Wayanad	123	123	2139	2139
13.	Kannur	1291	1322	23346	23829
14.	Kasaragod	186	204	2655	2842
	Total	13403	13946	391964	405838

Source: Directorate of Economics and Statistics, Thiruvananthapuram.

(P) Provisional

(R) Revised

*Joint Stock Companies in Kerala*

6.10 There were a total number of 5228 joint stock companies including 4406 private limited and 822 public limited companies in Kerala at the end of March, 1993. During 1992-93, a total number of 598 companies, comprising of 518 private limited and 80 public limited companies were newly registered in the State while 15 companies including 12 private limited and 3 public limited companies were either wound up or struck off or amalgamated. One of the companies working in the State was transferred to another state while three companies were transferred to Kerala from

other states during 1992-93. Thus the net addition to the total number of joint stock companies in the State during 1992-93 was 585. In the State sector a new company-viz-Kerala State Mineral Development Corporation Limited has been registered during 1992-93 while an existing Government Company viz. Kerala State Engineering Works Limited was wound up. The total number of Government Companies in Kerala declined to 102 by the end of March 1993, which included 80 private limited and 22 public limited companies. The details of joint stock companies in Kerala as at the end of March, 1992 and 1993 are furnished in Table 6.2.

Table 6.2

*Joint Stock Companies 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 31-3-1992	3897	746	4643
2.	Number of Companies Newly Registered during 1992-93	518	80	598
3.	Number of Companies transferred to Kerala from other States during 1992-93	3	--	3
4.	Number of Companies wound up/struck off/ Amalgamated during 1992-93	12	3	15
5.	Number of Companies transferred to other states from Kerala during 1992-93	--	1	1
6.	Net addition to the total Number of Joint stock companies in Kerala during 1992-93. (Item 2+3) - (4+5)	509	76	585
7.	Total Number of Joint Stock Companies in Kerala as on 31-3-1993 (Item 1+6)	4406	822	5228
8.	Total Number of Government Companies in Kerala as on 31-3-1992	80	22	102
9.	Number of Government Companies registered in Kerala during 1992-93.	81	--	1
10.	Number of Government Companies wound up during 1992-93	1	--	1
11.	Net addition to the number of Government Companies during 1992-93 (Item 9-10)	--	--	--
12.	Total Number of Government Companies in Kerala as on 31-3-1993 (Item 8+11)	80	22	102

Source: Registrar of Joint Stock Companies, Kerala.

## Industrial Promotion Agencies

### Kerala State Industrial Development Corporation

6.11 The Corporation is the nodal agency for the promotion of large and medium scale industries in Kerala. As on 31-3-1993, the Corporation has promoted/sponsored/assisted 258 projects in the public, joint and private sectors since its inception in 1961. Out of these, 189 companies have completed/commissioned as many as 235 projects comprising new units and expansion/diversification/modernisation/rehabilitation of existing units. The remaining 69 projects were under different stages of implementation at the end of the year. The Corporation's gross financial sanctions to various industries totalled Rs.298.06 crores by the end of March 1993. This comprised of share capital and underwriting assistance of Rs.60.63 crores, loans of Rs.204.09 crores and guarantee assistance for Rs.33.34 crores. Disbursements amounted to Rs.193.55 crores which consisted of share capital of Rs.26.50 crores, loans aggregating Rs.136.37 crores and guarantees for Rs.30.68 crores.

6.12 A record number of 33 industrial projects involving a total outlay of Rs.85 crores and having direct employment potential of 2910 people were completed and commissioned with financial support of the

Corporation during 1992-93. Thirty nine projects with an estimated investment of Rs.275 crores were taken up for implementation during the year under review. These projects expected to provide direct employment to 5060 people are under various stages of implementation. The Corporation took investment decisions for 51 projects worth about Rs.490 crores. The total direct employment potential of these projects has been estimated at 6985. During the year 1992-93, the Corporation signed memoranda of understanding with private parties for developing and establishing 54 projects at a total cost of Rs.983 crores. At the end of March 1993, as many as 57 projects, with an investment of Rs.316 crores were under various stages of implementation. Besides, 24 other projects involving a total cost of Rs.261 crores were under different stages of finalisation.

6.13 The gross income of the Corporation for the year 1992-93 amounted to Rs.1056.42 lakhs as against Rs.704.76 lakhs in the previous year. It shows an increase of nearly 50 percent over that earned in 1991-92. The Corporation was able to generate a net profit of Rs.122.36 lakhs during the year under review as against Rs.49.40 lakhs in 1991-92. The trends in the financial assistance sanctioned and disbursed by the Corporation during the period from 1990-91 to 1992-93 are furnished in Table 6.3.

Table 6.3

*Trends in Financial Assistance Sanctioned and Disbursed by Kerala State Industrial Development Corporation Limited during the period from 1990-91 to 1992-93*

(Amount in Rs. lakhs)

Mode of Assistance	1990-91		1991-92		1992-93	
	Gross sanction	Disbursement	Gross sanction	Disbursement	Gross sanction	Disbursement
1	2	3	4	5	6	7
(a) Share Capital	823.80	276.82	591.67	392.21	1763.67	379.58
(b) Loan	1906.12	1174.85	2852.47	2012.57	3785.77	2344.07
(c) Guarantee	300.00	300.00	977.83	977.83	--	--
<b>Total</b>	<b>3029.92</b>	<b>1751.67</b>	<b>4421.97</b>	<b>3382.61</b>	<b>5549.44</b>	<b>2723.65</b>

Source: Kerala State Industrial Development Corporation.

### *Kerala State Electronics Development Corporation Limited*

6.14. During the period under review, the Corporation has been managing eight subsidiary and five associate units. It was operating nine manufacturing divisions of its own as well. The Corporation has achieved a record turnover of Rs.126.48 crores during 1992-93 as compared to Rs.43.09 crores in the previous year and earned a net profit of Rs.53.64 lakhs during the period under review as against a loss of Rs.3756.27 lakhs in 1991-92. The Corporation has worked out a Corporate Long Range Plan (CLRP) for the growth of the Corporation. This CLRP based on a strategy of optimising operations and advancing into thrust areas to take best advantage of the market conditions and trade environment prevailing in the country has helped the Corporation to improve its overall performance during the financial year 1992-93.

### *Kerala State Industrial Enterprises Ltd.*

6.15 The Kerala Soaps and Oils Limited, Kerala State Drugs and Pharmaceuticals Limited, Kerala State Detergents and Chemicals Limited, Kerala State Salicylates and Chemicals Limited and Travancore Plywood Industries Ltd., were being managed by the Kerala State Industrial Enterprises Limited during 1992-93. This company has earned a total income of Rs.246.49 lakhs during 1992-93 as against Rs.186.69 lakhs in the previous year. The sales income earned by the Company increased to Rs.19.50 lakhs in 1992-93 from the level of Rs.10.69 lakhs in 1991-92. Income from other activities has also shown a noticeable increase from Rs.174.82 lakhs in 1991-92 to Rs.224.78 lakhs in 1992-93. During the period under review, the Company incurred an expenditure of Rs.191.61 lakhs towards interest and finance charges. However, the overall working of the Company during 1992-93 ended with a marginal profit of Rs.0.11 lakh as against a net loss of Rs.20.15 lakhs in 1991-92. All the subsidiary companies were working on loss mainly due to lack of working capital and resultant low production.

### *Kerala State Industrial Products Trading Corporation Ltd.*

6.16 The Corporation formed in 1976 is engaged in trading of the monopoly products of Govern-

ment Companies and industrial concerns. It has been functioning as the sole selling agent for the products of Travancore Titanium Products Ltd., since 1979. During 1992-93, the Corporation has achieved an all time high record in the sales of titanium dioxide. The sales during this period crossed Rs.7547 lakhs as against Rs.7124 lakhs in 1991-92. This was achieved mainly by evolving an aggressive marketing strategy. The Corporation has been running on profit from 1979-80 onwards continuously and paying dividend from 1981-82. During the year under review the Corporation earned a profit of Rs.59.23 lakhs as against Rs.60.24 lakhs in 1991-92. An amount of Rs.26.14 lakhs has been remitted to Government by way of service charges during 1992-93 in addition to the payment of dividend at 20 per cent.

### *Kerala State Textile Corporation Limited*

6.17 The four textile mills-viz-the Kottayam Textiles, Prabhuram Mills, Malabar Spinning and Weaving Mills and Edarikode Textiles - managed by the Kerala State Textile Corporation have shown significant improvement in their performance during 1992-93. These four mills together produced 25.34 lakh kg. of Cotton Yarn during this period as against 23.89 lakh kg. in 1991-92. This shows an increase of six per cent in the production of cotton yarn over the previous year. The value of cotton yarn produced has also shown a markable increase. The value was Rs.1822.79 lakhs in 1991-92, which in 1992-93 rose to Rs.2357.04 lakhs. The Knitwear and Elastic divisions of the Corporation manufactured items worth Rs.19.64 lakhs during 1992-93 as against Rs.16.93 lakhs in the previous year. Total sales turnover of the Corporation during 1992-93 reached Rs.2400.78 lakhs compared to the previous year's level of Rs.1900.05 lakhs. The working of the Corporation for the year 1992-93 has resulted in a net profit of Rs.13.62 lakhs as against the budgeted net loss of Rs.93.10 lakhs. This achievement has been mainly contributed by the advantageous cotton prices as well as favourable yarn prices. During 1992-93, there was an increase of 16.45 per cent in the capacity utilisation as compared to the previous year. There was improvement in labour productivity also. The production details of the mills under the management of the Corporation are given in Table 6.4.

Table - 6.4

*Consolidated Production Details of Malabar Spinning and Weaving Mills, Kottayam Textiles, Prabhuram Mills and Edarikode Textiles Managed by the Kerala State Textile Corporation.*

Year	Cotton Yarn		Cloth/ other items		Total Value of Production (Rs. lakhs)
	Production (lakh kg.)	Value (Rs. lakhs)	Production (lakh Kg.)	Value (Rs. lakh)	
1	2	3	4	5	6
1989-90	19.57	1349.94	--	11.34	1361.28
1990-91	26.08	1673.77	--	16.50	1690.27
1991-92	23.89	1822.79	--	16.93	1839.63
1992-93	25.34	2357.04	--	19.64	2376.68

\* Source: Kerala State Textile Corporation Ltd.

37/92/94-6A

6.18 Modernisation programmes taken up by the Corporation for the Kottayam Textiles and Prabhuram Mills has been successfully completed. In addition to this, the Corporation could enhance the capacity of the Edarikode Textiles by 2880 spindles (from 12480 to 15360) during 1992-93 utilising ownfunds. Another scheme for increasing the spindleage to 25000 numbers is under active consideration. The Corporation has also drawn up a programme for ensuring the sustained profitable operation of the Malabar Spinning and Weaving Mills during the Eighth Plan period.

#### *Manufacturing Industrial Enterprises under State Public Sector*

6.19 As on 31-3-1993, there were 44 manufacturing units in the State public sector under the administrative control of the Industries Department. The State Government was holding the entire equity capital of 20 units out of them, while the majority shares of the remaining units were jointly held by the State Government and its holding companies. Out of these, the Astral Watches Ltd. and Kerala Garments Ltd. were being managed by the Kerala State Industrial Development Corporation and the Kerala State Handloom Development Corporation respectively. The Kerala Special Refractories Ltd. and Kerala Hitech-Industries Ltd. had not commenced commercial production during the period under review. The performance of the Foam Mattings (India) Ltd. has been dealt with elsewhere in this chapter. Some of the companies are yet to finalise their accounts for the year 1992-93. The performance of 26 companies, for which data are available for this period, has been attempted in this section.

6.20 In terms of value of production, sales turnover and utilisation of installed capacity the performance of the Kerala Minerals and Metals Ltd., Malabar Cements Ltd., Kerala Automobiles Ltd., Sitaram Textiles Ltd., and Kerala Ceramics Ltd during the period under review was encouraging. They have achieved better working results after a long period. The performance of the Kerala Minerals and Metals Ltd. and Malabar Cements Ltd., in particular was very encouraging. (See the Appendix tables 6.2 to 6.4) Among the public sector units in which the Government is holding majority shares, the Travancore Cochin Chemicals Ltd., Travancore Cements Ltd., Traco Cable Company Ltd., Transformers and Electricals Kerala Limited and Keltron Electro Ceramics Ltd. showed better results in terms of value of production and sales turnover during 1992-93 compared to those in the previous years. Rate of capacity utilisation in these units, except Traco Cable Company has also increased during this period. Details of the units under the Government majority group are furnished in Appendix tables 6.5 to 6.7.

6.21 Out of the 26 manufacturing units, information for which are available, 12 were working on profit during 1992-93. They were the United Electrical Industries Ltd., Transformers and Electricals Kerala Ltd., Traco Cable Company Ltd., Travancore Cements Ltd., Kerala State Electronics Development Corporation Ltd., Travancore Cochin Chemicals Ltd., Kerala Ceramics Ltd., Malabar Cements Ltd., Kerala Clays and Ceramic Products Ltd., Forest Industries (Travancore) Ltd., Keltron Electro Ceramics Ltd., and Foam Mattings (India) Ltd. Some of the units such as Kerala Minerals and Metals Ltd. and Kerala Automobiles Ltd., which were incurring huge losses in the previous years could bring down their losses substantially during 1992-93. Among the total number of 38 State public sector units reviewed, 18 units were working on profit during 1992-93. They together earned a net profit of Rs.33.17 crores, major contributors to this being the chemical industries group. The remaining twenty units together incurred a total loss of Rs.78.22 crores during this period. All the six units reviewed under the 'Engineering' group were working on loss. Out of the 38 units, 33 were having accumulated losses amounting to Rs.527.41 crores as against their total paid up capital of Rs.393.26 crores as on 31-3-1993. The accumulated loss of 19 companies had exceeded their paid up share capital. Their total accumulated losses stood at Rs.484.90 crores as against their total paid up capital of Rs.202.30 crores as at the end of March, 1993. The details of these units are given in Table - 6.5. A group-wise summary of working results of the State Sector Units coming under the administrative control of the Industries Department is furnished in Appendix - 6.8.

6.22 Many of the State public sector enterprises reviewed were facing problems such as shortage of working capital, scarcity of rawmaterials and stiff competition from well established private companies during 1992-93. Despite these, some of them have achieved noticeable improvements during this period. Effective steps initiated in the procurement and usage of stores and spares, budgetary control, better working capital management and improved operational efficiency helped the Kerala Minerals and Metals Ltd. to bring down its variable costs substantially. In order to prevent accumulation of stock, discount was given for the sale, and production was regulated to single stream of operation from the second half of the year under review. It is worth mentioning that the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India has awarded the first ever National Award for R&D efforts to this company in 1992 in recognition of its achievements in the absorption, adaptation and improvement in imported chloride route technology for production of Titanium



dioxide. The Malabar Cements Ltd., could gain confidence of its dealers and customers and thereby improve its market share through vigorous sales promotion activities. This has been achieved without resorting to price cut or giving discounts and credits as offered by the competitors in the field.

6.23 The Travancore Cements Ltd., was facing difficulties on account of increased input costs particularly the steep hike in the price of LSHS and upward revision in the salaries and wages. The Company could not enhance the price of its products due to unfavourable market conditions prevailed during 1992-

93. These factors have affected the profitability of the company. The Travancore Cochin Chemicals Ltd. could improve its sales corresponding to the enhanced production at reasonable price levels and achieve better utilisation of chlorine during the period under review. During this period the company has completed the second phase of the project on Brine system consisting of modernisation involving technology upgradation and power system of Plant I. The Traco Cable Company earned a cash profit of Rs.506 lakhs, whereby it could wipe off all the past cash losses. Moreover, the Company could earn a net profit of Rs.107 lakhs during the period under review.

Table - 6.5

*Details of Public Sector Industrial Undertakings whose Accumulated Loss Exceeded their Paid up Share Capital*

<i>(Amount in Rs. lakhs)</i>		
Name of Undertaking	Paidup Capital as on 31.3.1993	Accumulated Loss as on 31.3.1993
1	2	3
<b><u>Manufacturing Industrial Enterprises</u></b>		
<b><u>Electronics</u></b>		
1. Kerala State Electronics Development Corporation Ltd.	6691.55	6893.14
2. KELTRON Electro Ceramics Ltd..	195.29	344.53
<b><u>KSIE GROUP</u></b>		
3. Travancore Plywood Industries Ltd.	48.59	962.34
4. Kerala State Salicylates and Chemicals Ltd.	628.00	1217.90
<b><u>CHEMICALS</u></b>		
5. Kerala Minerals and Metals Ltd.	3093.27	10799.46
<b><u>TEXTILES</u></b>		
6. Sitaram Textiles Ltd.	317.00	1567.74
7. Trivandrum Spinning Mills Ltd.	264.99	755.10
<b><u>ELECTRICALS AND CABLES</u></b>		
8. Metropolitan Engineering Co. Ltd.	138.17	363.88
9. Transformers and Electricals Kerala Ltd.	1347.54	4195.60
<b><u>ENGINEERING</u></b>		
10. Steel and Industrial Forgings Ltd.	450.00	1184.00
11. Autokast Ltd.	1310.00	4209.28
12. Scooters Kerala Ltd.	229.99	267.76
13. Kerala Automobiles Ltd.	323.00	1404.63
<b><u>CERAMICS AND REFRACTORIES</u></b>		
14. Kerala Ceramics Ltd.	1031.98	1441.85
15. Chalakudy Refractories Ltd.	346.64	484.64
<b><u>AGRO-BASED</u></b>		
16. Foam mattings (India) Ltd.	68.00	216.61
<b><u>Trading and Promotional Agencies</u></b>		
17. Kerala State Cashew Development Corporation Ltd.	3058.95	11249.84
18. Kerala State Small Industries Development Corporation Ltd.	451.59	682.93
19. Kerala State Coir Corporation Ltd.	235.04	248.97
<b>Total</b>	<b>20229.59</b>	<b>48490.20</b>



### Central Sector Industrial Investment in Kerala

6.24 As on 31st March, 1992, the Central investment (in terms of gross block) in the industrial sector of Kerala has increased to Rs.2000 crores from Rs.1853 crores in March, 1991. The percentage share of the State in the total Central investment in the Country has, however, come down to 1.30 per cent as on 31st March, 1992 from 3.24 per cent in March, 1975. The total Central sector industrial investment in the Country has increased from Rs.130657 crores in March, 1991 to Rs.154258 crores by the end of March, 1992 showing an increase of Rs.23601 crores during the financial year, 1991-92. Out of this, Kerala received only Rs.147 crores, constituting only 0.62 per cent in the total investment made by the Central Government in the industrial sector in the Country as a whole. The five states of Maharashtra, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and Bihar accounted for more than 50 per cent of the total Central investment in the Country as on 31.3.1992. (See Appendix-6.9). The main reason for the declining trend in the percentage share of Kerala in the total Central investment is that no new industrial ventures, excepting certain expansion/diversification projects are being established in the State for the last few years. It is understood that the Central Government have already approved certain projects of the existing units for implementation during the remaining period of the Eighth Plan. The data relating to the Central sector investment in the Country and Kerala at different intervals are furnished in Table 6.6.

Table 6.6

#### Central Sector Industrial Investment in Kerala

(Rs. in crores)

Year	Investment (Gross Block) as on 31st March	Percentage of Column (3) to Column (2)
1	2	3
1970	3795	116
1975	6242	202
1980	18161	423
1985	47323	831
1990	113430	1701
1991	130657	1853
1992	154258	2000

6.25 Eighteen Central Sector undertakings including five textile mills managed by the National Textile Corporation were functioning in Kerala during 1992-93. They were;

1. Cochin Refineries Limited, Kochi.
2. Cochin Shipyard Limited, Kochi.

3. Fertilizers and Chemicals Travancore Limited, Aluva.
4. Hindustan Newsprint Limited, Kottayam.
5. Hindustan Latex Limited, Thiruvananthapuram.
6. Indian Rare Earths Limited, Aluva and Chavara.
7. Indian Telephone Industries Limited, Palakkad.
8. Instrumentation Limited, Palakkad.
9. Hindustan Insecticides Limited, Aluva.
10. Modern food Industries (India) Limited, Kochi.
11. HMT Limited, Kalamassery.
12. Balmer Lawrie and Company Limited, Aroor
13. Hindustan Organic Chemicals Limited, Kochi.

#### Units under National Textile Corporation

14. Cannanore Spinning and Weaving Mills, Kannur
15. Vijayamohini Mills, Thiruvananthapuram.
16. Parvathi Mills, Kollam.
17. Kerala Lakshmi Mills, Thrissur
18. Alagappa Textile (Cochin) Mills, Thrissur.

6.26. Certain salient features of the Central sector manufacturing units working in Kerala are furnished in Appendix Tables 6.10 to 6.13.

#### Small Scale Industries

6.27. The Small Scale Industries Sector recorded substantial growth during 1992-93 in the number of SSI units registered. There were 95851 small scale industrial units in the State at the end of the financial year 1992-93. Of these, the number of new units registered during the year against a target of 10000 numbers was 11411. The achievement in the previous year was 10918. The capital invested by the units registered in 1992-93 amounted to Rs.14502.23 lakhs. These units generated goods and services worth Rs.26331.21 lakhs during 1992-93 and provided employment to an estimated number of 50606 persons. Of the total number of 11411 SSI units registered, 2669 units were promoted by women entrepreneurs and 898 by SC/ST entrepreneurs. Ernakulam district accounted for 14% of the total number of SSI units registered, followed by Thiruvananthapuram (12%) and Kottayam (11%). All these three districts together accounted for 37% of the total number of small scale units registered in the State during the year 1992-93. Wayanad and Kasargod districts accounted for the lowest number of new SSI units with only 265 and 221 respectively. District-wise details of the Small Scale Industrial units registered in Kerala during the year 1992-93 are given in Appendix 6.14.

6.28. The total number of SSI units registered in the State as on 31st March, 1993 was 95851. Total investment of these units which provided employment

to 5.69 lakh persons was Rs.1008.89 crores. The value of goods and services produced by these units during 1992-93 (excluding those in Kasaragod district) was estimated at Rs.3020.38 crores. District wise details of registered small scale units in Kerala as on 31.3.1993 are furnished in Appendix 6.15. The average investment per unit, value of goods and services produced per unit and the employment generated by one unit in the Small Scale Sector in the State have been worked out to Rs.1.05 lakhs, Rs.3.15 lakhs and six numbers respectively.

6.29. (The State Government have launched an Intensive Industrialisation Programme (IIP) on 1st February 1993, with a view to promoting 25,000 new small scale industrial units to provide employment to 1.5 lakh persons over a period of two years. Consequent to the implementation of this programme, 12482 new units have come up in the Small Scale Industrial Sector.) Since the response of the entrepreneurs to the programme has been encouraging, the Government have raised the target under this programme to 30,000 units.

6.40. During 1992-93, a total number of 950 prospective entrepreneurs were trained under the Entrepreneurship Development Programme, which included 134 persons belonging to SC/ST. Fifty five persons trained under the programme had started new Small Scale Industrial Units. Details of Entrepreneurship Development Programme conducted during 1992-93 is furnished in Appendix 6.16. Under Self Employment Programme, an amount of Rs.489.40 lakhs was sanctioned to 2949 persons for establishing their own ventures under Industry, Service and Business category and Rs.310.80 lakhs disbursed to 1913 beneficiaries during this year. Achievements under the Self Employment Programme during the year 1992-93 is given in Appendix 6.17.

#### *Kerala Financial Corporation*

6.31. The prime objective of the Kerala Financial Corporation is to encourage and promote industrialisation by providing term loans to the small and medium scale industries in the State. During the span of forty years, the Corporation has sanctioned Rs.641 crores to about 20,000 small and medium scale units in the State, providing thousands of employment opportunities. Of this, total loan assistance sanctioned to small scale units alone amounted to Rs.439 crores (i.e., 68 per cent of the total assistance sanctioned). The paid up capital of the Corporation as on 31.3.1993 was Rs.38.50 crores (including advance). The long term borrowing of the corporation till the end of March, 1993 was Rs.274.73 crores. The outstanding balance of loans and advances stood at Rs.296.64 crores. The

Corporation sanctioned loan assistance to 9063 units during 1992-93. The gross amounts sanctioned and disbursed as loans by the Corporation during the period under review were to the tune of Rs.93.11 crores and Rs.65.10 crores respectively. During this period, the recovery was to the tune of Rs.75 crores. The Corporation earned a net profit of Rs.1.51 crores during this year. The details of assistance sanctioned and disbursed by the Corporation during the year 1992-93 are furnished in Appendix Tables 6.18 and 6.19.

#### *Kerala Small Industries Development Corporation (SIDCO)*

6.32. The achievements with regard to the functional activities of the Corporation are summarised below:

- (i) The Raw Material Division of SIDCO procures and distributes scarce raw materials to the registered SSI units in the State. The quantity of raw materials supplied through various depots amounted to 19851 tonnes and total number of 2000 SSI units were assisted for procurement of raw materials during the year 1992-93. This Division registered a turnover of about Rs.31 crores and earned a profit of nearly Rs.50 lakhs during 1992-93. The Production Division of the Corporation having 12 production/service units engaged in the manufacture of wooden furniture, survey instruments and similar items are running on loss due to shortage of working capital, obsolete machines, lack of marketing facilities etc. The turnover of this Division during 1992-93 was Rs.2.14 crores.
- (ii) SIDCO is in possession of seventeen conventional Industrial Estates and thirty six Mini Industrial Estates. During 1992-93 all the 527 sheds in the conventional Industrial Estates were occupied by 323 units. Out of 393 sheds in Mini Industrial Estates, 381 were occupied by 337 units. The problem faced by this Division is that the revenue received from these estates is inadequate to meet even the maintenance charges of these estates. The Planning and Development Division of SIDCO attends to rehabilitation of SSI units under the SIDCO-IRBI scheme and the recovery of dues from the entrepreneurs who had availed margin money and rehabilitation loans. Total amount of arrears collected during 1992-93 from the entrepreneurs who had availed rehabilitation/margin money loan, by enforcing revenue recovery proceedings and other methods was Rs.5.89 lakhs and Rs.7.00 lakhs respectively. Loan outstanding as on 31.3.1993

was Rs.1.89 crores. This Division provides general guidance to prospective entrepreneurs and Non Resident Indians and furnishes information on sick units from its own division and outside agencies.

- (iii) During the year 1992-93 the marketing division of the corporation placed orders to the tune of Rs.2.23 crores of which supply of articles worth Rs.1.15 crores has been completed. The sales emporia of this Division at Kannur, Ernakulam, Kottayam and Thiruvananthapuram recorded a total turn over of Rs.73.18 lakhs and earned a profit of Rs.9.14 lakhs. The construction Division of the Corporation could complete civil works costing Rs.200 lakhs though it had taken up works costing Rs.460 lakhs during the period under review. The Khadi and Village Industries Board has entrusted this Division with their civil works of the new projects for sericulture complexes at Kollam and Kasaragod. The Division has completed the Oil Expeller Project at Karunagapally for 'KERAFED'. The centage charges levied by the Corporation are comparatively less. The rate of centage allowed to the Corporation is only 12 per cent whereas KHRWS and Warehousing Corporation are charging centage at the rates of 16.5 per cent and 21 per cent respectively. The low rate of centage has been affecting the working of this division adversely and restrains it from undertaking new works for its sister concerns. The total turnover of the corporation, earned through its various divisions during 1992-93, amounted to Rs.34.27 crores as compared to Rs.37.69 crores in the previous year.

#### *Small Industries Service Institute*

6.33. The Small Industries Service Institute, Trichur continued its activities during 1992-93 and provided technical and managerial consultancy services to a number of industrial units. During this period, the Institute executed a total number of 790 jobs providing common facility services and earned a total revenue of Rs.3.40 lakhs. Besides, it prepared several technical reports for the benefit of existing as well as prospective entrepreneurs during the period. A status report on electrical industries, a state profile on agro food processing industries, a study report on policy control, a report on quality control and upgradation, an energy audit report, a directory on type retreading machinery manufacturers, a State Industrial Profile of Kerala, In-

dustrial potentiality surveys for Kollam and Kottayam districts and the Union Territory of Lakshadweep were a few among them.

6.34. The Institute provided consultancy services to a total number of 6561 cases, of which 3604 (55%) cases were dealt with at the Institute, 863 (13%) cases at the unit premises and 2094 (32%) cases through correspondence. Out of 6561 consultancy services provided 3487 (53%) cases were of purely technical in nature. Remaining cases were related to dissemination of information relating to scope, infrastructure facilities, financial availability, market potential and availability of various incentives and facilities. The summary position of consultancy services offered by SISI is given in Table 6.7.

Table 6.7

#### *Details of Consultancy Services Offered by Small Industries Service Institute during 1992-93*

Sl.No	Type of Assistance	Location of Services			Total
		At Unit premises	At SISI Extension Centres	Through Correspondence	
1	2	3	4	5	6
1.	Technical	601 (525)	1925 (1850)	961 (828)	3487 (3203)
2.	Managerial	13 (10)	15 (18)	1 (1)	29 (29)
3.	Economic and Statistical	80 (34)	480 (466)	360 (312)	920 (812)
4.	Others	127 (121)	352 (346)	370 (351)	849 (818)
5.	Assistance to start new Industries	42 (36)	832 (805)	402 (398)	1276 (1239)
	Total	863 (726)	3604 (3485)	2094 (1890)	6561 (6101)

Note: Figures in brackets indicate the achievements in 1991-92.

6.35. The details of training programme and seminars organised by the Institute during 1992-93 for the prospective entrepreneurs and also for the development of their technical and managerial skills are furnished in Table 6.8. In addition to the above, motivation campaigns were conducted at Minicoy, Kollam and Kannur during the year 1992-93 and about 560 participants took part in the campaigns.

Table 6.8

Place at which Training/Seminar was organised	No. of Trainees
1. Thiruvananthapuram	36
2. Kollam	19
3. Pathanamthitta	26
4. Alappuzha	31
5. Kottayam	17
6. Thiruvalla	24
7. Idukki	31
8. Ernakulam	42
9. Aluva	14
10. Thrissur	84
11. Irinjalakuda	52
12. Palakkad	21
13. Wayanad	37
14. Kozhikode	50
15. Kannur	43
16. Kasaragod	18
17. Minicoy (Lakshadweep)	38
<b>Total</b>	<b>583</b>

6.36. In order to promote more ancillarisation, a Buyer Seller Meet was organised at Palakkad with the help of KISSA and DIC on 18.11.1992 for identifying ancillary items for the large and medium units situated in the State. Besides a survey report for Palakkad District and a State profile of Kerala were prepared for 1992-93. The SISI kept a close liaison with the DICs in preparing thrust area for the district. Finally a list containing the thrust areas (proposed) for each district was identified during the year 1992-93. SISI had also extended all assistance to SC/ST/Women entrepreneurs by giving training and guiding them for setting up SSI units. During the year 63 women entrepreneurs and 10 SC/ST candidates were trained by this Institute. The Footwear Service Centre had also extended training to SC/ST/Women sponsored by ITDP Kalpetta in foot wear making.

6.37. Under energy conservation programme, the Institute conducted an indepth study on two units and suitable measures in respect of energy conservation and cost reduction were recommended. An awareness programme on energy conservation was organised during the year with industrialists in the area of energy conservation. The Institute has undertaken a study on pollution control under cluster group which covered the working of 15 SSI units manufacturing sodium silicate. The study helped in bringing down the pollution in the respective areas. The Food Division of the Institute has undertaken an indepth study of nearly 6 units producing fruit/vegetable/food preservation, about

their present mode of preparation, packaging, marketing etc. and suggested necessary modification/alteration to enable them to improve their quality and cater to a better market.

#### *Kerala Industrial and Technical Consultancy Organisation (KITCO)*

6.38. Kerala Industrial and Technical Consultancy Organisation (KITCO) which provides consultancy services to entrepreneurs and managements on project preparation, civil works, engineering aspects, energy conservation, industrial management, business promotion etc. achieved a turnover of Rs.59.31 lakhs in 1992-93 as against Rs.48.35 lakhs in 1991-92 (23% increase). Out of the total turnover an amount of Rs.58.07 lakhs was earned through consultancy fees as against Rs.46.87 lakhs in the previous year thus registering 20% increase over the year. The project consultancy division of KITCO has completed 186 project reports and 6 rehabilitation/diagnostic study reports during the year 1992-93. The company has successfully completed an assignment received for the preparation of detailed project report for five growth centres at Alleppey, Pathanamthitta, Kannur, Kozhikode and Malappuram districts within a short span of time. The detailed engineering division of the company had undertaken 16 assignments of which only one assignment was completed and others are in various stages of execution. Six consultancy assignments for Hindustan Latex, establishment of interim processing facilities at Chithara estate, Anchal for the Oil Palm India Ltd., civil work for Marine Products Exports Development Authority, assignments from National Dairy Development Board (NDDB) for commissioning of dairy projects in the states of Karnataka and Tamil Nadu, extension of facilities in the Meet Products of India Ltd., Koothattukulam, interior decoration and electrification work for SIDBI, design and execution of civil works for an oil complex at Vytilla from KERAFED, detailed engineering support to Rehabilitation Plantations Ltd. and electrification of vegetable processing plant at Cochin Export Processing Zone are the various assignments undertaken by the Company during 1992-93.

6.39. KITCO had 19 assignments under the category of special studies, of which six were completed during the year and draft reports were submitted in the case of 8 assignments. Remaining five assignments were in various stages of execution. It included studies in respect of rubber based industry, marine food industry, coir industry, printing ink industry, tiles, foot wear and stone crushing sectors and other tiny sector industrial units. Special attention had also been given for the preparation of project profiles for NRI entrepreneurs. During the year 1992-93, KITCO had completed 12

assignments for Energy audit for different industries. It had also completed 18 Entrepreneurship Development Programmes during the year in various districts. Further in the sphere of business promotion, business contracts and follow up of offers already sent for consultancy services were made. Proposals were also sent to various firms for consultancy services. The Data Bank of the company had also extended necessary help for the prospective entrepreneurs. KITCO also utilised the IFCI promotional schemes for new entrepreneurs. During the year 1992-93, a subsidy worth Rs.3.84 lakhs had been availed by the company.

### *Handicrafts Industry*

#### *Handicrafts Development Corporation of Kerala Limited*

6.40. The main objectives of the Handicrafts Development Corporation of Kerala are to protect and develop handicrafts industry within the State by marketing the products in India and abroad. Procurement and distribution of raw materials to artisans at subsidised rates, collection of finished handicrafts goods at fair prices, exhibition and sales of handicrafts all over India through emporia, participation in international trade fairs to promote export of handicrafts goods, financial assistance to artisans, provision of facilities to artisans in the common facility service centre run by it were the main activities carried out by the Corporation during the year under review. The sales performance of the Corporation during 1992-93 was encouraging. The total sales turnover of the Corporation during 1992-93 was Rs.554.73 lakhs (19.24 per cent increase) against Rs.465.22 lakhs of the previous year. During the year 1992-93 handicrafts goods valued at Rs.44.47 lakhs (96.16% increase) was exported by the Corporation against Rs.22.67 lakhs during 1991-92. The Corporation earned a total profit of Rs.36.30 lakhs during the year 1992-93. It has conducted a number of exhibition cum sales during the year in important places viz., Jaipur, Poona, Calcutta, Mysore, Aurangabad, Pondicherry, Salem and Thrissur. The Corporation is planning to open more show rooms at important places like Thrissur, Ahmedabad and Lucknow. The major show rooms Kairali at New Delhi and SMSM Institute at Thiruvananthapuram were renovated during the year. The Corporation is planning to increase its export sales with the assistance of UNDP.

#### *Kerala Artisans' Development Corporation*

6.41. The Kerala Artisan's Development Corporation provides a package of assistance for the benefit of artisans engaged in carpentry, blacksmithy, goldsmithy, bronzesmithy, masonry, pottery and shoe making trades. For attaining the goal, the Corporation

is implementing various schemes including the Composite Term Loan Scheme and Registration Scheme. The Corporation is organising 'Artisan's Fairs' for marketing of finished products. During the year 1992-93, a total number of 10 trade fairs were conducted by the Corporation at various places of Kerala. Under Composite Term Loan Scheme, as a promoter the corporation channelised a total amount of Rs.25.03 lakhs to 111 artisans from different banks for setting up of tiny industrial units. During the year under review the corporation made arrangements for the supply of finished goods of artisans to other public sector undertakings and private parties. Such items were displayed through the small show room attached to their regional office at Ernakulam. This small emporium has achieved a total turnover of Rs.4 lakhs during 1992-93. The corporation is proposing to open a Marketing Centre at Thiruvananthapuram for selling the products of artisans. The Corporation sold items such as furniture, handicraft items, pottery etc. valued at Rs.23.20 lakhs during 1992-93.

#### *Bamboo Industry*

6.42. The Kerala State Bamboo Corporation helps in the consolidation and promotion of bamboo and reed based traditional cottage industries in the State. It assists in organising the dispersed workers, effects equitable distribution of raw materials to them and finally undertakes procurement and marketing of their finished products. The Bamboo Corporation produced 22.75 lakh sq. feet of bamboo ply and 733.29 lakh sq. feet of bamboo mats during 1992-93. Total value of items produced by the Corporation during this period amounted to Rs.512 lakhs. Raw materials worth Rs.127.80 lakhs were consumed by the Corporation during the year. During the year, the Corporation received financial assistance to the tune of Rs.52.98 lakhs (Rs.40.98 lakhs as share capital and Rs.12.00 lakhs as loan) from the State Government. The total sales turnover of the Corporation during the year 1992-93 amounted to Rs.7.50 crores. The major consumers of the Corporation include the Central and State warehousing corporations, Food Corporation of India and sugar mills. The Corporation earned a profit of Rs.36.09 lakhs during the year 1992-93 before providing for income tax.

#### *Beedi Industry*

6.43. The Kerala Dinesh Beedi Central Co-operative Society has taken much effort to organise the dispersed individual beedi workers and petty traders in the Northern districts of Kerala and develop the industry as a flourishing enterprise. The Central Society and the twenty two primary societies together provided employment to about 33930 workers as on 31.3.1993.



The Central Society procures raw materials in bulk, distributes to primary societies and helps them in marketing their products under a single brand name. There were 48604 members in the primary societies as on 31.3.1993. The paid up share capital of the primary societies during the year 1992-93 was Rs.72.98 lakhs. An amount of Rs.108.37 lakhs had been disbursed towards salary during 1992-93 by the primary societies, while it was Rs.19.90 lakhs for the Central Society. During the period 1992-93, workers were given 16% bonus and the amount disbursed in this respect was Rs.439.39 lakhs. Under the welfare cum pension scheme an amount of Rs.2.95 lakhs had been disbursed during 1992-93 towards assistance for the family of the deceased beedi workers and Rs.2.13 lakhs for lumpsum retirement benefit for the workers. About 109 workers were provided pension during 1992-93 as per pension scheme.

6.44. The paid up share capital of the Central Society was Rs.35.75 lakhs which included Rs.15.65 lakhs contributed by members and Rs.20.10 lakhs given by State Government. The Society earned a gross income of Rs.78.75 crores during 1992-93. A total number of 669.67 crore beedies valued at Rs.62.15 crores were purchased by the Central Society from the member societies during the year. Raw materials valued at Rs.7.43 crores were consumed by the Central Society during 1992-93. The Central Society had a sales turnover of Rs.63.80 crores and earned a net profit of Rs.21.15 lakhs during 1992-93.

#### *Khadi and Village Industries*

6.45. The Kerala Khadi and Village Industries Board continued its promotional activities, during 1992-93, for extending financial and technical assistance to artisans engaged in Khadi and Village Industries through co-operative societies, charitable institutions and individuals. The finance required for this purpose was mainly received as grant and loan from Khadi and Village Industries Commission. As on 31.3.1993 there were 438 Khadi production centres and 13 village industries units under the Board. The Board has financed 1949 co-operative societies, 1764 charitable institutions and 11435 individuals to run various Khadi and village industries units as on 31.3.1993. Altogether five federations are working under the Board for the cottage match industries, soap industries, rural women electronic industries, bee keeping and rubber during the year under review. In order to ensure regular supply of cotton tape to the centres, the Board had commissioned a sliver project at Ettukudukka in Kasaragod District.

6.46. The Board is implementing various schemes for the upliftment of the economically weaker sections especially those belonging to Scheduled Castes and Scheduled Tribes. As on 31.3.1993, 202 societies were registered under these schemes. The physical targets for 1992-93 were 836 families under Special Component Plan, and 366 families under Tribal Sub Plan. As regards disbursement of funds, a total amount of Rs.7148.90 lakhs has been disbursed to the beneficiaries by way of grant and loan as on 31.3.1993. During the year 1992-93, the Board had received an amount of Rs.571 lakhs under plan, Rs.242 lakhs under non-plan and Rs.50 lakhs for rebate from the State Government. The production and sales of the Board in 1992-93 were Rs.94.01 crores and Rs.104.94 crores respectively. The Khadi and Village Industries provided employment to a total number of 1.78 lakh persons during 1992-93. Particulars of programmes formulated by the Board and its performance during the year 1992-93 are furnished in Appendix 6.20.

#### *Kerala State Palmyrah Products Development and Workers' Welfare Corporation Limited (KELPALM)*

6.47. The Kerala State Palmyrah Products Development and Worker's Welfare Corporation Ltd. (Kelpalm) was registered in 1985 with the objective of establishing facilities for processing and promoting palmyrah fibre and the welfare of the workers engaged in the Palmyrah industry in the State. The Corporation has already established facility centres at Alathur in Palghat District and Parassala in Thiruvananthapuram District for the manufacture of Palmyrah products. The Corporation has taken steps to implement the second phase of the project envisaging programmes including training to young persons in Palmyrah fibre processing, a full fledged facility centre to house the 1200 tonne capacity fibre processing plant, brush making unit, palm sugar manufacturing unit etc. The Corporation has exported processed palmyrah fibre to USA based on a test order. Total income of the Corporation during 1992-93 was Rs.23.34 lakhs. Palmyrah products valued at Rs.19.20 lakhs was produced by the Corporation during 1992-93 and the total sales turnover during this period was Rs.8.43 lakhs.

#### *Sericulture*

6.48. Silk worm rearing, silk reeling, silk weaving and establishment of related industries are the major activities contemplated under the sericulture development programme in Kerala. The State Government has declared the sericulture as a village industry in 1990-91 and since then Kerala Khadi and Village Industries Board has been entrusted with the implemen-

tation of the programmes in the State on a large scale. In the light of the new Industrial Policy Statement announced by the State Government in 1991 a target to bring 50000 acres under mulberry cultivation with an employment potential of 2.5 lakh persons was fixed for the Eighth Five Year Plan.

6.49. During the year 1992-93, an additional area of 4631 acres was brought under mulberry cultivation. Total production of cocoon during this period was 288 MT. More than 6500 farmers have so far been trained under the programme of on farm practical training in sericulture with a stipend of Rs.250/-. Two large scale silk reeling units, one each in Pattanakkad in Alappuzha district and Uduma in Kasaragod district have been started in the State sector. In addition to these, about twenty units of varying capacities have been promoted in the private sector. A grainage with P2 farm is nearing completion in the sericulture complex at Elamad in Kollam district. Another sericulture complex comprising of silk reeling,

training and silk worm rearing has been contemplated at Uduma in Kasaragod district.

6.50 More than 3000 farmers have so far been benefited under the programme for providing subsidy for rearing equipment, rearing sheds and interest subsidy. In addition to these, the Government have been contributing to the insurance scheme for DFLS. The Government have also approved a scheme to provide an incentive bonus @ Rs.10 per Kg. of bivoltine reeling cocoons, with 50 per cent reimbursement from the Central Silk Board. Certain details relating to the major achievements under the Sericulture Development programme during 1992-93 and 1993-94 (8 months) are given in Table 6.9.

6.51. It has been found that though the area under mulberry cultivation has been increasing, there was no corresponding increase in the production of cocoon. In view of this it has been decided to initiate

Table 6.9

*Progress of Sericulture Development Programmes in the State*

Sl.No.	Item	1992-93	1993-94 (till Nov. 30th)	Remarks
1	2	3	4	5
1.	Mulberry Cultivation (Productive area) (in acres)	4631	948	
2.	Number of Farmers	5454	1066	
3.	Number of Rearing Units	..	2854	Existing cumulative total
4.	Production of cocoon (MT)	288.14	60.74	
5.	Silk worm seed production centre (Nos)			
a.	State sector	Nil	Nil	
b.	Private sector	1	1	
c.	Co-operative sector	-	-	
d.	Central Sector	1	1	
	Total (5)	2	2	
6.	Cocoon Purchase Centres (Nos.)			
a.	State sector	14	-	
b.	Co-operative Sector	-	-	
c.	Private Sector	-	-	
	Total (6)	14	-	
7.	Silk reeling units (Nos.)			
a.	State sector	2	-	
b.	Co-operative Sector	4	-	
c.	Private sector	15	-	
	Total (7)	21	-	
8.	Demonstration cum Training Centre (Nos.)			
a.	State Sector	-	-	
b.	Central Sector	1	1	
	Total (8)	1	1	
9.	Production of Raw Silk Yarn (Kg)	-	1584	Production started only recently
10.	Sericulture Co-operative Societies Organised (Nos)	508	-	Functioning societies about 20 Nos.

action to increase the productivity in the areas already brought under cultivation instead of expanding the area.

### *Coir Industry*

6.52. Coir industry in Kerala provides direct employment to 3.83 lakh workers mostly in the rural areas. According to the census conducted in 1988, the total population of the coir workers households were 11.08 lakhs. Out of the total workers in the spinning and manufacturing sectors, about 2.53 lakh workers have been brought under the co-operative fold. About 70,000 members could be provided with employment during the year 1992-93. As on 31.3.1993, there were a total number of 816 co-operative societies in the State. Out of these, 477 societies were working as against 484 working societies in the previous year, whereas others were either new societies or dormant or under liquidation.

6.53. The Central and State Governments and the NCDC have been extending financial support for implementing the schemes under this sector. Under the coir sector, an amount of Rs.798.50 lakhs has been spent during 1992-93 for implementation of various schemes. Under the Special Component Plan, an amount of Rs.62.50 lakhs was spent during the year 1992-93. Three Point Levy System adopted for the collection of husk was discontinued in seven southern districts in July 1993 and in its place, a scheme for providing subsidy to the Coir co-operative societies for purchasing husk from the open market has been introduced. The implementation of the Integrated Coir Development Project for establishing 100 mechanised defibring mills and 200 motorised spinning units was in progress during the period under review.

6.54. Export of coir and coir products increased during the year 1992-93. During this period, 32314 tonnes of coir and coir products valued at Rs.95.95 crores could be exported as compared to 30999 tonnes worth Rs.74.12 crores in the previous year. The scheme for providing rebate on the sale of Coir and Coir products was in operation during the year 1992-93. A total amount of Rs.403.12 lakhs was disbursed to 'Coirfed', Coir Corporation, Foam Mattings (India) Ltd. and Mats and Mattings Co-operative Societies as rebate during 1992-93. This scheme has helped to enhance the sale of coir products in the internal market and to liquidate the accumulated stock in the co-operative sectors to certain extent.

6.55. During 1992-93, COIRFED continued its activities connected with marketing of coir and coir products manufactured in the co-operative sector through 80 owned/agency showrooms. The total sales

turnover through these showrooms during the year was Rs.445.53 lakhs whereas it was 498.83 lakh rupees during the previous year. During 1992-93 the Federation procured 5441.70 MT of coir and coir products valued at Rs.735.97 lakhs and sold 5480.90 MT worth Rs.1036.66 lakhs in the domestic market. Procurement and sales turnover of COIRFED have shown improvement during 1992-93 compared to the previous year. During 1991-92, procurement was 7842.50 MT worth Rs.883.38 lakhs and sales turnover was 10347 MT worth Rs.1383.09 lakhs. COIRFED has set up a mechanised rubber backing unit and power operated rubberised coir product unit. During 1992-93 the Rubberised Coir Product Unit produced 121.38 metric tonnes of coir products worth Rs.43.45 lakhs as against 46.86 m. tonnes valued at Rs.16.77 lakhs in the previous year.

6.56 The Kerala State Coir Corporation Ltd. has a network of 14 show rooms in different parts of the country for domestic marketing. The recent developments in Soviet Union affected its exports adversely. But now with great effort, the Company has re-entered in the export market. The Corporation is planning to undertake joint ventures with foreign governments in the Coir product sector. The Corporation has drawn up a project for establishing an export oriented unit to manufacture PVC tufted coir products and coir tiles with OECF assistance. In the meanwhile, the Corporation has taken active steps to increase domestic sales through their showrooms and marketing to Government departments and other public bodies, in the coming years. The Corporation's gross sales income during 1992-93 was Rs.190.46 lakhs. The working of the Corporation during 1992-93 ended with a net loss of Rs.28.86 lakhs as against Rs.20.72 lakhs in the previous year. The Company's accumulated loss as on 31.3.1993 was Rs.248.77 lakhs as compared to Rs.212.15 lakhs during 1991-92.

6.57 The Foam Mattings (India) Ltd. was incurring losses continuously since its inception in 1980 and till 1991. Performance of this company, reopened in April 1990, after a lock out for a period of six years, is commendable. Capacity utilisation and sales turnover during 1992-93, were the highest ever achieved by the company in its history. Sales turnover during 1990-91 was Rs.54.99 lakhs and Rs.99.25 lakhs in 1991-92. During 1992-93 the company achieved a sales turnover of Rs.202.11 lakhs. The company has entered into the export market by exporting coir products worth Rs.2.09 lakhs to France during the year under review. The provisional accounts of the company shows a profit of Rs.19.67 lakhs during this period.

6.58 Detailed tables on coir co-operative societies in Kerala, export of coir and coir products from



India, activities of coir co-operative societies are given as Appendix - 6.21 to 6.23.

### *Handloom Industry*

6.59 A good number of handloom weavers in the State could be organised under the co-operative sector and the existing private units could be revitalised during the Eighties by providing financial assistance through various schemes such as share participation, managerial assistance, modernisation of looms, purchase and distribution of looms to loomless weavers, market development assistance, rebate on sale of handloom cloths, social security and welfare schemes. Most of the handloom development programmes are being implemented through Handloom Weavers Co-operative Societies to redeem the weavers from the clutches of middlemen and master weavers and to improve their living standards.

6.60 The total number of handlooms in the State has increased to 55093 by the end of March, 1993 from 52600 in March, 1992 registering an increase of 4.7 per cent over the previous year. Of these, 43472 looms were in the Co-operative Sector constituting about 79 per cent of the total handlooms in Kerala. The number of looms accounting for in this sector shows an increase of 6.08 per cent over the previous year's level of 40979. All the looms newly installed in the State are registered under the Co-operative Sector. The production of handloom cloth in the Co-operative Sector has increased to 48.60 million metres during 1992-93 from 45.25 million metres marking an increase of more than 7 per cent over the previous year. The value of production increased from Rs.81.45 crores to Rs.97.20 crores during this period. The productivity of handloom cloth in the Co-operative Sector also shows improvement over the previous year. The total number of Co-operative Societies under the handloom sector stood more or less at the previous year's level, including 125 factory type and 363 cottage type societies.

6.61 The total number of handlooms in the Corporate sector declined to 6236 in 1992-93 from 6361 in the previous year. The production of handloom cloth in this sector has also decreased to 0.88 million metres during the year under review from 0.93 million metres in 1991-92. The productivity per loom on the other hand, has increased noticeably in this sector from 146 to 533 M/loom/annum during the year under report. The number of looms in the unorganised/Private sector increased from 9.10 million metres in 1991-92 to 9.69 million metres during 1992-93. Value of production in this sector has evinced an increase from Rs.16.37 crores to Rs.29.10 crores during this period.

The productivity of looms has also increased from 1730 to 1800 metre/loom/annum during the year under review.

6.62 The total production of Handloom Cloth in the State thus increased from 55.28 million metres in 1991-92 to 59.17 million metres during the year under review. This shows a growth of 7.04 per cent over the year. The total value of production as well as the per-loom productivity in the handloom sector have also registered a growth during 1992-93. These have been achieved through various measures taken by the agencies concerned with the financial as well as the technical support of the State Government and the promotional institutions such as HANTEX and HANVEEV in these years.

6.63 A total expenditure of Rs.500 lakhs has been incurred towards the scheme for giving rebate on the sale of handloom cloth during 1992-93 as against Rs.534 lakhs in the previous year. A total unsold stock of handloom cloth worth Rs.17.55 crores was accumulated in this sector by the end of March, 1993 as against a stock valued at Rs.19.12 crores in March 1992. The details regarding production and productivity under Handloom sector in Kerala are given in Appendix - 6.24.

6.64 The Kerala State Handloom Weavers Co-operative Society (HANTEX), established in 1961 with the objective of promoting the handloom sector in the State on commercial lines acts as the apex organisation of primary industrial weavers co-operative (both cottage and factory type) societies. It is the main agency for the marketing of finished materials of its 449 member societies through its 179 selling units throughout the State. The total sales turnover of the society during the year 1992-93 stood at more or less at the previous year's level of Rs.11 crores. The working results of Handloom Apex Society (HANTEX) are given in Appendix 6.25.

6.65 The Kerala State Handloom Development Corporation (HANVEEV), an agency for the development of Handlooms outside the Co-operative fold had 25 clusters covering 1500 looms and 24 weavers' societies under its control as on 31.3.1993. Total value of items produced by this corporation during 1992-93 amounted to Rs.182 lakhs whereas its total sales income during this period stood at Rs.345 lakhs against a target of Rs.782 lakhs. The reason attributed to the lower volume of sales and consequent increase in the total loss during this period was mainly the scarcity of working capital. Delay in the purchase and distribution of raw materials, hike in the cost of materials and increased finance charges also contributed to the poor performance of the Corporation during 1992-93.

6.66 During the period under review, the Corporation was entrusted with the implementation of certain projects under the welfare schemes announced by the Government of India recently. The major ones among them were the Project Package Scheme, Health Package Scheme and Integrated Handloom Village Development Scheme. The Corporation has been establishing a Design Research and Development Cell for developing new products with improved designs, layout, colour combination etc.

6.67 The details on the performance of the Corporation during 1992-93 are furnished in Appendix 6.26. The details of production and productivity under powerloom sector in Kerala are shown in Appendix 6.27.

### *Cashew Industry*

6.68 As far as the cashew industry is concerned, the year 1992-93 was a turbulent year, though the export performance of the industry was praiseworthy. During 1992-93, a total quantity of 53241 MT of cashew kernels valued at Rs.745 crores has been exported as compared to 47738 MT valued at Rs.669 crores in the previous year. Both in terms of quantity and value this shows an increase of 11 per cent over the previous year. The unit value realisation during the period under review was also more or less at the same level of Rs.140 per Kg. achieved in the previous year. The quantity of kernels exported to USA, the principal importer of cashew products from India has registered an increase of more than 10 per cent compared to that in the previous year. Export of cashew shell liquid registered a decline during 1992-93 both in terms of quantity and value as compared to those in 1991-92.

6.69 Import of raw cashewnuts during 1992-93 was to the tune of 133293 MT valued at Rs.360 crores which shows an increase of more than 25 per cent compared to the previous year's import of 106080 MT. Average import price during the year under review was Rs.27.03 per kg as against Rs.25.14 per kg in 1991-92. During 1992-93, we were able to import 3895 MT of raw cashew nuts from Brazil, for the first time. Major sources of supply during this period were Vietnam, Tanzania, Nigeria, Indonesia and Guinea Bissau.

6.70 The Kerala State Cashew Development Corporation manufactured 10229 MT of cashew kernels valued at Rs.139.29 crores in 1992-93. The corporation could not utilise its full capacity during this period due to lack of sufficient quantity of rawnuts. There were 49877 persons in the roll of the corporation on 31st March, 1993. The corporation's perfor-

mance in terms of sales was however encouraging. Total sales turnover increased to Rs.119.32 crores in 1992-93 from Rs.88.06 crores in the previous year. The provisional accounts of the corporation for the year 1992-93 shows a net loss of Rs.42.31 crores as compared to a profit of Rs.3.35 crores earned in the previous year.

6.71 The Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd. (CAPEX) engaged in the procurement of raw cashewnuts through the affiliated societies for distribution to the cashew factories in the State has procured 5199 MT of raw cashewnuts during 1992-93 as against 1075 MT in the previous year. During the year 1993 cashew season no monopoly procurement of rawnuts was made by the Society. Two more societies have been affiliated with the CAPEX during 1992-93 enhancing the total number of such societies from 8 to 10 as on 31.3.1993. Number of cashew workers in the societies affiliated to it has also increased from 5648 to 6151 during this period. The CAPEX has exported cashew kernels valued at Rs.28.76 crores during 1992-93 as against Rs.10.38 crores in the previous year. Quantity of kernels exported has also increased from 678 MT in 1991-92 to 2112 MT in 1992-93. Total sales of the Apex Society has thus increased from Rs.11.75 crores to Rs.31.58 crores during this period. The details of foreign exchange earnings of India from cashew industry and import of rawnuts into India are given in Appendix Tables 6.28 and 6.29. Working results of the CAPEX are furnished in Appendix 6.30.

### *Mining*

6.72 During 1992-93, three state level agencies, viz., State Department of Mining and Geology, Kerala Mineral Exploration and Development Project (KMEDP) and the Kerala State Mineral Development Corporation Ltd. were continuing their activities connected with exploration and exploitation of the mineral resources of the State. In the case of major minerals, 71 mining leases were in force in the State during 1992-93. In respect of minor minerals, 129 quarrying lease, 257 quarrying permits and 72 dealer's licences were in force during this period. The Department continued to take vigorous measures for checking illicit mining and transport of valuable mineral resources of the State. The revenue collection of the Department on minerals during 1992-93 was Rs.430.78 lakhs as against Rs.164.36 lakhs in 1991-92. The details of revenue collected from the mining sector during the period from 1985-86 to 1992-93 are shown in Appendix - 6.31.

6.73 The Kerala Mineral Exploration and Development Project carried out its activities satisfactorily

during 1992-93. A detailed investigation undertaken for probing the existence of lignite and for assessing the China Clay deposits in Madai area of Kannur district was completed during the period under review. The investigation has indicated that in this area there is a deposit of about 4 million tonnes of lignite. About 10 metre thick China Clay has also been indicated in an area of one sq. km. Investigation for lignite and clay at Palayi in Nileswaram area of Kasaragode district was taken up. Investigation for granite at Kozhikode, Idukki and Wayanad districts was taken up during this field season. The Project has undertaken a detailed investigation to identify the granites and decorative stones in Thiruvananthapuram district and collected a wide range of multicolored and black granite samples from Thiruvananthapuram, Palakkad and Wayanad districts in connection with the survey for dimension and decorative stones. About 40 granite samples were polished for determining its export worthiness and commercial viability. Exploration taken up in collaboration with the Department of Mining and Geology at Melthonnakkal and Pallippuram village of Thiruvananthapuram district was continued during the period under review for identifying additional reserves for establishment of clay based industries. Reconnaissance was carried out in gem bearing places in Thiruvananthapuram and Kollam districts. The stream stretches covered during this survey were;

1. Kulathupuzha River
2. Kallar

3. Sarkara River
4. Vamanapuram River
5. Karamana River and
6. Neyyar.

6.74 Exploratory drilling and mining at Marud in Nilambur valley for gold was taken up by the Project. Photomicrographs of six samples and cutting and polishing of one rock sample weighing 3 gemstones and specific gravity determination of one gem stone were done on payment basis during 1992-93. Mineral/gem testing was made on 375 stones brought to the laboratory for certification. The analytical laboratory carried out detailed chemical analysis of 143 clay samples and free silica content. In addition to this, 25 rock samples were analysed for estimation of gold content. A total number of 90 samples were pulverised on payment basis.

6.75 Kerala State Mineral Development Corporation established in June 1992 with the objective of exploiting the economically viable mineral deposits of the State on commercial basis has drawn up a project for the establishment of a diamond stones (granites) mining cutting and polishing unit in two phases. The Corporation has already signed a memorandum of understanding for promoting a joint venture with M/s. English Indian Clays Ltd. for the manufacture of paper coating clays.

6.76 The details of production and sale of mineral resources in the State during 1991-92 and 1992-93 are furnished in Appendix tables 6.32 and 6.33.

## TRANSPORT AND COMMUNICATIONS

Transport and communications sector registered relatively good progress during 1992-93. Total road length increased by 2.4 per cent (3214 kms) during 1992-93 from 135828 kms in 1991-92 to 139042 kms. Out of it, length of Public Works Department roads increased by 49 kms and Panchayat roads by 2821 kms. Number of vehicles increased by 73226, an increase of 10.3 per cent, during 1992-93. Thus by 1992-93 end there were 7.81 lakh motor vehicles as against 7.08 lakhs during 1991-92. Highest increase was in the case of two wheelers at 11.9 per cent followed by buses and three wheelers at 11 per cent. Number of goods carriers increased by 8.8 per cent. As regards passenger transport services in the State, private sector occupies the major share. During 1992-93 only 21 per cent passenger services in the State were operated by KSRTC whereas 79 per cent passenger services were operated by private and co-operative sectors. KSRTC owned 3456 buses as on 31.3.1993. During 1992-93, 267 new buses were added and 345 overaged buses were replaced. Gross revenue earning of KSRTC increased by 12 per cent and revenue expenditure by 10 per cent. The gross revenue loss of KSRTC thus decreased from Rs.29.53 crores in 1991-92 to Rs.23.26 crores in 1992-93.

7.2. Railway route length stood at 1198 kms in 1992-93 as against 1055 kms in 1991-92. The opening of Kayamkulam-Alappuzha line at a distance of 57 kms was an important event of the railway network in Kerala. The goods traffic through railways increased by 5 per cent and passenger traffic decreased by 5.3 per cent during 1992-93 through Thiruvananthapuram Railway Division. Revenue receipts through this division increased by 6.8 per cent (Rs.11.07 crores).

7.3. Indian Airlines in Kerala operates services from Thiruvananthapuram, Kochi and Kozhikode. Passengers and goods originated and terminated through Indian Airlines in Kerala decreased in 1992-93 over 1991-92. While goods traffic decreased by 6.8 per cent passenger traffic decreased by 8.6 per cent.

7.4. The three Regional Passport Offices in the State issued 4.8 lakh passports during 1992-93. The two offices of the protector of Emigrants, Thiruvananthapuram and Kochi granted emigration clearance to 2793 persons.

7.5. Total cargo handled through major, intermediate and minor ports together increased by 6.3 per cent during 1992-93. While Cargo handled through ma-

major port (Kochi) increased by 6.6 per cent, cargo handled through intermediate and minor ports decreased by nearly 12 per cent. Number of vessels called at the ports also decreased by 2.5 per cent. While vessels called at the major port decreased by 2 per cent, vessels called at the intermediate ports increased by 5.3 per cent. Among intermediate and Minor ports landing and shipping operations took place only in four ports namely; Neendakara, Kozhikode, Azhikkal and Vizhinjam.

7.6. Inland Water Transport operations in the State are carried out by three agencies namely, State Water Transport Department, Kerala Shipping and Inland Navigation Corporation and Water Transport Wing of KSRTC. The three agencies together possessed 108 passenger boats in 1992-93 out of which only 68 were operated. The fleet utilised decreased from 62 per cent in 1991-92 to 58.3 per cent in 1992-93. Passengers carried were 263.82 lakhs in 1992-93. The revenue receipts of these three agencies together increased by 26.2 per cent in 1992-93 while revenue expenditure increased by only 7.3 per cent. SWTD and water transport wing of KSRTC incurred loss during 1992-93, whereas KSINC made a profit of Rs.17.34 lakhs. The total loss of these three agencies decreased from Rs.277.39 lakhs in 1991-92 to Rs.217.37 lakhs in 1992-93.

7.7. Under Kerala postal circle 31 new post offices were opened during 1992-93. Thus by 1992-93 end there were total 5009 post offices in the Kerala circle. Out of it, 10 are in Lakshadweep and 4 in Mahe. There are seven speed post centres in Kerala. Area served by one post office is 7.77 sq. kms. and 5982 people in Kerala by 1992-93.

7.8. Thirteen Telephone exchanges were started in Kerala during 1992-93 and 126868 lines were added. Working connections given during 1992-93 were 72200 as against the target of 72000. There were 377805 working connections by 1992-93 end in Kerala. Seventy three telex connections were provided and 102 stations were added to NSD/ISD net work and 49 more exchanges were brought under group dialing during 1992-93. 681 local and 1316 STD public telephone booths were opened during 1992-93. Applicants in the wait list for telephone connection was 293043 by 1992-93 end. Applicants in the wait list increased by 78209 during 1992-93. Telex connections added during 1992-93 were 73. The overall progress made in the transport and communication sector from 1975-76 to 1992-93 is given in Table 7.1.

Table 7.1

*Growth of Transport & Communications in Kerala*

Item	Unit	1975	1980	1985	1990	1991	1992	1993
1. Road length PWD	Kms.	14870	17408	19107	19836	20283	20414	20663
2. Road length (PWD) per Sq.km.	"	0.38	0.45	0.49	0.51	0.52	0.53	0.53
3. Road length (Panchayats)	"	54812	66158	81515	96951	99022	101067	103888
4. Motor vehicles	Nos.	119720	174704	319259	581054	647742	708172	781398
5. Motor vehicles per 100 Sq.km.	"	308	450	821	1495	1667	1822	2011
6. Passenger buses	"	7828	8705	12910	20290	21454	22833	25345
7. Goods vehicles	"	15875	211215	40879	61106	66190	71089	77336
8. Buses under KSRTC	"	2212	2935	3239	3313	3413	3534	3456
9. Railway route length	kms.	896	916	941	998	998	1055	1198
10. Post offices	Nos.	4024	4512	4751	4861	4911	4978	5009
11. Telephone Exchanges	"	286	441	561	636	649	675	688
12. Total Equipped capacity	"	70410	104595	144462	246190	281607	344536	428213
13. Public call offices	"	2352	2292	2766	3794	4958	6246	8229

**Roads**

7.9. The total road length of Kerala as on 31.3.1993 under all categories was 139042 kms, as against 135828 kms as on 31.3.1992. This shows an increase of 3214 kms (2.4%) of road length during 1992-93. Out of the total road length, 1011 kms are National

Highways, 20663 kms are Public Works Department roads, 103888 kms are Panchayat roads, 8672 kms roads are maintained by Municipalities and Corporations, 3027 kms by Forests and 1781 kms by other departments. The National Highways in Kerala are maintained by the P.W.D. (N.H). Length of roads maintained by different departments are given in Table 7.2.

Table 7.2

*Length of roads in Kerala maintained by different Departments/Agencies*

Sl. No.	Name of Department/Agency	Road Length (kms)		Percentage increase (+)/decrease (-)
		As on 31.3.1992	As on 31.3.1993	
1.	Public Works Department (N.H)	1011 (0.8)	1011 (0.7)	0
2.	Public Works Department (R&B)	20414 (15.0)	20663 (14.9)	(+)1.2
3.	Panchayats	101067 (74.4)	103888 (74.7)	(+)2.8
4.	Municipalities including Corporations	8112 (6.0)	8672 (6.2)	(+)6.9
5.	Forests	3480 (2.6)	3027 (2.2)	(-)13.0
6.	Others	1744 (1.3)	1781 (1.3)	(+)2.1
Total		135828 (100)	139042 (100)	(+)2.4

Note: Figure in brackets indicate percentage to total road length

7.10. Length of road maintained by National Highways remained unchanged during 1992-93. Out of the total road length under National Highways, only 339 kms (33.5 per cent) are of National Highway Standards. Total length of Public Works Department roads in the State as on 31.3.1993 stood at 20663 kms as against 20414 kms during 1991-92. This shows that Public Works

Department road length increased by 249 kms (1.2%) during 1992-93. Out of the total PWD roads, 1889 kms constitute State Highways, 6163 kms Major District Roads, 9787 kms Other District Roads and 2825 kms are Village Roads. The category-wise length of Public Works Department roads are given in Table 7.3.

Table 7.3  
Category-wise and type-wise length of PWD roads as on 31.3.1993 (Kms)

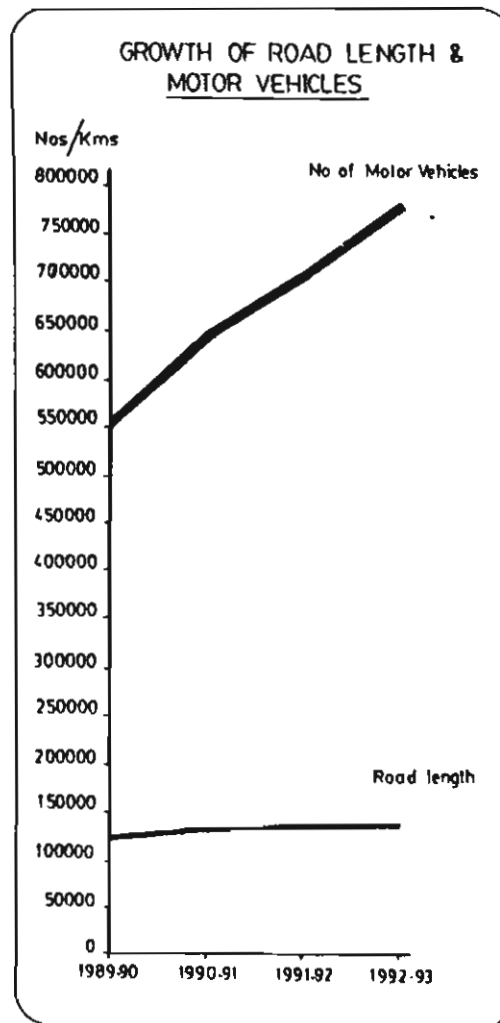
Sl. No.	Category	Cement concrete	Black topped	Water Bound Mecadam	Others	Total
1.	State Highways	16.612	1857.984	8.350	5.956	1888.902
2.	Major District Roads	8.263	6028.999	54.464	71.096	6162.732
3.	Other District Roads	-	9215.020	87.359	492.862	9786.686
4.	Village Roads	-	1307.786	150.457	1359.969	2824.767
	Total	24.875 (0.12)	18407.699 (89.09)	300.630 (1.45)	1929.883 (9.34)	20663.087 (100)

Note: The figure in brackets denotes percentage to the total road length maintained by PWD (R&B).

7.11. PWD roads contribute 14.9% of the total roads in Kerala and nearly 89 per cent of the PWD roads are black topped. Out of 720 works included in the budget during 1992-93, 342 works are completed, 267 works are in progress and balance 111 works are abandoned/not yet started.

7.12. Length of Panchayat roads increased by

2821 kms (2.8%) in 1992-93. Thus roads maintained by Panchayat stood at 103888 kms in 1992-93 as against 101067 kms in 1991-92. The share of Panchayat roads comes to 74.7 per cent of total roads in Kerala during 1992-93. Out of the total Panchayat roads 11.1 per cent (11544 kms) are black topped and metalled and remaining roads are gravelled/earthen.



(fig.-7.1)

### Road Transport

7.13. Total number of vehicles increased from 7.08 lakhs in 1991-92 to 7.81 lakhs in 1992-93 which shows an increase of 10.3 per cent. Out of this 71615 vehicles were newly registered in 1992-93. Out of the total vehicles in the State, 47 per cent are two wheelers, 26 per cent are cars and nearly 11 per cent are three wheelers, goods vehicles formed 10 per cent and passenger buses 3.2 per cent. The number of two wheelers increased by 0.39 lakhs from 3.30 lakhs to 3.69 lakhs and cars by 0.11 lakhs from 1.94 lakhs to 2.05 lakhs in 1992-93 over 1991-92. Although the number of vehicles in all categories increased during 1992-93 the highest increase was for two wheelers (11.9 per cent), followed by buses and three wheelers (11%) goods vehicles (8.8 per cent) and cars 5.7 per cent. Table 7.4 gives the major categorywise vehicles and its share in 1992-93. Out of

the total vehicles newly added during 1992-93, nearly 54 per cent were two wheelers and 15 per cent were cars and nearly 11 per cent were three wheelers. This shows that personal modes of transport, particularly two wheelers, are increasing rapidly in the State.

7.14. In terms of percentage increase in the number of vehicles in 1992-93, in the districts, Kottayam (27.5%) topped the list followed by Malappuram (15.4%) and Trissur (13.1%). Lowest increase was in Thiruvananthapuram district (6.2%). Out of the State's total vehicles 16 per cent are in Ernakulam and 15.5 per cent are in Thiruvananthapuram. Nearly one third of state's total vehicles are thus in these two districts. The share of vehicles in Wayanad and Idukki districts are 1.2% and 2% respectively (see Table 7.4).

Table - 7.4  
Increase in the number of motor vehicles in Kerala

Sl. No.	Type of Vehicles	Year			
		1991-92 (Nos.)	1992-93 (Nos.)	Addition during 1992-93 (Nos.)	Percentage increase
(1)	(2)	(3)	(4)	(5)	(6)
1.	Goods vehicles	71089 (10.0)	77336 (10.0)	6247 (8.5)	8.8
2.	Buses	22833 (3.2)	25345 (3.2)	2512 (3.4)	11.00
3.	Cars & Station Wagons	194479 (27.5)	205564 (26.3)	11085 (15.1)	5.7
4.	Three wheelers	75301 (10.6)	83773 (10.7)	8472 (11.6)	11.3
5.	Two wheelers	330379 (46.7)	369600 (47.3)	39221 (53.6)	11.9
6.	Tractors, tillers and Others	14091 (2.0)	19780 (2.5)	5689 (7.8)	40.4
	Total	708172 (100)	781398 (100)	73226 (100)	10.3

Table 7.5 below shows the district-wise number of total vehicles and its increase in 1992-93 over 1991-92.



Table 7.5.

*District-wise Distribution of Motor Vehicles*

Sl.No.	District	1991-92	1992-93	Percentage increase
1.	Thiruvananthapuram	113822 (16.0)	120868 (15.5)	6.2
2.	Kollam	58023 (8.2)	62871 (8.0)	8.3
3.	Pathanamthitta	40048 (5.7)	43047 (5.5)	7.5
4.	Alappuzha	43288 (6.1)	46560 (6.0)	7.6
5.	Kottayam	44695 (6.3)	56996 (7.3)	27.5
6.	Idukki	13819 (2.0)	15300 (2.0)	10.7
7.	Ernakulam	115605 (16.3)	124951 (16.0)	8.1
8.	Thrissur	79421 (11.2)	89989 (11.5)	13.1
9.	Palakkad	42272 (6.0)	46055 (5.9)	8.9
10.	Malappuram	35032 (4.9)	40439 (5.2)	15.4
11.	Kozhikode	62105 (8.8)	68973 (8.8)	11.1
12.	Wayanadu	9082 (1.3)	9733 (1.2)	7.2
13.	Kannur	34764 (4.9)	37716 (4.8)	8.5
14.	Kasaragod	16196 (2.3)	17900 (2.3)	10.5
	Kerala	708172 (100)	781398 (100)	10.3

(Figures in bracket show percentage to total.)

7.15. Regional transport authority issued 2465 stage carriage permits in 1992-93. Out of this 1642 were temporary permits. As part of tourism promotion, tourist permits were granted to 4314 cars in the State in 1992-93. As a result, by March end 1993, there were 20975 tourist taxis in the State. During 1992-93 driving licences were issued to 256651 persons in Kerala as against 126176 licences during 1991-92. Thus by the end of 1992-93 total number of licence holders in the State stood at 19.76 lakhs.

7.16. Motor vehicles department initiated few modernisation measures in 1992-93. Accordingly steps were initiated to issue laminated type of driving licence from Regional Transport Office, Thiruvananthapuram and for this purpose department procured a sophisticated machine and necessary accessories and consumables for Rs.8.30 lakhs. With a view to control pollution from vehicle exhaust, the department procured five smoke metres valued Rs.10.66 lakhs for the conduct of exhaust emission test in diesel vehicles. Breath Analysers have also been provided to field staff to detect persons driving vehicles after consuming alcohol.

7.17. Motor vehicles department collected Rs.112.82 crores as revenue during 1992-93 as against Rs.93.91 crores in 1991-92. Out of the total revenue collected in 1992-93 Rs.101.10 crores (89.6%) was motor vehicle tax, Rs.3.12 crore (2.8%) registration fees, Rs.2.22 crores (2.0%) permit fees and Rs.6.37 crores (5.6%) others.

*Goods Transport*

7.18. Goods transport is virtually a monopoly of the private sector. In 1992-93, 6247 goods vehicles were newly added in Kerala. Thus by 1992-93 end, there were 77336 goods vehicles in Kerala as against 71089 in 1991-92. This shows nearly 9 per cent increase. Out of the total goods vehicles in 1992-93, 88% are four wheelers and 12 per cent are three wheelers including tempos.

*Passenger Transport*

7.19. Private, public and co-operative sectors operate passenger services in Kerala. Public sector passenger services in the State are operated by KSRTC. In 1992-93 there were 16883 stage carriages (buses) in the

State and out of it 3456 were owned by KSRTC. This shows that only about 21 per cent passenger services in the State are operated by public sector and 79 per cent passenger services are operated by private and co-operative sectors. In 1992-93, 1031 stage carriages (buses) were newly added in the State which shows 6.5 per cent increase over 1991-92. Number of contract carriages/omni buses newly registered in the State in 1992-93 were 1481 representing an increase of 21 per cent. Thus by 1992-93, there were 8462 contract carriages/omni buses in Kerala as against 6981 by 1991-92. Total number of buses including contract carriages/omni buses thus stood at 25345 in 1992-93 as against 22833 in 1991-92 which shows an increase of 9.9 per cent.

#### *Kerala State Road Transport Corporation*

7.20 KSRTC added 267 new buses and replaced 345 over aged buses during 1992-93. Thus the total fleet strength of KSRTC as on March 1993 was 3456 buses as against 3534 buses as on March 1992. Several measures were initiated by the Corporation during 1992-93 to improve the operational efficiency and productivity to

reduce bus-staff ratio, improve earnings and to reduce expenses. Rescheduling, ban on fresh recruitment and promotion, revision in work norms, introduction of new services on economic routes and strengthening of maintenance were the major measures initiated. This resulted in remarkable progress in the performance of KSRTC. Gross revenue earnings increased by 12 per cent from Rs.205 crores in 1991-92 to Rs.230 crores in 1992-93. Gross revenue expenses increased by 10 per cent only from Rs.235 crores to Rs.258 crores. the revenue loss thus decreased marginally to Rs.28.26 crores in 1992-93 from Rs.29.53 crores in 1991-92. The passenger earnings increased from Rs.200.60 crores in 1991-92 to Rs.225.24 crores in 1992-93 (12.3 per cent). Similarly passengers carried also increased from 9120 lakhs to 9610 lakhs (5.4 per cent) Table 7.6 shows the operational efficiency of KSRTC in 1992-93 and 1991-92. Earning per bus and earning per km increased by 9.8 per cent and 7.1 per cent respectively in 1992-93. Gross kms operated increased from 2932 lakhs to 3070 lakhs. (4.7 per cent). Number of schedules operated decreased from 3089 in 1991-92 to 3032 in 1992-93.

Table 7.6

*Major indicators of the operational efficiency of KSRTC in 1992-93 over 1991-92.*

No.	Items	Operational details		Increase/Decrease (per cent)
		1991-92	1992-93	
1	2	3	4	5
1.	Fleet strength (Nos.)	3534	3456	-2.2
2.	Passengers carried (lakhs)	9120	9610	5.4
3.	Passenger earnings (Rs. crores)	200.60	225.24	12.3
4.	Gross Revenue earnings "	204.96	229.85	12.1
5.	Gross Revenue Expenditure "	234.49	258.11	10.1
6.	Gross operating loss (4-5) (Rs. crores)	29.53	28.26	-4.3
7.	No. of schedules operated	3089	3032	-1.8
8.	Average earning per passenger (paise)	216	234	8.3
9.	Earnings per km of buses operated (Paise)	702	752	7.1
10.	Earning per vehicle on road per day (Rs.)	1981	2176	9.8

7.21. The expense on staff increased by 3.4 per cent from Rs.108.25 crores to Rs.111.95 crores. Similarly fuel cost increased by Rs.10.16 crores (21 per cent) from Rs.48.45 crores to Rs.58.09 crores. Repairs and maintenance cost increased by Rs.1.71 crores (6.2 per cent) from Rs.27.76 crores to Rs.29.49 crores. Even

though the total revenue expenses increased by 10 per cent, passenger earning increased by nearly 12 per cent on account of fare revision and increase in passenger traffic. Table 7.7 shows the fare structure of KSRTC as on 31.12.1993.

Table 7.7  
Fare Structure in KSRTC

No.	Type of Service	Basic fare per km as on		Minimum fare as on	
		31.12.91	31.12.93	31.12.91	31.12.93
(1)	(2)	(3)	(4)	(5)	(6)
1.	City	13	15	70	80
2.	Ordinary	13	15	70	80
3.	Fast Passenger	16	18	150	150
4.	Super Fast	-	20	-	200
5.	Express	18	22	400	400
6.	Super Express	-	23	-	400
7.	Deluxe Express	20	25	500	500

Staff strength in KSRTC decreased from 30572 in March 1992 to 29716 in March 1993 and further to 28605 in December 1993. Thus between March 1992 and Decem-

ber 1993 staff strength decreased by 1967. Table 7.8 gives the category wise staff strength.

Table 7.8  
Category-wise staff position of KSRTC

Sl. No.	Category	As on 31.3.92	As on 31.3.93	As on 31.12.93	Decrease in staff strength in 12/93 over 3/92 (%)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Administrative staff (including watch & ward)	4543 (14.9)	4392 (14.8)	4293 (15.0)	5.5
2.	Traffic personnel	19151 (62.6)	18601 (62.6)	17704 (61.9)	7.6
3.	Maintenance personnel	6878 (22.5)	6723 (22.6)	6608 (23.1)	3.9
	<b>Total</b>	<b>30572</b> <b>(100)</b>	<b>29716</b> <b>(100)</b>	<b>28605</b> <b>(100)</b>	<b>6.4</b>

(Figures in bracket indicate percentage)

7.22. The efficiency and productivity of KSRTC increased in 1992-93 over 1991-92. For instance, the vehicle productivity increased from 281.2 kms in 1991-92 to 297.8 kms in 1992-93. Similarly manpower productivity increased from 26 kms to 28 kms. The major achievement was the reduction in staff-ratio per bus on road from 10.8 in 1991-92 to 10.6 in 1992-93. In 1992-93, out of the total vehicles owned by KSRTC, 22.5 per cent were more than 10 years old where as 41.7 per cent were less than five years old. Vehicles below seven years formed 60.2 per cent in 1992-93. Table 7.9 gives the age-wise classification of vehicles owned by KSRTC as on December 1993.

Table 7.9

*Age-wise details of vehicles owned by KSRTC as on 31.12.1993*

No.	Age	Number of buses	Percentage to total
1.	10 years and above	808	22.5
2 <sup>1</sup>	Above 7 years and below 10 years	615	17.1
3.	Above 5 years and below 7 years	669	18.7
4.	Below five years	1495	41.7
	Total	3587	100.0

7.23. The accumulated loss of KSRTC stood at Rs.254.66 crores in 1992-93 as against Rs.224.55 crores in 1991-92 ; an increase of Rs.30.11 crores (13.4 per cent). The total loan liability outstanding as at the end of 1992-93 amounted to Rs.118.96 crores as against Rs.106.40 crores in 1991-92. Out of the total loan outstanding in 1992-93, Rs.66.48 crores were (55.8%) to State Government and Rs.30.01 crores (25.2 per cent) to IDBI.

### *Kerala Transport Development Finance Corporation*

7.24. KTDFC was set up to finance the transport sector in the State through lease, hire purchase, hypothecation of transport vehicles used by persons, firms and companies particularly by KSRTC. The Corporation raised Rs.4.86 lakhs as public deposit during 1992-93 and granted hire purchase loan for Rs.357.78 lakhs. The working of KTDFC ended with a net profit of Rs.21.11 lakhs before tax and Rs.10.55 lakhs after tax during 1992-93.

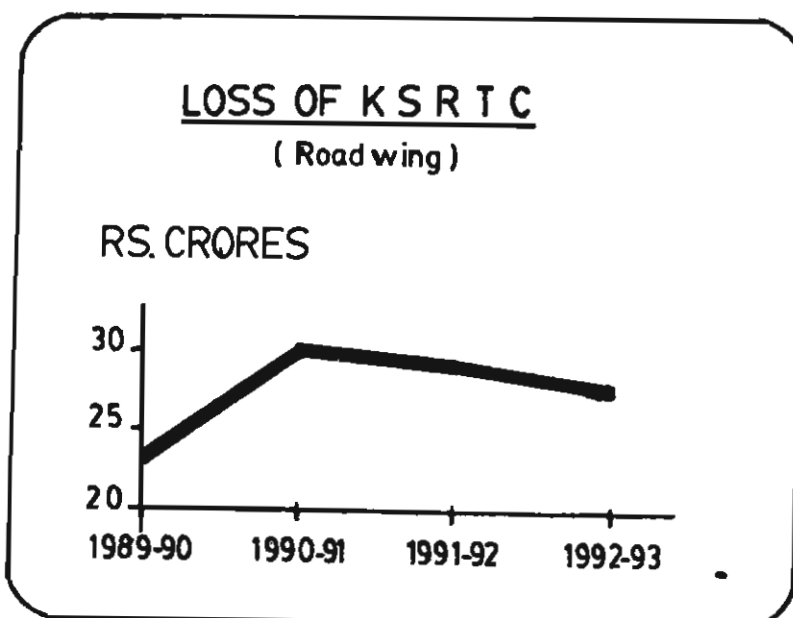
### *Road Accidents*

7.25. Total number of road accidents in Kerala during 1992-93 were 26646 as against 24677 during 1991-92. Number of persons injured due to road accidents increased from 32421 in 1991-92 to 37111 in 1992-93. Number of persons killed in the road accidents also increased from 1886 in 1991-92 to 2013 in 1992-93. Thus during 1992-93 road accidents and number of persons injured and killed increased as compared to 1991-92. While road accidents increased by 8 per cent, persons injured increased by 14.5 per cent and persons killed increased by 6.7 per cent.

Table 7.10

*Motor Vehicle Road Accidents and Persons injured and killed in Kerala*

Particulars	1991-92	1992-93	Increase (%)
(1)	(2)	(3)	(4)
1. Road Accidents	24677	26646	8.0
2. Persons Injured	32421	37111	14.5
3. Persons Killed	1886	2013	6.7



(fig:-7.2)

7.26. Out of the total road accidents in 1992-93 nearly 96 per cent accidents were due to the fault of the drivers and 1.4 per cent were pedestrians fault. KSRTC buses contributed to 4.7 per cent of road accidents while other buses contributed to 18.7 per cent. Road accidents caused by autorickshaws were 18 per cent and two wheelers were 19.5 per cent. Appendix 7.6 shows the road accidents by class of vehicles.

7.27 Highest number of road accidents excluding cities were in Kollam and Malappuram districts during 1992-93 and 1991-92. Highest number of persons injured due to road accidents were also in these two districts. Appendix 7.4 shows the district wise distribution of road accidents in Kerala during 1991-92 and 1992-93.

### Railways

7.28. The total railway route length of Kerala increased to 1198 kms by 1992-93 as against 1055 kms in 1991-92. Out of the total railway length in Kerala in 1992-93, 1069 kms are broadgauge and 129 kms are meter gauge. The opening of Kayamkulam-Alappuzha railway line at a distance of 57 kms was the major development of railway route length in Kerala in 1992-93. Thrissur-Guruvayur at a distance of 22.5 kms was started in January, 1994. Out of the total railway route length in Kerala 177 kms (Walayar to Ernakulam) are double line.

7.29. There were nine railway routes and 183 stations in Kerala in 1992-93. With the starting of Thrissur-Guruvayur route in January, 1994 railway routes have increased to ten. The rail routes in Kerala are operated by three railway divisions such as Thiruvananthapuram, Palakkad and Madurai. Idukki and Wayanadu are two districts in Kerala without railway connection. Thiruvananthapuram Railway Division operated 93 trains during 1992-93.

7.30. The passenger traffic showed a down trend and goods traffic showed an uptrend in 1992-93 in Thiruvananthapuram Division. The Division carried 716 lakh passengers in 1992-93 as against 756 lakhs in 1991-92. Out of the total passenger traffic in 1992-93, passengers originated through this Division were 398 lakhs and passengers terminated were 318 lakhs. Both the terminating and originating passenger traffic in 1992-93 decreased. The originating traffic decreased by 5.2 per cent while the terminating traffic decreased by 5.4 per cent. Total goods originated and terminated increased by 5 per cent from 66.23 lakh tonnes in 1991-92 to 69.55 lakh tonnes in 1992-93. Goods originated increased from 31.5 lakh tonnes to 33.12 lakh tonnes (5 per cent) and goods terminated increased from 34.69 lakh tonnes to 36.43 lakh tonnes (5.2 per cent). Table 7.11 shows passenger

and goods traffic through Thiruvananthapuram division in 1992-93 and 1991-92.

Table 7.11

### Passenger and Goods Traffic in Kerala (Thiruvananthapuram Division)

Traffic	Thiruvananthapuram Division		Increase/ Decrease (%)
	1991-92	1992-93	
<b>Passenger Traffic (lakhs)</b>			
i. Originating	420	398	-5.2
ii. Terminating	336	318	-5.4
Total	756	716	-5.3
<b>Goods Traffic (Lakh tonnes)</b>			
i. Originating	31.54	33.12	+5.0
ii. Terminating	34.69	36.43	+5.2
Total	66.23	69.55	+5.0

7.31. Revenue receipts from Thiruvananthapuram Division increased to Rs.173.50 crores in 1992-93 as against Rs.162.43 crores in 1991-92 which shows an increase of Rs.11.07 crores (6.8 per cent). Revenue receipts from passenger traffic increased by 12.3 per cent and from goods traffic increased by 2.5 per cent. Out of the total revenue receipts, 46.5 per cent was from passengers and 53.5 per cent was from goods traffic.

Table 7.12

### Revenue Receipts from Thiruvananthapuram Railway Division (1991-92 and 1992-93)

Items	Revenue Receipts (Rs. lakhs)		
	1991-92	1992-93	Increase (%)
(1)	(2)	(3)	(4)
1. Passenger	7182	8064	12.3
2. Goods	9061	9286	2.5
Total	16243	17350	6.8

7.32. The railway route length in Kerala under Palakkad Division is 434 kms and number of railway stations are 76. This division operated 70 express trains, 57 passenger trains and 163 goods trains during 1992-93. The total revenue from Palakkad division from passenger and goods traffic was Rs.51.36 crores during 1992-93.

7.33. Konkan Railway connecting Mangalore and Bombay will benefit Kerala also since rail distance between Bombay and Mangalore will be reduced by about 12 hours. The share participation of Kerala in the Corporation is fixed as six per cent of the total cost. An amount of Rs.12 crores has been released. Amount earmarked in the budget for 1993-94 for this purpose is Rs.300 lakhs.

*Air Transport (Indian Airlines)*

7.34. Indian Airlines carried 5.8 lakh passengers in Kerala during 1992-93 as against 6.35 lakhs during 1991-92. Out of the total passengers carried during 1992-93, 2.78 lakhs originated from Kerala and 3.02 lakhs terminated in Kerala. Goods traffic through Indian Airlines was 4098 tonnes during 1992-93. Out of it, 2304 tonnes originated from Kerala and 1794 tonnes terminated in Kerala. It thus shows that during 1992-93 total passenger and goods traffic carried by Indian Airlines declined. (See Table 7.13).

Table 7.13

*Air Traffic (Indian Airlines) through Kerala from Thiruvananthapuram, Kochi and Kozhikode Airports*

Category	Passengers	
	1991-92	1992-93
1. Passengers (Nos.)		
i. Originating	307915	277966
ii. Terminating	326842	302280
Total	634757	580246
2. Goods (Tonnes)		
i. Originating	2389.95	2304.05
ii. Terminating	2005.66	1793.49
Total	4395.61	4097.54

*Passports and Emigration*

7.35. There are three regional passport offices in Kerala at Thiruvananthapuram, Kochi and Kozhikode. The passport office Thiruvananthapuram issued 116737 passports during 1992-93, as compared to 3200 during 1991-92. Similarly passport office Kozhikode issued 341000 passports in 1992-93 as against 206917 during 1991-92. These two passport offices issued more passports in 1992-93 when compared to 1991-92. Table 7.14 shows the passport applications received and passports issued from the passport offices in Kerala during 1991-92 and 1992-93. Total number of emigration clearances granted from the Protector of Emigrants, Cochin and Thiruvananthapuram were 1186 and 1607 respectively during 1992-93.

Table 7.14

*Passport applications received and passports issued from the Regional Passport Offices in Kerala*

Passport Offices	Year and Numbers			
	1991-92		1992-93	
	Applications received	Passports issued	Applications received	Passports issued
(1)	(2)	(3)	(4)	(5)
1. Thiruvananthapuram	34319	3200	156653	116737
2. Kozhikode	228965	119427	206917	341000
3. Kochi	304523	153134	NA	NA
Total	567807	275761	363570*	457737*

\* It excludes Kochi office.

*Ports and Harbours*

7.36. There are one major port, three intermediate ports and ten minor ports in Kerala. The port activities in 1992-93 achieved only very little progress when compared to 1991-92. The total cargo handled through major, intermediate and minor ports together increased by only 6.3 per cent, from 76 lakh tonnes in 1991-92 to 81 lakh tonnes in 1992-93. The cargo handled through major port increased by 6.6 per cent while cargo handled through intermediate and minor ports decreased

by 8.4 per cent and 54.5 per cent respectively. Consequently the share of cargo handled through major port increased marginally and share of intermediate ports decreased. Total number of vessels called at the various ports in Kerala decreased by 2.5 per cent in 1992-93 over 1991-92. But vessels called at the intermediate ports increased by 5.3 per cent where as vessels called at the major port decreased by 2.2 per cent. Table 7.15 gives the total cargo handled and vessels called at the various ports of Kerala during 1991-92 and 1992-93. Out of the

total cargo handled in 1992-93, only 1.5 per cent is the share of intermediate and minor ports.

Table 7.15

*Cargo handled and vessels called at the Major, Intermediate and Minor Ports of Kerala  
(1991-92 and 1992-93)*

Ports	Cargo handled (lakh tonnes)		Increase/ Decrease (%)	Vessels called (Nos.)		Increase/ Decrease (%)
	1991-92	1992-93		1991-92	1992-93	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Major Ports	74.81 (98.2)	79.78 (98.5)	+6.6	801 (63.5)	783 (63.7)	-2.2
2. Intermediate Ports	1.31 (1.7)	1.20 (1.4)	-8.4	341 (27.0)	359 (29.2)	+5.3
3. Minor Ports	0.11 (0.1)	0.05 (0.1)	-54.5	119 (9.5)	88 (7.1)	-26.1
Total	76.23 (100)	81.03 (100)	+6.3	1261 (100)	1230 (100)	-2.5

(Figures in bracket indicate percentage)

#### Major Port

7.37. The Major Port, Cochin, handled 79.78 lakh tonnes of Cargo in 1992-93 as against 74.81 lakh tonnes in 1991-92. The goods traffic through Cochin Port thus increased by 6.6 per cent during 1992-93. Out of the total goods traffic in 1992-93, 68.64 lakh tones were imports (86%) and 11.14 lakh tonnes (14%) were exports. Both the export and import traffic increased in 1992-93. while export increased by 6.3 per cent import increased by 6.7 per cent.

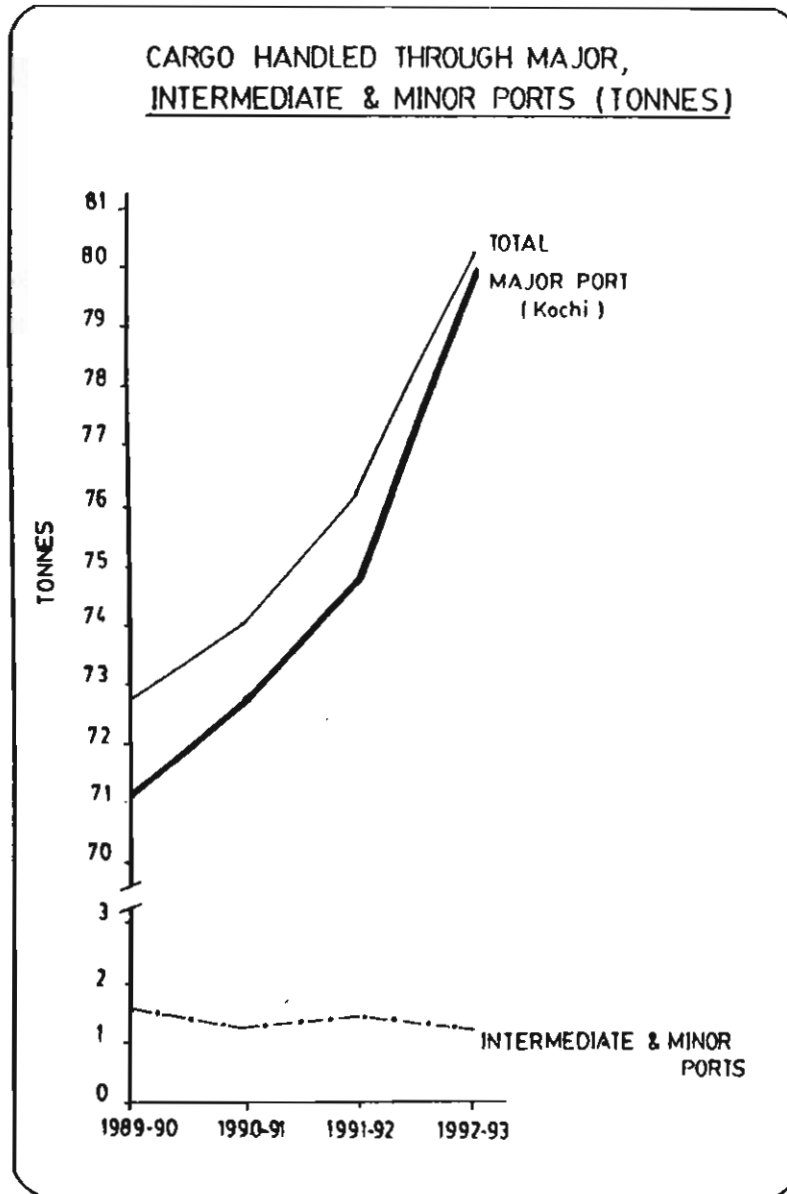
7.38. During 1992-93, 783 ships called at the Cochin Port as against 801 ships in 1991-92; a decrease of 2.2 per cent in 1992-93 over 1991-92. Out of the total ships called at the Port, 228 were tankers and 227 were containers.

#### Intermediate and Minor Ports

7.39. Out of the three intermediate and ten minor ports, landing and shipping operations took place only in

four ports during 1992-93 namely; Neendakara, Kozhikode (including Beypore), Vizhinjam and Azheekkal. These four ports together handled only 1.25 lakh tonnes of cargo in 1992-93 as against 1.42 lakh tonnes in 1991-92. The cargo handled thus decreased by 11.7 per cent in 1992-93 when compared to 1991-92. The functions performed by other ports include registration and licensing of harbour crafts including mechanised fishing vessels, maintenance of light houses, display of weather warning signals for ships and fishermen, rescue operations and collection of revenue. Out of the total cargo handled in 1992-93, 0.90 lakh tonnes (72%) were handled in Neendakara and 0.30 lakh tonnes (24%) in Kozhikode including Beypore. The entire cargo handled through Neendakara constituted illmenite and at Azheekkal it wastimber (see Appendix 7.17). But Kozhikode harbour handled a few items like timber, cement, bricks soda ash, granite metal etc. A passenger vessel called at Vizhinjam port for the first time in 1992-93 with 114 tourists. Port department conducted 19 search and rescue operations and 90 persons and six fishing vessels were rescued during 1992-93 (see Appendix 7.15).





(fig.-7.3)

7.40. In 1992-93, 447 vessels called at the intermediate and minor ports of Kerala. Out of this, 45 were steamers and 402 were sailing vessels. Nine steamers were foreign. Out of the total vessels 354 were called at Kozhikode and 83 in Azheekkal. Number of harbour crafts registered during 1992-93 were 514 in Kerala (see Appendix, 7.16). Out of it, 394 were mechanised fishing vessels and 120 were canoes including boats. Out of the total mechanised fishing vessels registered in 1992-93, 213 were in Neendakara and 86 were in Alappuzha.

7.41. Dredging operations were conducted in Azheekkal, Beypore and Neendakara ports and in Chavara and Kollam canals (see Appendix 7.18). Dredging was conducted for 769 hours and quantity dredged was 225058 M<sup>3</sup>. Total value of dredging was Rs.21.30 lakhs.

7.42. Intermediate and minor ports together collected revenue of Rs.72.23 lakhs in 1992-93 against Rs.46.85 lakhs in 1991-92. Out of the total revenue, Rs.47.66 lakhs (66%) was collected from Neendakara Port. The revenue collection in 1992-93 thus shows 54% increase over 1991-92.

#### *Inland Water Transport*

7.43. State Water Transport Department, Kerala Shipping and Inland Navigation Corporation and the Water Transport Wing of KSRTC are the three agencies that carry out the water transport operations in the State. Number of boats possessed by these three agencies together were 108, in 1992-93 and 1991-92. Out of the 108 boats only 63 boats were in operation in 1992-93 as against 67 in 1991-92. This shows that the fleet

utilisation decreased to 58.3 per cent in 1992-93 from 62 per cent in 1991-92. But the passengers carried increased marginally from 263.06 lakhs in 1991-92 to 263.82 lakhs in 1992-93, while the State Water Transport Department carried during 1992-93 on an average 2.85 lakh passengers per boat, KSINC carried 6.44 lakh passengers and KSRTC boats carried 7.16 lakh passengers. SWTD boats and KSINC boats together carried only 2.88 lakh tones of cargo in 1992-93 as against 3.49 lakh tonnes in 1991-92.

7.44. The three agencies together collected a revenue of Rs.471.83 lakhs in 1992-93 as against Rs.374 lakhs in 1991-92 which shows an increase of Rs.97.83 lakhs (26.2 per cent). Revenue expenditure of the three agencies increased from Rs.651.39 lakhs in 1991-92 to Rs.699.16 lakhs in 1992-93 which shows an increase of Rs.47.77 lakhs (7.3 per cent), while SWTD and KSRTC incurred loss in 1992-93 KSINC made profit (See Table 7.16).

#### State Water Transport Department

7.45. State Water Transport Department has a fleet strength of 85 boats in 1992-93. Out of them 42 boats were in operation in 1992-93 as against 46 boats in 1991-92. This shows that fleet utilisation decreased from 54.1 per cent in 1991-92 to 49 per cent in 1992-93. However 119.89 lakh passengers were carried in 1992-93 as against 116.72 lakhs in 1991-92 which shows 2.7 per cent increase. Volume of cargo carried decreased to 3043 tonnes in 1992-93 from 3146 tonnes in 1991-92.

7.46. Revenue receipt of the Department increased to Rs.159.96 lakhs in 1992-93 from Rs.118.14 lakhs in 1991-92. The revenue receipts thus increased by Rs.41.82 lakhs (35.4%) in 1992-93. Revenue Expenditure increased from Rs.338.76 lakhs in 1991-92 to Rs.350.40 lakhs in 1992-93 which shows 3.4 per cent increase (Rs.11.64 lakhs). The working of the State Water Transport Department ended in a loss of Rs.180.48 lakhs in 1992-93 as against Rs.220.62 lakhs in 1991-92.

#### Kerala Shipping and Inland Navigation Corporation Ltd.

7.47. Kerala Shipping and Inland Navigation Corporation during 1992-93 engaged both in passenger and cargo traffic. Corporation has 11 passenger boats and 10 self propelled steel barges for cargo movement. During 1992-93, out of 11 passenger boats, the corporation operated 9 boats and carried 58 lakh passengers as against 57 lakh passengers carried during 1991-92. Volume of cargo carried was 2.85 lakh tonnes in 1992-93 as against 3.49 lakh tonnes in 1991-92. Although the volume of cargo carried decreased by 18.3 per cent during 1992-93, Corporation's better performance resulted in increased revenue receipts. Revenue receipts of the Corporation increased to Rs.249.50 lakhs in 1992-93 from Rs.203.89 lakhs in 1991-92 which shows an increase of Rs.45.61 lakhs (22.4%). Revenue expenditure of the Corporation increased from Rs.193.87 lakhs in 1991-92 to Rs.232.16 lakhs in 1992-93 which shows an increase of Rs.38.29 lakhs (19.8%). Consequent on increased revenue receipts Corporation made a profit of Rs.17.34 lakhs in 1992-93 as against a profit of Rs.10.02 lakhs in 1991-92.

Table 7.16

#### Operational Statistics of Inland Water Transport Agencies in Kerala

Particulars	1991-92				1992-93				% variation over the previous year
	SWTD	KSINC	KSRTC	Total	SWTD	KSINC	KSRTC	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Total No. of boats	85	11	12	108	85	11	12	108	-
2. No. of boats in operation	46	9	12	67	42	9	12	63	-6.00
					(-8.7)				
3. No. of passengers carried (in lakhs)	116.72	57.00	89.34	263.06	119.89	58.00	85.93	263.82	-0.29
					(+2.7)	(+1.8)	(-3.8)		
4. Volume of Cargo carried (lakh tonnes)	0.03	3.46	-	3.49	0.03	2.85	-	2.88	-17.48
						(-17.6)	-		
5. Total Revenue/Receipt (Rs. lakhs)	118.14	203.89	51.98	374.01	159.96	249.50	62.37	471.83	+26.15
					(+35.4)	(+22.4)	(+20.00)		
6. Total Revenue Expenditure (Rs. lakhs)	338.76	193.87	118.76	651.39	350.40	232.16	116.60	699.16	+7.33
					(+3.4)	(+19.8)	(-1.8)		
7. Loss/Profit (Rs. lakhs)	(-220.62)	(+10.02)	(-66.79)	-277.39	(-180.48)	(+17.34)	(-54.23)	-	
					(-18.19)	(+73.1)	(-18.8)	(-217.37)	-21.64

(+) Profit/increase (-) Loss/decrease

Figures in brackets denote percentage increase in 1992-93 over 1991-92.

### Water Transport Wing of KSRTC

7.48. Water Transport Wing of KSRTC operates only passenger boat services. In 1992-93 it had a fleet strength of 12 boats and all these boats were operated. All the boats are aged over 20 years. Average number of trips per day decreased from 218 in 1991-92 to 216 in 1992-93. consequently total number of passengers carried declined from 89.34 lakhs in 1991-92 to 85.93 lakhs in 1992-93.

7.49. Total revenue receipts was Rs.62.37 lakhs in 1992-93 as against Rs.51.98 lakhs in 1991-92 which shows an increase of 20%. Revenue expenditure decreased from Rs.118.76 lakhs in 1991-92 to Rs.116.60 lakhs in 1992-93. Increase in revenue receipts (Rs.10.39 lakhs) and a marginal decrease in revenue expenditure (Rs.2.16 lakhs) helped to reduce the loss to Rs.54.23 lakhs in 1992-93 from Rs.66.79 lakhs in 1991-92.

### Communications

7.50. Under the Kerala Postal Circle 31 new post offices were opened during 1992-93 as against 74 during 1991-92. All the post offices started during 1992-

93 were branch offices. Thus by 1992-93 end the total number of post offices under Kerala Circle stood at 5009 as against 4978 in 1991-92. Out of the total post offices, 51 (1.0 per cent) are Head Post Offices, 1968 (39.3 per cent) are Sub Post Offices and 2990 (59.7 per cent) are branch offices. Table 7.17 below shows the growth of post offices in 1992-93 over 1991-92.

Table 7.17

#### Category-wise Distribution of Post Offices

Post Offices	1992-93	1991-92
(1)	(2)	(3)
1. Head Post Offices	51	51
2. Sub Post Offices	1968	1968
3. Branch Offices (including speed post centres)	2990	2959
Total	5009	4978

7.51. Of the 5009 Post Offices in 1992-93, ten are in Lakshadweep and four in Mahe. Excluding these 14 post offices, the number of post offices in Kerala was 4995 in 1992-93 as against 4964 in 1991-92. Speed post centres increased from six in 1991-92 to seven in 1992-

Table 7.18

#### District-wise Distribution of Post Offices under Kerala Circle

District	Number of Post Offices		Area served by each post office		Population served by each post office	
	1991-92	1992-93	1991-92	1992-93	1991-92@	1992-93*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Thiruvananthapuram	414	416	5.29	5.27	7099	7274
2. Kollam	327	330	7.62	7.55	7333	7494
3. Pathanamthitta	241	243	10.96	10.87	4925	5021
4. Alappuzha	360	351	3.93	4.03	5531	5855
5. Kottayam	420	421	5.25	5.23	4333	4461
6. Idukki	293	298	17.13	16.84	3676	3715
7. Ernakulam	378	378	6.37	6.37	7402	7653
8. Thrissur	487	487	6.23	6.23	5614	5772
9. Palakkad	442	445	10.14	10.07	5376	5499
10. Malappuram	427	440	8.31	8.07	7244	7227
11. Kozhikode	431	432	5.44	5.43	6063	6229
12. Wayanad	142	145	15.01	14.70	4725	4759
13. Kannur	410	412	7.23	7.20	5476	5612
14. Kasaragod	196	197	10.16	10.11	5464	5584
Kerala (Excluding Lakshadweep and Mahe)	4978	4995	7.82	7.77	5840	5982
15. Lakshadweep	10	10	3.00	3.20	5200	5400
16. Mahe	4	4	2.25	2.10	8750	8750

@ Based on 1991 census population

\* Based on 1993 projected population

93. The speed post centres in Kerala are Thiruvananthapuram, Kollam, Kochi, Aluva, Thrissur, Kozhikode and Kozhikode Civil Station. Speed post from Kerala is linked with 62 centres within India and 74 countries are linked with International speed posts.

7.52. There are three other postal service Divisions under Kerala circle. They are;

- (i) Railway Mail Service
- (ii) Mail Motor Service and
- (iii) Central Stamp Depot.

Under these three other postal service divisions there are 89 post offices during 1992-93 (See Appendix 7.22).

7.53. There are 24 postal service divisions under Kerala circle. Division-wise distribution of post offices under Kerala circle is given in Appendix 7.23. Distribution of post offices shows that area served by a post office in all districts except in Alappuzha decreased in 1992-93 over 1991-92. However average area served by each post office differ between districts from 4.03 sq. kms in Alappuzha to 16.84 sq. kms in Idukki. Similarly

population served by each post office differ between districts, from 3715 in Idukki to 7494 in Kollam in 1992-93. Table 7.18 below shows district-wise distribution of Post offices, area and population served by each Post office in Kerala in 1991-92 and 1992-93. For the State as a whole, area served by each post office declined from 7.82 sq. kms to 7.77 sq. kms but population served increased from 5840 to 5982.

#### Tele-Communications

7.54. Kerala telecom circle made unique progress during 1992-93. Total number of telephone exchanges in Kerala increased by 13 from 675 in 1991-92 to 688 in 1992-93. A total of 126868 lines were added in the switching capacity. The total equipped capacity increased from 344536 to 428212 with a net addition of 83676 lines during 1992-93. By March 1993, there were 377805 working connections in Kerala as against 305605 by March, 1992. This shows that during 1992-93, 72200 working connections were provided; an increase of 23.6 per cent. This was against a target of 72000 connections. However the achievement in the equipped capacity and telephone connection vary as shown in Table 7.19.

Table 7.19

#### Area-wise Improvement in Telephone System in Kerala

Secondary switching Areas	Number of Exchanges March end (Nos.)		Total equipped capacity March end (Nos.)		Total working connection March end (Nos.)	
	1992	1993	1992	1993	1992	1993
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Alappuzha	39	35	19745	22400	16367	20707
2. Kozhikode	108	109	47360	55584	42706	49885
3. Kannur	99	99	37791	47420	33362	39734
4. Ernakulam	131	143	76718	99428	68029	88150
5. Kottayam	59	58	32684	39424	28595	34834
6. Palakkad	63	63	19612	25116	16662	21309
7. Pathanamthitta	37	37	14861	18168	12961	19836
8. Kollam	52	53	21975	29248	20181	25351
9. Thrissur	47	49	29034	38820	27400	33548
10. Thiruvananthapuram	40	42	44756	52604	39342	48451
Total	675	688	344536	428212	305605	377805

7.55. Telecom facilities in vilages made rapid progress during 1992-93. In rural areas 13 more new exchanges were opened in 1992-93. As a result a net switching capacity of 46000 lines were added in rural exchanges and 34798 connections were provided during

1992-93. Consequently addition to the switching capacity in rural areas works out at 55 per cent of the capacity added during 1992-93. In rural areas over 150 MAX 111 strowger exchanges were replaced with electronic exchanges and over 200 PCM systems were commis-

sioned during 1992-93 to provide group dialing as well as STD facilities in order to improve quality of telecom service. Seventy three telex connections were provided and 102 stations were added to NSD/ISD net work during 1992-93 and 49 more exchanges were brought under group dialing. By March 1993, ISD facility is available in 300 stations in Kerala. All the exchanges in the Kerala circle are automatized and 526 are having electronic exchanges.

7.56. Local and STD public telephones were established on a large scale in urban and rural areas in 1992-93. Accordingly 681 local and 1316 STD public telephones were opened in 1992-93. Consequently by March 1993 there were 5026 local and 3100 STD public telephones. The total public telephones in all categories together were 10226 by March 1993 in Kerala. Out of 688 telephone exchanges in Kerala 636 exchanges are having group dialing facility

7.57. As at the end of March 1993, Kerala has one telephone exchange for every 7.50 kms. The density of telephones in Kerala is 12.64 per 1000 population. The average utilisation of exchange capacity is 88.23 per cent. In spite of the fact that there has been rapid development in the telephone facilities in the State it has not been possible to meet the demand for telephone connections. Total applicants in the wait list for telephone connection by 1992-93 end was 293043 as against 214834 in 1991-92. Applicants for telephone connections in the wait list thus increased by 78209 during 1992-93.

7.58. There are 11 telex exchanges in Kerala with an equipped capacity of 2230 local and 650 transit lines by 1992-93. Net telex connections added during 1992-93 were 73 as against 127 during 1991-92. Telex working connections as on 31.3.1993 is 1993 local and 505 transit lines in Kerala.

7.59. Telegraph service continued to expand during 1992-93. Two DTOs were opened in 1992-93. As a result as on 31.3.1993 there were 36 DTOs/CTOs, 72 telecom centres and 195 combined offices in Kerala. Phonogram booking facility is available in 195 offices compared to 192 in 1991-92. Department of Telecom opened 17 centres in 1992-93 to provide facilities like STD/ISD telephones, trunk calls, local calls, telex service, telegram booking etc. These centres also act as customer service centre accepting complaints and telephone bills.

#### *Tourism*

7.60. The year 1993 witnessed only a marginal increase in the tourist flow to the state. The number of

foreign tourist arrivals in Kerala stood at 92,000 in 1993 as against 90,624 in 1992. This represented an increase of only 1.5 per cent compared to 30 per cent increase in 1992 over 1991. General trend in the tourist arrivals in the country as a whole shows decrease. The tourist arrivals at the all India level decreased by 14 per cent during the year under review.

7.61. The main public sector agencies which carry out tourism related activities in Kerala are the Department of Tourism and the Kerala Tourism Development Corporation. The Department of Tourism incurred an expenditure of Rs.222.58 lakhs during 1992-93 against an outlay of Rs.291 lakhs. This shows that only 76 per cent of the total outlay has been spent. The Department of Tourism concentrated more on publicity such as bringing out publicity materials, brochures, pamphlets and audio-video publicity etc. The Department conducted Great Elephant March and dance festivals and participated in international tourism fairs like World Tourism Mart, ITB, Berlin etc. Financial assistance were provided to tourism promotion ventures like boat races, organisation of tours and tourism clubs etc.

7.62. A toy train service was started at Veli for children and also barbed wire fencing was provided at the Tourist Complex during 1992-93. The construction of guest house at Idukki is over and is ready for commissioning. Land for the construction of a guest house at Pathanamthitta has been acquired. Basic amenities were provided for pilgrim tourists at Erumely and Vadasserikkara.

7.63. Preparation of project reports for Athirappally Tourist Resort, Nehru Memorial Pavilion at Alleppey and cottages at Malampuzha, strengthening of water sports facility at Veli, renovation of Poomulli Mana purchase of CVTS and computer consumables for the Department of Tourism, furniture for wayside amenities at Kayamkulam, Kasaragod and Valara were other activities carried out by the Department.

7.64. The District Tourism Promotion Councils actively participated in the tourism promotion activities. The DTPC, Trivandrum undertook the construction of a restaurant and children's park at Aruvikkara and a sculpture at Shanghumughom. Organisation of conducted tours, boat services, maintenance of gardens and publicity were other activities carried out by the District Tourism Promotion Councils during the year under report.

7.65. Besides the State Plan Schemes, a few centrally sponsored schemes were also implemented by the Department of Tourism. The expenditure made under this

category is Rs.62.25 lakhs. The construction of Tourist facilitation Centre at Trivandrum and waterside amenity at Vaikom were completed and Boat Train for Kumarakom was acquired under the centrally sponsored schemes.

7.66. Kerala Tourism Development Corporation is mainly concentrated on commercial activities viz., hoteliering and tourist transport services. In addition to this promotion and publicity is also undertaken by the Corporation.

7.67. At present the Corporation has under its control 12 hotel units and 9 other units such as motels, youth hostels, Sabala etc. These units have a total bed capacity of 1003. 14185 foreign tourists and 96628 domestic tourists used the facilities available in these units. Two hotel units namely; hotel Chaithram and Bolgalty Palace showed an occupancy ratio of more than 60 per cent during 1992-93. But as against the previous year, 4 hotel units and 4 motels registered an occupancy ratio of more than 50 per cent. In the year 1991-92 only 2 hotel units had an occupancy ratio between 50-60 per cent.

The total income of the Corporation from these hotel units during 1992-93 stood at Rs.735 lakhs against the expenditure of Rs.652 lakhs. The Corporation made a profit of Rs.83 lakhs from these hotel units during the year 1992-93. The accumulated loss of the Corporation as on 31.3.93 is Rs.549.21 lakhs.

7.68. As against the previous year, the administrative expenses of the Corporation stood at a higher level than the operating expenses during 1992-93. A statement showing the operational details of the Corporation is appended (Appendix No.7.25).

7.69. The total staff component of the Corporation shows 46 Administrative and 525 operating staff.

7.70. The Transport Division of KTDC owned 2 A/C luxury coaches, 4 non A.C. luxury coaches, 8 mini coaches and 1 luxury boat.

7.71. The Tourism Resorts Kerala Limited could not make any investments during the year under report for want of clearance from the Government.

## EXPORT-IMPORT TRADE

*India's Foreign Trade*

8.1 The year 1993-94 has seen the country emerge decisively out of its balance of payments problems of the past three years originated with the unprecedented crisis during the year 1990-91 and persisted due to some of the external factors such as the Gulf crisis, global slow down in the world trade and the breaking of the erstwhile Soviet Union.

8.2 The foreign currency reserves with RBI stood at \$12 billion by the middle of February 1994 and is expected to reach \$13 billion by the end of March, 1994, an amount equal to nearly 30 weeks import cover as against just two weeks of cover in May 1991. This build up was achieved in spite of a net outflow of \$1.7 billion an account of Foreign Currency Non-Resident Account Scheme by the end of January 1994, a repayment of \$1.1 billion on account of SBT's liability on behalf of IOC during 1991-92 between April to October 1993 and a settlement of all outstanding savings with a net sale of \$1.2 billion between April and October 1993. The trends in foreign currency assets and foreign exchange reserves are given in Table 8.1

TABLE 8.1

*Foreign Exchange Reserves : 1980-81 to 1993-94*

(Rs. crores)				
Year	Foreign currency assets of RBI at the end of the year	Annual growth rate (%)	Foreign exchange reserves at the end of the year @	Annual growth rate (%)
(1)	(2)	(3)	(4)	(5)
1980-81	4822	..	5544	..
1981-82	3355	-30.42	4024	-27.42
1982-83	4265	27.12	4782	18.84
1983-84	5498	28.90	5972	24.88
1984-85	6817	23.99	7243	21.28
1985-86	7384	8.32	7820	7.97
1986-87	7645	3.53	8151	4.23
1987-88	7287	-4.68	7687	-5.69
1988-89	6605	-9.36	7040	-8.42
1989-90	5787	-12.38	6251	-11.21
1990-91	4388	-24.17	11416	82.63
1991-92	14578	232.22	23850	108.92
1992-93	20140	38.15	30745	28.91
1993-94 (P)	30747	52.67	43434	41.27

Notes : P - Provisional Estimates.

Includes foreign currency assets of RBI, gold holdings of RBI and SDR holdings of government.

\*\* Effective from October 17, 1990 gold is revalued closer to international market price at the end of every month. For earlier periods gold is valued at official rate of Rs. 84.39 per 10 grams.

Source : Economic Survey 1993

8.3 The policy measures announced by the Government of India to restructure and deshelter the Indian economy and to impart international competitiveness, and the new export and import policy commenced by the Government from April 1, 1992 have made a significant improvement in the country's trade balance. Exports are expected to grow by 20 per cent. Despite large scale liberalisation of import policies, imports are not expected to grow by more than 4 per cent during the corresponding period. This is likely to provide the much needed improvement in the external sector.

8.4 The trends in India's foreign trade from 1980-81 to 1993-94 are given in Table 8.2.

TABLE - 8.2

*India's Foreign Trade : 1980-81 to 1992-93*

(Rs. crores)					
Year	Export	Growth rate	Import	Growth rate	Balance of trade
(1)	(2)	(3)	(4)	(5)	(6)
1980-81	6711	4.57	12549	37.25	- 5838
1981-82	7806	16.32	13608	8.44	- 5802
1982-83	8803	12.77	14294	5.04	- 5491
1983-84	9771	11.00	15831	10.75	- 6060
1984-85	11744	20.19	17134	8.23	- 5390
1985-86	10895	-7.23	19658	14.73	- 8763
1986-87	12452	14.29	20096	2.23	- 7644
1987-88	15674	25.88	22244	10.69	- 6570
1988-89	20232	29.08	28235	26.93	- 8003
1989-90	27658	36.70	35328	25.12	- 7670
1990-91	32553	17.70	43193	22.26	- 10640
1991-92	44042	35.29	47851	10.78	- 3809
1992-93	53688	21.90	63375	32.44	- 9687
1993-94 P	49182	31.80	51477	8.4	- 2295

(Apr. -Dec)

P : Provisional.

Source : Economic Survey 1993.

8.5 Manufactures accounted for 76.3 per cent of the total exports in 1992-93 as against 74.6 per cent in 1991-92. The share of agro-products declined from 17.9 per cent in 1991-92 to 16.4 per cent in 1992-93. These trends are likely to be reversed in 1993-94 as during the first half of 1993-94 the export of agro-products went up by 38 per cent as compared to 19 per cent for manufactured items. Within manufactures, the highest growth was recorded by plastic and linoleum



products (119%), followed by gems and jewellery (37%) and metal products (30%). The relatively higher growth rate of agro-products makes the export import inelastic with few exceptions.

8.6 The composition of non-POL imports has remained virtually unchanged over the years. Capital goods, pearls, precious and semi-precious stones, chemicals, fertilizers and iron and steel together account for more than two third of non-POL imports.

### Trade through Kochi Port

8.7 During 1992-93 Kochi Port handled 79.78 lakh tonnes of traffic as against 74.81 lakh tonnes handled in 1991-92, showing an increase of 6.6 per cent. Foreign cargo handled at the port recorded an increase of 5.8 per cent to 31.94 lakh tonnes in 1992-93 from 30.20 lakh tonnes in 1991-92. The increase in coastal traffic was 7.2 per cent, during the corresponding period. Details of cargo handled by Kochi Port from 1989-90 to 1992-93 are given in Table 8.3.

TABLE - 8.3

### Cargo Handled by Kochi Port : 1989-90 to 1992-93

Traffic	Export				Import				Total			
	1989-90	1990-91	1991-92	1992-93	1989-90	1990-91	1991-92	1992-93	1989-90	1990-91	1991-92	1992-93
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Coastal	5.89	6.44 (9.34)	5.94 (-7.76)	5.21 (-12.29)	35.70	41.13 (15.21)	38.67 (-5.98)	42.63 (10.24)	41.59	47.57 (14.37)	44.61 (-6.22)	47.84 (7.24)
Foreign	4.83	3.81 (-21.12)	4.54 (19.16)	5.92 (30.40)	24.83	21.37 (-13.93)	25.66 (20.07)	26.01 (1.36)	29.66	25.18 (-15.10)	30.20 (19.94)	31.94 (5.76)
Total	10.72	10.25 (-4.38)	10.48 (2.4)	11.13 (6.20)	60.53	62.50 (3.25)	64.13 (2.61)	68.64 (7.03)	71.25	72.75 (2.11)	74.81 (2.83)	79.78 (6.64)

Note : Figures in brackets indicate percentage change over the previous year.

Source : Cochin Port Trust

8.8 The total export traffic handled during 1992-93 also showed an increase by 6.2 per cent to 11.13 lakh

tonnes from 10.48 lakh tonnes in 1991-92 as shown in the Table 8.4.

TABLE - 8.4

### Commodity-wise Exports through Kochi Port 1989-90 to 1992-93

Commodity	1989-90		1990-91		1991-92		Percentage variation over 1990-91	1992-93		Percentage variation over 1991-92
	Quantity	Percentage to total	Quantity	Percentage to total	Quantity	Percentage to total		Quantity	Percentage to total	
	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	
Tea	12347	1.2	9530	0.9	17906	1.7	87.9	32313	2.90	80.46
Cashew Kernels	46095	4.3	49970	4.9	36630	3.5	-26.7	31268	2.81	(-) 14.64
Sea foods	53123	5.0	58598	5.7	65800	6.3	12.3	62227	5.59	(-) 5.43
Coir products	26117	2.4	24198	2.4	21639	2.1	-10.6	22971	2.06	6.16
Spices	41268	3.8	35976	3.5	29710	2.8	-17.4	28266	2.54	(-) 4.86
Coffee	57852	5.4	35892	3.5	42008	4.0	17.0	45761	4.11	8.93
Miscellaneous *	834666	77.9	810822	79.1	834038	79.6	2.9	890.778	80.00	6.80
Total	1071468	100.0	1024986	100.0	1047731	100.0	2.2	1113584	100.00	6.29

\* Includes P.O.L

Source : Cochin Port Trust.

8.9 While value of export increased in the case of tea, sea foods, coffee and coir products, the export

value of pepper, cardamom, cashew kernels and ginger decreased during 1992-93 compared with the previous year.

TABLE - 8.5

## Commodity-wise value of Foreign Export Trade : Kochi Port, 1986-87 to 1992-93

Commodity	(Rs. crores)								
	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	Percentage variation over 1990-91	1992-93	Percentage Variation over 1991-92
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Tea	37.10	33.35	43.46	32.38	30.02	42.38	41.17	94.43	122.82
Pepper	191.65	233.65	156.23	148.00	99.97	72.49	- 27.49	69.72	- 3.82
Cardamom	3.99	0.56	1.41	0.90	2.13	4.00	87.79	0.20	- 95.00
Cashew kernels	302.81	278.42	251.23	334.58	391.83	432.82	10.46	383.82	- 11.32
Coffee	112.84	111.35	127.05	136.35	79.70	118.60	48.81	131.75	11.09
Ginger	2.47	3.84	7.83	9.42	7.85	12.69	61.66	9.01	- 29.0
Sea foods	167.11	187.47	224.15	236.72	317.44	443.02	39.56	459.28	3.67
Coir products	33.10	20.97	20.94	23.95	28.25	29.04	2.80	43.06	48.28
Miscellaneous	327.77	164.10	248.53	295.28	357.31	492.97	37.97	566.46	14.91
Total	1178.84	1033.71	1080.83	1217.58	1314.50	1648.01	25.37	1757.73	6.66

Source : Cochin Port Trust

8.10 The Commodity-wise details of major imports during 1989-90 to 1992-93 are given in Table 8.6.

The total import traffic handled during 1992-92 recorded an increase of 6.7 per cent of 68.64 lakhs tonnes from 64.33 lakh tonnes in 1991-92.

TABLE - 8.6

## Commodity-wise Exports through Kochi Port 1989-90 to 1992-93

Commodity	(Tonnes)									
	1989-90		1990-91		1991-92		Percentage variation over 1990-91	1992-93		Percentage variation over 1991-92
(1)	Quantity	Percentage share	Quantity	Percentage share	Quantity	Percentage share		Quantity	Percentage share	
Fertilizers & Raw materials	889429	14.7	864431	13.8	969498	15.1	12.2	936492	13.64	- 3.40
Food grains	42881	0.7	27308	0.5	16463	0.3	- 39.7	87482	1.27	431.39
Iron & Steel & Machinery	20772	0.4	6549	0.1	2058	-	- 68.6	6767	0.10	228.81
News Print	13060	0.2	19819	0.3	20134	0.3	1.6	9748	0.14	- 51.58
Cashewnuts	21060	0.3	4809	0.1	1361	-	- 71.7	11358	0.17	734.53
Miscellaneous *	5065957	83.7	5327401	85.2	5423870	84.3	1.8	5812462	84.68	7.17
Total	6053159	100.0	6250317	100.0	6433384	100.0	2.9	6864309	100.00	6.70

\* Includes P.O.L

Source : Cochin Port Trust

## Marine Products

8.11 India's marine products export has continued to grow touching a record figure of 2,08,602 tonnes valued at Rs.1,767.43 during 1992-93. When compared to the previous year, the increase in terms of quantity was 36,782 Tonnes (21.41 per cent), while in value terms,

the increase was in the order of Rs.391.54 crores (28.46 per cent). The average unit value realisation recorded a marginal increase from Rs.80.08 per kg to Rs.84.73 per kg. The quantity of marine products exported through Kochi Port, however, decreased from 58,743 Tonnes in 1991-92 to 32,473 tonnes in 1992-93. The share of Kerala in the total export from the country went down from 34 per cent in 1991-92 to 16 per cent in 1992-93.

TABLE - 8.7

### Exports of Marine Products : Kerala and India - 1980-81 to 1993

(Qty. in Tonnes, Value in Rs. lakhs)

	India		Kerala		Percentage share of Kerala	
	Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1980-81	75591	23484	29148	9534	39	41
1981-82	70105	28601	32006	12513	46	44
1982-83	78105	36136	32525	14147	42	39
1983-84	92691	37302	32840	14086	35	38
1984-85	87187	38429	31570	14798	36	39
1985-86	83651	39800	29580	13808	35	35
1986-87	85843	46067	33906	16457	39	36
1987-88	97179	53120	35576	18394	37	35
1988-89	99777	59785	45614	22131	46	37
1989-90	110843	63499	47245	24094	43	38
1990-91	139419	89337	50997	31379	37	35
1991-92	171820	137589	58743	44447	34	32
1992-93	208602	176743	32473	27432	16	16

Source : The Marine Products Export Development Authority, Kochi.

8.12 The export growth in terms of US Dollar was only marginal because India's major markets like Japan, USA and West Europe were in the grip of an economic recession. Moreover, there was abundant supply of farm-raised shrimp by countries like China, Indonesia, Thailand, Ecuador, Mexico etc. The growth rate of total export in terms of US \$ was 10.20 per cent during 1992-93. However, the unit value realisation declined from US Dollars 3.25 to US Dollars 2.95 per kg. This was mainly due to the depreciation of the Indian Rupee against currencies like US Dollar, Pound, Sterling and also because of export of low valued fish items.

8.13 India exports marine products to over 59 countries. Japan continues to be the single largest market accounting for 19.77 per cent of the total volume and

45.37 per cent of value closely followed by USA which accounted for a share of 9.6 per cent of the total volume and 10.78 per cent of the value. West Europe as a block surpassed Japan in terms of volume. The other major markets for our marine products are South East Asia and Middle East.

8.14 Eventhough frozen shrimp continued to dominate in our export accounting for 35.66 per cent of the volume and 66.78 per cent in value, its share in the overall export in terms of volume has declined. At the same time, fresh/frozen fish export recorded a quantum jump exceeding that of frozen shrimp with a total quantity of 75,370 tonnes. This represents a share of 36.13 per cent. Export of frozen cephalopods viz., frozen squid, cuttlefish and octopus has also shown an increase from 38,580 tonnes to 49,460 tonnes in 1992-93.

TABLE - 8.8

## Major items of Export of Marine Products : India - 1989-90 to 1992-93

Major items	(Qty. in tonnes, value in Rs. lakhs)															
	1989-90		1990-91		1991-92		1992-93		1992-93		1992-93		1992-93		1992-93	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Frozen shrimp	57819	46330.88	52.16	72.96	62395	66332.69	44.75	74.25	76151	97911.66	44.32	71.16	74393	1180.26	35.66	66.78
Frozen Lobster/ Lobster tails	2068	3362.80	1.87	5.30	1600	3430.20	1.16	3.85	1628	5530.70	0.95	4.02	75370	232.41	36.13	13.15
Frozen cuttle fish/fillet	14158	4730.98	12.77	7.45	11596	4528.74	8.32	5.07	12437	6091.09	7.24	4.43	30364	151.90	14.56	8.59
Fresh/frozen fish	21227	4820.31	19.15	7.59	42340	9082.14	30.37	10.16	49333	14319.64	28.71	10.40	18981	118.88	9.10	6.73
Frozen squid	11944	2848.39	10.77	4.49	16667	4498.81	11.95	5.03	25529	10938.10	14.86	7.95	1613	43.34	0.77	2.45
Dried fish	1081	146.85	0.98	0.23	1331	173.72	0.95	0.19	2466	351.17	1.44	0.26	4243	18.02	2.03	1.02
Shank fins & FISH MAWS	295	598.83	0.27	0.94	152	300.95	0.11	0.34	317	895.74	0.18	0.66	573	3.49	0.23	0.20
Other items	2251	660.22	2.03	1.04	3338	9089.73	2.39	1.11	3959	1550.98	2.30	1.12	3075	19.13	1.47	1.08
Total	110843	63499.26	100.00	100.00	139419	89336.98	100.00	100.00	171820	137589.08	100.00	100.00	208612	1767.43	100.00	100.00

Source : The Marine Products Export Development Authority, Kochi.

## Export of Spices

8.15 India is a leading spices producing and exporting country in the world. During the past two decades, India has been facing severe competition from the established exporting countries and new entrants. From 20 per cent in the early seventies India's share in World export of spices was progressively reduced to about 8 per cent in 1990. The exports in spices presented a very favourable scenario in 1991-92 surpassing the targets fixed for the year. However, the success could not be repeated during the following year as the export fell short of the targets by about 10 per cent.

8.16 Black pepper, chilli, turmeric and cardamom are the mainstay of spices exported from the country. In the case of Kerala, pepper, cardamom, ginger and turmeric are the major spices grown and exported. Almost the entire Indian export of pepper and cardamom is from Kerala. The total export earnings from spices for 1992-93 was Rs. 386.78 crores, of which Kerala's share was Rs.150 crores.

## Pepper

8.17 Black pepper, the king of Indian spices, continued to be the single largest foreign exchange earner among the spices for the country till the eighties. But due to the glut like situation for black pepper in world market, its unit value has declined sharply in recent years pushing it down to the second position and adversely affecting the export earnings.

8.18 The quantity of pepper exports increased to 23,752 M.T. in 1992-93 from 20,565 tonnes in 1991-92. But compared with the exports from 1985-86 to 1989-90, it has declined in recent years (See table 8.9). Of the total exports of 23752 M.T. of Pepper, the export from Kerala was 21985 tonnes, i.e, 92.6 per cent.

TABLE - 8.9  
Export of Black Pepper: India:  
1984-85 to 1992-93

Year	Qty. (MT)	Value (Crores)	Unit Value (Rs/Kg)
(1)	(2)	(3)	(4)
1984-85	25420	60.54	23.81
1985-86	37620	172.48	45.85
1986-87	37083	200.33	54.02
1987-88	41011	240.58	58.66
1988-89	36981	164.63	44.52
1989-90	34482	152.97	44.36
1990-91	29985	102.40	32.15

(1)	(2)	(3)	(4)
1991-92	20565	74.32	36.08
1992-93	23752	78.31	32.97
1993-94*	32000	112.00	35.00

\* Target

Source : Spices Board, Kochi.

8.19 Export of Pepper, as already hinted, has shown a declining trend during the last four years from 1988-89 to 1991-92 which is attributed to the uncompetitiveness springing up from the improved supply situation in other pepper producing countries. However, there has been a moderate recovery in 1992-93 and the pepper exports are expected do well during the current year due to India's comfortable supply position while the world production has marginally declined.

8.20 Kerala accounts for about 93 per cent of the total pepper production in the country according to official statistics.

## Small Cardamom

8.21 India's share in the world export market for cardamom is fast declining. From an estimated share of 50 per cent in mid-seventies, India's share has nosedived to about 3 per cent in recent years.

8.22 The dominant entry of Guatemala in the world market has been the major reasons for India's declining share. With a relatively low production cost and practically no domestic demand, Guatemala could compete well on the price front with India is confronted with a rising cost of production and growing domestic demand.

8.23 Kerala accounts for nearly 53 per cent of the area under small cardamom cultivation in India and the state contributes, on an average, about 65 per cent of the country's production. Export of small cardamom from Kerala in the last three years averages to about 80 per cent of the total export from India.

8.24 During 1992-93 export of small cardamom from India was only 190 MT valued at Rs.7.51 crores compared to 544 MT valued at Rs.15.57 crores in 1991-92. The fall in export was mainly due to the low production and the resultant increase in domestic price. The average domestic price during 1992-93 was Rs.465 per Kg, which was the highest recorded so far. Export of small cardamom from India and the share of Kerala from 1982-83 to 1992-93 are given in Table 8.10.

TABLE 8.10

*Export of Small Cardamom : Kerala & India, 1982-83 to 1992-93*

(Quantity in M.T. and value in Rs. crores)

Year	Kerala		India		Share of Kerala (%)	
	Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1982-83	844	13.75	1032	16.37	81.78	83.99
1983-84	194	4.10	258	5.44	75.19	75.37
1984-85	2170	59.05	2383	64.81	91.06	91.11
1985-86	2994	49.20	3272	53.46	91.50	92.03
1986-87	1268	16.46	1447	18.50	87.63	88.97
1987-88	212	2.67	270	3.40	78.52	78.53
1988-89	606	7.88	727	10.37	83.36	75.99
1989-90	127	2.37	180	3.06	70.56	77.45
1990-91	320	8.69	400	10.87	80.00	79.94
1991-92	435	12.45	544	15.57	79.96	79.96
1992-93	147	5.81	190	7.51	77.37	77.36

Source: Spices Board, Kochi.

*Ginger*

8.25 Kerala accounts for 26 per cent of the area and 30 per cent of the production of ginger in the country. According to trade circles 90 per cent of the exportable variety of dry ginger is produced in the State.

8.26 The export of dry ginger declined during 1992-93. It was 14,259 MT valued at Rs.21.88 crores in 1991-92 which fell to 9,517 MT valued at Rs.16.55 crores during 1992-93, of which Kerala's share was 3210 MT valued at Rs.9.05 crores. The trend in the export of dry ginger from India for the period 1984-85 to 1992-93 is given in the Table 8.11.

TABLE - 8.11

*Export of Dry Ginger: India, 1984-85 to 1992-93*

(Qty in M.T. - Value Rs. Crores)

Year	Quantity	Value
(1)	(2)	(3)
1984-85	7330	18.73
1985-86	6820	10.89
1986-87	4843	5.71
1987-88	2628	4.89
1988-89	6368	9.40
1989-90	9037	12.68
1990-91	6555	11.76
1991-92	14259	21.88
1992-93	9517	16.55

Source : Spices Board, Kochi.

*Turmeric*

8.27 Although Kerala accounts for only about 2 per cent of the country's production of turmeric, a major share of the production in the state is exported as Alleppey turmeric. Export earnings from turmeric registered an all time record in 1992-93. According to trade sources, around 2000-2500 MT of Alleppey turmeric is exported from Kerala. The export of turmeric from India is given in Table 8.12.

TABLE - 8.12

*Export of Turmeric: India 1983-84 to 1992-93*

(Qty in MT - Value Rs Crores)

Year	Quantity	Value	Unit Value(Rs)
(1)	(2)	(3)	(4)
1983-84	10890	11.06	10.16
1984-85	12800	17.16	13.41
1985-86	8560	12.09	14.12
1986-87	19530	19.18	9.82
1987-88	8747	9.23	10.55
1988-89	18968	19.39	10.22
1989-90	16860	16.15	9.58
1990-91	13624	15.48	11.36
1991-92	19661	37.76	19.21
1992-93	19665	48.36	24.59

Source : Spices Board, Kochi.

8.28 It can be seen that although the quantity of turmeric exported from the country has been more or less the same in 1991-92 and 1992-93, the value increased to Rs.48.36 crores in 1992-93 from Rs.37.76 crores in the previous year due to higher unit value realisation.

### Cashew Kernels

8.29 India is the largest producer and exporter of cashew kernels in the world. Nearly 50 per cent of the world export of cashew kernels is accounted for by India. Indian cashews are demanded from as many as 40 countries all over the world, the major markets being the

USA, Russia, UK, Japan, Netherlands, Australia, Canada, Germany Hong Kong, Singapore, New Zealand and Middle East Countries. Indian cashew kernel is also acclaimed for its better quality, appearance and taste.

8.30 In the case of cashew industry, the year 1992-93 was a turbulent year. However, the export performance of the industry was praiseworthy. During 1992-93, export of cashew kernels was of the order of 53,241 MT valued at Rs.745.13 crores as against 47,738 MT valued at Rs.669.09 crores during 1991-92. Quantity-wise it reflects an increase of 5503 MT and value-wise an increase of Rs.76.04 crores.

TABLE - 8.13

### Export of Cashew Kernels: Kerala and India (1985-86 to 1992-93)

(Quantity - MT; Value Rs. Crores)

	Kerala		India		Kerala's Share	
	Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1985-86	31904	196.16	37097	225.11	90.8	91.1
1986-87	37508	302.81	43004	327.55	89.8	90.6
1987-88	33163	290.36	35971	311.29	89.8	88.9
1988-89	30234	245.74	33994	273.93	88.9	88.9
1989-90	41651	334.58	44858	365.07	92.8	92.8
1990-91	44370	391.83	49874	442.24	88.5	88.6
1991-92	—	—	47738	669.09	—	—
1992-93 P	—	—	53241	745.13	—	—

P : Provisional

Source : Cashew Export Promotion Council;

8.31 The unit value realisation of cashew kernels during 1992-93 was Rs.139.95 per kg against Rs.140.16 per kg in 1991-92 reflecting a decline in the unit value realisation.

8.32 In respect of cashewnut shell liquid, our exports recorded a decline both in quantity and in value. During 1991-92 Indian exports were 4,542 MT of cashewnut shell liquid valued at Rs.4.02 crores. This has declined to 4,162 MT valued at Rs.3.72 crores during 1992-93. The average price realised was Rs.8,938 per MT during 1992-93 against Rs.8,850 per MT during 1991-92, showing an increase of Rs.88 per MT during 1992-93.

TABLE 8.14  
Export of Cashew Shell Liquid: Kerala & India  
(1982-83 to 1992-93)

(Qty. in M.T - Value in Rs. Crores)

	Kerala		India	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1982-83	4260	1.15	5903	1.74
1983-84	1446	0.55	3385	1.36
1984-85	2662	1.13	3411	1.81
1985-86	1574	0.83	2180	1.35
1986-87	1888	1.00	2716	1.48
1987-88	5372	2.42	6534	5.03
1988-89	915	0.63	3034	2.20
1989-90	1919	1.61	3014	2.56
1990-91	2855	2.01	3658	5.56
1991-92	—	—	4542	4.02
1992-93	—	—	4162	3.72

Source: (1) Cashew Export Promotion Council. (2) Cochin Port Trust.



8.33 Import of raw cashewnut during 1992-93 was 1,33,293 MT valued at Rs.360.28 crores. During 1991-92 this was 1,06,080 MT valued at Rs.266.68 crores. The average import price during 1992-93 was Rs.27.03 per kg against Rs.25.14 per kg during 1991-92. In 1992-93, for the first time, we were able to import 3895 M.T of raw cashewnut from Brazil. The major sources of supply during the year 1992-93 were Vietnam (42974 M.T), Tanzania (21924 M.T), NIGERIA (13009 M.T) Indonesia (11540) M.T and Guinea Bissau (5500 M.T).

TABLE - 8.15

*Import of Raw Cashewnut : Kerala & India  
1982-83 to 1992-93*

(Quantity in M.T - Value in Rs. Crores)

Year	Kerala		India	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1982-83	886	0.76	896	0.77
1983-84	17736	14.60	26877	22.12
1984-85	9813	10.78	33215	36.49
1985-86	6959	07.73	21945	24.36
1986-87	26529	37.59	49149	71.16
1987-88	30499	48.54	42609	64.37
1988-89	21847	30.57	45150	61.37
1989-90	21060	29.07	52474	76.66
1990-91	4809*	—	82639	134.00
1991-92 ©	—	—	106080	266.68
1992-93	—	—	133293	360.28

Source : Cashew Export Promotion Council.

Note : \* Import through Kochi Port.

© : Provisional

8.34 As regards the domestic production of raw cashewnut, Kerala accounts for nearly 43 per cent. The production of raw cashewnut by Kerala and other cashew growing states since 1989-90 is given in Table 8.16.

TABLE - 8.16

*Statewise Production of Raw Cashewnut  
1989-90 to 1992-93*

(M.T.)

State	1989-90	1990-91	1991-92	1992-93
Kerala	139500	142100	143200	151600
Karnataka	24650	25770	26750	31260
Andhra Pradesh	36580	37770	40360	44880
Tamil Nadu	12430	12470	12710	19190
Goa	13210	14100	14490	33810
Maharashtra	27130	29510	31960	25590
Orissa	28600	29100	31840	39060
West Bengal	3170	3440	3660	3660
Pondicherry	270	280	290	290
Tripura	50	50	50	50
Total	285590	294590	305310	349390

Source : Cashew Export Promotion Council

## Tea

8.35 Tea has an important place among the agro-based exports from India. The share of India in world tea trade, which remained as high as 33 per cent in 1970 has progressively declined to 19 per cent in 1991. Sri Lanka is the chief competitor in the world market. During 1992-93 India exported 1,32,370 tonnes of tea valuing Rs.72480 lakhs. Details are given in Table 8.17.

TABLE - 8.17

## Export of Tea - Kerala and India

Qty. in tonnes - Value in Rs. lakhs)

Year	Kerala		India	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1987-88	15371	3335	201830	62777
1988-89	22884	4346	204800	64187
1989-90	12347	3238	211760	91482
1990-91	9530	3002	199170	107100
1991-92	17906	4238	210390	115714
1992-93	32313	—	132370	72480
1993-94*	—	—	106250	71144

Sources : (i) Tea Board. (ii) (\*) April - November

8.36 Tea export of tea through Kochi Port has increased markedly in 1992-93. From 17,906 tonnes in 1991-92, it increased to 32,313 tonnes in 1992-93.

8.37 Comparatively higher cost of production creates difficulties in maintaining steady growth of India's tea exports. However, because of the devaluation of Indian Rupee effective from July 1991, the Indian tea has become competitive.

8.38 Another problem in promoting tea exports is the mounting domestic demand.

## Coir

8.39 Export of coir and coir products from India has dwindled to about 30,000 tonnes in recent years from 75,000 tonnes during the early sixties. Competition from synthetic substitutes having superior quality and favourable prices and the growing wage cost of coir processing industries in European countries have contributed to the declining demand for coir and coir products in the international market over the years. The machine spun Sri Lankan Yarn and PVC backed carpets and floor covering have been giving serious threats to Indian coir exports.

8.40 The demand for coir yarn, which was extensively used for hop cultivation in the US and UK, has also been adversely affected following the promotion of high yielding varieties of hop cultivation.

8.41 Sensing the emerging global trends, the traditional mode of production and product diversification are undergoing transformations for the survival and growth of the industry. More than seventy per cent of the total production of the industry is accounted by Kerala.

8.42 The export of coir and coir products from

India during the year 1992-93 amounted to 32,354 tonnes valued at Rs.95,95.31 lakhs as against 30,999 tonnes worth Rs.7412.09 lakhs during 1991-92 showing a growth rate of 4.37 per cent in terms of quantity and 29.46 per cent in terms of value. The item wise export of coir and coir products in India is given in the Table 8.18.

TABLE - 8.18

## Export of Coir and Coir products India 1990-91 to 1992-93

(Qty. in tonnes - Value in Rs. lakhs)

Country	1990-91		1991-92		1992-93		Percentage variation			
							1990-91 to 1991-92		1991-92 to 1992-93	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Coir fibre	41	3.17	5	1.40	12	4.59	- 87.80	- 55.84	140.00	227.86
Coir yarn	14110	1705.85	15266	2328.23	11442	1966.18	8.19	36.49	- 25.05	- 15.55
Coir mats	9009	2021.86	11163	3569.35	13786	5082.37	23.91	76.54	23.50	42.39
Coir mattings	3362	794.54	3645	1193.90	4577	1775.89	8.42	50.26	25.57	48.75
Coir rugs & carpets	1208	268.07	602	241.28	1327	573.89	- 50.17	-10.00	120.43	137.85
Coir (other sorts)	51	13.09	86	13.27	95	16.89	68.63	1.38	10.47	27.28
Coir rope	113	15.19	139	22.43	68	13.81	23.01	47.66	- 51.08	- 38.43
Curled coir	17	1.02	32	2.23	935	90.15	88.24	118.63	2821.88	3942.60
Rubberised coir	16	10.06	61	40.00	112	71.54	281.25	297.61	83.61	78.85
<b>Total</b>	<b>27927</b>	<b>4832.85</b>	<b>30999</b>	<b>7412.09</b>	<b>32354</b>	<b>9595.31</b>	<b>11.00</b>	<b>53.36</b>	<b>4.37</b>	<b>29.46</b>

Source : Coir Board, Kochi.

8.43 An analysis of the item wise exports of coir products shows that the major items of coir products such as coir yarn, coir mats, coir mattings and coir rugs and carpets, registered a sharp increase in exports with the exception of coir yarn, which has shown a sharp decline by 25.05 per cent in quantity. Similarly, there was a fall in export of coir rope also. Though rubberised coir registered an increase of 83.61 per cent in quantitative terms, the corresponding rise in value was only 78.85 per cent indicating a fall in unit value realisation.

8.44 Coir is exported to more than 55 countries all over the world. Italy and countries in Western Europe continued to occupy a major share of India's exports. Exports to the U.S.A has also showed a significant upward trend during the period. Destination-wise export of different coir products is shown in the following Tables.

TABLE - 8.19

## Export of Coir Yarn Destination-wise India 1989-90 &amp; 1992-93

(Qty. in tonnes Value in Rs. lakhs)

Country	1989-90		1992-93	
	Quantity	Value	Quantity	Value
	(1)	(2)	(3)	(4)
Australia	5	0.58	25	4.85
Belgium	953	97.26	914	161.99
Denmark	394	54.51	50	14.69
France	2659	257.19	1754	296.86
West Germany	1383	128.90	1358	239.94
Italy	1495	140.66	1822	303.82
Netherlands	2796	270.57	2099	367.86
Portugal	1222	129.69	939	174.68
Turkey	281	27.64	347	62.99
Singapore	370	41.27	—	—
USA	238	24.57	443	78.38
UAE	130	11.08	265	30.94
Yugoslavia	112	12.62	—	—
GDR	352	37.03	—	—
<b>Total</b>	<b>12390</b>	<b>1233.57</b>	<b>10016</b>	<b>1737.00</b>

TABLE - 8.20

*Export of Coir Rugs & Carpets Destination-wise  
1989-90 & 1992-93*

(Qty. in tonnes - Value in Rs. lakhs)

Country	1989-90		1992-93	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
USA	182	41.78	948	355.16
USSR	1314	229.68	—	—
UK	16	32.64	176	73.12
Denmark	14	2.91	—	—
Germany	9	1.47	11	4.81
Netherlands	11	2.62	36	17.02
Spain	12	3.39	28	13.61
<b>Total</b>	<b>1558</b>	<b>314.49</b>	<b>1199</b>	<b>463.72</b>

TABLE - 8.21

*Export of Coir Mattings Destination-wise  
1989-90 & 1992-93*

(Qty. in tonnes - Value in Rs. lakhs)

Country	1989-90		1992-93	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Canada	150	22.54	254	73.68
USA	204	37.32	362	147.21
UK	422	84.49	521	192.51
Australia	190	42.37	219	100.61
Japan	71	13.62	93	47.52
Belgium	358	87.47	697	299.96
Denmark	336	70.45	183	66.09
France	270	54.38	263	89.02
Greece	68	14.99	23	8.83
Germany	677	146.81	633	233.07
Italy	313	58.61	401	150.05
Netherlands	424	90.70	552	226.49
<b>Total</b>	<b>3483</b>	<b>723.75</b>	<b>4201</b>	<b>1635.04</b>

TABLE - 8.22

*Export of Coir Mats  
Destination-wise 1989-90 & 1992-93*

(Qty. in tonnes - Value in Rs. lakhs)

Country	1989-90		1992-93	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Canada	191	35.08	358	115.67
USA	1601	298.46	4379	1685.18
Australia	114	189.57	1541	518.46
Japan	96	19.33	92	33.55
Saudi Arabia	48	9.86	97	40.24
UAE	116	22.02	109	43.00
Belgium	62	13.73	231	86.77
Denmark	72	13.64	143	52.40
France	61	13.55	352	143.52
Greece	47	107.72	373	155.19
Germany	647	130.57	957	375.69
Italy	613	142.40	1124	440.40
Netherlands	862	151.70	569	218.43
UK	1609	277.55	2233	680.90
<b>Total</b>	<b>6139</b>	<b>1425.18</b>	<b>12558</b>	<b>4589.42</b>

## SOCIAL AND COMMUNITY SERVICES

The emphasis on social services during the last four decades of Planning effort in Kerala has taken the State to the forefront of Social Sector Development in India with the highest Human Development Index (HDI) which is generally taken as an indicator of the physical quality of living. The successive Governments in Kerala have been according very high priority in implementing various welfare measures and Social Service Programmes, the expenditure on which is as high as 40 per cent of the total budgetary expenditure of the State Government. From a level of Rs.689 crores in 1985-86, the expenditure on Social Services shot up to Rs.1663 crores in 1992-93. The relevant data are given in Table 9.1. (Fig.2)

TABLE - 9.1

(Rs. in crores)

Year	Total expenditure (Revenue & capital)	Expenditure on social services (Revenue & capital)	% to total Expenditure
1	2	3	4
1985-86	1651	689	42
1986-87	1711	790	46
1987-88	1948	852	44
1988-89	2241	970	43
1989-90	3418	1059	31
1990-91	3081	1278	41
1991-92	3502	1382	39
1992-93	4145	1663	40
(R.E)			
1993-94	4683	1893	40
(B.E)			

Source: Annual Financial Statement (from 1987-88 to 1992-93)

## Education

## Literacy

9.2 Kerala has attained the highest effective literacy rate of 89.81 percent in the country, whereas the all India level is 52.21 per cent. The female literacy rate is 86.17 percent as against 39.29 per cent at the National level. The literacy rate for Scheduled Castes is 79.66 percent and the female literacy among SCs is 74.31. The literacy level of Scheduled Tribes in Kerala is 51.09 per cent. Thus Kerala has successfully tackled one of the first generation problems while at the national level the other states are still grappling with this vital issue. The trend in literacy levels of India and Kerala from 1901-1991 is given in table 9.2. The district wise data on literacy in Kerala is presented in Appendix 9.1

## School Education

9.3 The school education infrastructure in Kerala consists of 6779 L.P. Schools, 2931 U.P. Schools and 2472 High Schools. Further 661 High Schools are having L.P. Sections, 1969 High Schools are having U.P sections and 2236 U.P. Schools have L.P. sections. Of the total schools there are 4488 Government Schools, 7330 private aided schools and 364 private unaided schools. The wide spread facilities and access through a fairly large network of school infrastructure has helped the attainment of the present level of enrolment in Kerala. Details of schools are given in appendix 9.2, 9.3, 9.4.

TABLE 9.2

## Trend in Literacy - INDIA &amp; KERALA

Year	INDIA			KERALA		
	Rate of Literacy	Male	Female	Rate of Literacy	Male	Female
1	2	3	4	5	6	7
1901	5.35	9.83	0.60	11.14	19.15	3.15
1911	5.92	10.56	1.05	13.31	22.25	4.43
1921	7.16	12.21	1.81	19.02	27.88	10.26
1931	9.50	15.59	2.93	21.34	30.89	11.99
1941	16.10	24.90	7.30	--	--	--
1951	16.67	24.95	7.93	40.47	49.79	31.41
1961	24.02	34.44	12.95	56.85	54.97	38.90
1971	29.45	39.45	18.68	60.42	66.62	54.31
1981	36.03	46.62	24.73	70.42	87.74	75.65
1991	52.21	64.13	39.29	89.81*	93.62	86.17*

Source: Census of India, Kerala

\* Effective Literacy rate.

9.4 According to the Fifth All India Educational Survey 1986 conducted by NCERT, Kerala serves 94 per cent of its habitations against the all India level of 82.94 per cent and 96.2 per cent of its population with an upper primary school/section within a distance of 3 kms, whereas the all India level is 83.98 per cent. More than 90% of the rural population is served by secondary sections with 8 kms.

#### *School Enrolment*

9.5 The total enrolment during 1992 was 59.07 lakhs which declined to 58.69 lakhs in 1993. The decline in enrolment, was 0.38 lakh students (0.64%). While analyzing the fact it could be seen that the actual decline in enrolment at the L.P. level was 49313 and 25556 at U.P. level. At the High School level there was an increase of 36,600 students. The relevant data on stage wise enrolment is given in Table 9.3 and district wise details are given in Appendix 9.5.

9.6 The age specific enrolment ratio of 86 for the age group 11-14 years in Kerala is the highest in the country. An analysis of school enrolment would show that girls enrolment constituted 49.19 per cent. The standard-wise strength of students is given in Appendix-9.6. The enrolment of Scheduled Caste students in 1993 was 11.19 per cent of the total strength and that of Scheduled Tribe students was 1.10 per cent. The relevant details are given in Appendix 9.7, 9.8.

#### *Declining Trend in School going population.*

9.7 A clear declining trend has set in with regard to school age population of Kerala. An age-wise

projection made by the Centre for Development Studies at the instance of the State Planning Board reveals that 5-14 age group population would decline from 58.17 lakhs in 1991 to 55.22 lakhs in 1996 and further to 52.8 lakhs in 2001 A.D. Thus there will be a net decline of 5.36 lakh children. Relevant data are highlighted in table 9.4. The State Planning Board at the instance of the Government has already appointed a Committee for a detailed study on this.

#### *Teachers*

9.8 There are 1.90 lakh teachers at all stages in school education sector in Kerala. An analysis would show that of the total teachers 37% are Government School teachers, 60% private aided and 3% private unaided. An interesting trend is that at the L.P. level there is a decline in the number of teachers both in the government schools and in aided schools. During the last five years there was a net decline of 2731 teachers both in Government and private aided schools together. However, in the case of private unaided schools the number of teachers increased. The relevant data on teachers in Kerala from 1971 to 1993 are presented in Appendix 9.9 and the stage wise teachers in Kerala for 1993 is reflected in Table 9.5. The Pupil-Teacher ratio in Kerala is 31, whereas the All India ratio is around 35.

9.9 According to a study conducted by the State Planning Board, 26171 teachers are likely to retire during 1993-97. Out of this 9348 are L.P School teachers, 8988 U.P. School teachers and 7835 H.S. teachers. About 57.68 percent of the teachers retiring are private aided school teachers.

TABLE 9.3

#### *Enrolment in Schools - Stage wise*

Stage	1991			1992			1993		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Lower Primary	1268705	1203698	2472403	1241041	1180357	2421398	1215142	1156943	2372085
Upper Primary	990059	939747	1929806	993750	939330	1933080	981615	925909	1907524
Secondary	753544	745348	1498892	776629	775898	1552527	784730	804397	1589127

TABLE - 9.4

*Projection of School going Population for Kerala  
1991-2001*

Age	Years		
	1991	1996	2001
0.	545091	509311	424171
1.	547718	514282	444081
2.	550497	519243	463493
3.	552260	523260	482035
4.	553046	526138	499580
5.	561812	532731	506704
6.	569129	537667	512925
7.	575008	541044	518180
8.	579405	543132	522355
9.	582288	544125	531962
10.	583448	552963	531962
11.	586941	560363	536942
12.	590338	566289	540349
13.	593342	570708	542451
14.	595542	573571	543437
(Population Kerala)	29011237	30750330	32219463
0 - 14	8565870	8114818	7593999
5 - 14	5817258	5522584	5280639

Source: *Centre for Development Studies, Thiruvananthapuram.*

TABLE 9.5

*Number of School Teachers As on 31-3-1993*

Category	Total Numbers	of which SC/ST	
		SC	ST
L.P. Teachers	47699	1889	138
U.P. Teachers	51506	1704	123
H.S. Teachers	91034	3008	144
Total:	190239	6601	405

Source: *Directorate of Public Instruction, Thiruvananthapuram.*

### 6. Uneconomic Schools and Protected Teachers

9.10 An uneconomic school is defined as one which does not satisfy the requirement of para I of Rule 22 (4) of Kerala Education Rules which warrants that the minimum strength per standard in LP/UP/HS shall be 25. The minimum strength per standard in Sanskrit and Arabic schools shall be 15. The uneconomic schools in Kerala declined marginally from 1170

in 1992 to 1165 in 1993. A district-wise analysis reveals that the number of uneconomic schools are the highest in Kannur district. The district wise details are given in Table 9.6. Of the total uneconomic schools, 727 were in the private sector (62 per cent) and 448 in the Government Sector (38 per cent). An analysis of the stage-wise uneconomic schools shows that 1048 were LP schools.

### Protected Teachers

9.11 The number of protected teachers decreased marginally from 2051 in 1991 to 2011 in 1992. Of the total protected teachers 1172 teachers were in primary section (L.P. & U.P.), 561 special teachers and 278 High School teachers. All the protected teachers are from the private aided schools. Details are given in Appendix. 9.10.

### Closure of Uneconomic Schools

9.12 During 1990-93, 67 uneconomic schools were closed of which 63 schools were closed during 1992-93. Of the total schools closed 63 were LP schools and 4 UP schools. In the private aided sector 22 schools were closed.

### S.S.L.C. Examination Results

9.13 An analysis of the examination results of March 1993 reveals that out of 564030 students appeared for the examination 51 per cent passed. The percentage of students passed from SC/ST was 24.5%. Details are furnished in Appendix 9.11

### Higher Secondary Education (Plus Two)

9.14 The Higher Secondary Course (Plus Two) was introduced during 1990-91 in 31 schools and in 55 schools during 1991-92. Of the total 86 schools, 49 are Government Schools, 34 aided schools and 3 unaided schools. Also out of the total schools 48 were in science groups and 38 in humanities. There were 8450 students enrolled under plus two system of education during 1993 (Appendix 9.12)

### Vocational Higher Secondary Schools

9.15 Vocational courses are introduced in 237 schools offering Vocational Education to 13250 students at 10+2 level during 1992-93. Year-wise intake of students is given in Table 9.7. The examination results of 1993 shows that 35.26 per cent of the students passed the examination and in respect of girls, the percentage of passed was higher than that of the boys.

### University Education

9.16 In Kerala there are 174 Arts and Science colleges. Out of the total arts and science Colleges 41 are under Government sector and 133 are under pri-

TABLE 9.6

*Uneconomic Schools in Kerala District wise & Stage wise 1993*

District	Government Schools			Private Schools			Total		
	L.P	U.P	HS	LP	UP	HS	LP	UP	HS
I	2	3	4	5	6	7	8	9	10
Thiruvananthapuram	29	5	2	15	3	1	44	8	3
Kollam	15	2	-	17	2	-	32	4	-
Pathanamthitta	39	12	-	107	5	-	146	17	-
Alappuzha	38	6	-	30	6	-	68	12	-
Ernakulam	37	2	-	45	7	-	82	9	-
Kottayam	67	7	-	67	6	-	134	13	-
Idukki	26	6	-	13	1	-	39	7	-
Trissur	17	2	-	44	6	-	61	8	-
Malappuram	7	-	-	5	-	-	12	-	-
Palakkad	9	-	-	15	-	-	24	-	-
Kozhikode	39	3	-	69	3	-	108	6	-
Wayanad	7	-	-	-	-	-	7	-	-
Kannur	42	7	-	210	21	-	252	28	-
Kasarode	21	1	-	18	1	-	39	2	-
Total	393	53	2	655	61	1	1048	114	3

Source:- Directorate of Public Instruction, Thiruvananthapuram.

vate sector. In Ernakulam district there are 24 colleges while Wyanad and Kasaragod districts have only 4 colleges each. Details are furnished in Appendix 9.13, 9.14.

TABLE 9-7

*Yearwise Intake of students for Vocational Education 1990-93*

Year	Boys	Girls	Total
1990	4700	3965	8665
1991	7035	5115	12150
1992	7345	4655	12000
1993	8082	5168	13250

Source: Directorate of VHSE.

9.17 There are 45 colleges under University of Kerala, 72 Colleges under Calicut University and 57 Colleges under Mahatma Gandhi University. Out of the total enrolment of 1.54 lakh students in the three Universities, 0.84 lakh are girls. An analysis of the stage wise data reveals that there are 1.04 lakh students at the pre-degree level 0.45 lakh students at the degree level and 0.05 lakh students at the postgraduate level. (Appendix Table - 9.15) out of the total enrolment 15 per cent students belong to SC/ST.

9.18 There are 13541 teachers in Arts and Science Colleges and the percentage of female teachers account for 39. The details are furnished in Table 9.8.

*Private Registration*

9.19 The State Government have allowed private registration to cater to those students who could not attend regular courses in colleges. During 1991-92 a total of 1.40 lakh students were admitted by the Kerala and Calicut Universities. The course-wise details of private registration in Kerala and Calicut Universities are given in Appendix 9 16.

*Technical Education*

9.20 The technical education infrastructure in Kerala consists of 9 Engineering Colleges (including two Self financing Colleges) 32 polytechnics, One Technical Higher Secondary school and 47 Technical High schools. Out of the 9 Engineering colleges 4 are in Government sector and 3 in Private sector. There is one Regional Engineering college at Kozhikode and one model Engineering college at Ernakulam under IHRDE. Out of the total Polytechnics 25 are in Government sector including the model Polytechnics Vadakara and Mala and 7 are in the private sector. All the 47 Technical High Schools are under Government sector including the 5 technical high schools under IHRDE. There are four autonomous institutions pro-



moting technical education and research viz. Lal Bahadur Sastri Centre for Science and Technology, Institute of Human Resources Development for Electronics, Kerala State Science and Technology Museum and Kerala State Audio Visual and Reprographic Centre. The Cochin University of Science and Technology imparts advanced training and research in Technical Education.

### Engineering Colleges.

9.21 The annual intake in Engineering colleges increased from 2847 in 1992 to 2879 in 1993. The details are given in Appendix 9.17. The annual intake at post graduate level is 312 for 11 courses. Course-wise intake is furnished in Table 9.9. The details of students and teachers in Engineering Colleges are given Appendix 9.18, 9.19.

TABLE 9.8

### Number of Teachers in Arts and Science Colleges 1992-93

Name of University	Number of Teachers					
	1992			1993		
	Men	Women	Total	Men	Women	Total
1. Kerala	2369	1768	4137	2360	1764	4124
2. Calicut	2944	1767	4711	2889	1733	4622
3. Gandhiji	2886	1685	4571	3021	1774	4795
<b>Total</b>	<b>8199</b>	<b>5220</b>	<b>13419</b>	<b>8270</b>	<b>5271</b>	<b>13541</b>

TABLE - 9.9

### Course-wise Annual Intake in Engineering Colleges at Post Graduate Level

Name of Course	1992 Intake	1993 Intake
1. Civil Engineering	57	57
2. Mechanical Engineering	42	42
3. Electrical	41	41
4. Electronics	05	05
5. Chemical Engineering	06	06
6. Instrumentation and control system	10	10
7. Production Engineering	06	06
8. Applied Electronics and Instrumentation	05	05
9. Architecture	05	05
10. Industrial Engineering	15	15
11. M.C.A	120	120
<b>Total</b>	<b>312</b>	<b>312</b>

Source: Directorate of Technical Education

### Polytechnics and Technical High School Education

9.22 The actual intake for the 32 polytechnics is 4508 students. The students strength in 1993 is 13089 of which 3 per cent are SC/ST students. Out of this 3222 are girls. The annual intake, total enrolment are given in appendix 9.20, 9.21, 9.22. The student strength in technical high schools stood at 7929 in 1993. Details are given in Appendix 9.23, 9.24.

### Expenditure on Education

9.23 The total expenditure on education during 1992-93 amounted to Rs.953.67 crores (Revised

Estimate) as against Rs.815.23 crores. Of the total expenditure of Rs.953.67 crores, Rs.458 crores was spent on primary education (48%) and Rs.295 crores for secondary education (31%). The expenditure on University Education increased from Rs.122 crores in 1991-92 to Rs.155 crores during the year under review. Expenditure on Technical Education increased to Rs.40.64 crores in 1992-93 from Rs.38 crores in 1991-92. The details of expenditure on education are furnished in Table 9.10. The cost of education per pupil at the primary stage increased from Rs.953.48 in 1991-92 to Rs.1074 in 1992-93. The relevant details are given in Table 9.11.

TABLE 9.10

### Expenditure on Education 1985-86 to 1993-94

(Rs. in crores)

Stages	1985-86 (Accounts)	1986-87 (Accounts)	1987-88 (Accounts)	1988-89 (Accounts)	1989-90 (Accounts)	1990-91 (Accounts)	1991-92 (Accounts)	1992-93 (R.E)
1. Primary Education	210.64	240.00	244.52	274.52	305.17	384.16	409.00	458.00
2. Secondary Education	125.11	140.17	146.58	163.60	182.23	229.51	242.00	295.00
3. University & Other								
Higher Education	54.50	62.22	68.27	77.10	83.21	95.14	122.00	155.00
4. Adult Education	1.31	1.22	1.44	1.28	2.30	0.87	0.32	0.62
5. Language Development	2.44	2.57	2.14	2.66	3.16	3.72	3.91	4.41
6. Technical Education	20.55	24.23	20.63	22.94	27.62	38.08	38.00	40.64
<b>Total</b>	<b>414.55</b>	<b>470.41</b>	<b>483.58</b>	<b>542.13</b>	<b>603.69</b>	<b>751.48</b>	<b>815.23</b>	<b>953.67</b>

Source: Detailed Budget.

TABLE - 9.11  
Cost of School Education per Pupil 1987-88 to 1991-92

(Rs.)

Year	Primary stage	Secondary stage
1987-88	550.35	1089.38
1988-89	617.80	1161.93
1989-90	690.12	1248.15
1990-91	872.69	1500.00
1991-92	953.48	1600.00
1992-93	1074.41	1856.25

## HEALTH

### Basic Health Development Indicators

9.24 Kerala has made signal achievements in health coverage and the standards achieved are almost comparable to that in some of the developed countries. The level of development attained by Kerala in 1930's

could not be attained by some of the Indian States and several African countries even today. The access to institutional care and health man power development have largely contributed to this unique situation. Besides, women education, awareness and clean health habits of the people have played a key role in the attainment of the health standards in Kerala. Kerala has successfully tackled some of the first generation problems like infant mortality rate, maternal mortality rate and death rate. The present level of health development can be seen from the following indicators.

9.25 The decadal growth rate of population in Kerala is brought down to 13.98 whereas the all India level is 23.5. The birth rate per thousand population in Kerala is 18.1 while the all India rate is as high as 30.5. The death-rate per thousand population in Kerala is 6 as against the all India rate of 10.2. Infant mortality rate in Kerala came down to 16 per thousand live births but the all India rate is still as high as 91. The

death rate and birth rate and IMR from 1911 to 1991 is shown in Figure 1 and Diagram 1. The maternal mortality rate in Kerala is below one for every three thousand deliveries. The life expectancy at birth in

Kerala is 69 years for men and 72 for women where as the all India level is 59.1 years and 58.1 years respectively for men and women. Some of the basic health development indicators are presented in Table 9.12.

TABLE - 9.12

*Birth, Death and Infant mortality rate in Kerala*

Year	Birth rate per '000 population		Death rate per '000 population		Infant mortality rate per '000 population	
	Kerala	All India	Kerala	All India	Kerala	All India
1970	32.3	36.8	9.2	15.7	61	129
1980	26.8	33.7	7.0	12.6	42	117
1981	25.6	33.0	6.6	12.5	37	110
1985	22.9	32.9	6.9	11.8	33	97
1986	22.4	32.6	6.7	11.1	27	96
1987	21.0	32.2	6.0	10.9	26	95
1988	19.9	31.3	6.0	10.0	24	94
1989	20.3	30.5	6.1	10.2	21	93
1990	20.3	30.5	6.1	14.2	21	93
1991	19.8	30.5	5.8	10.2	17	91
1992	18.1	30.5	6.0	10.2	16	91

Figure: 1

BIRTH & DEATH RATES

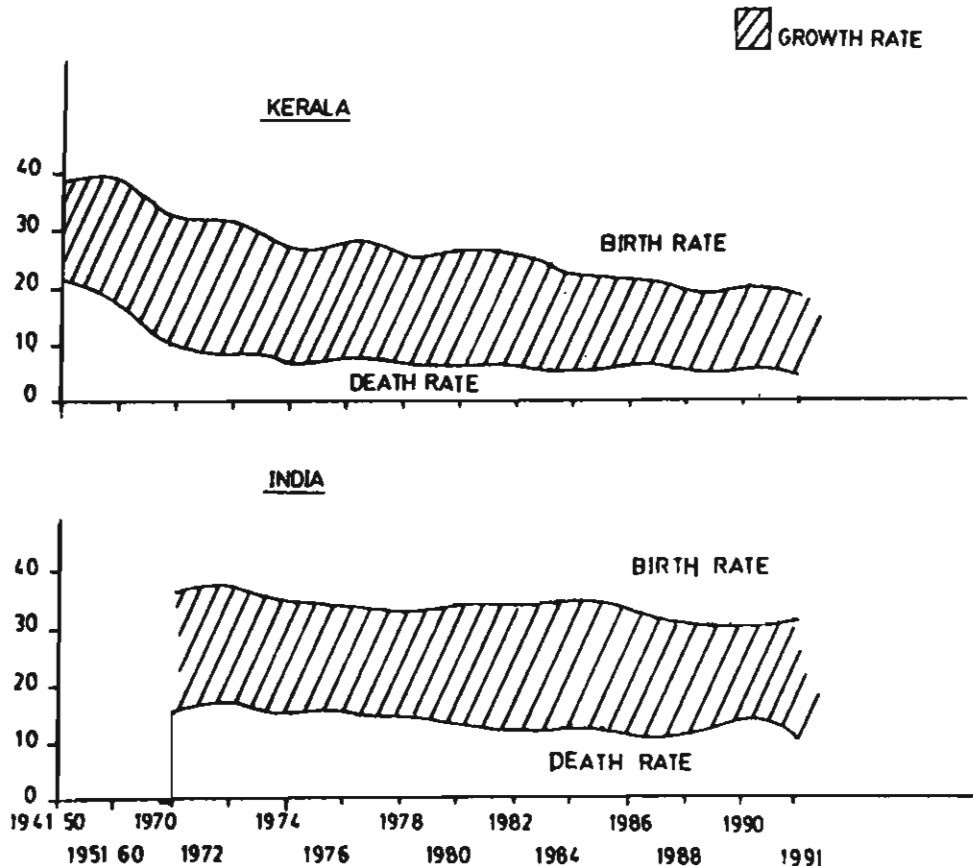
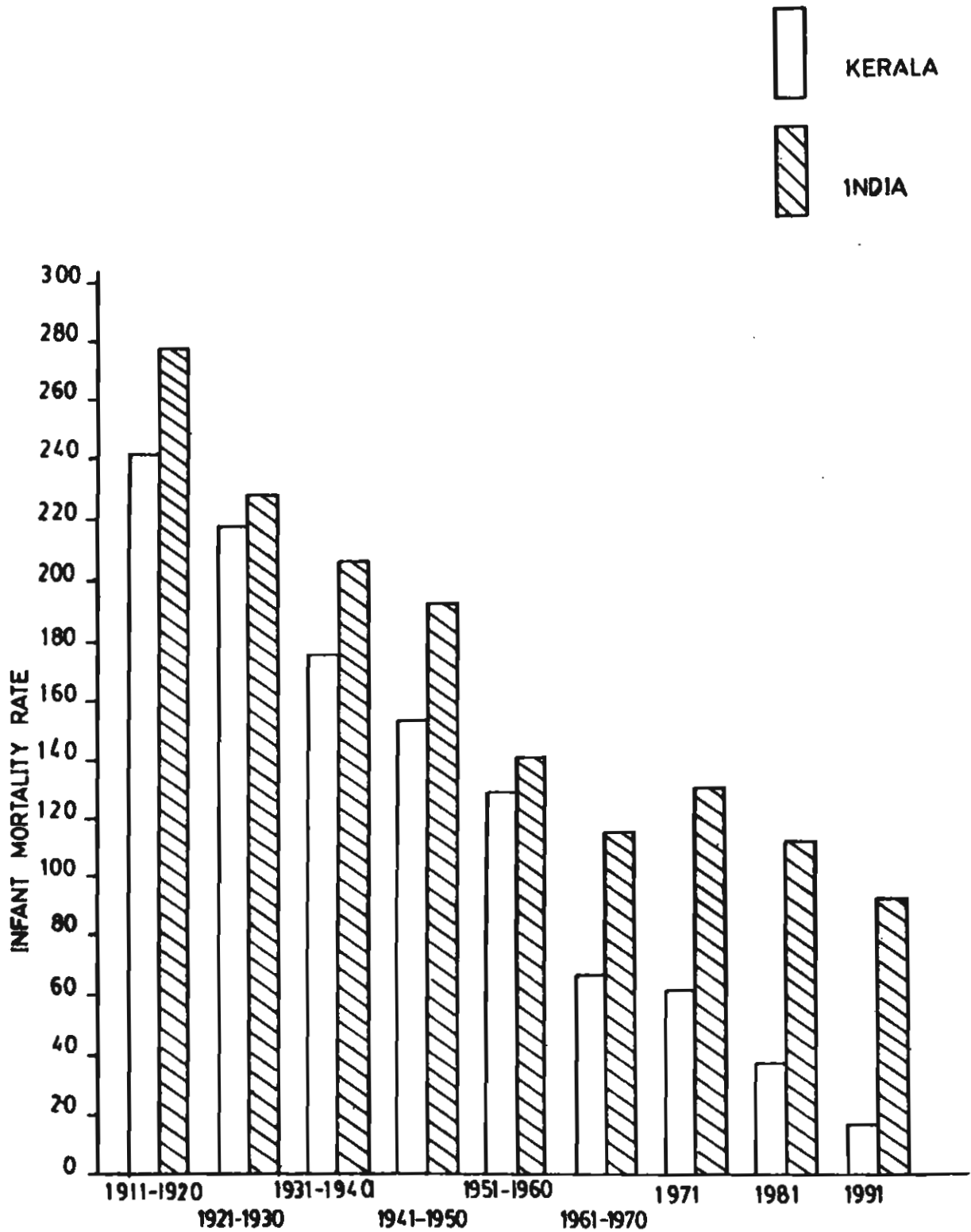


Diagram - 1

INFANT MORTALITY RATE OF KERALA & INDIA



### Immunisation Status

9.26 The immunisation status in Kerala is unique when compared to the rest of the country. The coverage is 100 per cent in respect of pregnant women with T.J and 100 per cent of infants with DPT., Polio and BCG. But antimeasles coverage is only 92 per cent. A new programme called Child Survival and Safe Motherhood (CSSM) has been implemented in two districts, viz Alappuzha and Malappuram during 1992 and in three districts viz. Thiruvananthapuram, Pathanamthitta and Kollam during the year 1993. These are expected to improve the situation further in these districts.

### Health Care Infrastructure and Manpower Development

9.27 One of the major factors that contributed to the present level of health development is the health care infrastructure and availability of manpower which facilitated greater access to institutional care. The health care infrastructure under the Department of Health Services consisted of 1240 institutions with 41018 beds in 1993 as against 1229 institutions with 40496 beds in 1992. A further analysis would show that there are 141 hospitals with 27037 beds, 918 primary health centres including MCH centres with 5116 beds, 54 Community Health Centres with 3285 beds, 54 dispensaries with 163 beds, 22 T.B Clinics/Centres with 453 beds and 14 leprosy control units and one leprosy sanatorium with 993 beds. With regard to the availability of infrastructure, there is one Sub Centre for every 4565 persons and one primary health centre for a population of 25529 on an average in Kerala. There are on an average 4 sub centres for every village and two primary health centres for every 3 villages in Kerala-the maximum radial distance covered by a sub centre being 1.85 k.m. and a primary health centre 3.59km. as

compared to 2.76 and 6.73 respectively at the all India level. Considering the density of population, greater access to transport etc. it could be stated that the primary health care has reached the door steps of the people. It is worth mentioning in this context that about 90 per cent of the deliveries are institutionalised thanks to the health care facilities available in Kerala. The relevant data on health infrastructure are given in Table 9.13 and Appendix: 9.25. The spatial distribution of institutions and beds are given in Table 9.14. During the period 1985-86 to 1992.-93 the primary health centres increased from 299 to 918. The expansion of rural health infrastructure during the last 7 years is presented in Table: 9.15.

TABLE - 9.13

#### Medical Institutions and beds under Allopathy system in Kerala - 1981 to 1993

Year	No. of Medical Institutions	No. of beds	No. of beds per lakh of population
1981	968	32447	127
1982	991	32532	126
1983	1005	32880	125
1984	1009	33380	124
1985	1014	33329	124
1986	1015	35744	128
1987	1038	36404	128
1988	1066	36668	127
1989	1126	37100	127
1990	1199	38223	128
1991	1226	38726	133
1992*	1229	40496	137
1993*	1240	41018	137

\* Projected population furnished by the Department of Economics and Statistics is used for calculating the number of beds per lakh of population for the last two years 1992- and 1993.

TABLE - 9.14

#### Spatial Distribution of Medical Institutions, Beds and Patients treated under Allopathy (District-wise)

District	No. of Medical Institutions		No. of Beds		No. of patients treated 1993	
	1992	1993	1992	1993	Inpatients	Outpatients
1	2	3	4	5	6	7
1. Thiruvananthapuram	109	110	6446	6446	127265	2823502
2. Kollam	83	82	1931	1960	138838	1920067
3. Allappuzha	82	84	3873	3843	83422	1808646
4. Pathanamthitta	55	58	939	939	30617	976834
5. Kottayam	76	76	3046	3046	87077	2128577
6. Idukki	63	63	805	863	25742	605971
7. Ernakulam	113	113	3733	3743	104025	3680823
8. Thrissur	111	112	3983	3983	96266	1147081
9. Palakkad	101	102	2101	2128	113573	2033720
10. Malappuram	113	113	1854	2019	102403	2137852
11. Kozhikode	88	89	4284	4308	77597*	1810246*
12. Wayanad	43	43	749	777	16036	52146
13. Kannur	96	98	2465	2335	75957	1399525
14. Kasaragod	60	61	653	657	28836	523904
<b>Kerala</b>	<b>1193</b>	<b>1204</b>	<b>36862</b>	<b>37047</b>	<b>1107654</b>	<b>23048894</b>

Excluding grant-in-aid institutions.

\* Patients treated during 1992.

TABLE - 9.15  
*Rural Health Infrastructure 1986-87*

Year	Primary Health Centre		Community Health Centre	
	No.	Beds	No.	Beds
1985	299	2842	--	--
1986	299	2880	--	--
1987	444	3400	--	--
1988	577	3274	29	2226
1989	740	3686	29	2292
1990	883	4480	54	3129
1991	908	4714	54	3159
1992	907	5031	54	3216
1993	918	5116	54	3285

TABLE 9.16

*Medical and Para Medical Personnel in the Health Services Department*

Category	(Numbers)		
	1991	1992	1993
1. Medical Officers	2998	2905	3134
2. Dentists	71	66	66
3. Senior Nurses	1951	1954	1954
4. Junior Nurses	4086	4137	4137
5. Lady Health Inspectors	857	894	923
6. Pharmacists	1684	1681	1681
7. Junior P.H. Nurses (ANMS)	5296	5281	5508
8. Junior Health Inspectors	4505	4505	4505
9. Health Inspectors	845	845	845
<b>Total</b>	<b>22293</b>	<b>22268</b>	<b>22753</b>

*Health Manpower*

9.28 As regards the availability of trained manpower Kerala enjoys a very favourable position. There are 22753 medical personnel with department of health services and 1741 personnel with medical education department. The relevant data are given in Table 9.16 and Table 9.19.

9.29 The number of medical personnel in total increased from 4639 in 1992 to 4873 in 1993.

*Health Institutions and Beds in Private Sector*

9.30 Private health institutions are playing an important role in the health and family welfare programmes in the State. A survey conducted by the Department of Economics and Statistics in 1986 revealed that there were 3565 private medical institutions with about 50,000 beds in the State. A recent survey

carried out by the Kerala Sasthra Sahitya Parishad revealed that there were 6760 private medical institutions under all systems of medicines with 65156 beds in the state. Besides there are 77 co-operative medical institutions with beds 2579.

*High bed Population Ratio*

9.31 There are 1204 medical institutions (including grant-in-aid institutions) with 37047 beds under the department of health services, and in all the five Medical Colleges together have 7017 beds. Besides there were 2259 beds in 107 Ayurveda hospitals and 950 beds in 31 Homoeo Hospitals. The beds per lakh of population under all systems of medicines in the Government sector is 158 as against national situation of about 85 beds per lakh of population. Taking into account of the 65156 beds in 6760 private medical institutions and 2579 beds in 77 co-operative medical institutions the bed availability in the state thus is 385 per lakh of population which compared favourably with that of developed countries.

*Patients treated in hospitals under different systems of medicines*

9.32 During the year under review a total of 1107654 inpatients and 230,48,894 outpatients were treated in allopathic medical institutions under the department of health services. In all the medical colleges, a total of 2,97,752 inpatients and 20,91221 outpatients were treated. The total inpatients treated stood at 1405406 and outpatients treated stood at 25140115 in allopathy. There are 15,239 inpatients and 83,74,817 outpatients treated under homoeopathic system and 24,555 and 5358258 respectively were treated under Ayurvedic system during 1992-93. The relevant data are given in Table 9.17.

TABLE - 9.17

*Statement showing the Patients treated in 1993*

	Inpatients	Outpatients
1. Health Care Institutions (DHS)	11,07,654	2,30,48,894
2. Medical Colleges		
i. Thiruvananthapuram	81,328	4,49,925
ii. Kozhikode	92,889	5,25,351
iii. Kottayam	55,600	7,75,651
iv. Alappuzha	44,807	2,37,872
v. Thrissur	23,128	1,02,422
3. Health Care Institutions under Ayurveda	24,555	53,58,258
4. Health Care Institutions under Homoeopathy	15,239	83,74,817
<b>Total</b>	<b>14,45,200</b>	<b>3,88,73,190</b>

9.33 The details on number of attacks and deaths due to principal communicable diseases during 1992-93 is furnished in the Appendix No.9.27. An analysis of data would show that the case of attack on acute diarrhoeal diseases, whooping cough, acute respiratory infections, pneumonia, enteric fever, viral hepatitis, rabies, gonococcal infection and tuberculosis recorded a decline during 1992-93, though the attack and death due to diphtheria and meningitis slightly increased.

#### Medical Education

9.34 The medical education and training infrastructure in the state consisted of 5 Medical Colleges, 2

Dental Colleges and 3 Nursing Colleges. The total intake under different courses is 700 for MBBS, 70 for BDS, 28 for B.Pharm, 24 for B.Sc MLT, 150 for B.Sc Nursing, 4 for M.Sc Nursing, 6 for M.Pharm, 25 for M.D.S. MSc. Nursing, M.D.S., B.Pharm, M.Pharm and B.Sc MLT courses are being conducted only in the Thiruvananthapuram Medical College. Details of annual intake of students for various courses in the Medical Colleges are given in Table 9.18. There are 7017 beds in all the five medical college hospitals. The details of personnel (Clinical/non clinical) under the Department of Medical Education is given in Table 9.19.

TABLE - 9.18

#### Medical and Para Medical courses conducted in the Medical Colleges with annual intake of students

Name of course	Number of seats in Medical Colleges				
	Thiruvananthapuram	Kozhikode	Kottayam	Alappuzha	Thrissur
1	2	3	4	5	6
<u>Degree Courses</u>					
1. MBBS	200	200	100	100	100
2. B.D.S	40	30	--	--	--
3. B.Sc Nursing	50	50	50	--	--
Sub Total	290	280	150	100	100
<u>Post Graduate Degree</u>					
1. M.Sc Nursing	4	--	--	--	--
2. M.D.S	25	--	--	--	--
3. M.D. Anaesthesia	4	1	2	--	--
4. M.D. Biochemistry	2	2	--	--	--
5. M.D. Forensic Medicine	2	2	--	--	--
6. M.D. Dermatology and Venerology	3	4	3	--	--
7. M.D. General Medicine	13	12	7	2	--
8. M.D. Micro Biology	2	2	--	--	--
9. M.D. Obstetrics and Gynaecology	8	8	4	--	--
10. M.D. Pathology	6	2	3	--	--
11. M.D. Pharmacology	4	2	--	--	--
12. M.D. Physiology	2	3	2	--	--
13. M.D. Paediatrics	6	5	3	--	--
14. M.D. Psychiatry	1	2	--	--	--
15. M.D. Radio Diagnosis	2	--	--	--	--
16. M.D. Radiotherapy	2	--	--	--	--
17. M.D. Community Medicine	3	2	2	--	--
18. M.D.T.B. and Respiratory Diseases	2	2	--	--	--
19. M.S. Anatomy	2	2	2	--	--
20. M.S. ENT	2	2	2	--	--
21. M.S. General Surgery	20	12	8	2	--
22. M.S. Orthopaedics	4	4	3	--	--
23. M.S. Ophthalmology	4	4	2	--	--
24. M.D. Physical Medicine	2	--	--	--	--
Sub Total	125	73	43	4	--



	1	2	3	4	5	6
<u>Super Speciality Courses</u>						
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	--	--	--	--
6. D.M Gastro Enterology		1	1	--	--	--
7. D.M. Neurology		1	--	--	--	--
8. D.M. Cardiology		2	1	--	--	--
9. D.M Nephrology		--	1	--	--	--
<b>Sub Total</b>		<b>14</b>	<b>11</b>	<b>2</b>	<b>--</b>	<b>--</b>
<u>Diploma Courses</u>						
1. Diploma in Anaesthesia		8	6	6	--	--
2. Diploma in Child Health		6	12	6	--	--
3. Diploma in Clinical Pathology		3	6	--	--	--
4. Diploma in Dermatology and Venerology--			2	--	--	--
5. Diploma in Larynology and Otology		8	6	2	--	--
6. D.M.R.D		2	2	--	--	--
7. D.M.R.T		2	2	--	--	--
8. Diploma in Obstetrics and Gynaecology		12	12	9	--	--
9. Diploma in Ophthalmology		3	6	9	--	--
10. Diploma in Orthopaedic Surgery		8	6	6	--	--
11. Diploma in Physical Medicine and Rehabilitation		4	--	--	--	--
12. Diploma in Psychiatric Medicine		6	--	--	--	--
13. Diploma in Public Health		12	--	--	--	--
14. D.T.C.D		2	2	--	--	--
<u>Diploma/Certificate Courses</u>						
1. B. Pharm		28	--	--	--	--
2. M. Pharm		6	--	--	--	--
3. B.Sc MLT		24	--	--	--	--
4. MLT Certificate		60	50	15	15	15
5. CRA Certificate		40	30	15	15	10
6. Ophthalmic Assistant Certificate		30	20	15	5	5
7. D. Pharm (1 year) Diploma		50	--	35	35	--
8. D. Pharm (2 years)		--	50	--	--	--
9. Dental Mechanic Certificate Course		15	5	--	--	--
10. Certificate Course in Nursing		30	30	--	--	--
(Exclusively for SC/ST)		--	--	--	--	--
<b>Sub Total</b>		<b>359</b>	<b>247</b>	<b>113</b>	<b>70</b>	<b>30</b>
<b>Total</b>		<b>788</b>	<b>611</b>	<b>308</b>	<b>174</b>	<b>130</b>

TABLE - 9.19

*Details of Personnel (Clinical/Non-Clinical) under the Directorate of Medical Education*

Sl. No.	Category	Number of Clinical/Non Clinical Personnel		
		1991	1992	1993
1.	Director and Professor	--	--	--
2.	Professor	186	188	188
3.	Associate Professor	193	194	195
4.	Assistant Professor	422	425	425
5.	Tutor/Lecturer	687	692	697
<i>Nursing Education</i>				
6.	Director	3	3	3
7.	Professor	4	4	4
8.	Associate Professor	16	16	16
9.	Assistant Professor	22	22	22
10.	Tutor	37	37	37
<i>M.L.T. Course</i>				
11.	Director	1	1	1
12.	Assistant Professor	6	6	6
13.	Tutor	4	4	4
14.	Tutor Technician	14	14	14
<i>Dental</i>				
15.	Director and Professor	--	--	--
16.	Professor	18	19	19
17.	Associate Professor	4	4	4
18.	Assistant Professor	24	24	25
19.	Tutor/Lecturer	36	36	36
<i>Pharmacy</i>				
20.	Director	1	1	1
21.	Professor	3	3	3
22.	Associate Professor	4	4	4
23.	Assistant Professor	10	11	11
24.	Lecturer	26	26	26
Total		721	1734	1741

*Nursing Education*

9.35 Medical colleges at Thiruvananthapuram, Kottayam and Kozhikode have Nursing colleges and 50 students are admitted in each college for B.Sc Nursing. M.Sc Nursing course is being conducted only in the Nursing college, Thiruvananthapuram with an annual intake of 4 students. Also certificate course in general nursing is being conducted at Thiruvananthapuram and Kozhikode Medical Colleges

with an annual intake of 30 students in each college. Under the department of health services and approved private nursing schools, every year 1447 trainees are admitted for certificate course of which 1150 are enrolled in private nursing schools. Junior Public Health Nursing course of 18 months duration is also conducted by both Government and private Nursing schools with an annual intake of 515 and 476 students respectively. The annual admission for various nursing course in different categories is given in Table 9.20

123(a)

Figure - 2

GOVERNMENT EXPENDITURE ( Plan & Non Plan )  
ON MEDICAL AND PUBLIC HEALTH AND EDUCATION

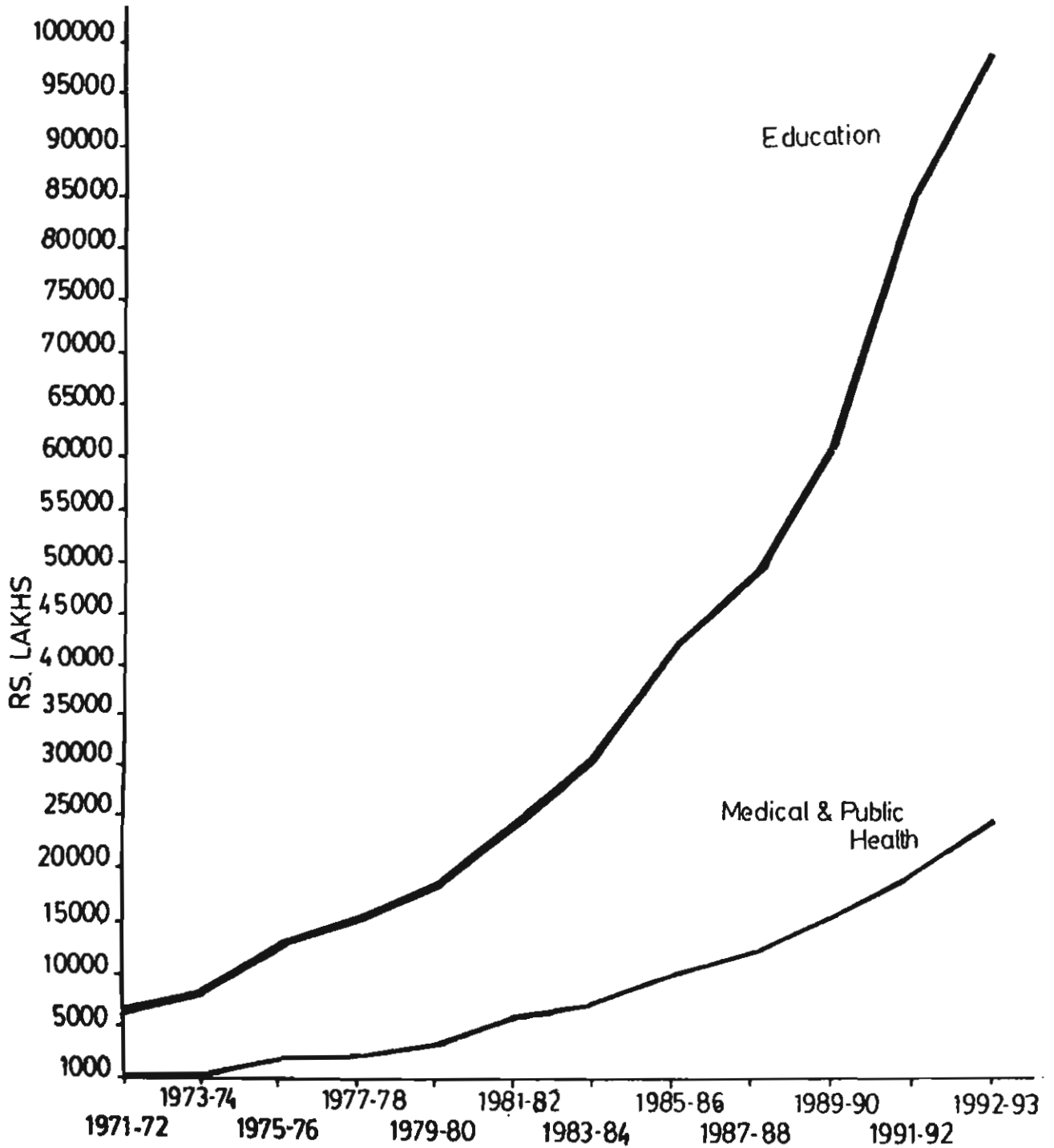


TABLE - 9.20

*Annual Admission for Nursing Courses in different categories in 1993*

Institutions	No. of Institutions	Total Annual Intake
1. Integrated (General Nurse Cum-midwives) 3 1/2 years course		
a) Government Nursing Schools	9	297
b) Private Nursing Schools	50	1150
c) Medical College, Kozhikode	1	30
d) Medical College, Thiruvananthapuram	1	30
II. Junior Public Health Nurses (18 months course)		
a) Government Nursing Schools	13	515
b) Private Nursing Schools	18	476
III. B.Sc Nursing (4 years Course)		
a) Medical College, Thiruvananthapuram	1	50
b) Medical College, Kottayam	1	50
c) Medical College, Kozhikode	1	50
IV. M.Sc. Nursing Medical College, Thiruvananthapuram	1	4

*Ayurveda - Department*

9.36 There were 107 Ayurveda hospitals with 2259 beds, 566 dispensaries and 173 grant-in-aid vaidyasalas as on 31-3-1993. During 1992-93, 17 dispensaries were started. The district-wise details of institutions, beds and number of patients treated are given in Appendix 9.29.

*Ayurveda Education*

9.37 There are 3 Government Ayurveda Colleges in the State with an annual intake of 50 students in Thiruvananthapuram Ayurveda College and 30 each in the other two colleges Thrippunithura and Kannur for BAMS course. M.D. education is imparted only in the Ayurveda College, Thiruvananthapuram and the annual intake is 30 out of which 3 seats are reserved for SC/ST students. In the private sector there are two private Ayurveda Colleges at Kottakkal and Ollur with an annual intake of 30 students in each college.

TABLE - 9.21

*Number of Ayurveda Hospitals and Dispensaries 1986-1993*

Year	Ayurveda Hospitals	Ayurveda Dispensaries
1	2	3
1986	96	473
1987	97	497
1988	101	496
1989	101	498
1990	101	506
1991	106	527
1992	106	550
1993	107	566

**Homoeopathy**

9.38 There were 30 homoeopathic hospitals with 900 beds and 338 dispensaries as on 31-3-1992. During the year 1992-93 one hospital with 50 beds and 22 dispensaries were started. Thus as on 31-3-1993 there were 31 homoeopathic hospitals with 950 beds and 360 dispensaries. The district wise distribution of institution, beds and patients treated under homoeopathy are given in Appendix 9.30.

**Homoeo Education**

9.39 There are 5 homoeopathic medical colleges in the state of which two are in the Government

sector and the remaining three are in the private sector. BHMS Degree course and BHMS (Graded) Degree course are being conducted in the Government Homoeopathic Medical Colleges with an annual intake of 100 students in each course. In the private Athurasramam NSS Homoeo Medical College, Kurichy, both BHMS Degree and Diploma courses are being conducted with an annual intake of 50 and 120 students respectively. In the other two private Homoeo Colleges BHMS diploma course is being conducted with an annual intake of 125 students. The bed strength in the homoeopathic college hospital, Thiruvananthapuram and Kozhikode are 50 and 100 respectively.

TABLE - 9.22

*Number of Homoeo Hospitals and Dispensaries - 1986-1993*

Year	Homoeo Hospitals	Homoeo Dispensaries
1986	24	227
1987	24	255
1988	24	255
1989	24	262
1990	26	274
1991	30	312
1992	30	338
1993	31	360

TABLE - A

*Medical Practitioners\* (Numbers in cum)*

System	Class of Registration	1991-92	1992-93
1. Modern Medicine	A	19,848	20646
	B	635	635
	Listed	204	204
	Sub Total	20,687	21,485
2. Homoeopathy	A	4275	4614
	B	1486	1486
	Listed	279	279
	Sub Total	6040	6379
3. Ayurveda	A	6049	6195
	B	6100	6100
	Listed	599	599
	Sub Total	12,748	12,894
4. Sidha	A	82	92
	B	1218	1218
	Listed	41	41
	Sub Total	1341	1351
5. Unani	A	1	3
	B	51	51
	Listed	5	5
	Sub Total	57	59
Grand Total		40873	42,168

\* Details of Medical practitioners under government only.

TABLE - B  
List of registered para-medical practioners\*

Sl. No.	Category	1991-92			1992-93		
		Male	Female	Total	Male	Female	Total
1.	Nurse	288	13374	13662	300	13676	13976
2.	Midwife	--	12039	12039	--	12374	12374
3.	Nurse & Midwives (Integrated)	--	13536	13536	--	14878	14878
4.	Auxilliary Nurse-Midwife	--	10726	10726	--	11206	11206
5.	Health visitors	--	318	318	--	318	318
Grand Total		288	49993	50281	300	52452	52752

\* Details of para medical practitioners under Government only.

#### Family Welfare Programme Present Status

9.40 Kerala's achievement in the family welfare front has been impressive in terms of major indicators viz. birth rate, death rate, maternal mortality rate, infant mortality rate and couple protection rate. The couple protection rate is 60 whereas the all India average is only about 48.2. The policy of Government of India is to reduce Net Reproduction Rate (NRR) to one by 2000 A.D.

#### Family Welfare Infrastructure

9.41 The Family Welfare Programmes in Kerala are being implemented through a net work of 918 Primary Health Centres and 5094 Sub centres. The details of family welfare infrastructure is given in Table 9.23. Training is an integral part of the Family Welfare

Programme. The training infrastructure consists of 6 Junior Health Inspectors Training Schools with a total intake capacity of 260 for imparting training of 12 months duration. Also there are 13 Junior Public Nurses Training Schools with a total intake capacity of 515 imparting training of 18 months duration. Besides there are 18 Female Health workers' Training school in private sector with a total intake capacity of 476. There are 3 Female Health Supervisors Training schools functioning with an intake capacity of 120 for conducting promotional training courses.

9.42 The targets and achievements under Family Welfare Programme are given in Table 9.24. The expenditure during 1992 amounted to Rs.3949.12 lakhs. The relevant data are given in Table. 9.25.

TABLE - 9.23  
No. of Family Welfare Centres - 1993

Sl.No	District	Rural		Total
		Main centres	Sub centres	
1.	Thiruvananthapuram	74	381	455
2.	Kollam	61	388	449
3.	Alapuzha	65	303	368
4.	Pathanamthitta	45	215	260
5.	Kottayam	51	308	359
6.	Idukki	51	180	231
7.	Ernakulam	73	278	351
8.	Thrissur	79	413	492
9.	Palakkad	79	392	471
10.	Malappuram	89	419	508
11.	Kozhikkode	63	326	389
12.	Wayanad	27	177	204
13.	Kannur	70	282	352
14.	Kasaragode	44	161	205
Kerala		871	4223	5094

TABLE - 9.24

*Target and Achievement of Family Welfare Programme*

Item	Unit	1991-92		1992-93	
		Target	Achievement	Target	Achievement
<b>I. Family Welfare Programme</b>					
a. Sterilisation (Vasectomy, Tubectomy)	Nos.	160000	173599	1,40,000	1,59,823
b. I.U.D. Insertion	"	125000	115446	1,25,000	1,01,170
c. C.C. users	"	300000	296359	3,00,000	2,88,370
d. O.P. users	"	35000	38970	49,000	33,896
<b>II.M.C.H. Programme</b>					
<b>a. Immunisation Programme</b>					
i. DPT	"	561785	573794	5,50,000	553536
ii. Polio	"	561785	587605	"	570927
iii. BCG	"	561785	638463	"	623252
iv. Measels	"	561785	512188	"	504848
v. T.T. for pregnant women	"	574422	608204	570000	605268
vi. D.T.	"	514483	231313	521107	208046
vii. T.T. for 10 years	"	489989	320096	496419	283313
viii. T.T. for 16 years	"	489989	295533	"	280277
<b>b. Prophylaxis against nutritional anaemia</b>					
1. Women	"	720000	586371	550000	407482
2. Children	"	1200000	900589	550000	404635
<b>c. Prophylaxis against blindness due to vitamin A deficiency children</b>					
	"	1200000	1108453	467500	352713

Note: 2a (i) to (iv) are target and achievement of children below one year (infants)

TABLE - 9.25

*Expenditure on Family Welfare Programme*

Year	(Both plan & non plan) Amount (Rs. lakhs)
1980-81	590.20
1981-82	687.08
1982-83	785.59
1983-84	1176.47
1984-85	1930.99
1985-86	2510.22
1986-87	3130.33
1987-88	3370.22
1988-89	3157.83
1989-90	4279.08
1990-91	4081.74
1991-92	3949.12
1992-93 (R.E)	4802.70

*Expenditure on Health*

9.43 The expenditure on medical and public health (excluding family welfare) stood at Rs.27.58 crores in 1975-76 which increased to Rs.98.57 crores in 1985-86, Rs.149.51 crores in 1989-90 and to Rs.181.17 crores in 1990-91. The expenditure amounted to Rs.192.31 crores in 1991-92. The plan and non plan expenditure from 1975-76 to 1992-93 are given in Table 9.26. The per capita expenditure increased from Rs.46 in 1985-86 to Rs.96 in 1992-93 thus showing an increase of 108.7 per cent. The relevant data are given in Table 9.27.

*Water Supply and Sanitation*

9.44 Over the years of planned development about 43 per cent of the rural population and 71 per cent of the urban population could be provided with protected water supply. In the three city regions of Kozhikode, Kochi and Thiruvananthapuram, the cov-



TABLE - 9.26

*Plan and Non plan Expenditure on Medical and Public Health in Kerala  
excluding Family Welfare Programme*

				(Rs. lakhs)
Year	Plan	Non Plan	Total	
1975 - 76	230.71	2527.38	2758.09	
1976-77	236.87	2678.67	2915.54	
1977-78	306.96	2867.83	3174.79	
1978-79	525.66	3051.48	3577.14	
1979-80	472.51	3647.19	4119.70	
1980-81	651.38	4229.27	4880.65	
1981-82	905.97	4936.88	5842.85	
1982-83	880.10	5058.12	5938.22	
1983-84	1044.41	5935.02	6979.43	
1984-85	1074.00	6354.81	7428.81	
1985-86	1102.50	8754.37	9856.87	
1986-87	1799.34	9576.09	11375.43	
1987-88	1532.08	10207.12	11739.20	
1988-89	1802.43	11408.10	13210.53	
1989-90	2040.33	12910.55	14950.88	
1990-91	1529.53	16587.77	18117.30	
1991-92	1786.23	17445.10	19231.33	
1992-93 (R.E)	2668.10	21188.79	23856.89	

Source: Budget Document.

TABLE - 9.27

*Percapita Expenditure on Medical and Public Health*

Year	Population (lakhs)	Expenditure on health including family welfare (Rs. lakhs)	Index of Growth	Expenditure per head (Rs.)	Index of Growth
1985-86	274.05	12681.25	100	46.27	100
1986-87	275.06	14506.88	114	52.74	114
1987-88	288.39	15103.96	119	52.37	113
1988-89	293.58	16368.36	129	55.75	120
1989-90	298.87	19230.44	152	64.34	139
1990-91	290.11	22199.04	175	76.52	165
1991-92	294.91	23180.45	183	78.60	170
1992-93 (R.E)	298.88	28659.59	226	95.89	207

Source: Annual Financial Statement.

erage is around 90 per cent. As on 31-3-93, 2.26 lakh houses were connected with piped water supply which accounted for 4.18 per cent of the houses in Kerala. As per the Accelerated Rural water supply norms every stand post is to benefit a population of 250 and as on 31-3-93, 10,63,17 stand posts were installed. The relevant data are given in Table 9.28.

*Rural Water Supply*

9.45 There were 1720 rural water supply schemes in operation in the State as on 1-4-1993. Of these 128 were completed during 1992-93. The district wise details are given in Table 9.29.

TABLE - 9.28

Sl. No.	District	Number of House connections Provided	Number of Stand posts Installed
1.	Thiruvananthapuram	108650	10420
2.	Kollam	15460	8576
3.	Pathanamthitta	1975	2745
4.	Alappuzha	9005	9239
5.	Kottayam	21065	11498
6.	Idukki	1585	2543
7.	Ernakulam	21925	19979
8.	Thrissur	6590	11705
9.	Palakkad	6440	9305
10.	Malappuram	9360	7575
11.	Kozhikode	5480	5804
12.	Wayanad	--	1620
13.	Kannur	13410	3183
14.	Kasaragod	5625	2125
Total		226570	106317

TABLE - 9.29

*Number of Rural Water Supply Schemes in operation and schemes completed during 1992-93.*

Sl. No.	District	Number of Schemes in operation during 1992-93	Number of schemes completed during 1992-93
1.	Thiruvananthapuram	127	20
2.	Kollam	84	9
3.	Pathanamthitta	63	14
4.	Alappuzha	95	6
5.	Kottayam	120	7
6.	Idukki	124	5
7.	Ernakulam	140	2
8.	Thrissur	210	15
9.	Palakkad	177	12
10.	Malappuram	164	10
11.	Kozhikode	140	13
12.	Wayanad	65	6
13.	Kannur	126	7
14.	Kasaragod	85	2
Total		1720	128

#### *Coverage of problem villages*

9.46 There are 1196 problem villages in the state of which 70 are fully covered and the remaining 1126 villages are partially covered with protected water supply. The relevant data highlighting villages covered with protected water supply and the total population benefited as on 31-3-1993 are given in Table 9.30.

9.47 With regard to coverage in these villages, the percentage of population covered was less than 10 per cent in as many as 237 villages, between 10 and 25 per cent in the case of 242 villages. The relevant data showing per centage of population provided with safe drinking water as on 31-3-1993 is given in table 9.31 and district-wise rural population covered is given in Appendix 9.32.

TABLE - 9.30

*District-wise number of villages covered with protected Water Supply and Population benefited as on 31-3-1993*

No.	District	No. of villages	Population benefited in '000's
1.	Thiruvananthapuram	86	965
2.	Kollam	68	843
3.	Pathanamthitta	38	325
4.	Alappuzha	88	853
5.	Kottayam	74	705
6.	Idukki	42	331
7.	Ernakulam	79	747
8.	Thrissur	213	1147
9.	Palakkad	146	1151
10.	Malappuram	115	628
11.	Kozhikode	89	428
12.	Wayanad	31	1881
13.	Kannur	88	2361
14.	Kasaragod	62	290
Total		1219	8835

TABLE - 9.31

Percentage of population	No. of villages
Below 10%	237
Between 10% and 25%	242
Between 25% and 50%	253
Between 50% and 75%	249
Between 75% and 100%	238

*World Bank and Bilaterally Assisted Schemes:*

9.48 Seven major rural water supply schemes are under implementation with World Bank assistance and on completion of these schemes a population of 13.54 lakhs will be additionally benefited. Eleven bilaterally assisted schemes, when completed, will benefit a population of about 19.58 lakhs.

*Urban Water Supply*

9.49 According to 1991 census, the urban population in the State was 76.8 lakhs which represented 26.39 percent of the total population. An analysis of the facts would reveal that about 50 lakh urban

population got benefited under protected water supply. The district wise coverage is shown in Appendix 9.33.

*Pricing of Water and Revenue*

9.50 There has been considerable increase in the pricing of water supplied since 1991. Also efforts have been made to collect the charges due to KWA. The revenue demand during 1992-93 amounted to Rs.22.21 crores and amount collected was 59.2 per cent. The relevant data are presented in Table: 9.32.

TABLE - 9.32

Year	(Rs. lakhs)	
	Demand by Water Charge and Revenue Collected by the Kerala Water Authority	Revenue collected
1985-86	1513	315
1986-87	1400	629
1987-88	1658	853
1988-89	1699	915
1989-90	2110	1504
1990-91	2197	1685
1991-92	2221	1315

**Sanitation**

9.51 According to the data published in 'Survekshana' (January-March 1992) 51.54 per cent of the households in Kerala are without any mode of sanitary latrines. Out of 55.21 lakh households, based on NSS estimates, about 29 lakh households are without latrine facilities. It is estimated that the public agencies support construction of 65000 latrines every year. More over between 60 and 70 lakh houses are constructed every year in the private sector. Thus the number of latrines constructed every year in the state can be estimated to be about 1,35,000. The achievements made under the Government sponsored schemes during the last five years is given below.

I. Rural Development	No. of latrines constructed
a) Environmental sanitation Programme	3000
b) N.R.E.P	15065
c) R.L.E.G.P (including IAY)	62079
d) C.R.S.P	2250
e) JRY (including IAY)	71721

I) DWCRA	740
II. Through NGOS assisted by capant	14528
III. Socio Economic Unit Panchayats and Minicipalities	8000 183284
Total	36066

**Flow of Funds**

9.52 In addition to State funds assistance was received from LIC, HUDCO etc for the implementation of schemes. The source wise flow of funds other than State Government is given below.

**Expenditure on Water Supply**

9.53 The total expenditure on Water Supply and Sanitation incurred by the State during 1991-92 was Rs.69.34 crores and that during 1992-93 was Rs.69.38 crores. The income and expenditure of the Kerala Water Authority since 1985-86 is given in Appendix. 9.34. Out of the total expenditure 20.68 per cent was spent on maintenance and operation account, 73.65 per cent on schemes and 5.67 per cent towards repayment of LIC loan.

**Flow of Funds from LIC, Government of India HUDCO and External Agencies**

Year	LIC	Flow of Funds from World Bank	Netherland Government	DANIDA	GOI	HUDCO	Total
1991-92	1347	1527	227	300	1383*	251	5045
1992-93	1000	874	381	120	1315*	1395	5085

\* The amount includes special central assistance for SCP Schemes.

## Housing

### Housing Situation

9.54. There were 42.89 lakh house holds and 41.4 lakh houses in Kerala according to 1981 Census. The numerical shortage of houses during 1981 thus was 1.56 lakhs. According to 1991 census, there were 54.59 lakh houses and 55.13 lakh households. This would show that the numerical shortage of houses were 54000 only in 1991. The rate of growth of residential houses during 1981-91 was 27.04 per cent whereas the households increased by 24.64 per cent and population 14.32 per cent. Another important characteristic feature is that the average size of a household in Kerala was 5.3 persons as against 5.6 for all-India.

### Demand for Housing

9.55 Out of 54.59 lakh houses in Kerala about 20% (11 lakhs) is estimated as thatched huts of semi permanent nature. Out of which about 5.5 lakh units are substandard huts which are not fit for human living. In addition about 5% of the existing houses required to be demolished and reconstructed. Thus the housing demand existed, during 1991 was as given below:

	(in lakhs)
Numerical shortage during 1991	0.54
No. of substandard huts which need to be reconstructed	5.50
No. of houses which require major repair/reconstruction	2.70
	<hr/> 8.74

9.56. It is projected that population would increase from 290 lakhs in 1991 to 328 lakhs in 2000 A.D. an increase of about 38 lakhs. Assuming the average household size of 5.3, the number of houses required for accommodating the increase in population would be 7.2 lakhs. Thus the total demand for construction of houses during the period 1991-2000 approximately is about 16 lakhs.

9.57. An overview of the various housing programmes implemented in the State would show that during the period 1991-1993 approximately 1,50,000 houses were constructed by the public agencies. In the private sector the average construction per year is estimated at 60000 houses. Thus during the three years 1991-93 about 330000 houses were constructed. As against the demand of 16 lakh houses during 1991-2000 already about 3.3 lakh houses were constructed. During the next 7 year period about 12.7 lakh houses are to be constructed on an average about 1.8 lakh houses per year both in the private and the public sector together.

### Construction of Houses by Major Public Agencies

9.58. Under various housing schemes the public agencies in Kerala constructed 2.2 lakh houses till 31.3.85. During 1985-86 to 1992-93, 4.82 lakh houses were constructed/assisted of which 4.52 lakhs were for the economically weaker sections. Till 31.3.1993, 7.04 lakh houses were constructed by the public agencies and the relevant data are given in Table 9.34.

9.59. There are more than 20 major agencies implementing housing programmes. The Revenue Department, Housing Department, Finance Department, Rural Development Department, Kerala State Housing Board, Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes and Kerala State Co-operative Housing Federation are the major Government Departments and autonomous bodies implementing housing programmes in the State. One notable feature is that there has been a shift in emphasis towards social housing scheme of EWS. The State funds provided in the budget has been facilitating to avail institutional finance for housing development. During 1992-93 the Kerala State Housing Board and Kerala State Co-operative Housing Federation together have raised about Rs.55 crores. As highlighted earlier during the period 1985-86 to 1992-93, 482727 houses were constructed/assisted by the state sector agencies which accounted to an average of 60341 houses a year. It is also estimated that on an average between 60000 and 70000 houses are being constructed in private sector every year.

9.60. Housing Board is the major public agency, implemented/implementing twenty major schemes of which public housing scheme and cash loan scheme are the major ones. It had constructed 822 houses under Public Housing Scheme and extended loan assistance to 1986 houses under cash loan scheme. Out of this 997 loans and 129 loans respectively were distributed to low income groups and to economically weaker sections. Further 60 houses for beedi workers and 19 houses for handloom workers were constructed. Besides, 5693 houses were constructed under Kairali housing scheme through the district collectors. The Board raised Rs.39.78 crores from various financial institutions for the implementation of housing schemes.

9.61. The Kerala State Co-operative Housing Federation through its 207 affiliated primary societies extended financial assistance for the construction of 62,139 houses and disbursed Rs.186 crores till 31.3.1993. The Federation raised Rs.15 crores from LIC as loan and mobilised Rs.120 lakhs through debentures and disbursed Rs.23.94 crores for the construction of 5563 houses during 1992-93.

9.62. Under the scheme allotment of house sites to landless rural workers 2214 sites were distributed by the Board of Revenue. Of this 997 were for Scheduled Castes and 110 were for Scheduled Tribes.

9.63. The scheme "House Building Advance to

Government Servants" is being implemented by the Finance Department. During 1992-93, Rs.17.09 crores was disbursed to 3191 persons and 4020 applications were pending at the end of 1992-93. The number of applications received and sanctioned and the amount disbursed from 1985-86 to 1992-93 are furnished in Table - 9.33.

Table 9.33

*No. of Applications received and sanctioned and amount disbursed under House Building Advance to Government Servants.*

Year	No. of applications received	No. of cases sanctioned	No. of pending cases	Amount disbursed (Rs. lakhs)
1985-86	NA	1824	NA	500.35
1986-87	NA	2000	NA	620.50
1987-88	NA	2350	NA	793.32
1988-89	NA	2096	NA	699.87
1989-90	4481	2090	2391	694.17
1990-91	4484	2041	3443	900.00
1991-92	6490	2631	3859	1215.52
1992-93	7211	3191	4020	1709.33

9.64. The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes, Scheduled Caste Development Department and Scheduled Tribe Development Department are implementing housing scheme for Scheduled Castes and Scheduled Tribes. During 1992-93, Scheduled Caste Development Department, extended assistance for 1135 landless/house less SCs and ST Development Department assisted 626 Scheduled Tribes for

the construction of houses. Kerala State Development Corporation for SCs and STs assisted construction of 1060 houses during the period under review. The Rural Development Department under Jawahar Rozgar Yojana assisted/constructed 16533 houses during 1992-93 for those below poverty line. Matsyafed also assisted 2433 fishermen for the construction of houses. The achievement under major schemes since inception is given in Table 9.34.

Table 9.34

*Achievement in Housing - Major Schemes*

Sl. No.	Scheme	Upto 31.3.85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Provision of House-sites to rural landless workers	4841	3022	5517	1869	2903	2179	2634	2585	2214
2.	Huts/Houses for rural workers	7740	700	974	366	852	335	396	335	-
3.	Village Housing Project	10453	-	-	-	-	29	52	-	-
4.	Low Income Group Housing	10514	184	-	-	-	28	52	2240	1131
5.	Middle Income Group Housing	4402	113	59	22	27	53	68	1119	603
6.	Co-operative housing scheme for economically weaker sections	49537	2427	2625	-	-	-	-	-	-
7.	Subsidised aided self help housing scheme with co-operation of voluntary Agencies	15460	12125	2090	-	-	-	-	-	-
8.	Rental Housing Scheme	4687	152	-	-	11	78	258	84	-
9.	Public Housing Scheme	11117	528	613	544	488	178	216	478	822

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
10.	Kudikidappukar Housing	6351	743	212	-	-	-	-	-	-
11.	SC/ST Development Corpn.	21047	3870	2215	1916	675	1283	1181	738	1060
12.	Tribal Welfare Department	3660	590	90	350	377	286	404	583	626
13.	Scheduled Caste Development Department	18076	313	159	1166	957	1131	818	985	1135
14.	Fishermen Housing	16313	17019	2290	3870	6143	869	2211	63	2423
15.	Kerala State Co-operative Housing Federation	20743	4869	8387	8658	6716	3502	4577	5313	5563
16.	Rehabilitation Housing Scheme	-	-	86837	9840	22062	6497	29611	5239	5621
17.	NREP	1570	2301	9544	7560	9451	-	-	-	-
18.	RLEGP	2045	4802	14388	11040	8554	-	-	-	-
19.	Jawahar Rozgar Yojana	-	-	-	-	-	22932	14225	22182	16533
20.	Other Schemes Implemented by KSHB	-	-	-	-	-	-	-	4755	6045
21.	Completed/Discontinued Schemes	12308	-	-	-	-	-	-	-	-
<b>Total</b>		<b>220864</b>	<b>53758</b>	<b>136000</b>	<b>47201</b>	<b>59216</b>	<b>39374</b>	<b>56703</b>	<b>46699</b>	<b>43776</b>

### Urban Development

9.65. As per 1991 Census, Kerala's urban population was 76.8 lakhs which accounted to 26.39% of the total population as against the all India proportion of 25.73%. The percentage of urban population in 1981 was 18.8%. There are 197 towns of which 65 are statutory towns (3 Corporations, 59 Municipalities, 1 Cantonment and 2 Townships and 132 Census Towns).

9.66. The major departments concerned with urban development in the State are Town Planning department, Municipal Administration Department, three City Corporations, eleven Development Authorities and 59 Municipalities.

I.	<i>Urban Micro Enterprises</i>	
	Expenditure incurred during 1989-90 - 1992-93	Rs.378.08 lakhs.
	No. of units assisted	14285
II.	<i>Training under Micro Enterprises</i>	
	Expenditure incurred during 1989-90 - 1992-93	Rs.44.38 lakhs
	No. of persons trained	3741
III.	<i>Urban Wage Employment</i>	
	Expenditure incurred during 1989-90 - 1992-93	Rs.512.53 lakhs
	No. of mandays of work generated	795366
IV.	<i>Housing and Shelter Upgradation</i>	
	Expenditure incurred during 1989-90 - 1992-93	Rs.542.61 lakhs
	No. of dwelling units upgraded	37618
Physical achievement made under various components during 1992-93		
	Micro units set up	- 2702
	mandays of work generated	- 107960
	Dwelling units upgraded	- 7215

### Kerala Urban Development Finance Corporation

9.67 The Kerala Urban Development Finance Corporation assisted 555 schemes upto 31.3.1992 involving Rs.48.67 crores. Out of these, 461 schemes have already been completed. During the period 1992-93 the Corporation assisted 49 schemes and expended Rs.4.26 crores as financial assistance.

### Nehru Rozgar Yojana

9.68. Achievements under Nehru Rozgar Yojana are given below:

### *Environmental Improvement of Slums*

9.69 The programme for improvement of urban slums is an item in the New 20 Point Programme. Out of the estimated 4.5 lakh slum population in the state, about 2.5 lakh persons could be covered. The average per capita investment is about Rs.400. During 1992-93, 70 schemes were implemented and the expenditure incurred was Rs.130 lakhs benefiting 26818 persons.

### *Town Planning Department*

9.70 The main functions of the department are preparation of development plans for urban and rural areas and for fast developing regions and preparation of spatial development plans for the state. During 1992-93, Government have sanctioned four town planning schemes prepared by the department. It has formulated 5 draft schemes and forwarded to local bodies and 73 schemes

are under preparation. Moreover 10 project reports for the integrated development of small and medium towns were prepared and three are under preparation and 113 layout plans for local bodies have been prepared/sanctioned. Under Kerala Factory Rules 195 Factory sites were approved, 8 housing schemes were scrutinised and 431 building plans were cleared by the department during the period under review.

### *Industrial Training*

9.71 There are at present 28 Government Industrial Training Institutes including 8 women ITIs. In the private sector there are 315 Industrial Training Centres which include 41 production centres formerly with the department of Scheduled Castes and Scheduled Tribes which were upgraded to the level of ITCs in 1993. District wise details of ITIs and ITCs with intake capacity are given in Table 9.35.

TABLE 9.35

*District-wise number of Industrial Training Institutions and Seat Strength in Kerala as on 31-12-1993*

Sl. No.	District	Number of Institutions		Total	Seat Strength		Total
		Government I.T.I	Private I.T.C		Government I.T.I	Private I.T.C	
1	2	3	4	5	6	7	8
1.	Thiruvananthapuram	5	52	57	3000	3552	6552
2.	Kollam	2	32	34	1032	4336	5368
3.	Pathanamthitta	1	29	30	176	2480	2656
4.	Alappuzha	2	38	40	864	4688	5552
5.	Kottayam	2	24	26	1092	3888	4980
6.	Idukki	1	5	6	224	416	640
7.	Ernakulam	3	43	46	880	5440	6320
8.	Thrissur	2	31	34	1068	2480	3548
9.	Palakkad	1	12	14	800	672	1472
10.	Malappuram	1	12	13	264	720	984
11.	Kozhikode	3	15	18	880	1168	2048
12.	Kannur	2	16	18	944	880	1824
13.	Wayanad	1	2	3	144	160	304
14.	Kasaragod	1	4	5	112	160	272
Total		28	315	344	11480	31040	42520

9.72 The Government ITIs are conducting 17 trades with two years duration and 15 trades with one year duration, while the private ITCs are conducting 13 trades with two years duration and 17 trades with one year duration. There are 8 Related Instruction Centres

and Two AVTS, one at Kalamasserry and the other at Thiruvananthapuram. Apprenticeship training was imparted to 4421 candidates. Also Government ITIs imparted training to 234 students sponsored by the Kerala State Labour Welfare Fund Board.



TABLE - 9.36

*Trade-wise Annual Intake in Government ITIs and Private ITCs for two year Course 1991-93*

Sl. No.	Trade	Industrial Training Institutes		Industrial Training Centres	
		Total Intake	of which girls	Total Intake	of which girls
1	2	3	4	5	6
1.	Draftsman Mechanic	192	29	248	7
2.	Draftsman Civil	640	228	2774	612
3.	Surveyer	160	40	48	9
4.	Fitter	1152	--	1963	--
5.	Turner	612	--	57	--
6.	Mechinist	564	--	28	--
7.	Mechanic (R&AC)	416	--	348	--
8.	Instrument Mechanic	160	--	--	--
9.	Watch and Clock Repair	96	96	--	--
10.	Electrician	816	--	2363	--
11.	Wireman	768	--	216	--
12.	Electroplater	16	--	--	--
13.	Mechanic (Motor Vehicle)	464	--	636	--
14.	Mechanic (Radio & TV)	736	356	796	53
15.	Electronics	960	520	1261	104
16.	Painter (General)	128	--	--	--
17.	Mill wright Mechanic	16	--	--	--
18.	Tool and dye maker	--	--	18	--
Total		7896	1269	10756	785

*Trade-wise strength in ITIs and ITCs*

9.73 An analysis of the intake in different courses in Government ITIs would show that about 70% are undergoing two years courses and 30% one year course. In the Case of private ITCs, about 69% are undergoing two year courses and 31% in one year course. Out of 7896 students admitted in Government ITIs under 17 trades in

the two year courses 16% (1269) are girls and 12% (925) belongs to SCs/STs (SC 621 and ST 304). While out of 3432 students admitted in Government ITIs under 15 trades in the one year course more than 21% (728) are girls and less than 9% (354) constituted SCs and STs. The trade wise intake in Government ITIs and private ITCs are given in Table 9.36 and Table 9.37.

TABLE - 9.37

*Trade-wise Intake in Government ITIs and Private ITCs during 1992-93*

Sl. No.	Trade	Industrial Training Institutes		Industrial Training Centres	
		Total Intake	of which girls	Total Intake	of which girls
1	2	3	4	5	6
1.	Forger and Heat Treater	352	--	12	--
2.	Carpenter	348	40	18	--
3.	Dress Making	80	80	25	12
4.	Mechanic (Diesel)	144	--	272	--
5.	Mechanic (Tractor)	64	--	--	--
6.	Moulder	224	--	--	--
7.	Plumber	368	--	916	--
8.	Secretarial Practice	48	48	82	11
9.	Stenography (Eng)	432	240	1186	763
10.	Stenography (Hindi)	48	48	18	5
11.	Sheet Metal worker	272	72	23	--
12.	Welder	696	--	272	--
13.	Upholstery	16	--	--	--
14.	Data Preparation and Computer software	240	200	1812	512
15.	Plastic Processing Operator Trade	64	--	--	--
16.	Cutting and Tailoring			168	168
17.	Hand Compositor and proof Reading			16	--
18.	Photography			21	3
19.	Hair and skin care			16	--
20.	Preservation of Fruits and Vegetables			15	7
21.	Letter Press Mechine minder			2	--
22.	Book Binder			--	--
<b>Total</b>		<b>3432</b>	<b>728</b>	<b>4874</b>	<b>1481</b>

## SPECIAL PROGRAMMES FOR THE WEAKER SECTIONS

The rural population of Kerala accounts for 74 per cent of the State's total population. They have a much lower level of income and consumption per head as well as poorer access to education, health, water supply and such other essential services compared to those living in the urban areas. Improving the quality of life of the rural population therefore continues to be Central to our development planning. With this end in view a number of poverty alleviation programmes are under implementation. Most important among them are the Integrated Rural Development Programme (IRDP) and Jawahar Rozgar Yojana (JRY). Restructuring of agrarian relationships through land reforms is also part of the agenda for rural transformation. Poverty alleviation programmes were under implementation for more than a decade with substantial increases in outlays and coverage. The total investment so far made under IRDP has been estimated to be around Rs.468.72 crores and that of employment generation programmes like NREP and RLEGP till 1988-89 and under JRY there onwards works out to Rs.526.11 crores. (Year-wise details are given in tables 10.1 and 10.2). Nevertheless unemployment continues to be a very serious problem. The quantum for assistance available under these Centrally Sponsored Schemes is not adequate enough to make any appreciable dent in the unemployment problem faced by the State. As per the family survey organised by the Rural Development Department in 1992 nearly 17.86 lakhs families are still below the poverty line.

TABLE - 10.1

*Physical and Financial Achievements under IRDP- Families Assisted and subsidy disbursed under IRDP during 1980-81 to 1992-93*

Sl. No.	Year	No. of families assisted	Bank Loans Ra. in lakhs	Amount of subsidy given (Rs. in lakhs)
(1)	(2)	(3)	(4)	(5)
1.	1980-81	58992	662.92	331.46
2.	1981-82	96832	1221.34	610.67
3.	1982-83	127798	2146.72	1173.36
4.	1983-84	120547	2510.94	1255.47
5.	1984-85	104816	2488.12	1241.76
6.	1985-86	71376	1550.56	775.28
7.	1986-87	143399	4021.96	775.28
8.	1987-88	110684	3150.04	1575.02
9.	1988-89	87006	3079.06	1539.53
10.	1989-90	74150	3120.44	1560.22
11.	1990-91	60877	2560.06	1702.09
12.	1991-92	57562	2470.04	1613.53
13.	1992-93	50517	2250.78	1485.29
Total		1164556	31232.98	15638.96

Source : Rural Development Department

TABLE - 10.2

*Physical achievements under NREP, RLEGP, JRY No. of Mandays Generated (in lakhs)*

Sl. No.	Year	NREP	RLEGP	JRY	Total
(1)	(2)	(3)	(4)	(5)	(6)
1.	1980-81	97.00	-	-	97.00
2.	1981-82	128.00	-	-	128.00
3.	1982-83	93.08	-	-	93.08
4.	1983-84	119.00	-	-	119.00
5.	1984-85	142.00	-	-	142.00
6.	1985-86	72.34	77.62	-	149.96
7.	1986-87	105.32	113.72	-	219.04
8.	1987-88	98.75	85.32	-	184.07
9.	1988-89	149.57	74.11	-	223.68
10.	1989-90	-	-	231.79	231.79
11.	1990-91	-	-	180.96	180.96
12.	1991-92	-	-	177.08	177.08
13.	1992-93	-	-	134.54	134.54
Total		1005.06	350.77	724.37	2080.20

Source : Rural Development Department

Programme-wise details of implementation of major rural development programmes are given below:

(a) *Integrated Rural Development Programme (IRDP)*

10.2 The objective of the programme is to assist families below the poverty line in rural areas to take up self-employment ventures through a package of assistance comprising of subsidy and institutional credit. For identification of families eligible for assistance under the programme a comprehensive house to house survey was organised in 1990 and the final list of families was published in 1992. According to the survey a family with an annual income of Rs.11,000/- (at 1991-92 price level) or less is considered to be below poverty line. The survey revealed that a total number of 17.86 lakh families are below poverty line. (see Table 10.3). Assistance for the States under the National Programmes for poverty alleviation were based on the estimates of poverty by the Planning Commission. According to the commission the percentage of population below the poverty line in Kerala has come down from 56.9% in 1972-73 to 17% in 1987-88. The methodology followed by the Commission in estimating the poverty line has been questioned by various quarters including Kerala State. Accordingly, an expert group was constituted by the

Planning Commission under the Chairmanship of late Prof. D.T. Lakdawala in September 1989 to look into the methodology and to go into the question of redefining poverty line. The Committee recommended adoption of the standardised commodity basket at the national level as the basis and valuing it at the prices prevailing in each State for arriving the State specific poverty lines.

TABLE - 10.3

Number of families below poverty line according to Social Group as per 1992 Survey

Sl. No.	District	Number of families			
		SC	ST	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)
1.	Thiruvananthapuram	34280	2161	166818	203259
2.	Kollam	24458	95	161115	185668
3.	Pathanamthitta	13895	722	54710	69327
4.	Alappuzha	7871	47	126604	134522
5.	Kottayam	4454	749	104073	109276
6.	Idukki	10319	6422	59464	76205
7.	Ernakulam	4208	118	116364	120690
8.	Thrissur	27265	430	148321	176016
9.	Malappuram	13470	1247	156209	170926
10.	Palakkad	36614	4571	111526	152711
11.	Wayanad	2023	16063	35673	53759
12.	Kozhikode	9316	288	156933	166537
13.	Kannur	1142	196	104897	106235
14.	Kasargod	7223	2555	53965	63743
State Total (Provisional)		196538	33664	1556672	1786874

Source : Rural Development Department

(Sec Appendix 10.4). The number and percentage of poor in Kerala estimated accordingly works out to 92.22 lakhs and 32.08% (Sec Appendix 10.5).

10.3 Since the scheme aims at assisting the poorest of the poor families first, priority is given to rural families having annual income below the 'cut off' line of Rs.8500. Here again, families with annual income below 6000 are assisted first. The programme is implemented in all 152 blocks of the State through 14 DRDAs. 50% of the families assisted are SC/ST, and 40% of those assisted are women and 3% of the outlay is earmarked for physically handicapped. The physical and financial achievements under the programme are furnished in table 10.4. During 1992-93 the maximum subsidy amount received ranged from Rs.3000 to 4000 in the case of general category and 3000 to 5000 in the case of Schedule Castes and Scheduled Tribes.

### (b) Trysem

10.4 Trysem imparts training to Rural youths in the age group 18 - 35 belonging to families below the poverty line for enabling them to take up self-employment ventures. The number of youth trained during 1992-93 was 7919 against the target of 7570. An amount of Rs.222.85 lakhs were expended. The details of achievement of TRYSEM are furnished in Table 10.4.

TABLE - 10.4

Physical and Financial Achievements under Rural Development Programmes 1991-92 and 1992-93

Sl. No.	Programme	Unit	Achievement	
			1991-92	1992-93
(1)	(2)	(3)	(4)	(5)
<b>I. (a) IRDP</b>				
1.	Total Expenditure	Rs. Lakhs	1784.84	1770.80
2.	Families Assisted	No.	57562	50517
3.	SC Families Assisted	"	24682	23810
4.	ST Families Assisted	"	2166	1853
5.	Women Assisted	"	28063	23770
6.	Subsidy Adjusted	Rs. Lakhs	1613.53	1485.29
7.	Per Family Investment	(in Rs.)	7094	7395
8.	SC Families	"	6391	6643
9.	ST Families	"	5786	6098
(b) Supply of Tool Kits to Rural Artisans		No.	—	716
<b>(c) TRYSEM</b>				
1.	Total Youth Trained	No.	7126	7919
2.	Of which No. of SCs	"	2484	2861
3.	" " STs	"	190	182
4.	" " Women	"	1352	1194
5.	Total No. settled including self employed and wage employed	No.	3279	3856
6.	Percentage of Youth settled out of No. trained	%	70	68
<b>(d) DWCRA</b>				
1.	Women Groups Organised	No.	347	319
2.	Women Groups Functioning	"	218	299
<b>II. JRY</b>				
1.	Total Expenditure	Rs. lakhs	7252.79	6843.94
2.	Man days generated	lakh Man days	177.08	134.57
3.	Foodgrains utilised	M.T. Rice	2496.69	1220.16
4.	No. of houses completed	No.	22182	16533
5.	New Roads Constructed	KM.	1873.38	1767.19
6.	Sanitary Latrines completed	No.	6112	4516
7.	Drinking Water Wells constructed	No.	433	309

TABLE - 10.5

(1)	(2)	(3)	(4)	(5)
8.	Irrigation Canals	No.	273	293
9.	Area planted under Social Forestry	Ha.	207.14	31.78
10.	No. of seedlings and fruit plants distributed	Lakhs.	32.59	34.48
11.	Building constructions (Schools and Other buildings)	No.	2102	2222

Source : Rural Development Department

(c) *Development of Women and Children in Rural Areas (DWCRA)*

10.5 The objective of DWCRA, a sub scheme of IRDP is to provide opportunities to women belonging to the target groups living below poverty line to take up income generating activities. The scheme was continued in seven districts namely; Wayanad, Palakkad, Idukki, Malappuram, Kannur, Kozhikode, Alappuzha and Thiruvananthapuram was additionally included during 1992-93. Target groups for 1992-93 numbered 260 against which 319 groups were formed. Of the above groups, 297 groups started income generating activities benefitting 2959 persons.

(d) *Jawahar Rozgar Yojana (JRY)*

10.6 Jawahar Rozgar Yojana is implemented by 14 DRDAs, through 152 Blocks and all the Panchayats in the State. The expenditure under the programme is being shared between the centre and the State in the ratio 80:20. The main objective of the programme is the creation of additional gainful employment for the unemployed in rural areas and strengthening of rural infrastructure.

10.7 The Financial and Physical achievements of JRY during 1991-92 and 1992-93 are furnished in Table 10.4.

(e) *Kerala Rural Development and Marketing Society*

10.8 KERAMS established in 1986 provides marketing facility for products manufactured by IRDP beneficiaries, rural artisans DWCRA Units, Mahila Samajams, Voluntary Organisations etc. Apart from 'Gramasree' a permanent outlet for IRDP Products functioning in Thiruvananthapuram since 1987; a mobile sales unit was also started during 1990-91. As in the previous years trade fairs were organised by Kerams during Onam Festival in all District Head Quarters and also participated in major trade fair and exhibitions outside the State. Further more three Training and Production Centres of Fruit Processing, Ready made garments and Kora grass mats at Kozhikode, Kollam and Kottayam respectively were also started during the period. The sales proceeds of KERAMS for the last 6 years are given in Table 10.5.

\* *Sale of IRDP Products through KERAMS*

Year	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Rs. in lakhs	3.48	6.54	6.84	9.47	19.12	27.28

(f) *Peoples Action for Development (Kerala)*

10.9 PAD (K) encourages, promotes and assists voluntary organisations in implementation of projects for enhancement of rural prosperity and strengthens and promote voluntary effort in rural development. Assistance is made available from Council for Advancement of Peoples Action and Rural Technology (CAPART). Further it helps voluntary organisations in preparing projects in accordance with the guidelines of CAPART. During the year 1993, 25 projects for Rs.54 lakhs were sanctioned by CAPART which are implemented by voluntary agencies.

(g) *Land to Landless*

10.10 The extent of land declared surplus as on 30-11-1993 under the Land Reforms measures was 170409 acres. Out of which 93864 acres have been taken possession by the Government and 63929 acres were distributed upto 30-11-1993. About 20334 acres of land were reserved for public purposes. The beneficiaries under the programme were largely from the category of Scheduled Castes and Scheduled Tribes. Category wise details are furnished in Appendix 10.1 to 10.3.

10.11 Annual Target for the distribution of surplus land and the achievement since 1989-90 are given in table 10.6

10.12 For the effective implementation of land reforms, resurvey of the entire land in the State was initiated and the resurvey works are in progress in all districts except Kasargode. Out of 32510 sq. kms to be surveyed, field work has been completed in 22401.89 sq. kms till the end of 1992-93. Out of 61 taluks in the State resurvey has been started in 46 Taluks and field work completed in 21 Taluks.

10.13 The assignees of surplus land are given financial assistance at the rate of Rs.2500 per hectare for agricultural development. The achievement under the scheme during the last four years are given in Table 10.7.

(h) *Development Programme of Panchayats*

10.14 The number of Panchayats in Kerala during the year 1992-93 was 983. The various development activities undertaken by the Panchayats include construction and maintenance of village roads, small bridges, culverts, petty irrigation works, sinking wells, construction and maintenance of public latrines, bus stands, shopping centres, marketing stalls etc. (See Table 10.8). The amount

spent by Panchayats under such public works during 1992-93 was Rs.20 crores. An amount of Rs.1.13 crores

was also expended under the Self Reliant Village (Panchayat) Scheme.

TABLE - 10.6

*Target and Achievements under Land Reforms . -*

Sl. No.	Year	Unit	Target	Achievement			
				SC	ST	Other	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	1989-90	No.	1000	343	16	346	705
2.	1990-91	No.	1500	851	85	--	936
3.	1991-92	No.	3700	1990	116	--	2006
4.	1992-93	No.	3000	1231	15	--	1246

Source : Land Board, Kerala.

TABLE - 10.7

*Financial Assistance to the Assignees of Surplus Land - Achievement*

Sl. No.	Particulars	Unit	1989-90	1990-91	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Total Amount Sanctioned	Rs. lakhs	24.00	30.00	30.00	15.00
2.	Amount spent	-do-	23.79	11.34	9.05	5.51
3.	No. of beneficiaries					
	(a) General	No	2275	1523	1257	746
	(b) Scheduled Castes	No	1964	1292	960	1017
	(c) Scheduled Tribes	No	207	74	45	222
	Total	No	4446	1292	2262	1985

Source : Land Board, Kerala.

TABLE - 10.8

*Physical Achievements under Untied Funds to Panchayats during 1992-93*

Sl. No.	Name of Scheme	Unit	Physical Achievement	
			1991-92	1992-93
(1)	(2)	(3)	(4)	(5)
1.	Construction and Improvement of Roads	Nos.	928	166
2.	Construction of Foot bridges/bridges/culverts	Nos.	526	32
3.	Construction of Waiting Sheds	Nos.	—	4
4.	Construction of Latrines	Nos.	18750	1020
5.	Construction of routes for weaker sections	Nos.	—	—
6.	Electrification of houses	Nos.	6807	686
7.	Construction of Play grounds/Community halls/Public buildings	Nos.	38	2
8.	Construction of Cultural Centres/Libraries	Nos.	—	—
9.	Construction of Nursery School Buildings	Nos.	14	4
10.	Construction of Shopping Complexes	Nos.	6	—
11.	Installation of Street Lights	Nos.	85	48
12.	Construction of Ponds/Wells	Nos.	200	14
13.	Construction of Drainage Schemes	Nos.	5	—
14.	Installation of Water Taps	Nos.	—	2
15.	Installation of Smokeless Choolahs	Nos.	—	—
16.	Construction of T.V. Kiosk	Nos.	41	7
17.	Installation of T.V. Sets	Nos.	55	9

Source : Directorate of Panchayats.

## (i) Western Ghats Development Programme

10.15 Western Ghats Development Programme is a fully Centrally Sponsored Scheme. The important programmes taken up under Western Ghats Development include Agriculture and Allied Activities, Minor Irrigation, Village and Small Scale Industries (Sericulture), Watershed Development Programmes, Infrastructure Development, Survey and Studies. During the year 1992-93 the outlay for Western Ghats Development Programme was Rs.610.58 lakhs and expenditure Rs.614.59 lakhs. The sector-wise break up of outlay and expenditure during 1992-93 are given in Table 10.9.

TABLE - 10.9

*Financial Achievement under  
Western Ghats Development during 1992-93*

(Rs. in lakhs)

Sl.No.	Sector	Financial	
		Outlay	Expenditure
(1)	(2)	(3)	(4)
I.	Agriculture & Allied Services		
i)	Soil Conservation	120.99	123.74
ii)	Agriculture Development	32.32	34.68

(1)	(2)	(3)	(4)
iii)	Animal Husbandry	1.22	—
iv)	Dairy Development	40.00	40.44
v)	Forestry	176.68	183.21
vi)	Afforestation	11.12	11.33
vii)	Poultry Development Units	0.50	0.50
viii)	Horticulture Development	15.37	14.66
II.	Minor Irrigation	119.13	116.04
III.	Infrastructure Development		
i)	Water Supply & Sanitation	40.00	40.85
ii)	Foot Bridges	40.00	40.60
IV.	Survey Studies and Evaluation	8.25	4.16
V.	Western Ghat Cell	5.00	4.38
Total		610.58	614.59

Source : Western Ghats Cell, Secretariat, Thiruvananthapuram.

## SELF RELIANT VILLAGE

10.16 Self Reliant Village Scheme is a prestigious programme launched by the Government in 1992-93. The scheme aims at making selected panchayats self reliant in the sense that the co-ordinated development of all economic activities with active participation of people at all levels would bring gainful and self generating employment to the people through the exploitation of the resources of the

area to the maximum extent and mobilisation of resources from financial institutions. The speedy flow of benefits of the existing departmental schemes to the people is also envisaged under the scheme. The concept of this new strategy is a confluence of decentralised planning, development through peoples participation, rapid and sustained improvement in the quality of the life of the people etc. Based on certain criteria 113 panchayats were selected and detailed action plan for each panchayat was prepared by a committee constituted for this purpose at the panchayat level. The allocations from sectoral programmes operated by the different departments form the corpus of the funds for the scheme. Apart from this an outlay of Rs.113 lakhs was separately provided during 1992-93. During 1993-94 Rs.400 lakhs is set apart for this scheme.

10.17 The total estimated cost of various programmes included in 113 panchayats is Rs.204.69 crores. This includes financial assistance from central/state governments, financial institutions and contributions from voluntary organisations and beneficiaries. Against this the cumulative expenditure at the end of November 1993 is Rs.31.59 crores (15.45%). The district wise details of panchayats selected and outlay and expenditure are given in Table-10.10.

TABLE - 10.10

*Self Reliant Villages - District wise Details of Panchayats Selected and Outlay and Expenditure as on 39-11-1993*

District	No. of SRV Panchayats	Outlay	Expenditure
(1)	(2)	(3)	(4)
Thiruvananthapuram	9	5328.37	342.75
Kollam	7	2865.49	169.13
Pathanamthitta	6	2162.92	131.26
Alappuzha	5	1218.14	280.06
Kottayam	10	1218.97	109.90
Idukki	5	477.08	212.79
Ernakulam	11	1014.30	237.20
Thrissur	14	1147.22	377.41
Palakkad	9	778.90	170.95
Malappuram	11	1619.27	414.53
Kozhikode	8	670.85	142.29
Wayanad	4	470.68	187.68
Kannur	8	536.31	128.81
Kasaragod	6	960.78	154.97
<b>Total</b>	<b>113</b>	<b>20469.28</b>	<b>3159.73</b>

### *Panchayat Level Resource Mapping*

10.18 Panchayat Level Resource Mapping (PRM) aimed at providing objective data for micro level planning and sustainable development has covered 90 Panchayats fully or partly; 45 panchayats by voluntary and scientific mapping and another 40 panchayats by scientific mapping and 5 panchayats by voluntary mapping. The survey has highlighted the integrated land-water-human-resource potential of the panchayats and the potential for their development in an environment-friendly way. The programme during the period upto the middle of 1993 was implemented in panchayats covered by Self Reliant Village Scheme as well as others which are scattered over the entire state. Since this arrangement is found to be logistically inconvenient, it has been decided to implement the programme on a district wise basis. Accordingly, Kollam and Thrissur Districts have been taken up for the project. The work is progressing in these two districts. The Centre for Earth Science Studies is implementing this programme with the involvement of panchayats, voluntary organisations etc.

### *Social Security and Welfare*

10.19 Social Security and Welfare measures constitute an integral part of the functions of a modern government irrespective of its level of economic and social development. There are people who are unable to participate in economic activities for reasons such as old age and physical or mental disabilities, or who have no other independent means of livelihood. These categories need community support. Social Security is thus the protection given by Society to such members through a series of measures who are not in a position to support themselves due to a variety of extraneous factors resulting from sickness, maternity, employment injury (including occupational disease), unemployment (including absence of employment) and under employment, invalidity, destitution, social disability and backwardness, old age and death etc.

10.20 The successive governments in Kerala introduced several measures and at present there are over 30 welfare schemes. During the period 1986 to 1991 the state expenditure under social security amounted to about Rs.370 crores. The expenditure for 1992-93 was about Rs.80 crores which represented 2.77 per cent of State revenue expenditure. The All India expenditure on social security and welfare scheme was around 1.02 per cent in 1991.

10.21 The coverage under the major pension scheme alone is about 20.4 per cent of the total 60 plus population in the State which is estimated at 29.3 lakhs. The coverage will be more when the five major social security schemes introduced for Handloom, Cashew, Khadi, Construction and Coir Workers become fully operational. Besides the State Government pensioners, military pensioners, freedom fighters, Central Government pensioners account for



a considerable percentage of the 60 plus population in the State.

10.22 Though there are more than 30 social security schemes under implementation, the three major pension schemes are agricultural workers pension scheme, destitute

and widows pension scheme and special pension for the physically handicapped. These schemes benefited about 6 lakhs persons. The expenditure under these three schemes was about Rs.52 crores during 1992-93. The physical coverage under major schemes with qualifying conditions, rate of assistance etc. are reflected in Table 10.11.

TABLE - 10.11

*Major Social Security and Pension Schemes in Kerala*

Sl. No.	Name of Scheme	Qualifying conditions	Year of starting	Present rate of assistance	Amount spent (Rs. in lakhs)	No. of persons benefitted/ covered 1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Agricultural Workers Pension Scheme	Eligible age is above 60 years. Annual family income should not exceed Rs. 15,000.	1-4-1980	Rs.70 P.M.	1451.46 (as on 31-12-1992)	3,40,776
2.	Kerala Destitute Pension Scheme	Above 65 years age for widowed destitute No age limit. Monthly income not to exceed Rs.100	1960	Rs.65 P.M. Rs.5 P.M. is also being paid to those widows have one or more minor children	1401.32	1,87,310
3.	Special Pension Scheme for the Physically handicapped, disabled and Mentally retarded person	Disabled persons who have minimum 40% disability, Medical Certificate necessary. Beneficiaries monthly income Rs.75 or family income Rs.75 or family income not to exceed Rs.5000 per annum.	1-4-1982	Rs.85 P.M.	895.23	90,306
4.	Kerala Freedom Fighters Pension Scheme	----	1-4-1971	Rs.500 P.M	660.50	12,000
5.	Pension to Sportsmen	The income should not exceed Rs.300 P.M. Minimum age 45 years	1978	Below 60 years Rs.100 P.M. between 60 to 70 years Rs.150 P.M. above 70 years Rs.200 P.M.	---	157
6.	Financial assistance to Leprosy and Cancer patients	Leprosy and Cancer patients are covered, Certificates from hospitals are to be produced. Income of the patients not to exceed Rs.50 P.M.	11/76 onwards	Rs.100 P.M.	31.75	5300
7.	Welfare Fund for Journalists	Financial Assistance is given to the working Journalists/their dependents in distress. The annual income should not exceed Rs.3600	1975	Varies from Rs.100 to Rs.300 P.M.	7.24	192
8.	Welfare Fund for Cine Artists	Financial Assistance is given to Cine Artists in distress. The annual family income should not exceed Rs.3600	1975	Rs.300 P.M.	5.14	145

(1)	(2)	(3)	(4)	(5)	(6)	(7)
9.	Kerala Cashew Workers Relief and Welfare Scheme	Cashew Workers above the age of 60 years	1989	Rs.100 P.M. for workers and Rs.200 P.M. for workers under the category of Staff	41.02	1,03,000 *
10.	Kerala Coir Workers Welfare Fund Scheme	Coir Workers above the age of 60	1989	Rs.75 P.M.	37.50 upto 30-9-1992	3,83,394 *
11.	Kerala Construction Workers Welfare Scheme	Construction workers having one year service and attained 60 years of age	1-1-1991	Rs.75 P.M.	0.53	2,10,000 *
12.	Kerala Khadi Workers Welfare Scheme	Khadi workers having 10 years of service and 60 years of age	1990	Rs.60 P.M.	0.09	11286 *
13.	Kerala Handloom Workers Welfare Scheme	Handloom Workers above the age of 60	1989	Rs.75 P.M.	10.84	24,514 *
14.	Abkari Workers Welfare Scheme	Abkari Workers having 5 years of service and 60 years of age	1990	The minimum pension is fixed at Rs.200 and maximum pension Rs.300 depending on the length of service	---	12,845 *
15.	Kerala Toddy Workers Welfare Fund	---	1970	P.F. contribution at 16% of total wages gratuity at 50% of the monthly average of wages and other facilities	--	46,000 *
16.	Kerala Advocate Clerk Advocate Clerk Welfare Scheme	---	1985	After 5 years of contribution Rs.1650 is given after completing 30 years Rs.10,000	--	2,500 *
17.	Kerala Headload Workers Welfare Scheme	Minimum 3 years of service	1983	Accident benefit at Rs.10,000. The fund will be used for pension bonus, death insurance scheme, superannuation assistance etc.	0.90	16
18.	Kerala Artisans and Skilled Workers Welfare Scheme	Artisans and Skilled Workers above 68 years	1991	Death benefit of Rs.10,000. Rs.500 as medical aid, disability assistance at Rs.100 per month, scholarship for children. Maternity benefit at Rs.500 for two times for Women members, Retirement benefit ect.	--	2,78,595 *
19.	Kerala Motor Workers Welfare Fund	----	1986	Retirement benefit P.F. etc. A member will get about Rs.12,000 for 5 years of contribution and Rs.60,000 if continues as members for 15 years	---	29332 *

(1)	(2)	(3)	(4)	(5)	(6)	(7)
20.	Kerala Fishermen's Welfare Scheme	Benefited Fisherman who has completed 60 years of age	1987	---	220.21	25780
21.	Financial assistance to widows for the marriage of their daughter	Yearly income of the family should not exceed Rs.3000	1978	Rs.1,250	110.00	11000
22.	Tree climbers Welfare Scheme	Financial assistance is given to workers in the event of total accidents and permanent total disability following the accidents	1980	Rs.10,000	12.50 (as on 31-12-1992)	128
23.	Kerala Labour Welfare Fund Scheme	---	1989	---	---	405706 *
24.	Students Accidents Insurance Scheme	All Students	1989	Rs.10,000 in the case of total accidents which cause total disability. In the case of Minor injuries, assistance is subjected to a maximum of Rs.500 in a year	---	5800000*
25.	Unemployment Assistance	Financial assistance is given to those who wait for employment in the live register of Employment Exchange for more than 3 years	1981	Rs.60 P.M.	16119.63	253798
26.	Self Employment Scheme	Unemployed persons	1980	Rs.600 per person	15.92	2653

\* *Workers/members Enrolled under respective schemes.*

**Institutional Care**

10.23 Another dimension of social security is institutional care through abalamandirs, rescue homes, after care hostels, care homes, orphanages, home for dis-

abled mentally retarded etc. Institutional care is provided to more than 30000 persons like orphans, destitutes, aged etc. The relevant data reflecting the physical coverage and nature of benefit extended are highlighted in Table 10.12.

TABLE - 10.12

**Major Social Security and Welfare Schemes Implemented by the Social Welfare Department**

Sl. No.	Name of Scheme	Nature of Care	Year of Starting	Amount spent (Rs. in lakhs)		No. of persons served/benefited	
				1991-92	1992-93	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>I Welfare Institutions run by Government</b>							
a)	Abalamandir (Shelter for waifs and strays)	Care and protection of Destitute women and girls		13.26	17.96	176	191
b)	Govt. Balasadan	Care and protection of Destitute children		---	---	82	86
c)	Rescue Homes	Care and protection of destitute women who are sentenced to detention under the provision of suppression of immoral Traffic in women and girls Act 1986		17.35	23.90	23	158
d)	After Care Hostel (for women)	-do-					
e)	Care Homes						
f)	Custodial Care Homes, Manjeri	Care and protection of Mentally ill children	1974	---	---	179 13	---
g)	Home for Mentally deficient children	Care and protection of Mentally deficient children					
	Thiruvananthapuram		1976			50	50
	Kozhikode		1976			24	25
h)	Care Home for disabled children	Care and Welfare of children (disabled) up to the age of 16					
	Kollam		1960			20	21
	Alappuzha		1981			20	18
	Thrissur		1960	23.92	26.81	22	23
	Thalassery		1981			18	11
i)	Home for Physically handicapped						
	Thiruvananthapuram		1976			25	23
	Alappuzha		1962			25	23
	Ernakulam		1980	1.53	2.20	20	21
	Palakkad		1962			13	16
	Kozhikode		1980			25	19
	Wayanad		1991			18	16
	Idukki		1991			18	9
j)	Children's Home, Nooramad	Care and protection of non-infected healthy children of leper patients				40	19

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
k)	Home for the cured Mental patients (Asha Bhavan)	Care & Protection of cured Mental Patients					
	Thiruvananthapuram		1991			22	31
	Thrissur		1989	3.40	4.52	15	Not functioning now
	Kozhikode		1991			15	9
l)	Rehabilitation Home for the handicapped		1986-87	1.44	1.38	204	167
	<u>Institutions run by Voluntary Organisation</u>	Registered Voluntary Organisations engaged in Social Welfare activities are eligible for the grant		10.36	18.88	1225	1225
a)	Orphanages	Orphans & destitutes old age, beggars		10.36	18.88	1225	1225
	Orphanages (Non-plan)			172.81	302.50	24726	27501
b)	Foundling Homes			14.51	11.05	440	440
c)	Home of aged & infirm					2713	1470
d)	Beggar Homes			2.40	2.50	365	245

## NUTRITION

### Nutrition Status in Kerala

#### 1) Food Pattern and Nutrient Consumption

##### (a) Food Stuffs

10.24 The National Nutrition Monitoring Bureau conducted repeat Surveys during 1980-90 to assess the nutritional status of 10 major states in India. The survey revealed that the intake of cereals and millets is below the recommended level by about 20%. In the case of pulses the intake is 55% below the recommended level. The intake of green leafy vegetables is about 77.5% below the recommended level. It is seen that adequate amount of other vegetables, roots and tubers and sugar and jaggery are consumed. But intake of milk is about 42% below the recommended allowances. The average consumption level of food stuffs in Kerala is given in table 10.13.

TABLE - 10.13  
Average consumption of Food Stuffs in Kerala  
(G/CU/DAY)

Sl. No.	Item	Period of Consumption	
		1975-79	1988-90
1.	Cereals & Millets	341	369
2.	Pulses	14	18
3.	Green Leafy Vegetables	4	9
4.	Other Vegetables	81	65
5.	Roots & Tubers	135	63
6.	Milk & Milk Products	47	87
7.	Fats & Oils	4	14
8.	Sugar & Jaggery	19	32

Ref: National Nutrition Monitoring Bureau Report 1992

37/92/94-11A

##### (b) Nutrient Intake

The Caloric and Protein Intake are below by about 11% and 4% respectively of the recommended levels. The details are given in Table 10.14.

TABLE - 10.14  
Average Consumption of Nutrients  
(per CU/Day) in Kerala

Sl. No.	Nutrient	Period	
		1975-79	1988-90
1.	Protein (g)	46.4	52.9
2.	Energy (Kcal)	1978	2140
3.	Calcium (mg)	507	608
4.	Iron (mg)	20.8	22
5.	Vitamin A (mg)	176	297
6.	Vitamin C (mg)	67	47
7.	Thiamine (mg)	0.72	0.72
8.	Riboflavin (mg)	0.72	0.74
9.	Niacin (mg)	11.5	11.8

Ref: National Nutrition Monitoring Bureau Report 1992.

##### (ii) Minerals and Vitamins

10.25 The intake of calcium found to be below the recommended level. But consumption of iron is below the recommended level by about 8%. In the case of Vitamin A, it is about 60% below what is recommended. The intake of Vitamin C is adequate. But the consumption of thiamine and riboflavin are not adequate.

## 2) Protein Energy-Malnutrition

10.26 Protein energy-malnutrition is the most wide-spread form of malnutrition among pre-school children in the state. A majority of the pre-school children suffer from varying grades of malnutrition. Based on the survey

during 1988-90 it was observed that 47.4% children suffered from mild form of malnutrition, 32.9% suffered from moderate form of malnutrition and 2% suffered from severe form of malnutrition. It was found that the percentage of normal children (both sexes grouped) was 17.7%. The relevant data are presented in Table 10.15.

TABLE - 10.15

### Percent distribution of children according to Nutritional Grades\* in Kerala

Classification	Period	Number	Normal	mild	Moderate	Severe
Children (1-5 years)	1975-79	737	7.5	35.7	46.5	10.3
	1988-90	882	17.7	47.4	32.9	2.0
Boys (1-5 years)	1975-79	373	7.5	32.4	49.9	10.2
	1988-90	451	16.6	47.7	33.3	2.4
Girls (1-5 years)	1975-79	364	7.4	39.0	43.0	10.4
	1988-90	431	18.8	47.1	32.5	1.6

\* NCHS Children-standard

Ref : National Nutrition Monitoru Bureau Report of Repeat Surveys 1988-90

10.27 The nutrition programmes implemented in the state are Integrated Child Development Services, Special Nutrition Programme in Urban areas, Applied Nutrition Programme for Women and Pre-school Children and Mid-day Meal Programme in Schools.

### Pre-school Feeding Programme

10.28 The objective of Pre-school Feeding is to

provide 300 calories per day. There are 99 ICDS projects in the State of which 75 are Central Sector Projects and the remaining 24 are State Sector projects. Under ICDS 8.86 lakh beneficiaries are benefited through a net work of 11565 anganwadies. It is implemented by the Social Welfare Department. The programmes implemented by the Development Department benefited 2.99 lakh children and mothers. The details are given in Table 10.16.

TABLE - 10.16

### Nutrition Programmes - Centres and Beneficiaries

Department Implemented the Programme	Programme	No. of Centres		No. of Beneficiaries	
		1991-92	1992-93	1991-92	1992-93
(1)	(2)	(3)	(4)	(5)	(6)
Social Welfare Department	1. Special Nutrition Programme (upgraded)	--	--	0.47	0.92
	2. Integrated child Development Services	10255	11565	8.55	8.86
		10255	11565	9.02	9.78
Developmental Department	1. Composite programme for women and pre-school children	1427	1434	1.10	0.99
	2. Non-ICDS Balawadies - ANP	67	67	0.90	1.00
	3. Feeding Centres	1516	1367	0.99	1.00
		3010	2868	2.99	2.99
Education Department	School meals programme	9789	9475	24.10	23.42

10.29 Food assistance was received from World Food Programme for implementation of nutrition programme by the Social Welfare Department and Development Department. During 1987-88 - 1991-92 both the departments together received 11659.64 lakh kgs. of food materials and its value amounted to Rs.7903.12 lakhs. The relevant data are highlighted in Table 10.17.

TABLE - 10.17

*Quantity and Value of Food materials received from world Food Programme for Supplementary Feeding in Kerala during 1987-88 - 1991-92*

Year	Quantity (in lakh kgs.)	Value (Rs. in lakhs)
1987-88	2076.90	1154.80
1988-89	1522.02	983.31
1989-90	2043.79	1450.98
1990-91	2131.57	1398.82
1991-92	3885.36	2915.21
	11695.64	7903.12

#### *Noon-meal Programme in School*

10.30 The Noon Meal programme is implemented in Schools to benefit L.P./U.P. children. The per student per meal expenditure is about Re.1 and the expenditure during 1992-93 was about Rs.20 crores. The scheme benefited 24.42 lakhs children which accounted to 54.72 per cent of the L.P./U.P. children in the State.

#### **WELFARE OF SCHEDULED CASTES AND SCHEDULED TRIBES**

10.31 The development and welfare of weaker sections particularly the Scheduled Castes and Scheduled Tribes has received top most priority during the period under review. Multifarious programmes devoting funds from various sources such as Special Component Plan, Tribal Sub Plan, Special Central Assistance etc. have been implemented for the overall development of Scheduled Castes and Scheduled Tribes in the State. The Scheduled Castes and Scheduled Tribes development departments are undertaking several programmes for the uplift of these classes to the normal socio-economic life of other sections of the society. The strategy followed is family oriented economic development schemes for ameliorating poverty and habitat oriented programmes in the case of infrastructural development. Even though poverty alleviation programmes had received priority in the earlier five year plans, it could not make much headway on account of overall development of Scheduled Castes and Scheduled Tribes in the State owing to a variety of reasons. With the advent of Special Component Plan for Scheduled Castes and Tribal Sub Plan

Scheduled Tribes in the late seventies, incessant flow of funds could be ensured by husbanding of resources from various sources such as State and Central Governments and financial institutions and this new approach hastened the process of development of SC/ST.

#### *Special Component Plan and Tribal Sub Plan*

10.32 The concept of Tribal Sub-Plan for Scheduled Tribes was introduced during the Fifth Plan and Special Component Plan for Scheduled Castes during the sixth plan to facilitate monitoring of development programmes for the benefit of Scheduled Castes and Scheduled Tribes. Special Component Plan aims at identification of the existing schemes in each sector of development which can directly benefit the Scheduled Castes, earmarking provisions from the sectoral plans in proportion to their population, channelising institutional credit and extending adequate social amenities to the target group particularly to those below the poverty line. The involvement of sectoral departments in the development process has also been ensured. Even though the Special Component Plan was introduced in Kerala in 1979-80 a realistic and pragmatic approach in the implementation of schemes started only in 1983-84. Since the implementation of Special Component Plan and Tribal Sub Plan schemes was decentralised to the district level. In contrast to the implementation of vertical stereotyped departmental schemes this set up has made it possible to chalkout those schemes which are local need based, beneficiary oriented and income generating. The district level officers of sectoral departments have been given full autonomy to identify schemes considering the local potential and available resources. The schemes formulated by the sectoral departments are approved and monitored by the District Level Working Group headed by the District Collector as Chairman.

10.33 Considering the peculiar nature of the Scheduled Tribes concentration and to ensure effective co-ordination of development programmes, Integrated Tribal Development Projects were started during the Fifty Five year Plan. At present there are seven ITDPs and seven Tribal Development Offices in the State. The ITD Projects are located at Nedumangadu, Idukki, Nilambur, Kanjirappally, Attappady, Kalpetta and Kannur. About 75 percent of the Scheduled Tribe population is covered under ITD Projects. The schemes for STs in the ITD project area and outside ITDP area form part of Tribal Sub Plan and are implemented with the approval and supervision of District Level Working Group.

10.34 Funds earmarked by the various sectoral departments form the corpus of the outlay for SCP and TSP. Apart from this, Special Central Assistance is released by Government of India every year on the basis of certain criteria. SCA is given as an additionality to State plan resources and has a multiplier effect. District wise

distribution of outlay under SCP and TSP are made along with the Annual Budget and hence the district Level officers and District level Working Group could start the implementation of schemes sufficiently early.

#### *Profile of Scheduled Castes and Scheduled Tribes*

10.35 The Scheduled Caste population in Kerala is 28.87 lakhs according to 1991 Census and this constitute 9.92 percent of the total population. The percentage of Scheduled Caste population was 10.2 in 1981 and there is a marginal decline of 0.10% in 1991. Similarly the decadal growth rate (1981-91) shows that the rate of growth of Scheduled Caste population is 13.22% where as it is 14.32% in the case of general population. Of the total SC population, the highest percentage is in Palakkad District (13.11%) and the lowest is in Wayanad District (0.96%). As regards percentage of SC population to total district population, Palakkad has the largest content of 15.89% and Kannur has the lowest of 4.05%. There are 5.93 lakh SC household which constitute 10.76% of the total households in the State. The average size of SC household is 4.9 where as it is 5.3 for general population. In the case of sex ratio there is 1029 females per 1000 males among Scheduled Castes and the corresponding figure for general population is 1036.

10.36 The literacy rate among Scheduled Castes is 79.66 (male 85.22% and female 74.31%) as against the total literacy rate of 89.81 in the State (male 93.62% and female 86.17%). Literacy among Scheduled Castes is highest in Kottayam District (90.28%) and lowest in Kasaragod (63.61%).

10.37 Work (main and marginal) participation rate is 41.21% for SC and 31.43% for total population. Marginal workers among Scheduled Castes account for 4.38%, where as it is 2.90% among total population. Agricultural labourers account for 53.78% of SC workers and cultivators constitute only 3.15%. Workers in forestry, fishing, hunting, plantations etc. together accounts for 10.87% of SC workers and their percentage in manufacturing, processing, servicing and repairs constitute 9.52.

10.38 According to 1991 census the Scheduled Tribes constitute 1.10% (3.20 lakhs) of the total population of the State. During the decade 1981-91 the growth rate was 22.75% for STs against 14.32% for total population. Sex ratio of tribal population is 996 females per 1000 males. There are 69441 Scheduled Tribe households in the State. More than 77 percent of Scheduled Tribes are in the Districts of Wayanad, Idukki, Palakkad, Kannur and Kasaragod. Wayanad District alone accounts for 35.82% of the total ST population in the State and this constitute 17.11 percent of the total population of the district.

10.39 Literacy rate off Scheduled Tribes in Kerala is 57.22% as against 89.81% for the general

population. The male literacy is 63.38% and that of female is 51.07%. Among districts, the highest literacy rate is recorded in Kottayam (88.69%) and the lowest is in Palakkad (34.87%). As part of the total literacy programme of the State, a sub project, for tribal literacy programme was launched in September 1991. This programme could make nearly 64000 Scheduled Tribe literates and there by the State declared total literacy among Scheduled Tribes during July 1993. The tribal literacy rate estimated by the Kerala Saksharatha Samithi as on 3.7.93 is 80.71%. However, the programme could not achieve the desired level of impact in certain remote tribal pockets. In order to cover the remaining population and to consolidate the literacy status already achieved by the Scheduled Tribes, the State Saksharatha Samithi has launched a post-literacy and continuing education programme for them.

10.40 The combined work (main and marginal) participation rate is 46.04% for Scheduled Tribes. Marginal workers account for 5.76%, agricultural labourers constitute 55.47% of Scheduled Tribe workers and 16.66% of them are cultivators. Workers in forestry, fishing, hunting, plantations etc. account for 15.47% while 5.28% belong to service category. The ST workers in manufacturing, processing, servicing and repairs accounts for 3.43%.

10.41 There are 35 Scheduled Tribe Communities in the State. Scheduled Tribe Communities with pre-agricultural stage of development, stagnant population and very low literacy are recognised as Primitive Tribes and in Kerala there are five such communities, viz., Kuttanickans, Cholanaickans, Kadars, Kurumbas and Koragas, and they constitute 4.5% of the total ST population.

10.42 The basic statistics regarding the Scheduled Castes and Scheduled Tribes according to 1991 census is given in Table 10.18 and district-wise distribution of SC/ST population is given in Table 10.19 respectively.

TABLE - 10.19

#### *Basic Statistics on Scheduled Castes and Scheduled Tribes (1991 Census)*

Description	Unit	Scheduled Castes	Scheduled Tribes	Total
(1)	(2)	(3)	(4)	(5)
Households	No	593676	69441	5513200
Population	"	2886522	320967	29098518
0-6 Population	"	372301	48237	3836900
Literates	"	2002786	156061	22686461
Main Workers	"	1062922	129297	8301087
Marginal Workers	"	126488	18474	845031
Non Workers	"	1697112	173196	19952400
Size of Household	"	4.9	4.6	5.3
Decadal Growth Rate (%)	"	13.22	22.75	14.32



(1)	(2)	(3)	(4)	(5)
Sex ratio per	1000	1029	996	1036
Literacy rate Total	%	79.66	57.22	89.81
Male	"	85.22	63.38	93.62
Female	"	74.31	51.07	86.17
Work Participation rate				
Total	"	41.21	46.04	31.43
Male	"	50.96	55.14	47.58
Female	"	31.73	36.90	15.85
Cultivators	"	3.10	16.66	12.24
Agricultural Labourers	"	53.78	55.47	25.54
Livestock, Forestry, Fishing, Hunting, Plantations etc.	"	10.87	15.47	9.24
Mining and Quarrying	"	1.88	0.33	0.99
Manufacturing and Processing				
Servicing and Repairs in				
(i) Household Industry	"	2.44	0.47	2.58
(ii) Other than Household Industry	"	7.08	2.96	11.60
Construction	"	3.60	0.48	4.00
Trade and Commerce	"	2.83	1.38	12.64
Transport, Storage & Communication	"	2.72	1.50	5.99
Other Services	"	10.70	5.28	15.18

TABLE - 10.19

*Population of Scheduled Castes and Scheduled Tribes  
(1991 Census)*

(in lakhs)

Sl. No.	District	Total Population	Scheduled Castes	Scheduled Tribes
(1)	(2)	(3)	(4)	(5)
1.	Thiruvananthapuram	29.38	3.43	0.16
2.	Kollam	23.98	3.06	0.04
3.	Pathanamthitta	11.87	1.58	0.07
4.	Alappuzha	19.90	1.90	0.03
5.	Kottayam	18.25	1.36	0.18
6.	Idukki	10.77	1.57	0.50
7.	Ernakulam	28.12	2.42	0.05
8.	Thrissur	27.35	3.35	0.04
9.	Palakkad	23.76	3.78	0.35
10.	Malappuram	30.93	2.56	0.11
11.	Kozhikode	26.14	1.85	0.05
12.	Wayanad	6.71	0.28	1.15
13.	Kannur	22.44	0.91	0.18
14.	Kasaragod	10.70	0.82	0.29
	<b>Total</b>	<b>290.32</b>	<b>28.87</b>	<b>3.20</b>

10.43 The Scheduled Castes and Scheduled Tribes Development Departments undertake the major lead in implementing various schemes under plan and non-plan for the development of education, welfare, economic status, infrastructural facilities and health of Scheduled Castes and Scheduled Tribes in the State. Among educational programmes, scholarships and stipends at pre-matric and post-matric levels, hostels, better educational facilities to bright students, special incentives to talented students, book banks to professional colleges and polytechnics, coaching for competitive examinations, model residential schools, special incentive to indigent scheduled caste girls etc. deserve special mention. Under welfare programmes construction of houses, rehabilitation housing scheme, improvement of housing facilities, inter caste marriage grant, enforcement of PCR Act, programmes for vulnerable groups and primitive tribes are to be specially mentioned. Intensive habitat development programme, financial assistance for self employment, assistance to the major tribal rehabilitation projects etc. are the schemes which are worth mentioning under economic development schemes. For health care, the Scheduled Tribes Development Department takes several measures. Majority of schemes under infrastructural development are implemented by sectoral departments. Besides, the sectoral departments are also implementing various schemes for the development of SC/ST under SCP and TSP.

10.44 The enrolment of SC/ST students at school level as on 1-7-93 and college level during 1991-93 are furnished in Table 10.20 and 10.21 respectively.

TABLE - 10.20

*Enrolment of SC/ST Students at School Level  
as on 1-7-1993*

Section	Student Strength				
	General	SC	% to Total	ST	% to Total
L.P.	2362250	270565	11.50	33642	1.42
U.P.	1903330	215847	11.34	19196	1.00
H.S.	1585777	166792	10.51	11451	0.72
<b>Total</b>	<b>5851357</b>	<b>653204</b>	<b>11.16</b>	<b>64289</b>	<b>1.10</b>

TABLE 10.21

*Enrollment of SC/ST Students in Arts and  
Science Colleges (1992-93)*

Course	Total Sanctioned Strength	Scheduled Castes/ Scheduled Tribes	Percentage
1. Pre-degree	102459	17857	17.43
2. Degree	45466	4029	8.86
3. Post-graduate	5416	632	11.67

10.45 Ason 1-7-1993 out of total students in the L.P. Section 11.50% belonged to SC and 1.42% ST. At the U.P. and H.S. level 11.34% and 10.51% were SC students. The corresponding percentage for ST students were 1.00 and 0.72 respectively. At the pre-degree, degree and post graduate level 17.43%, 8.86% and 11.67% respectively belonged to SC/ST category.

10.46 There were 1066 SC/ST students in various technical high schools out of a total strength of 7929 students in 1992-93. During 1992-92 the corresponding strength was 801 and 7907 respectively. The enrolment of students during 1992-93 for technical education reveals that only SC students were got admitted in various institutions and there were no ST representation in any of the branches. There were 306 SC students out of 4816 in various polytechnics and 282 students out of 2687 for various engineering (B.Tech.) courses. For (M.Tech. Engineering) course there were neither SC nor ST students during the year. In 1991-92 and 1992-93, 61 SC and 17 ST students were admitted to various medical courses. The total strength was 782. For para-medical courses there were 34 SC students in 1992-93. The representation of ST students in para medical courses appears to be very poor. The admission details of Scheduled Castes and Scheduled Tribe students for various medical and para-medical courses during 1991-92 and 1992-93 are given in Appendix 10.6.

10.47 The Scheduled Castes Development Department is running several institutions. There are 79 balawadies, 66 boys hostels, 52 girls hostels, 51 nursery schools, 11 study centres, 44 industrial production centres/ production cum training centres, 3 pre-examination training centres, 2 sports hostels and one coaching centre during the period under review. The district-wise details of institutions are given in Appendix 10.7.

10.48 The Department has constructed 1135 houses for the SC people during 1992-93 as against 718 during 1991-92. The district wise details of the number of houses constructed are furnished in Appendix 10.8.

10.49 The Scheduled Castes Development Department has incurred a total plan and non-plan expenditure of Rs.1424.34 lakhs and Rs.2815.83 lakhs respectively during 1992-93 as against the corresponding expenditure of Rs.1240.96 lakhs and Rs.2566.37 lakhs for 1991-92. The number of beneficiaries of various programmes of the department for 1992-92 and 1992-93 is given in Table-10.22.

TABLE - 10.22

*Number of Beneficiaries of Various Programmes*

Scheme	1991-92	1992-93
(1)	(2)	(3)
1. Balwady-cum-feeding centres	2147	2238
2. Pre-matric hostels	2890	3022
3. Pre-matric studies	627915	653434
4. Post-matric studies	47997	42340
5. Post-matric hostels	888	945
6. Incentive to talented students	197	244
7. Tuition system	1342	1084
8. Study centres	385	11
9. Financial assistance to failed SC students	727	571
10. Inter-caste marriage grants	943	592

10.50 The Scheduled Tribes Development Department give primary importance to the educational development of Scheduled Tribes. During 1992-93 the department has spent Rs.25.58 lakhs and Rs.209.55 lakhs respectively under plan and non-plan for providing scholarships, stipends, lumpsum grants etc. to the pre-matric and post-matric students. The expenditure on a count of this during the previous year, i.e., 1991-92 was Rs.23.73 lakhs and 211.93 lakhs respectively. A total number of 67987 students were benefited in 1992-93 while the figure for 1991-92 was 72982. For the educational development of Scheduled Tribes the department maintain 115 pre-matric hostels, 43 balawadies, 14 nursery schools and 12 single teacher schools. District-wise details of institutions managed by the Department are given in Appendix - 10.9. The total plan expenditure on account of all the educational development programmes of the department in 1992-93 amounted to Rs.176.76 lakhs as against the budget provision of Rs.203.50 lakhs. The non-plan expenditure was Rs.493.54 lakhs against the budget provision of Rs.470.73 lakhs. The plan and non-plan expenditure were Rs.101.44 lakhs and 436.34 lakhs respectively as against the budget provision of Rs.174.00 lakhs and 443.20 lakhs in 1991-92.

10.51 Under economic development programme, the department has utilised Rs.137.21 lakhs under plan and Rs.4.00 lakhs under non-plan during 1992-93 as against the budget outlay of Rs.143.00 lakhs and Rs.4.50 lakhs respectively. During 1991-92, the expenditure under this was Rs.147.45 lakhs and Rs.4.77 lakhs respectively under plan and non-plan out of the budgeted outlay of Rs.144.50 lakhs and Rs.4.50 lakhs.

10.52 The problem of housing among Scheduled Tribes is very crucial. It is estimated that there are

21000 houseless Scheduled Tribe families in the State. During 1992-93 a total number of 626 houses were constructed as against 520 houses in 1991-92. The district wise number of houses constructed during 1991-92 and 1992-93 are given in Appendix - 10.10. The expenditure on account of this was Rs.72.00 lakhs under plan and Rs.10.99 lakhs under non-plan in 1992-93 and Rs.57.94 lakhs and Rs.7.42 lakhs respectively in 1991-92.

10.53 Government have taken several steps for providing timely medical facilities to Scheduled Tribes. There are seventeen ayurveda dispensaries, one ayurveda hospital, three allopathic dispensaries, one allopathic hospital, five midwifery centres, and two mobile medical units under the Scheduled Tribes Development Department. Besides, a full fledged allopathic hospital is nearing completion at Mananthawady. Necessary financial assistance is also given to Scheduled Tribes for immediate medical treatment as discretionary grant. Out of the budgeted outlay of Rs.22.00 lakhs under plan and Rs.26.73 lakhs under non-plan the expenditure incurred for health programmes were Rs.11.74 lakhs and Rs.20.40 lakhs respectively in 1991-92. During 1992-93 the corresponding expenditure under plan and non plan were Rs.11.00 lakhs and Rs.23.04 lakhs as against the budget provision of Rs.11.00 lakhs and Rs.34.24 lakhs.

10.54 The total plan expenditure of the department including centrally sponsored schemes was Rs.632.96 lakhs in 1992-93 and non-plan expenditure was Rs.693.95 lakhs. During 1991-92 the plan and non plan expenditure were Rs.507.80 lakhs and Rs.615.80 lakhs respectively. The details of the number of scheduled tribe students, families, beneficiaries etc. assisted during 1992-93 through various programmes of Scheduled Tribes Development Department under plan and non plan, as compared with the year 1991-92 are given in Table 10.23.

TABLE - 10.22

*Scheduled Tribe Beneficiaries of Various Programmes*

Sector	Plan		Non-Plan	
	1991-92	1992-93	1991-92	1992-93
Educational programmes (Students)	5445	4500	65610	65518
Health programmes (Beneficiaries)	18600	28500	22400	35600
Economic Development Programmes (Families)	8015	9650	1125	1550
Others (Beneficiaries)	1865	2605	8035	11283

10.55 Apart from the SC/ST Development Departments the Kerala State Development Corporation for SC/ST (KSDC) and Kerala Institute for Research Training and Development Studies of SC/ST (KIRTADS) are also implementing various programmes for the development of SC/ST.

10.56 The important schemes of the Corporation are loan to purchase of agricultural land, foreign employment, housing, margin money and seed money. The Corporation has spent an amount of Rs.845.00 lakhs during 1992-93 as against the previous years (1991-92) expenditure of Rs.401.04 lakhs for various schemes. A total number of 3983 beneficiaries are assisted during 1992-93 and as against 2930 beneficiaries in 1991-92. The scheme wise details of financial and physical achievements are given in Appendix-10.11.

10.57 The Kerala Institute for Research, Training and Development Studies of SC/ST is a specialised agency concerned with conducting research studies. The programmes of the Institute are assisted jointly by Central and State Governments on 50:50 basis. Various research and training programmes are undertaken by the Institute. During 1992-93 the Institute has utilised an amount of Rs.19.33 lakhs for implementing its schemes.

10.58 The representation of Scheduled Castes and Scheduled Tribes in Government employment as on 1-1-93 is furnished in Table 10.24.

TABLE - 10.24

*Representation of SC/ST in Government Service*

Category	Total	SC	ST	Percentage	
				SC	ST
Gazetted	22333	2253	111	10.08	0.50
Non-Gazetted	247947	23884	1810	9.63	0.73
Last Grade	38710	5117	449	13.21	1.16

10.59 The unemployment problems among Scheduled Castes and Scheduled Tribes continue to be a very crucial problem as in the case of general people. The employment exchange registers show that 397312. Scheduled Caste candidates and 20467 Scheduled Tribe candidates have registered with the exchanges as on 31-12-1993. District-wise details are given in Appendix 10.12.

## INSTITUTIONAL FINANCE

The Financial Institutions are important development intermediaries. They have an important role to play in the socio-economic development of countries like India. The role of such institutions becomes all the more crucial in the context of the increasing budgetary strain of the Government resulting from its expanded development activities. The major All India Financial Institutions are Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), Industrial Credit and Investment Corporation of India, Unit Trust of India (UTI), Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC), National Bank for Agriculture and Rural Development (NABARD) and National Co-operative Development Corporation (NCDC).

11.2 The Overall performance of all India Financial Institutions during 1992-93, in terms of the quantum of assistances disbursed was significantly better than that of the previous year, as there was a marked increase of 42% in the disbursement during 1992-93, compared to the increase of only 27% during 1991-92. Out of a total of Rs.20008.8 crores disbursed by all the institutions, the lion's share of Rs.6338 crores (31.7%) was advanced by IDBI, followed by UTI Rs.4548.3 crores (22.7%), ICICI Rs.3315.2 crore (16.6%) and NABARD Rs.2359.1 crore (11.8%). The lowest disbursement was by NCDC Rs.325.2 crore (1.6%). Coming to the institution wise performance while the disbursements by LIC and NCDC declined by 2.8% and 0.6% respectively during the year 1992-93 over the previous year, all other institutions showed increases during the same period, 204% by GIC, 126% by UTI, 78% by ICICI, 24% by IDBI, 15% by NABARD and 8% by IFCI.

11.3 Regarding state-wise disbursements, a sizable amount of Rs.9339.10 crore (46.7%) was accounted for by the four major states viz. Madhya Pradesh, Uttar Pradesh, Gujarat and Maharashtra, all in the central and western regions of the country. Maharashtra retained the top place with 24.6% of the total disbursements, followed by Gujarat (11%) Andhra Pradesh (7.1%) and Tamil Nadu (6.7%). The position of Kerala was very low (1.4%) and it to be lowest, barring Assam (0.6%) Kerala's share of Rs.281.1 crore was mainly from IDBI Rs.113.5 (40.41%) NABARD Rs.103.9 crore (37%) and ICICI Rs.41.6 crore (14.8%). A significant point relating to flow of credit to Kerala from the All India Financial Institutions is that the credit absorption capacity of

the state is very poor for a variety, of reasons. The relevant figures are given in Appendix 11.1.

11.4 The Cumulative disbursements by All India Financial Institutions (excluding GIC) as at the end of March 1993 made a marked increase of 21.6% over the corresponding figure of 1992. Out of the total disbursements of Rs.110235.3 crore, major share of Rs.43565.2 crore (39.5%) was disbursed by IDBI, followed by NABARD Rs.18723.1 (17%) and ICICI Rs.18497.6 (16.8%). The share of Kerala was only Rs.2463.6 crore (2.2%) which was the lowest among major states. The details of cumulative disbursements are given in Appendix 11.2.

11.5 The per capita assistance disbursed by All India Financial Institutions during 1992-93 for the country as a whole increased by 36.8%, from Rs.144.5 in 1992-93 to Rs.197.7, as compared to an increase by 33.3% in 1991-92. The per capita assistance for all major states excepting Maharashtra and Gujarat, are below the national per capita assistance of Rs.197.7. The per capita assistance is highest in respect of Maharashtra (Rs.565.3), followed by Gujarat (Rs.485.1), Tamil Nadu (Rs.196.7) and Andhra Pradesh (Rs.167.9). Though the per capita disbursement improved at the national level, the case is not same with all the states. The per capita disbursement for Andhra Pradesh declined from Rs.195.7 to Rs.167.5, Assam from Rs.51 to Rs.35.4, Haryana from Rs.176.7 to Rs.163, Orissa from Rs.86, to Rs.78.9 and Uttar Pradesh from Rs.66.3 to Rs.55. The state-wise per capita assistances disbursed during 1991-92 and 1992-93 are given in Appendix 11.3.

11.6 After nationalisation of banks in 1969, commercial banks in India made rapid strides in opening branches, mobilising deposits and in advancing credit to various sectors of developments. With the annual growth rate of 15.4% the number of bank offices rose from 8262 in June 1969 to 60690 in March 1992 and again to 61235 in March 1993, registering more than seven fold increase. With regard to the geographical coverage of bank offices, Uttar Pradesh retained top position with 8557 (14%) bank offices, followed by Maharashtra 5659 (9.3%) and Bihar 4897 (8%), Assam, with 1221 (2%) bank offices was at the bottom. The number of bank offices per lakh of population is the highest in Punjab (10.5), followed by Kerala (9.6), Karnataka (9.3), Gujarat (8.1), Tamil Nadu (7.6) and Haryana (6.5). The state wise growth of bank offices in India is given in Appendix 11.4.

11.7 The trends in deposits and credits of Public Sector Banks show that, after nationalisation deposits and advances have increased at annual growth rate of 34% and 30% respectively. The total deposits stood at Rs.232753 crore and the total advances at Rs.142935 crore, as at the end of March 1993. In other words, the aggregate deposit has increased by 59 times and the aggregate advances by 37 times during the period 1969-1993. The credit deposit ratios of public sector banks in the country was 98.4 in 1969; which gradually started declining for the years. It came down to 60% in 1992. The ratio at the end of March 1993 was 61.4%. The CD ratios of nine states were below the all India average of 61.4. The states with CD ratios higher than that of all India CD ratio are Tamil Nadu (87.4), Andhra Pradesh (81.6), Karnataka (76.2), Maharashtra (68.5), Orissa (64.8) and Madhya Pradesh (62). The CD ratio of Kerala continues to decline. The ratio for public sector banks came down from 65.8 in 1969 to 58.7 in 1992 and to an all time low of 47.2 in March 1993. The CD ratio of all the banks in Kerala, including private banks, has declined from 64.77 in 1988 to 51.73 in 1992 and an all time low of 44.13 in September 1993. It is also observed that the rate of increase of advances by banks in Kerala has also declined over the years; from 18 per cent in 1989 to 11.3 per cent in September 1993. The Reserve Bank of India has appointed a special Task Force to examine the reasons for the steep fall in the CD ratio of banks in Kerala. The Committee is expected to submit its report shortly. The deposits, credits and credit deposit ratios of Public Sector Banks as at the end of March 1993 are shown in Table 11.1. While the deposits have

been increasing at the rate of 22.6 per cent in recent years the advances have increased only by about 13.5 per cent.

11.8 The aggregate deposit increased by 25.2% in 1992-93 over the preceding year, as against 23.1% in 1991-92. The corresponding figures with respect of advances are 16.3% in 1992-93 and 7.9% in 1991-92. This shows that the credit absorption capacity of the state is not growing in line with the increases in deposits.

11.9 The NRE deposits in the State have shown significant increase, the annual growth rate being 30.3%. The deposits have increased by 14.5% in 1990-91, 31.9% in 1991-92 and 48% in 1992-93, over the preceding years. At the end of September 1993, the total NRE deposits stood at Rs.5137.60 crore, which accounts for 38.6% of the total bank deposits. The corresponding percentage in 1992 was only 35, With NRE deposit of Rs.3490 crores. In terms of the Country's total NRE deposits of Rs.36370 crores as at the end of September 1993, Kerala's share was 14 per cent.

11.10 If the State is to benefit in a larger measure from the increasing pool of resources with All India Financial Institutions and commercial banks, a concerted effort would be needed to accelerate the tempo of growth by conceiving as many viable projects as possible in the different development sectors, so that the credit absorptive capacity of the economy is enhanced and thereby the flow of credit in the economy is augmented.

TABLE - 11.10

## Deposits and Credits of Public Sector Banks (As at the end of March 1993)

States	Deposit					Credit					Credit-Deposit Ratio (%)				
	1969	1991	1992	1993	1969	1991	1992	1993	1969	1991	1992	1993	(11)	(12)	(13)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)			
1. Andhra Pradesh	121	10036	10920	12381	122	8283	8905	10104	100.8	82.5	81.5	81.6			
2. Assam	33	2052	2234	2466	13	1006	1078	1172	39.4	49.0	48.3	47.5			
3. Bihar	169	8482	9219	10260	52	3348	3518	3830	30.8	39.5	38.2	37.3			
4. Gujarat	401	11443	13457	15817	195	6989	7217	8308	48.6	61.1	53.6	52.5			
5. Haryana	49	3833	4119	4787	23	2262	2307	2649	46.9	59.0	56.0	55.3			
6. Karnataka	188	8300	9705	11541	143	7370	7591	8794	76.1	88.8	78.2	76.2			
7. Kerala	177	6027	7084	8792	77	3589	3607	4154	65.8	58.7	50.9	47.2			
8. Madhya Pradesh	107	7196	8014	8885	68	5424	5065	5512	58.9	75.4	63.2	62.0			
9. Maharashtra	903	29839	38900	46903	911	23803	25040	32118	100.1	80.0	64.4	68.5			
10. Orissa	29	2461	2815	3320	15	1929	1963	2151	51.7	78.4	69.7	64.8			
11. Punjab	185	9839	10865	12430	50	4324	4578	5281	27.0	44.0	42.1	42.5			
12. Rajasthan	74	4697	5298	6162	38	2730	2997	3488	51.4	58.1	56.6	56.6			
13. Tamil Nadu	233	11607	12862	15891	311	11430	12488	13887	133.5	98.5	97.1	87.4			
14. Uttar Pradesh	337	18233	20291	22806	154	8692	8948	9593	45.7	47.7	44.1	42.1			
15. West Bengal	456	16170	18158	21011	526	8437	8788	10530	115.4	32.2	48.4	50.1			
Total	3402	150115	173941	203452	2693	99566	104090	121571	79.2	66.3	59.8	59.8			
Total - All India	3897	172393	199531	232753	3835	112475	119692	142935	98.4	65.2	60.0	61.4			

Source : 1. RBI Bulletin  
2. CMIE

# **A P P E N D I X**

STATISTICAL TABLES

## Appendix Tables

Appendix No.	Title	Page No.
(1)	(2)	(3)
2.1	Sectoral Distribution of Net Domestic Product at Factor Cost - India	167
2.2	Net State Domestic Product at Factor Cost by Industry of Origin (At constant prices)	168
2.3	Net State Domestic Product at Factor cost by Industry of Origin (At current prices)	169
2.4	Sector-wise distribution of Net Domestic product of Districts at Factor Cost (New series)	170
2.5	District-wise distribution of State Income at Current and constant (1980-81) prices - 1992-93	174
2.6	Distribution of work seekers in Kerala by Educational Levels	175
2.7	Number of professional and Technical work seekers, Kerala	175
2.8	Employment trends in the public and private organised sector in the State	176
2.9	Country-wise deployment of personnel by ODEPC	177
2.10	Unemployment Assistance Scheme : Kerala 1982-83 to 1993-94	177
2.11	Area and Density of population - 1991	178
2.12	Rural - Urban Distribution of population	178
2.13	Three-year moving average of Birth and Death rates Kerala and India (1981-1992)	179
2.14	Three-year moving Average of Infant mortality rates Kerala and India (1981-1992)	179
2.15	Estimated Annual Live Birth Rates, Death Rates and Infant mortality Rate for major States - 1992	180
<b>Prices, Cost of Living &amp; Wages</b>		
3.1	Wholesale price index of Agricultural commodities, Kerala 1993	181
3.2	Average retail prices of essential commodities for the year 1993	182
3.3	Consumer price index (Cost of Living Index) numbers for Agricultural and Industrial Workers - Kerala 1993	184
3.4	Index number of wholesale prices by group and sub groups - All India	185
3.5	Consumer price Index numbers for Industrial worker - All India and selected centers	187
3.6	Consumer price Index numbers for Agricultural Labourers - State-wise	188
3.7	Consumer Price Index Number-- urban and Non-Manual Employees - All India and selected centers	189
3.8	Whole sale price Index of Agricultural commodities - Kerala 1981-1993	190
<b>Agriculture</b>		
4.1	Coverage of HYV rice in Kerala 1981-82 to 1992-93	191
4.2	District-wise Institutions under the Animal Husbandry Department	192
4.3	Animal Husbandry Activities during 1992-93	194
4.4	Average price of Livestock products and feeds in the State for the last 3 years	194
4.5	District-wise distribution of Fishermen population in Kerala 1993 (Estimated)	195
4.6	Species-wise composition of Marine Fish Landings in Kerala from 1986-1992	195
4.7	Species-wise Inland Fish production in Kerala 1990-91, 1991-92 and 1992-93	196
4.8	Details of Fishermen Co-operatives in Kerala. (1992-93)	197



(1)	(2)	(3)
4.9	Details of Physical and Financial Achievements under the Integrated Fisheries Development Project (NCDC assisted) as on 31-3-1993	198
4.10	Details of fisheries Works under Harbour Engineering Department	199
4.11	Physical and Financial Achievements of Kerala Fishermen Welfare Fund Board as on 31-11-1993	202
4.12	Average Beach price of Selected Marine Fishes in Kerala	203
4.13	Agency-wise Disbursement of Refiner:es Assistance by NABARD	204
4.14	Purpose-wise Disbursement by NABARD	204
4.15	Selected Indicators of the Credit operations of the Primary Agricultural Credit Societies	205
4.16	Selected Indicators of the performance of Agricultural Credit Societies	206
4.17	Ordinary Loans Advanced by KSCARDB	206
4.18	Scheme loans Advanced by KSCARDB at primary level	207
4.19	Loan advanced and Debentures floated by K.S.C.A.R.D.B	207
4.20	Details of Release of Assistance by NCDC during 1992-93	208
4.21	Division-wise Area of Forests in Kerala	209
4.22	Species-wise area under Forest plantations	210
4.23	Production of Major Forest Produce	211
4.24	Forest Revenue in Kerala	211
4.25	Physical and Financial Achievements under Social Forestry (1991-92 and 1992-93)	212
4.26	Performance of Kerala Social Forestry project during 1991-92 and 1992-93	212
4.27	State showing selected Physical Achievements (Civil Works) under Kerala Social Forestry project as on 1993 March. (Since commencement of the project)	213
<b>Irrigation and Power</b>		
5.1	Irrigation, Flood control, Anti-sea Erosion and Command Area Development - Outlay and Expenditure during various plan periods	214
5.2	Major and Medium Irrigation projects in Kerala	215
5.3	Major and medium Irrigation - Physical and Financial Achievements during 1992-93	217
5.4	Physical and Financial Achievement under Minor Irrigation programme	218
5.5	Details of minor Irrigation works implemented during 1992-93	218
5.6	Physical and Financial Achievement of Flood control and Anti-sea Erosion programme	219
5.7	Details of Flood control and Anti-sea Erosion works completed during 1992-93	219
5.8	Physical and Financial Achievement of command Area Development programme during 1992-93	219
5.9	Growth of Kerala power system at a Glance 1992 and 1993	220
5.10	Outlay and Expenditure During various plan periods on Power Development	221
5.11	Power projects and power generation as on 31-3-1993	222
5.12	Details of cost Expenditure, Potential expected year of commissioning of Hydro-Electric Projects in Kerala - 1993	222
5.13	Pattern of Power consumption and Revenue collected during 1992-93	223
5.14	Average realisation from sale of power	223

(1)	(2)	(3)
	<b>Industries</b>	
6.1	Index of Industrial production	224
6.2	Capital Invested and Employment in respect of Government owned companies	225
6.3	Performance of Government owned companies in respect of production and sales Turnover 1991-92 and 1992-93	226
6.4	Installed capacity utilisation of the Government Owned Companies during 1991-92 and 1992-93	227
6.5	Capital invested and Employment in respect of Government Majority companies in Kerala	229
6.6	Performance of Government majority companies in Terms of Value of production and Sales Turnover 1991-92 and 1992-93	230
6.7	Installed capacity utilisation in Government majority companies in Kerala 1991-92 and 1992-93	231
6.8	Group-wise working Results of State public Sector Industrial Undertakings in Kerala	233
6.9	State-wise value of property (Gross block) under Public sector Enterprises	234
6.10	Capital Invested and Employment in respect of Government of India Companies working in Kerala	235
6.11	Performance of Government of India Companies in Kerala in Terms of production and sales Turnover 1991-92 and 1992-93	235
6.12	Government of India Companies Functioning in Kerala - main Features	236
6.13	Production and Capacity Utilisation in Government of India Companies working in Kerala 1991-92 and 1992-93	237
6.14	District-wise details of Small Scale Industrial units Registered in Kerala during 1992-93	239
6.15	District-wise details of registered small scale units in Kerala as on 31st March 1993	239
6.16	Details of Entrepreneurship Development programmes conducted during 1992-93	240
6.17	Achievements under Self Employment programme during 1992-93	240
6.18	District wise details of Disbursement of Loan by KFC 1992-93	241
6.19	Kerala Financial Corporation, Thiruvananthapuram Summary of loan operations as on 31-3-1993	242
6.20	Khadi and Village Industries - Production, Sales, Employment and Wages paid during 1992-93	244
6.21	Coir Co-operative Societies in Kerala	245
6.22	Export of coir and Coir products from India during 1991-92 and 1992-93	247
6.23	Activities of Coir Co-operative societies	247
6.24	Production and productivity under Handloom Sector in Kerala	248
6.25	Working Result of Handloom Apex Society (Hantex)	250
6.26	Working Results of Kerala State Handloom Development Corporation Ltd. Kannur	250
6.27	Production and productivity under power loom Industry	251
6.28	Foreign Exchange Earnings of India from Cashew Industry	251
6.29	Import of Raw Cashewnuts into India	252
6.30	Working Results of Kerala State Cashew workers Apex Industrial Co-operative Society (CAPEX)	253
6.31	Revenue collection from Mining Sector 1985-86 to 1992-93	254
6.32	Production and Sale of Mineral Sand	254
6.33	Production and Sale of Major Minerals (Other than Mineral sand)	255

(1)	(2)	(3)
<b>Transport and Communications</b>		
7.1	Division-wise and category-wise length of Roads under P.W.D as on 1-4-1993	256
7.2	Division wise & Surface wise length of roads maintained by P.W.D. as on 1-4-1993	257
7.3	District wise length of Roads maintained by the Irrigation Department	258
7.4	Motor Vehicles road accidents in Kerala 1992-93	259
7.5	Cause-wise motor vehicle accidents in Kerala 1992-93	260
7.6	Number of road accidents by class of Vehicles 1992-93	261
7.7	Motor Vehicle accidents by day/night 1992-93	262
7.8	Growth of motor Vehicles in Kerala	263
7.9	District-wise number of vehicles registered in the State during the year 1991-92 & 1992-93	284
7.10	District wise growth index of motor vehicles in Kerala	266
7.11	KSRTC - Operational Statistics 1992-93	267
7.12	KSRTC - Operational ratios 1992-93	269
7.13	Air traffic (Indian Airlines) from Thiruvananthapuram, Kochi and Kozhikode 1980-81 to 1992-93	271
7.14	Number of Passports issued by the Passport Offices at Thiruvananthapuram, Kochi and Kozhikode Since 1980 to 1993	272
7.15	Number and Tonnage of steamers and sailing vessels which called at the intermediate ports of Kerala during 1992-93	272
7.16	Number of harbour crafts registered at the intermediate and minor ports of Kerala 1992-93	273
7.17	Commodity wise cargo handled at the intermediate and minor ports of Kerala 1992-93	274
7.18	Details of dredging operations conducted at the Intermediate and Minor Ports of Kerala during 1992-93	275
7.19	Number of ships that called at Cochin Port during 1991-92 and 1992-93 and their Net Registered Tonnage	275
7.20	Revenue collected at the Intermediate & Minor ports of Kerala (1992-'93)	276
7.21	Growth of post offices under Kerala circle during the last 10 years	277
7.22	Category wise offices in postal and other postal services under Kerala circle	277
7.23	Division wise and category wise distribution of post offices under Kerala circle as on 1-4-1993	278
7.24	District wise area and population served by one post office (1992-93)	279
7.25	Income and Expenditure of Kerala Tourism Development Corporation and Accommodation details in the Hotels (1992-93)	280
<b>Social and Community Services</b>		
9.1	District-wise population profile 1991	281
9.2	Number of Schools in Kerala - Government	281
9.3	Number of Schools in Kerala - Private Aided Schools	282
9.4	Number of Schools in Kerala - Unaided	282
9.5	Enrolment of Students in Schools - District-wise and Stage wise	283
9.6	Standard wise strength of students 1993	284

(1)	(2)	(3)
9.7	Enrolment of SC/ST students at School Level as on 1-7-1993 students strength	285
9.8	Standard-wise strength of Scheduled caste/Scheduled Tribe students 1993	285
9.9	Number of Teachers in Kerala.	286
9.10	Protected Teachers in Kerala Stage wise/District wise 1993	287
9.11	Results of S.S.L.C. Examination Kerala 1993	287
9.12	Intake of students under Higher Secondary (Plus Two)	287
9.13	Number of Arts and Science colleges in Kerala (University-wise)	288
9.14	Number of Arts and Science colleges in Kerala, 1993	288
9.15	Enrolment by stages in Arts and Science colleges in Kerala - University - wise Enrolment 1993	289
9.16	Year-wise Break up of Private Registration	290
9.17	Annual Intake and out-turn in Engineering colleges in Kerala	290
9.18	Number of students and Teachers in Engineering colleges, 1992-1993	291
9.19	No. of SC/ST students and SC/ST teachers in Engineering Colleges during 1992 and 1993	292
9.20	Annual Intake and Out turn in Polytechnics in Kerala	292
9.21	Total students and staff strength in Polytechnics	292
9.22	No. of SC/ST students and SC/ST Teachers in polytechnics	293
9.23	Annual Intake and out-turn in Technical Schools in Kerala	293
9.24	Total students and staff in Technical High Schools	293
9.25	Medical Institutions and Beds in Kerala category-wise (1992-93)	294
9.26	District-wise availability of vehicles under Directorate of Health Services - 1992-93	294
9.27	Statement showing No. of Attacks and Deaths due to Principal diseases during 1992 and 1993	295
9.28	Communicable Diseases - Status	295
9.29	District-wise distribution of institutions, beds and patients treated under Ayurvedic system of medicine in Kerala 1992-93	296
9.30	District-wise distribution of institutions, beds and patients treated under Homocopathy 1992 and 1993.	297
9.31	District-wise Family welfare programme in 1992-93 District-wise	298
9.32	District-wise population covered by Rural water supply scheme 1984-85 to 1992-93	299
9.33	District-wise population covered by Urban water supply scheme since 1990-91	300
9.34	Income and Expenditure of Kerala Water Authority	301
<b>Special Programmes for Weaker Sections</b>		
10.1	Disposal of cases relating to Tenancy and Kudikkappu	302
10.2	Distribution of Surplus Land	302
10.3	Beneficiaries of surplus land and extent distributed as on 30-11-1993	303
10.4	State Specific Poverty Lines with Base 1973-74	304
10.5	Number and percentage of poor based on poverty lines as given in Table - 4.1 1987-88	305

(1)	(2)	(3)
10.6	Admission details of Scheduled Castes/Scheduled Tribes students in Medical and Para Medical courses during 1991-92 and 1992-93	306
10.7	District-wise details of Institutions under the Scheduled Caste Development Department as on 31-12-1993	307
10.8	Number of houses constructed (completed) by the Scheduled Castes Development Department	307
10.9	District-wise details of institutions under the Scheduled Tribe Development Department as on 31-12-1993	308
10.10	Number of houses constructed by the Scheduled Tribe Development Department	309
10.11	Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes - Financial and Physical Achievements during 1991-92 and 1992-93.	310
10.12	District-wise details of Registered Unemployed Scheduled Caste/Scheduled Tribe as on 31-12-1993	311
10.13	Beneficiaries of surplus land and extent distributed as on 30-11-1993	312
<b>Institutional Finance</b>		
11.1	State-wise Financial Assistance Disbursed by All India Financial Institutions during 1992-93	313
11.2	State-wise Financial Assistance Disbursed by All India Financial Institutions as at the end of March 1993 (cumulative)	314
11.3	State-wise Per capita Assistance Disbursed by All India Financial Institutions during 1991-92 and 1992-93	315
11.4	State wise Growth of Bank Offices in India (Including private Scheduled Commercial banks)	316
11.5	Banking Statistics of Kerala during 1988 to 1992	317

## APPENDIX 2.1

Sectoral Distribution of Net Domestic Product at Factor Cost - India  
(Rs. Crores)

Industry of origin	at current prices			at 1980-81 prices	
	1980-81	1991-92@	1992-93*	1991-92@	1992-93*
1. Agriculture, forestry & fishing	44091	165703	188116	60364	63442
1.1 Agriculture	40056	152907	173913	55984	59019
1.2 Forestry & logging	3229	8211	8343	2995	2952
1.3 Fishing	806	4585	5860	1385	1471
2. Mining & quarrying	1474	8547	9386	2771	2876
3. Manufacturing	18698	82243	92974	37690	38230
3.1 Registered	10050	50630	56109	22902	22934
3.2 Unregistered	8648	31613	36865	14788	15296
4. Electricity, Gas & water supply	912	4416	4490	2305	2450
5. Construction	5771	29844	32832	9104	9087
6. Trade, hotels & restaurants	14322	67995	77141	25887	27095
6.1 Trade	13555	64523	73191	24517	25660
6.2 Hotels & restaurants	767	3472	3950	1370	1435
7. Transport, storage & communication	3724	30876	37730	7906	8431
7.1 Railways	559	5032	6180	1027	984
7.2 Transport by other means	2438	21088	26096	5648	6102
7.3 Storage	114	423	442	163	165
7.4 Communication	613	4333	5012	1068	1180
8. Financing, insurance, real estate & business services	9264	38940	43601	21515	22043
8.1 Banking & insurance	3344	24923	28203	12401	12665
8.2 Real estate, ownership of dwellings & business services	5920	14017	15398	9114	9378
9. Community, social & personal	12084	60713	70074	22900	24060
9.1 Public administration & defence	5307	28366	32423	10535	10988
9.2 Other services	6777	32347	37651	12365	13072
10. Total	110340	489277	556344	190442	197714

Source : Central Statistical Organisation

## Appendix 2.2

Net State Domestic Product at Factor Cost by Industry of Origin (At Constant Prices) Base Year = 1980-81															
(Rs. in Lakhs)															
Sl.No	Industry of Origin	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92*	1992-93#	1993-94#
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Agriculture	129384	130483	128438	118376	131975	137924	130949	136601	156894	154730	176135	190225	209247	230171
1	Forestry and Logging	12382	7283	8832	5288	4749	4507	4389	3072	2998	3404	2561	2330	2120	1865
2	Fishing	7743	5797	6958	7691	6764	7042	5917	4592	6505	5457	9380	11725	14773	18466
3	Mining and Quarrying	461	590	481	345	540	496	647	525	1334	905	1310	1478	1669	1885
4	Sub Total-Primary	149970	144153	144909	131900	144028	149969	141902	144790	167731	164496	189386	205758	227809	252387
	Manufacturing	53152	57178	62187	58565	56916	58480	52345	59886	67569	81268	80574	79417	78273	77243
5	Registered	29030	31028	32324	32388	30865	31114	25442	38518	46930	53893	41413	42224	43013	438173
5.1	Un-registered	24122	26150	29863	26177	26051	27366	26903	21348	20639	27375	39161	37193	35260	33426
5.2	Electricity, Gas & Water supply	5509	3394	2438	1354	2898	1518	3157	1845	1695	6786	5736	5895	6071	6266
6	Water supply	5077	2885	2025	855	2566	891	2240	780	512	5484	4261	4279	4296	4313
6.1	Electricity	85	84	87	95	67	354	612	645	717	794	934	1055	1193	1349
6.2	Gas	347	425	326	404	265	273	305	420	446	508	541	561	582	604
6.3	Water Supply	34496	31495	28944	31405	31509	35732	33176	31876	35599	37280	40270	42488	44830	47300
7	Construction	93157	92067	93569	91324	91323	95730	88678	93607	104863	125334	126580	127800	129174	130809
8	Sub Total-Secondary	13625	14271	14832	15691	18644	21034	22214	24012	24819	25125	29491	32391	35590	39115
	Transport, Storage & Communication	419	646	629	686	705	836	807	872	879	837	873	882	891	899
8.1	Railways	10770	10841	11352	11879	14717	16967	17966	19536	19755	19953	24165	26757	29628	32804
8.2	Tram, other means & storage	2436	2784	2851	3126	3222	3231	3441	3602	4185	4335	4453	4752	5071	5412
8.3	Communication	57577	57398	59707	56368	60364	61095	60059	61849	67734	71177	72386	75860	79501	83317
9	Trade, Hotel & Restaurants	11428	12098	13654	14914	16867	19193	23029	27145	28974	35596	38505	44326	51028	58743
10	Banking and Insurance	12198	12166	12567	12178	11840	9011	7639	6324	3448	2760	2813	2867	2922	2978
11	Real Estate & Ownership of Dwellings	15133	15375	17005	17515	19267	20208	22889	25269	26758	30095	32501	35946	39756	43970
12	Public Administration	29185	29953	30608	31278	31825	32396	32887	33567	34083	34653	35275	35885	36507	37142
13	Other Services	139146	141261	148373	147944	158807	162937	168717	178166	185816	199406	210971	227275	245304	265265
	Sub Total-Tertiary	382273	377481	386851	371168	394158	408636	399297	416563	458410	489236	526957	560833	602287	648461
	Net State Domestic Product	25357	25699	26046	26398	26754	27115	27481	28114	28402	28693	28987	29378	29775	30177
	Population('000)	1508	1469	1485	1406	1473	1507	1453	1482	1614	1705	1818	1909	2023	2149
	Per Capita Income (Rs)														

Note : \* Provisional & Quick estimates # Anticipated; For population, upto the year 89-90 Census Population of 80-81 is projected and for the year 90-91 to 93-94 population is estimated based the 1991 census figure.

Appendix 2.3

Net State Domestic Product at Factor Cost by Industry of Origin (At Current Prices)

Sl.No	Industry of Origin	(Rs. in Lakhs)															
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
		1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94		
1	Agriculture	129584	131163	153826	199323	214908	203536	234755	261685	285915	308536	351843	370542	403891	440241		
2	Forestry and Logging	12382	8048	14364	8097	8448	9018	9872	7170	6287	9996	8376	8208	8044	7883		
3	Fishing	7743	6292	7923	8938	8942	11777	12104	10661	16845	28370	37193	44632	53558	63734		
4	Mining and Quarrying	461	640	754	690	1014	920	912	1159	1966	2219	3189	3599	4062	4584		
	<b>Sub Total-Primary</b>	<b>149970</b>	<b>146143</b>	<b>176867</b>	<b>217048</b>	<b>233312</b>	<b>225251</b>	<b>257643</b>	<b>280675</b>	<b>311013</b>	<b>349121</b>	<b>400601</b>	<b>426981</b>	<b>469555</b>	<b>516442</b>		
5	Manufacturing	53152	61585	71171	75013	79448	86335	90178	112815	131873	177944	193535	210859	230037	251286		
5.1	Registered	29030	33461	41755	45368	47610	48892	48892	75186	92453	120182	102291	115272	129900	146384		
5.2	Un-registered	24122	28124	34361	34080	38725	41286	37629	39420	57762	91244	95587	100137	104904	104904		
6	Electricity, Gas & Water supply	5509	3667	2797	1785	4307	2360	5920	3420	3163	12585	11632	13048	14643	16442		
6.1	Electricity	5077	3111	2293	1102	3772	1363	4305	1523	1014	10140	8709	9666	10728	11907		
6.2	Gas	85	95	101	109	87	459	909	960	1099	1177	1383	1563	1767	1998		
6.3	Water Supply	347	441	403	574	448	538	706	937	1050	1268	1540	1819	2148	2537		
7	Construction	34496	38427	42657	52889	60378	77439	76657	82617	94989	102161	117771	132610	149319	168133		
	<b>Sub Total-Secondary</b>	<b>93157</b>	<b>103659</b>	<b>116625</b>	<b>129687</b>	<b>144133</b>	<b>166134</b>	<b>172755</b>	<b>198852</b>	<b>230025</b>	<b>292690</b>	<b>322938</b>	<b>356517</b>	<b>393999</b>	<b>435863</b>		
8	Transport, Storage & Communication	13625	14725	18781	23676	32009	37448	44678	56718	64082	73748	80428	93364	108404	125895		
8.1	Railways	419	835	1010	1181	1039	1529	1898	2967	3336	2881	3310	3922	4647	5507		
8.2	Tran.other means & storage	10770	11482	14769	18976	26838	31446	37016	47032	50493	59076	62853	72406	83411	96089		
8.3	Communication	2436	2408	3002	3519	4132	4473	5764	6719	10253	11791	14265	17036	20346	24299		
9	Trade, Hotel & Restaurants	57577	60383	70111	81958	88750	89131	107859	125020	129161	142853	164734	186479	211094	238958		
10	Banking and Insurance	11428	16206	19803	22873	27198	31424	37053	39359	49637	61310	71661	84631	99949	118040		
11	Real Estate & Ownership of Dwellings	12198	12359	13152	12868	13159	10463	9055	7572	6347	6031	4353	4657	4982	5330		
12	Public Administration	15133	16873	17489	19259	25191	30806	39146	44417	48096	55206	69447	81919	86631	103986		
13	Other Services	29185	34625	38322	44959	50393	59684	67248	73143	81811	87809	105332	118982	133555	149941		
	<b>Sub Total-Tertiary</b>	<b>139146</b>	<b>155171</b>	<b>177658</b>	<b>205593</b>	<b>236700</b>	<b>258956</b>	<b>305039</b>	<b>346229</b>	<b>377134</b>	<b>426957</b>	<b>495955</b>	<b>570032</b>	<b>644615</b>	<b>742150</b>		
	<b>Net State Domestic Product</b>	<b>382273</b>	<b>404973</b>	<b>471150</b>	<b>552328</b>	<b>614145</b>	<b>650341</b>	<b>753437</b>	<b>825756</b>	<b>918172</b>	<b>1066768</b>	<b>1219494</b>	<b>1353530</b>	<b>1508169</b>	<b>1694455</b>		
	<b>Population('000)</b>	<b>25357</b>	<b>25699</b>	<b>26046</b>	<b>26398</b>	<b>26754</b>	<b>27115</b>	<b>27481</b>	<b>28114</b>	<b>28402</b>	<b>28693</b>	<b>28987</b>	<b>29378</b>	<b>29775</b>	<b>30177</b>		
	<b>Per Capita Income (Rs)</b>	<b>1508</b>	<b>1576</b>	<b>1809</b>	<b>2092</b>	<b>2296</b>	<b>2398</b>	<b>2676</b>	<b>2957</b>	<b>3233</b>	<b>3718</b>	<b>4207</b>	<b>4607</b>	<b>5065</b>	<b>5615</b>		

Note : \* Provisional @ Quick estimates # Anticipated  
Source : Department of Economics and Statistics



## APPENDIX 2.4

Sector-wise distribution of Net Domestic Products of Districts at Factor cost (New Series)  
(Rs. Lakhs)

Sl. No.	District	Year	At Current Prices				At Constant (1980-81) Prices			
			Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
1.	Thiruvananthapuram	1980-81	12166 (31.79)	9742 (25.46)	16360 (42.75)	38268 (100)	12166 (31.79)	9742 (25.46)	16360 (42.75)	38268 (100)
		1990-91	31102 (24.72)	33527 (26.65)	61190 (48.63)	125819 (100)	15166 (27.65)	13188 (24.05)	26488 (48.30)	54842 (100)
		1991-92	32992 (23.47)	36838 (26.21)	70729 (50.32)	140559 (100)	16447 (28.15)	13248 (22.67)	28741 (49.18)	58436 (100)
		1992-93	36171 (23.18)	40525 (25.97)	79332 (50.85)	156028 (100)	18168 (28.96)	13328 (21.24)	31247 (49.80)	62743 (100)
2.	Kollam	1980-81	19708 (45.57)	10068 (23.28)	13471 (31.15)	43247 (100)	19708 (45.57)	10068 (23.28)	13471 (31.15)	43247 (100)
		1990-91	39457 (38.25)	24662 (23.91)	39030 (37.84)	103149 (100)	17860 (40.35)	9779 (22.10)	16617 (37.55)	44256 (100)
		1991-92	42551 (37.11)	27195 (23.72)	44918 (39.17)	114664 (100)	19556 (41.29)	9849 (20.80)	17954 (37.91)	47359 (100)
		1992-93	47237 (36.89)	30018 (23.44)	50797 (39.67)	128052 (100)	21828 (42.64)	9929 (19.39)	19442 (37.97)	51199 (100)
3.	Pathanamthitta	1990-91	20500 (36.72)	13157 (23.56)	22180 (39.72)	55837 (100)	10040 (40.27)	5238 (21.01)	9654 (38.72)	24932 (100)
		1991-92	21536 (34.99)	14469 (23.51)	25545 (41.50)	61550 (100)	10795 (40.68)	5258 (19.81)	10486 (39.51)	26539 (100)
		1992-93	23381 (34.24)	15932 (23.33)	28973 (42.43)	68286 (100)	11829 (41.47)	5285 (18.53)	11410 (40.0)	28524 (100)
4.	Alappuzha	1980-81	10149 (32.94)	7675 (24.91)	12985 (42.15)	30809 (100)	10149 (32.94)	7675 (24.91)	12985 (42.15)	30809 (100)
		1990-91	29963 (33.95)	23634 (26.77)	34672 (39.28)	88269 (100)	13310 (35.52)	9453 (25.23)	14706 (39.25)	37469 (100)
		1991-92	32560 (33.13)	29918 (26.37)	39808 (40.90)	98278 (100)	14667 (36.74)	9455 (23.68)	15803 (39.58)	39925 (100)
		1992-93	36388 (33.14)	28459 (25.92)	44964 (40.94)	109811 (100)	16476 (38.36)	9467 (22.04)	17008 (39.60)	42951 (100)

(Contd.....)

Sector-wise distribution of Net Domestic Products of Districts at Factor cost (New Series)  
(Rs. Lakhs)

Sl. No.	District	Year	At Current Prices				At Constant (1980-81) Prices			
			Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
5.	Kottayam	1980-81	10777 (43.75)	3616 (14.68)	10240 (41.57)	24633 (100)	10777 (43.75)	3616 (14.68)	10240 (41.57)	24633 (100)
		1990-91	29147 (37.55)	12213 (15.74)	36253 (46.71)	77613 (100)	14511 (41.62)	4988 (14.30)	15370 (44.08)	34869 (100)
		1991-92	30737 (35.81)	13410 (15.63)	41676 (48.56)	85823 (100)	15685 (42.13)	4987 (13.40)	16556 (44.47)	37228 (100)
		1992-93	33541 (35.16)	14743 (15.45)	47119 (49.39)	95403 (100)	17269 (43.04)	4988 (12.43)	17869 (44.53)	40126 (100)
6.	Idukki	1980-81	10506 (54.52)	5469 (28.38)	3295 (17.10)	19270 (100)	10506 (54.52)	5469 (28.38)	3295 (17.10)	19270 (100)
		1990-91	27618 (47.86)	18330 (31.76)	11758 (20.38)	57706 (100)	13588 (53.19)	7049 (27.60)	4907 (19.21)	25544 (100)
		1991-92	29008 (46.00)	20564 (32.62)	13483 (21.38)	63055 (100)	14614 (53.88)	7249 (26.72)	5262 (19.40)	27125 (100)
		1992-93	31495 (45.09)	23077 (33.04)	15273 (21.87)	69845 (100)	16015 (54.98)	7455 (25.59)	5657 (19.42)	29127 (100)
7.	Ernakulam	1980-81	12830 (25.16)	18385 (36.05)	19782 (38.79)	50997 (100)	12830 (25.16)	18385 (36.05)	19782 (38.79)	50997 (100)
		1990-91	40591 (24.17)	63904 (38.06)	63412 (37.77)	167907 (100)	18704 (26.29)	24809 (34.87)	27641 (38.85)	71154 (100)
		1991-92	43710 (23.27)	71088 (37.84)	73045 (38.89)	187843 (100)	20490 (27.05)	25238 (33.32)	30017 (39.63)	75745 (100)
		1992-93	48520 (23.03)	79137 (37.57)	83001 (39.40)	210658 (100)	22881 (28.16)	25693 (31.63)	32666 (40.21)	81240 (100)
8.	Thirissur	1980-81	12263 (34.50)	9083 (25.55)	14198 (39.95)	35544 (100)	12263 (34.50)	9083 (25.55)	14198 (39.95)	35544 (100)
		1990-91	32950 (28.48)	31394 (27.13)	51370 (44.39)	115714 (100)	15818 (31.83)	12178 (24.51)	21692 (43.66)	49688 (100)
		1991-92	34980 (27.18)	34740 (26.99)	58990 (45.83)	128710 (100)	17144 (32.44)	12346 (23.36)	23358 (44.20)	52848 (100)
		1992-93	38343 (26.68)	38480 (26.77)	66910 (46.55)	143733 (100)	18934 (33.41)	12529 (22.11)	25204 (44.48)	56667 (100)

(Contd.....)

**Sector-wise distribution of Net Domestic Products of Districts at Factor cost (New Series)**  
(Rs. Lakhs)

Sl. No.	District	Year	At Current Prices				At Constant (1980-81) Prices			
			Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
9.	Palakkad	1980-81	10758 (40.47)	6179 (23.25)	9644 (36.28)	26581 (100)	10758 (40.47)	6179 (23.25)	9644 (36.28)	26581 (100)
		1990-91	29200 (34.16)	21635 (25.32)	34627 (40.52)	85462 (100)	14496 (38.41)	8576 (22.72)	14672 (38.87)	37744 (100)
		1991-92	30762 (32.67)	23639 (25.11)	39758 (42.22)	94159 (100)	15649 (39.16)	8568 (21.45)	15740 (39.39)	39957 (100)
		1992-93	33525 (32.13)	25862 (24.79)	44949 (43.08)	104336 (100)	17209 (40.31)	8569 (20.07)	16915 (39.62)	42693 (100)
10.	Malappuram	1980-81	11986 (48.18)	3300 (13.27)	9590 (38.55)	24876 (100)	11986 (48.18)	3300 (13.27)	9590 (38.55)	24876 (100)
		1990-91	33699 (42.29)	11374 (14.27)	34613 (43.44)	79686 100	14969 44.50	4267 12.68	14404 42.82	33640 100
		1991-92	36028 (40.81)	12611 (14.28)	39652 (44.91)	88291 (100)	16222 (45.07)	4370 (12.14)	15400 (42.79)	35992 (100)
		1992-93	39604 (40.24)	13994 (14.22)	44832 (45.54)	98430 (100)	17930 (46.09)	4485 (11.53)	16488 (42.38)	36903 (100)
11.	Kozhikode	1980-81	16048 (38.66)	10915 (26.30)	14543 (35.04)	41506 (100)	16048 (38.66)	10915 (26.30)	14543 (35.04)	41506 (100)
		1990-91	27384 (25.71)	33548 (31.50)	45573 (42.79)	106505 (100)	12645 (28.11)	13156 (29.25)	19179 (42.64)	44980 (100)
		1991-92	29399 (24.79)	36973 (31.18)	52223 (44.03)	118595 (100)	13806 (29.02)	13255 (27.86)	20513 (43.12)	47574 (100)
		1992-93	32515 (24.57)	40792 (30.83)	59010 (44.60)	132317 (100)	15355 (30.29)	13369 (26.37)	21972 (43.34)	50696 (100)
12.	Wayanad	1990-91	17587 (57.68)	5859 (19.21)	7047 (23.11)	30493 (100)	8685 (61.72)	2390 (16.99)	2995 (21.29)	14070 (100)
		1991-92	18480 (56.07)	6391 (19.39)	8087 (24.54)	32958 (100)	9349 (62.59)	2370 (15.87)	3219 (21.54)	14938 (100)
		1992-93	20080 (55.45)	6978 (19.28)	9152 (25.27)	36210 (100)	10252 (63.80)	2351 (14.63)	3466 (21.57)	16069 (100)

(Contd.....)

**Sector-wise distribution of Net Domestic Products of Districts at Factor cost (New Series)**  
(Rs. Lakhs)

Sl. No.	District	Year	At Current Prices				At Constant (1980-81) Prices			
			Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
13.	Kannur	1980-81	22779 (48.94)	8725 (18.75)	15038 (32.31)	46542 (100)	22779 (48.94)	8725 (18.75)	15038 (32.31)	46542 (100)
		1990-91	23868 (27.88)	20508 (23.95)	41238 (48.17)	85614 (100)	11425 (31.01)	7944 (21.56)	17471 (47.43)	36840 (100)
		1991-92	25418 (26.65)	22568 (23.66)	47395 (49.69)	95381 (100)	12411 (31.64)	8014 (20.43)	18803 (47.93)	39228 (100)
		1992-93	27936 (26.25)	24862 (23.35)	53642 (50.40)	106440 (100)	13735 (32.62)	8098 (19.23)	20273 (48.15)	42106 (100)
14.	Kasargode	1990-91	17535 (44.15)	9193 (23.14)	12992 (32.71)	39720 (100)	8169 (48.31)	3565 (21.08)	5175 (30.61)	16909 (100)
		1991-92	18820 (43.10)	10113 (23.16)	14731 (33.74)	43664 (100)	8923 (49.74)	3593 (20.03)	5423 (30.23)	17939 (100)
		1992-93	20819 (42.82)	11140 (22.91)	16661 (34.27)	48620 (100)	9928 (51.59)	3628 (18.85)	5687 (29.56)	19243 (100)
Kerala	1980-81	149970 (39.23)	93157 (24.37)	139146 (36.40)	382273 (100)	149970 (39.23)	93157 (24.37)	139146 (36.40)	382273 (100)	
	1990-91	400601 (32.85)	322938 (26.48)	495955 (40.67)	1219494 (100)	189386 (35.94)	126580 (26.02)	210971 (40.04)	526937 (100)	
	1991-92	426981 (31.55)	356517 (26.34)	570032 (42.11)	1353530 (100)	205758 (36.69)	127800 (22.79)	227275 (40.52)	560833 (100)	
	1992-93	469555 (31.13)	393999 (26.12)	644615 (42.75)	1508169 (100)	227809 (37.82)	129174 (21.45)	245304 (40.73)	602287 (100)	

Note : 1. Figures for 1990-91 are provisional estimates.  
2. Figures for 1991-92 are quick estimates.

Sources: Department of Economics and Statistics.

## APPENDIX 2.5

## Districtwise Distribution of State Income at Current and Constant (1980-81) Prices - 1992-93

(Rs. lakhs)

Sl No. District	1980-81				1992-93				Population ('000)*		
	Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total	1980-81	1992-93	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Thiruvananthapuram	12166 (8.11)	9742 (10.46)	16360 (11.76)	38268 (10.01)	18168 (7.98)	13328 (10.32)	31247 (12.74)	62743 (10.42)	2579 (10.17)	3016 (10.13)	
2. Kollam	19708 (13.14)	10068 (10.81)	13471 (9.68)	43247 (11.31)	21828 (9.58)	9929 (7.69)	19442 (7.93)	51199 (8.50)	2875 (11.34)	2462 (8.27)	
3. Pathanamthitta	..	..	..	..	11829 (5.19)	5285 (4.09)	11410 (4.65)	28524 (4.74)	..	1215 (4.08)	
4. Alappuzha	10149 (6.77)	7675 (8.24)	12985 (9.33)	30809 (8.06)	16476 (7.23)	9467 (7.33)	17008 (6.93)	42951 (7.13)	2350 (9.28)	2048 (6.88)	
5. Kottayam	10777 (7.19)	3616 (3.88)	10240 (7.36)	24633 (6.44)	17269 (7.58)	4988 (3.86)	17869 (7.28)	40126 (6.66)	1696 (6.69)	1870 (6.28)	
6. Idukki	10506 (7.00)	5469 (5.87)	3295 (2.37)	19270 (5.04)	16015 (7.03)	7455 (5.77)	5657 (2.31)	29127 (4.84)	966 (3.81)	1105 (3.71)	
7. Ernakulam	12830 (8.56)	18385 (19.74)	19782 (14.22)	50997 (13.34)	22881 (10.04)	25693 (19.89)	32666 (13.32)	81240 (13.49)	2528 (9.97)	2882 (9.68)	
8. Thrissur	12263 (8.18)	9083 (9.75)	14198 (10.20)	35344 (9.30)	18934 (8.31)	12529 (9.70)	25204 (10.27)	56667 (9.41)	2432 (9.59)	2802 (9.41)	
9. Palakkad	10758 (7.17)	6179 (6.63)	9644 (6.93)	26581 (6.95)	17209 (7.55)	8569 (6.63)	16915 (6.90)	42693 (7.09)	2034 (8.02)	2439 (8.19)	
10. Malappuram	11986 (7.99)	3300 (3.54)	9590 (6.89)	24876 (6.51)	17930 (7.87)	4485 (3.47)	16488 (6.72)	38903 (6.46)	2381 (9.39)	3168 (10.64)	
11. Kozhikode	16048 (10.70)	10915 (11.72)	14543 (10.45)	41506 (10.86)	15355 (6.74)	13369 (10.35)	21972 (8.96)	50696 (8.42)	2614 (10.31)	2680 (9.00)	
12. Wayanad	..	..	..	..	10252 (4.50)	2351 (1.82)	3466 (1.41)	16069 (2.67)	..	688 (2.31)	
13. Kannur	22779 (15.19)	8725 (9.37)	15038 (10.81)	46542 (12.18)	13735 (6.03)	8098 (6.27)	20273 (8.26)	42106 (6.99)	2962 (11.68)	2304 (7.74)	
14. Kasargode	..	..	..	..	9928 (4.36)	3628 (2.81)	5687 (2.32)	19243 (3.19)	..	1096 (3.68)	
<b>State Domestic Product</b>	<b>149970 (100)</b>	<b>93157 (100)</b>	<b>139146 (100)</b>	<b>382273 (100)</b>	<b>227809 (100)</b>	<b>129174 (100)</b>	<b>245304 (100)</b>	<b>602287 (100)</b>	<b>25357 (100)</b>	<b>29775 (100)</b>	

Figures in bracket indicates Percentage to the State total

@ - quick estimate

\* - mid year population

## APPENDIX 2.6

## Distribution of Work Seekers in Kerala by Educational Levels

Year as on 31st December	Total Work Seekers	Below S.S.L.C.		Pre-Degree	Graduates	Post Graduates	S.S.L.C and above	
		S.S.L.C.	S.S.L.C.				No	Per cent
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)
1980	1579164	765141	658652	79310	67841	8220	814023	51.55
1981	1903719	979830	748898	90254	77694	7043	923889	48.53
1982	2086056	1049320	842772	102644	84161	7159	1036736	49.70
1983	2262240	1128860	920622	117161	88557	7040	1133380	50.10
1984	2458206	1194453	1050073	121369	84025	8286	1263753	51.40
1985	2574074	1208724	1116495	148464	90329	10062	1365350	53.05
1986	2704874	1209462	1251793	136193	97217	10209	1495412	55.30
1987	2991022	1270764	1434413	161155	111008	13682	1720258	57.50
1988	2901051	1185145	1438051	160233	100330	17292	1715906	59.10
1989	3092031	1204737	1565709	188978	111372	21235	1887294	61.04
1990	3320035	1227319	1655465	273725	135213	28313	2092716	63.03
1991	3638804	1318514	1885304	257173	150014	27799	2320290	63.76
1992	3847063	1345260	2027567	283556	161571	29109	2501803	65.00
1993*	4278055	1649199	2111268	308137	176236	33215	2628856	61.00

\* as on 10/93

Source : Directorate of Employment and Training, Thiruvananthapuram.

## APPENDIX 2.7

## Number of Professional and Technical Work Seekers, Kerala

Year	Medical Graduates	Engineering Graduates	Diploma holders in Engg.&Tech.	ITI Cert. Holders	Agricultural Graduates	Veterinary Graduates	Total
1980	871	1505	6833	28873	106	17	38205
1981	681	1217	7866	33569	103	14	43450
1982	912	1662	7824	36043	195	15	46651
1983	829	1757	9756	41682	218	14	54256
1984	1035	2312	11646	68452	263	42	83750
1985	1143	2917	11257	53237	149	25	68728
1986	1270	3805	14812	59225	209	14	79335
1987	1728	4916	17062	63056	177	72	87011
1988	1334	4380	16766	64629	324	49	87482
1989	1481	5649	19273	70971	446	26	97846
1990	1806	6507	20154	87069	368	128	116032
1991	2588	7762	22399	75898	363	13	100023
1992	3123	9286	25810	89616	219	83	128137
1993*	3431	10088	28719	74631	342	227	117388

Note : \* Upto October, 1993

## APPENDIX 2.8

**Employment in the Organised Sector - Kerala**

Year ending as on 31st December	Public Sector		Private Sector		Total	
	No.	Index	No.	Index	No.	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1970	293318	52.1	409562	80.1	702880	65.4
1975	418151	74.2	462712	90.5	880863	82.0
1980	496659	88.2	526459	103.0	1023118	95.2
1981	516478	91.7	528309	103.4	1044787	97.3
1982	536864	95.3	518282	101.4	1055146	98.2
1983	550670	97.8	519512	101.7	1070182	99.6
1984	565587	100.4	513503	100.5	1079090	100.5
1985	568713	101.0	507375	99.3	1076088	100.2
1986	576784	102.4	519115	101.6	1095899	102.0
1987	585391	104.0	508917	99.6	1094308	101.9
1988	602696	107.0	501653	98.2	1104349	102.8
1989	620254	110.1	486354	95.2	1106608	103.0
1990	634379	112.6	512034	100.2	1146413	106.7
1991	648514	115.1	525903	102.9	1174412	109.3
1992	648215	115.1	532922	104.3	1181137	109.9
1993 *	646625	114.8	539117	105.5	1185742	110.3

Note : (\*) as on March, 1993 (Provisional)  
Base 31.3.1985 = 100

Source:- Directorate of Employment and Training, Thiruvananthapuram

## APPENDIX - 2.9

*Country-wise deployment of personnel by ODEPC*

Sl. No.	Name of country	1991-92	1992-93
(1)	(2)	(3)	(4)
1.	Kuwait	7	3
2.	Mascot	1	...
3.	Malaysia	1	...
4.	Qatar	...	1
5.	Saudi Arabia	291	106
6.	Singapore	36	...
7.	U.A.E.	...	1
8.	Bahrain	...	2
9.	Cyprus	...	1
Total		336	114

## APPENDIX 2.10

*Unemployment Assistance Scheme : Kerala 1982-83 to 1993-94*  
(Rs. lakhs)

Year	Applications received	No. of Beneficiaries	Amount disbursed
(1)	(2)	(3)	(4)
1982-83	161211	44011	80.22
1983-84	44744	98261	649.79
1984-85	102939	136471	768.52
1985-86	48715	179146	1012.08
1986-87	113809	218446	835.00
1987-88	92555	205556	1095.65
1988-89	64887	215456	2353.77
1989-90	81159	246040	1996.37
1990-91	118279	264314	1934.88
1991-92	99814	260196	1619.64
1992-93	...	229149	625.68
1993-94*	121379	282410	1304.96

\* as on 31.12.1993

Source: Directorate of Employment and Training,  
Thiruvananthapuram.



## APPENDIX 2.11

## Area and Density of Population - 1991

(Area - sq. kms; density - no. of persons per sq. km.)

District	Area			Density		
	Total	Rural	Urban	Total	Rural	Urban
Kasargode	1992	1887.22	104.78	538	474	1682
Kannur	2966	2318.86	647.14	759	477	1770
Wayanad	2131	2096.86	34.14	315	310	672
Kozhikode	2344	2004.33	339.67	1118	806	2957
Malappuram	3550	3378.48	170.52	872	833	1656
Palakkad	4480	4258.15	221.85	532	471	1688
Thrissur	3032	2730.80	301.20	903	739	2391
Ernakulam	2407	1865.38	541.62	1170	774	2535
Idukki	5019	4951.57	67.43	215	207	755
Kottayam	2203	2034.43	168.57	830	741	1904
Alappuzha	1414	1125.92	288.08	1415	1236	2116
Pathanamthitta	2642	2541.72	100.28	450	407	1546
Kollam	2491	2372.56	118.44	967	827	3766
Thiruvananthapuram	2192	1934.51	257.49	1344	1007	3877
<b>Kerala</b>	<b>38863</b>	<b>35500.79</b>	<b>3362.21</b>	<b>749</b>	<b>603</b>	<b>2284</b>

## APPENDIX 2.12

## Rural-urban Distribution of Population

(Lakhs)

District	Persons			Male			Female		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Kasargode	10.72	8.95	1.76	5.29	4.43	0.86	5.43	4.53	0.90
Kannur	22.52	11.06	11.45	10.99	5.46	5.53	11.53	5.61	5.92
Wayanad	6.72	6.49	0.23	3.42	3.30	0.12	3.30	3.19	0.11
Kozhikode	26.20	16.15	10.04	12.93	7.96	4.96	13.27	8.19	5.08
Malappuram	30.96	28.14	2.82	15.08	13.69	1.39	15.88	14.44	1.44
Palakkad	23.82	20.08	3.75	11.56	9.73	1.83	12.26	10.35	1.92
Thrissur	27.37	20.17	7.20	13.13	9.65	3.48	14.25	10.53	3.72
Ernakulam	28.17	14.44	13.73	14.09	7.23	6.86	14.09	7.21	6.87
Idukki	10.78	10.27	0.51	5.46	5.20	0.26	5.32	5.07	0.25
Kottayam	18.28	15.07	3.21	9.13	7.52	1.61	9.15	7.55	1.60
Alappuzha	20.01	13.92	6.10	9.76	6.77	2.99	10.25	7.14	3.11
Pathanamthitta	11.88	10.33	1.55	5.76	5.01	0.75	6.12	5.32	0.80
Kollam	24.08	19.62	4.46	11.83	9.62	2.21	12.25	9.99	2.25
Thiruvananthapuram	29.47	19.48	9.98	14.48	9.55	4.92	14.99	9.93	5.06
<b>Kerala</b>	<b>290.99</b>	<b>214.18</b>	<b>76.80</b>	<b>142.89</b>	<b>105.13</b>	<b>37.76</b>	<b>148.10</b>	<b>109.05</b>	<b>39.04</b>

## APPENDIX 2.13

**Three-year Moving Average of Birth and Death Rates  
Kerala and India (1981-92)**  
(Per Mille)

Period	Kerala						India					
	Total		Rural		Urban		Total		Rural		Urban	
	BR	DR	BR	DR	BR	DR	BR	DR	BR	DR	BR	DR
1981-83	25.6	6.6	25.8	6.7	24.5	6.4	33.8	12.1	35.4	13.3	27.8	7.7
1982-84	24.7	6.6	24.7	6.5	24.7	6.9	33.8	12.1	35.3	13.3	28.6	8.0
1983-85	23.7	6.5	23.6	6.5	24.4	6.9	33.6	12.1	35.0	13.3	28.6	8.1
1984-86	22.9	6.3	22.7	6.2	23.7	6.9	33.2	11.8	34.6	13.0	28.2	8.0
1985-87	21.5	6.2	22.3	6.2	23.1	6.6	32.6	11.3	34.1	12.4	27.5	7.6
1986-88	22.5	6.2	21.3	6.1	22.3	6.6	32.1	11.0	33.6	12.0	26.9	7.6
1987-89	20.7	6.2	20.6	6.1	21.4	6.4	31.5	10.7	33.0	11.7	26.3	7.4
1988-90	20.0	6.1	19.9	6.1	20.6	6.3	30.8	10.3	32.3	11.2	25.4	7.2
1989-91	19.4	6.0	19.4	6.1	19.5	5.8	30.1	9.9	31.6	10.7	24.7	7.1
1990-92*	18.5	6.1	18.4	6.1	18.7	5.9	29.5	9.8	31.1	10.7	24.0	7.0

Source: Sample Registration Bulletin, January 1994.  
Vol. XXVIII, No. 1  
Office of the Registrar General of India, New Delhi.

## APPENDIX 2.14

**Three-year Moving Average of Infant Mortality Rates  
Kerala and India (1981-1992)**  
(Per Millie)

Period	Kerala			India		
	Total	Rural	Urban	Total	Rural	Urban
1981-83	34	35	25	107	116	65
1982-84	31	32	26	105	114	66
1983-85	31	32	28	102	111	64
1984-86	29	30	26	99	108	62
1985-87	29	30	25	96	105	60
1986-88	28	29	22	94	104	61
1987-89	26	27	21	93	102	60
1988-90	22	23	17	88	96	57
1989-91#	18	19	15	84	90	54
1990-92#*	17	17	15	80	86	52

Source: Sample Registration Bulletin, January 1994.  
Vol. XXVIII, No. 1  
Office of the Registrar General of India, New Delhi.

## APPENDIX 2.15

**Estimated Annual Live Birth Rates, Death Rates and  
Infant Mortality Rate for Major States - 1992  
(Provisional)**

States	Birth Rates			Death Rates			Infant Mortality Rates		
	Combined	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban
INDIA *	29.0	30.7	23.1	10.0	10.8	7.1	79	85	53
Andhra Pradesh	24.1	24.6	22.3	9.1	9.9	6.0	71	78	42
Assam	30.6	31.3	21.4	10.3	10.5	7.4	76	78	50
Bihar	32.2	33.0	25.0	10.9	11.3	6.9	72	74	49
Gujarat	27.9	29.3	24.5	9.1	9.4	8.2	67	71	54
Haryana	31.9	33.7	25.2	8.6	9.1	7.0	75	79	55
Himachal Pradesh	27.9	28.5	20.2	8.8	9.1	4.6	67	69	32
Karnataka	26.2	27.3	23.3	8.5	9.4	6.0	73	82	41
Kerala	17.5	17.4	18.3	6.3	6.2	6.5	17	17	13
Madhya Pradesh	34.4	36.2	26.5	12.7	13.7	8.5	104	109	74
Maharashtra	25.1	27.1	21.5	7.9	9.1	5.6	59	67	40
Orissa	27.8	28.5	21.4	11.7	12.1	7.8	114	117	80
Punjab	27.1	28.2	24.2	8.2	8.8	6.5	56	60	41
Rajasthan	34.7	36.2	27.8	10.4	11.0	7.5	89	93	65
Tamilnadu	20.7	21.1	20.0	8.4	9.2	6.7	58	67	40
Uttar Pradesh	36.2	37.9	28.9	12.8	13.7	9.0	98	102	78
West Bengal	24.6	27.8	16.4	8.3	9.0	6.6	64	70	38

Source: Sample Registration Bulletin, January 1994.

Vol. XXVIII, No. 1

Office of the Registrar General of India, New Delhi.

## APPENDIX - 3.1

## Whole Sale Price Index of Agricultural Commodities - Kerala 1993

(Base 1952-53 = 100)

Crops	January	February	March	April	May	June	July	August	September	October	November	Average
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Rice	638.1	855.2	855.2	855.2	855.2	855.2	855.2	855.2	855.2	855.2	855.2	855.5
2. Millets	1376.1	1366.1	1434.8	1539.1	1717.4	1869.9	1887.4	2083.5	2001.3	2083.7	2283.7	1785.7
3. Condiments and spices	1698.5	1708.5	1649.9	1846.4	2159.0	2643.4	2589.0	1993.4	1900.1	1671.2	1477.0	1939.7
4. Fruits and vegetables	2448.9	2452.2	2445.5	2409.1	2389.7	2357.5	2436.0	2511.5	2481.3	2447.1	2432.1	2437.4
5. Food crops	1140.6	1280.5	1272.0	1301.3	1354.6	1433.0	1438.0	1359.8	1337.0	1296.6	1268.8	1316.6
6. Oilseeds	2712.0	2765.0	2721.0	2603.1	2415.4	2332.9	2222.0	2140.6	2166.6	2141.0	2124.8	2395.0
7. Plantation crops	981.3	1067.8	1032.6	1015.3	1049.4	1068.1	1070.0	1038.9	1054.0	1047.5	1013.3	1039.8
8. Non-food crops	2189.3	2252.5	2211.1	2123.6	2002.9	1950.9	1874.1	1807.9	1830.6	1810.8	1789.1	1985.7
9. All crops	1523.4	1635.3	1614.8	1601.4	1591.2	1622.0	1597.2	1523.4	1517.2	1484.3	1458.7	1560.8

Source: Department of Economics and Statistics

\* Average of eleven months

APPENDIX - 3.2

Average Retail Price of Essential Commodities for the year 1993

(Rs.)

Name of commodities	Unit	January	February	March	April	May	June	July	August	September	October	November	December
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Rice om	Kg.	7.60	7.50	7.41	7.30	7.38	7.48	7.45	7.59	7.58	7.42	7.60	7.61
2. White Rice	"	7.09	7.08	7.03	6.93	6.88	6.98	6.93	6.93	6.93	7.07	7.24	7.27
3. Greengram	"	14.74	14.89	15.14	16.08	16.97	16.86	16.99	16.56	15.39	15.11	15.31	15.52
4. Blackgram (split without husk)	"	13.71	13.56	13.36	13.19	13.11	13.25	13.50	13.64	13.63	13.61	13.77	13.95
5. Redgram	"	10.38	10.02	10.42	11.02	11.34	12.45	13.36	15.32	14.67	14.47	14.19	14.06
6. Dhall	"	19.75	18.91	19.20	19.11	19.14	19.18	19.39	19.39	19.49	20.70	20.84	20.96
7. Sugar (Open market)	"	9.74	10.73	10.91	11.71	12.16	10.84	11.30	11.18	11.34	11.90	12.44	13.09
8. Milk (cow's)	Ltr.	7.82	7.96	7.96	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82
9. Tea (Kannan Devan)	1/2Kg.	31.57	32.38	34.06	34.63	34.69	34.75	34.80	34.80	34.75	34.75	34.75	34.75
10. Coffee Power	"	25.43	25.50	25.50	25.79	27.07	27.64	28.18	28.82	29.89	30.00	30.43	31.29
(Brooke Bond Green label)													
11. Baby Food (Amul)	Kg.	82.00	82.00	82.00	82.00	82.00	82.00	82.00	82.00	83.36	83.36	82.00	82.00
12. Egg (Hen's)	Doz.	11.36	12.46	12.17	10.80	12.91	11.51	12.24	11.21	14.67	11.07	12.46	13.93
13. Mutton (with bones)	Kg.	56.93	57.64	58.36	59.00	59.00	60.07	60.36	60.36	61.00	61.64	61.71	63.07
14. Coconut oil	"	50.94	52.01	48.61	43.70	42.70	41.67	39.30	39.69	41.65	40.39	39.65	37.02
15. Ground nut oil	"	38.82	37.40	37.02	36.46	35.90	36.20	37.19	38.75	41.90	40.63	39.72	39.45
16. Refined oil (Postman)	Ltr.	62.33	61.73	59.67	56.94	56.45	53.29	51.66	52.14	52.16	54.73	56.15	58.75
17. Gingelly oil	Kg.	39.60	38.73	38.58	38.14	37.70	37.66	36.96	37.52	39.08	38.96	39.67	40.27
18. Coconut (without husk)	100Nos.	475.71	487.86	467.50	441.07	419.64	403.21	379.64	375.00	386.07	375.00	373.22	351.79
19. Corriander	Kg.	18.00	17.64	17.29	16.91	16.39	16.79	17.00	17.50	17.79	18.96	19.39	19.39
20. Chillies (Dry)	"	34.29	27.79	24.50	21.11	21.05	20.86	20.21	21.57	22.79	23.93	23.93	24.14
21. Onions (small)	"	5.67	5.45	5.38	5.93	6.85	8.46	5.44	4.60	6.06	6.89	8.89	8.25
22. Tamarind	"	13.86	13.18	13.43	12.89	13.14	13.71	14.54	15.21	15.86	16.71	17.36	17.50
23. Chenai	"	5.14	5.36	5.57	6.29	7.79	7.50	5.93	5.14	5.21	4.61	4.75	4.68
24. Tapioca (Raw)	"	2.75	2.72	2.80	2.73	2.66	2.60	2.77	2.79	2.87	2.84	2.77	2.81
25. Potato	"	4.80	4.70	4.29	4.20	4.71	5.67	6.25	4.86	5.48	5.07	5.94	7.96

1	2	3	4	5	6	7	8	9	10	11	12	13	14
26. Colocasia	"	5.18	5.25	5.11	5.74	6.71	7.40	7.50	7.14	6.91	6.36	5.82	5.71
27. Onion (big)	"	4.68	4.63	4.41	3.63	3.55	3.87	3.84	4.00	5.79	7.43	8.74	9.84
28. Brinjal	"	5.21	5.11	4.89	5.04	5.50	4.86	4.86	4.93	5.50	5.21	6.82	7.64
29. Pumpkin	"	3.89	3.61	3.36	3.29	3.46	3.61	3.43	3.68	3.93	3.79	3.79	4.07
30. Cucumber	"	5.57	4.21	3.54	3.43	4.18	4.43	5.07	4.75	4.64	4.79	6.04	5.89
31. Ladies Finger	"	5.04	4.82	5.21	4.96	5.64	5.29	5.39	6.61	6.04	5.75	6.46	8.29
32. Cabbage	Kg	4.39	4.11	4.14	4.36	6.71	7.36	4.64	4.07	6.32	4.04	4.86	5.18
33. Bittergourd	"	8.50	8.29	8.36	9.39	10.86	12.29	12.07	10.07	9.14	10.57	11.93	12.29
34. Ashgourd	"	4.39	4.29	4.04	3.57	3.79	3.71	3.96	3.61	3.75	3.86	3.93	4.39
35. Sausagegourd	"	5.29	4.50	4.25	4.00	5.18	6.25	5.89	6.00	5.54	6.36	7.11	7.00
36. Chillies (Green)	"	8.00	7.93	8.50	8.36	11.29	9.64	9.21	9.21	11.21	9.64	7.29	10.32
37. Banana (Green)	"	6.57	6.70	6.28	6.31	8.99	9.57	9.09	10.38	8.79	8.00	7.50	7.24
38. Plantain (Green)	"	4.77	4.93	4.71	4.68	4.86	4.86	5.18	5.79	5.79	5.14	4.93	4.96
39. Tobacco	"	25.71	25.79	26.21	27.29	27.43	28.29	28.39	28.79	28.71	28.71	27.93	28.79
40. Munda (Mall)	Each	31.48	31.54	31.54	32.34	32.54	32.79	32.55	32.87	34.48	34.23	34.22	34.22
41. Washing Soda	Kg	9.84	9.72	9.94	10.10	10.39	10.89	10.89	10.96	10.99	11.21	11.14	11.29
42. Washing Soap (50l)	1/2bar	5.00	5.00	5.00	4.99	4.98	5.08	5.24	5.27	5.30	5.30	5.21	5.30
43. Toilet Soap (Lux)	Each	5.50	5.50	5.50	5.51	5.56	5.56	5.59	5.68	5.72	5.74	5.75	5.75
44. Tooth paste (100g. tube Colgate)	Each	13.34	13.51	13.68	13.68	13.73	13.91	14.00	14.00	14.10	14.10	14.10	14.10
45. Razor blade	5 Nos.	4.40	4.60	4.91	4.62	4.65	4.90	4.91	5.28	5.47	5.47	5.47	5.45
46. Crocin	2 Tabs	0.59	0.59	0.61	0.62	0.62	0.62	0.64	0.64	0.66	0.66	0.66	0.67
47. Electric Bulb (Philips)	Each	9.02	9.09	9.09	9.17	9.35	9.35	9.37	9.37	9.47	9.46	9.48	9.52
48. Torch Battery (Eveready 950)	Each	5.98	5.98	5.97	5.94	5.90	5.88	5.81	5.79	5.70	5.70	5.70	5.70
49. Paper	24 sheet	4.88	4.91	4.99	4.99	5.00	5.06	5.05	5.07	5.11	5.18	5.18	5.33
50. Firewood (Local Split)	QtL	84.29	84.29	84.29	84.29	84.29	84.29	84.29	84.29	81.88	83.13	83.13	84.38
51. Cement (Ordinary bag)	Each	121.76	121.69	124.69	125.41	127.55	127.83	128.41	127.99	129.13	129.34	129.42	129.20

Source: Department of Economics and Statistics.

APPENDIX -3.3

Consumer Price Index (Cost of Living Index) Numbers for Agricultural and Industrial Workers - Kerala 1993

(Base 1970 = 100)

Centres	1	2	3	4	5	6	7	8	9	10	11	12
	January	February	March	April	May	June	July	August	September	October	November	
Thiruvananthapuram	576	581	583	586	589	594	597	599	605	609	611	611
Kollam	599	603	605	607	609	613	616	618	623	626	627	627
Punalur	571	576	577	579	581	586	589	590	595	598	597	597
Alappuzha	582	586	588	590	592	597	600	603	609	611	614	614
Kottayam	582	585	587	589	593	597	600	602	608	612	616	616
Mundakayam	581	585	587	589	593	598	601	603	608	612	616	616
Munnar	571	575	577	579	582	587	591	593	599	603	607	607
Ernakulam	569	574	575	578	581	586	590	592	598	602	606	606
Chalakyudi	590	593	595	598	602	606	610	613	619	621	624	624
Thrisoor	568	572	673	576	579	684	588	591	597	600	602	602
Palaikad	571	575	577	580	583	588	592	595	601	605	608	608
Malappuram	599	603	605	607	611	615	618	621	627	629	631	631
Kozhikode	579	584	585	587	591	595	599	602	608	609	611	611
Mappady	593	597	599	602	606	610	613	615	620	623	625	625
Kannur	582	586	588	591	595	600	604	607	613	615	617	617

Source: Directorate of Economics and Statistics

APPENDIX - 3.4

Index Number of Whole Sale Prices by Group and Sub Groups - All India

(Base 1981-82 = 100)

Item	Weight	1993												
		Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Octo.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
All Commodities	100.00	232.4	231.7	231.4	231.8	232.8	233.1	234.9	238.2	240.8	241.3	244.8	244.8	244.8
I. Primary Articles	32.29	237.1	235.8	235.0	235.0	234.6	232.2	232.9	239.1	243.9	244.8	251.5	251.5	251.5
1. Food Articles	17.39	274.0	274.2	272.4	270.7	273.1	268.5	269.8	273.5	279.7	260.5	286.4	286.4	286.4
(i) Foodgrains	7.92	239.7	238.8	238.7	240.0	236.2	238.5	238.3	239.5	244.0	240.8	257.3	257.3	257.3
(a) Cereals	6.92	237.2	237.8	237.4	237.2	231.5	235.0	235.7	235.8	240.1	236.0	251.5	251.5	251.5
(b) Pulses	1.09	255.7	245.1	247.0	257.5	265.4	260.2	254.2	262.9	268.4	270.5	293.3	293.3	293.3
(ii) Fruits & Vegetables	4.09	281.0	281.0	269.1	256.7	267.3	267.9	273.9	284.2	287.6	298.8	294.5	294.5	294.5
(iii) Milk & Milk Products	1.96	272.8	274.4	275.3	274.9	274.3	274.3	291.0	277.7	278.0	270.2	282.3	282.3	282.3
(iv) Egg, Fish & Meat	1.78	260.6	269.5	279.4	276.5	282.3	272.9	265.8	264.8	271.7	277.9	289.9	289.9	289.9
(v) Condiments & Spices	0.95	563.7	543.5	533.0	523.0	496.8	463.5	459.8	467.2	504.1	489.1	492.4	492.4	492.4
(vi) Other Food Articles	0.69	279.0	282.4	294.9	333.3	396.9	321.6	323.8	344.5	359.1	353.5	343.5	343.5	343.5
2. Non-Food Articles	10.08	231.2	226.99	227.2	230.3	224.2	224.4	224.4	229.2	234.1	235.4	243.2	243.2	243.2
(i) Fibres	1.79	217.9	211.7	209.0	198.9	194.0	206.4	205.6	218.1	218.5	218.8	232.9	232.9	232.9
(ii) Oil seeds	3.86	243.9	236.1	231.7	218.3	208.5	202.4	201.9	207.8	217.5	220.2	232.8	232.8	232.8
(iii) Other Non-Food Articles	4.43	225.6	225.1	233.1	253.5	250.2	250.8	251.6	252.4	254.8	255.4	256.4	256.4	256.4
3. Minerals	4.83	116.4	116.4	116.4	116.4	117.5	117.9	117.9	135.6	135.7	135.6	135.7	135.7	135.7
Petroleum Crude & Natural Gas	4.27	103.3	103.3	103.3	103.3	103.3	103.3	103.3	123.3	123.3	123.3	123.3	123.3	123.3
II. Fuel, Powerlight & Lubricants	10.66	234.9	234.9	234.9	237.1	242.9	245.9	251.9	251.9	254.3	254.3	254.3	254.3	254.3
III. Manufactured Products	57.04	229.3	229.7	244.8	253.5	266.5	231.2	232.9	235.2	236.5	236.9	239.3	239.3	239.3
1. Manufactured products (intensive)														
(i) Food products	10.14	229.7	225.4	225.4	222.2	221.9	224.4	230.3	238.6	244.5	247.3	253.6	253.6	253.6



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(ii) Dairy products	0.64	263.7	261.2	260.3	256.0	256.8	252.5	248.5	250.2	251.1	248.7	249.8		
(iii) Sugar, Khandsari and gur	4.06	188.5	180.9	181.9	181.2	186.4	198.8	214.0	233.8	242.1	242.0	249.3		
2. Beverage, Tobacco,	2.15	294.6	295.9	295.9	296.4	296.8	296.5	296.9	299.9	301.0	300.0	302.2		
Tobacco products														
3. Textiles	11.55	201.4	201.9	201.5	202.3	205.5	208.5	209.8	210.2	209.7	211.0	214.5		
4. Pepper and pepper	1.99	316.3	316.3	316.3	316.3	317.6	324.9	325.1	325.1	325.0	324.5	324.5		
Products														
5. Leather and Leather	1.02	225.9	227.7	227.8	228.4	230.9	234.5	234.5	233.0	233.3	235.5	236.9		
Products														
6. Rubber and plastic	1.59	186.3	187.6	187.6	187.6	187.8	188.5	188.7	188.7	190.0	188.8	190.3		
Products														
7. Chemical and chemical	1.35	199.7	199.2	199.4	200.4	199.9	200.5	201.2	203.0	203.9	203.6	206.0		
Products														
(i) Fertilizers	1.75	183.7	183.7	183.2	181.9	181.9	181.9	181.9	181.9	181.9	181.9	181.9		
(ii) Pesticides	0.20	199.6	199.6	201.4	203.3	203.3	203.3	203.3	203.3	205.4	203.3	205.4		
(iii) Drugs & Medicines	1.06	172.2	172.3	172.6	172.6	173.3	173.6	176.1	183.7	183.7	183.4	183.4		
8. Non-Metallic Minerals Products	2.48	234.2	231.4	229.5	230.6	236.4	236.7	240.3	243.7	246.6	243.2	246.2		
9. Basic Metals, Alloys and Metal	7.63	259.2	259.3	259.4	259.5	262.2	264.9	266.0	265.8	265.9	266.7	266.7		
Products														
10. Machinery and Machine tools	6.27	233.4	234.2	236.0	236.3	236.7	232.7	232.6	234.6	234.9	232.7	231.8		
(i) Motor Vehicles, Motor Cycles,														
Scooters, Bicycles and parts	2.43	214.6	214.8	214.8	215.6	215.9	209.6	210.5	210.5	211.1	210.6	211.7		
(ii) Other Miscellaneous manu-														
facturing industries	0.97	139.1	139.1	139.1	139.1	141.0	141.5	141.5	141.5	142.2	141.5	142.3		

Source: RBI Bulletin

## APPENDIX - 3.5

## Consumer Price Index Numbers for Industrial Worker - All India and Selected Centres

(1982-100)

	1993											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July		
All India	244	244	243	241	242	243	245	246	250	253		
Ahmedabad	245	244	239	239	240	240	237	240	244	250		
Ahuva	230	231	233	235	237	236	241	242	247	248		
Bengaluru	237	240	241	241	241	241	243	245	247	249		
Bombay	260	260	260	263	267	264	266	269	274	276		
Calcutta	248	246	243	241	243	246	248	249	253	259		
Coimbatore	233	238	241	236	238	238	240	241	245	246		
Delhi	259	258	257	254	260	263	267	269	273	276		
Hyderabad	231	230	229	228	228	229	232	234	237	238		
Jamshedpur	232	232	233	228	230	232	232	232	235	238		
Madras	247	248	249	247	249	250	249	251	256	258		
Madhura	250	256	256	249	249	248	245	248	250	252		
Mumbai	236	240	247	250	246	244	243	246	253	254		
Nagpur	158	156	154	156	158	159	159	162	166	170		

Source : RBI Bulletin

APPENDIX-3.6

Consumer Price Index Number for Agricultural Labourers State-wise

(Base 1960-61 = 100)

	1992												1993											
	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.		
All India	1099	1065	1067	1066	1058	1053	1039	1038	1057	1068	1088	1182	1121	1112	1117	1124	1115	1106	1107	1121	1129	1161	1141	
Andhra Pradesh	1029	1014	996	962	936	925	908	908	921	922	957	1063	1046	1010	1038	1038	1052	1071	1092	1116	1116	1116	1116	
Assam	1115	1109	1093	1091	1081	1098	1094	1109	1123	1129	1161	1168	1182	1174	1133	1108	1083	1092	1092	1065	1089	1100	1071	
Bihar	1138	1129	1112	1112	1117	1124	1115	1106	1107	1121	1141	1097	1146	1151	1223	1230	1233	1239	1239	1245	1267	1267	1267	
Orizarat	1026	998	984	963	941	938	949	947	961	972	1006	1109	1095	1061	1056	1041	1033	1064	1064	1089	1100	1100	1100	
Jammu & Kashmir	1063	1046	1010	1028	1028	1038	1052	1071	1092	1116	1116	1097	1146	1151	1223	1230	1233	1239	1239	1245	1267	1267	1267	
Karnataka	1168	1182	1174	1171	1162	1133	1108	1083	1092	1065	1071	1182	1182	1174	1133	1108	1083	1092	1092	1065	1089	1100	1071	
Kerala	1097	1146	1151	1170	1222	1223	1230	1233	1239	1245	1267	1097	1146	1151	1223	1230	1233	1239	1239	1245	1267	1267	1267	
Madhyapradesh	1109	1095	1061	1067	1065	1056	1041	1033	1064	1089	1100	1182	1121	1112	1117	1124	1115	1106	1107	1121	1129	1161	1141	
Maharashtra	1182	1121	1106	1101	1051	1017	990	986	1000	996	1021	1182	1121	1112	1117	1124	1115	1106	1107	1121	1129	1161	1141	
Orissa	1084	1081	1043	1043	1051	1036	1033	1049	1072	1100	1122	1084	1081	1043	1036	1033	1049	1072	1072	1100	1122	1122	1122	
Punjab	1125	1111	1097	1096	1105	1122	1099	1125	1154	1186	1214	1125	1111	1097	1122	1099	1125	1154	1154	1186	1214	1214	1214	
Rajasthan	1051	1021	1024	1035	1036	1029	998	1017	1052	1064	1097	1051	1021	1024	1029	998	1017	1052	1052	1064	1097	1097	1097	
Tamil Nadu	1031	1031	1046	1057	1045	1031	1014	1001	1016	1018	1015	1031	1031	1046	1031	1014	1001	1016	1016	1018	1018	1015	1015	
Uttar Pradesh	1145	1118	1077	1080	1095	1104	1075	1078	1121	1145	1164	1145	1118	1077	1104	1075	1078	1121	1121	1145	1164	1164	1164	
Bengal	1016	999	996	962	963	963	974	987	1017	1042	1067	1016	999	996	963	963	974	987	1017	1042	1067	1067	1067	

Source : RBI Bulletin

APPENDIX - 3.7

Consumer Price Index Number - Urban and Non-Manual Employees - All India & Selected Centres

	1992												1993				
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July							
All India	205	205	205	205	205	205	206	207	210	213	213						
Bombay	207	207	208	208	209	210	212	213	216	216	216						
Delhi	201	198	197	198	199	200	190	201	205	210	210						
Calcutta	201	200	199	200	200	201	204	206	208	212	212						
Madras	214	215	217	219	220	219	220	221	223	225	225						
Hyderabad	208	208	210	210	211	211	212	214	217	218	218						
Bombay	205	206	207	207	208	208	208	211	212	213	213						
Lucknow	199	197	195	193	196	196	197	198	199	204	204						
Almndabad	192	192	191	190	189	187	185	186	188	193	193						
Jaipur	206	204	202	205	207	207	207	210	211	221	221						
Patna	218	215	211	212	210	216	218	219	208	221	221						
SriNagar	150	150	150	150	150	150	150	150	150	150	150						
Trivandrum	192	193	195	158	199	199	199	201	203	204	204						
Cuttak	200	201	199	199	197	197	199	201	203	206	206						
Bhopal	219	221	221	221	221	219	221	222	226	228	228						
Chandigar	222	222	221	224	225	227	227	227	228	235	235						
Shillong	221	220	220	219	222	225	225	227	229	229	229						

Source : RBI Bulletin

### APPENDIX 3.8

#### Whole Sale Price Index of Agricultural Commodities-Kerala 1981-93

(Base 1952-53 = 100)

Group	Weight	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993 *
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>A. Food Crops</b>	63.5	417	413	499	597	582	679	709	696	725	835	936	984	1317
1. Food grains	40.4	319	319	406	442	448	501	529	533	544	592	638	638	836
2. Molasses	2.0	606	412	626	629	709	689	626	881	909	1082	1061	1161	1786
3. Condiments & Spices	10.4	442	439	548	854	637	1324	1435	775	754	1098	1542	1688	1940
4. Fruits & Vegetables	10.7	728	740	779	913	1008	759	858	1199	1342	1450	1449	1571	2437
<b>B. Non Food Crops</b>	36.5	680	672	930	1477	966	1009	1324	1428	1215	1365	1832	2062	1986
1. Oil Seeds	25.5	819	796	1112	1863	1142	1227	1650	1795	1411	1562	2240	2543	2395
2. Plantation Crops	11.0	358	386	508	585	560	509	568	578	761	910	888	948	1040
<b>C. All Crops</b>	100.00	513	507	656	918	722	800	933	963	904	1028	1263	1377	1561

Sources: Department of Economics & Statistics

\* Average up to 11/93

191  
APPENDIX 4.1

Coverage of HYV rice in Kerala 1981-82 to 1992-93

Year	Coverage in HYV (ha)				Percentage to total coverage in HYV area under rice			
	Autumn	Winter	Summer	Total	Autumn	Winter	Summer	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1980-81	136236	92391	51098	279725	48.70	33.03	18.27	100
1981-82	138941	73579	47183	250703	53.50	28.33	18.17	100
1982-83	113088	51867	31440	196395	57.58	26.41	16.01	100
1983-84	101810	62063	48477	212350	47.94	29.23	22.83	100
1984-85	112400	63687	44452	220539	50.97	28.88	20.15	100
1985-86	83782	40650	38846	163278	51.31	24.90	23.79	100
1986-87	80076	44604	41253	165933	48.26	26.88	24.86	100
1987-88	54760	33763	31311	119744	45.70	28.20	26.10	100
1988-89	62354	37971	36691	137016	45.52	27.71	26.77	100
1989-90	78997	36910	39718	155625	50.80	23.70	25.50	100
1990-91	80025	40005	42786	162816	49.15	24.57	26.28	100
1991-92	73304	49745	43287	166336	44.07	29.91	26.02	100
1992-93	78090	45417	51589	175096	44.59	25.93	29.46	100

Source: Directorate of Economics & Statistics.



36. Regional Poultry Farm	1	1	-	-	1	-	1	-	1	-	1	-	1	-	7
37. IPD sub Centre	4	-	-	-	-	1	4	-	-	-	-	-	-	-	9
38. Poultry Unit	2														2
39. Rinderpest Checkpost	1	1	-	-	-	3	-	-	8	1	-	2	1	1	18
40. Rinderpest Mobile unit							1	1							2
41. Rinderpest Eradication Scheme	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
42. RP Mass vaccination squad	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
43. Rinderpest vigilance Unit	-	1	-	-	1	1	-	-	1	-	1	-	1	-	6
44. PIG Breeding Farm	-	-			1										1
45. Swine Husbandry Office	-								1						1
46. PIG Breeding Farm	1				1	-	1	1				1	-		5
47. Livestock Mgmt. Trg. Centre	1							1					1		3
48. Poultry Training Institute	-	-	-	1											1
49. Chick sexing school	-	-	-	1											1
50. Motor Boat veterinary Dispensary	-	-	-	1											1
51. District veterinary Centre	1	1	-	1	1		-	1	-	1	-	1		1	8
52. Veterinary dispensary	57	48	30	33	36	36	56	53	38	37	37	14	37	29	541
53. Mobile Farm Aid Unit	1	-	1	1	2	1	1	1	3	2	-	1	2	-	17
54. Veterinary Hospital	10	11	8	10	11	5	14	14	9	7	6	3	6	2	116
55. Mobile vety dispensary	1	1	-	1	1	1	1	1	1	1	1	-	1	-	11
56. Central Veterinary Store	1	-	-	-					1			1			3
57. Veterinary poly clinic	2	2	4	6	4	3	5	6	4	4	2	3	5	1	51
58. Veterinary sub centre	-	-	4	-	-	-	3	12	13	8	6	1	-	-	47
<b>Total Institutions</b>	<b>235</b>	<b>179</b>	<b>152</b>	<b>111</b>	<b>133</b>	<b>67</b>	<b>148</b>	<b>135</b>	<b>136</b>	<b>133</b>	<b>129</b>	<b>77</b>	<b>170</b>	<b>77</b>	<b>1882</b>



## APPENDIX 4.3

## Animal Husbandry Activities during 1992-93

Sl. No.	Activities	Unit	Performance for the years		
			1990-91	1991-92	1992-93
1	2	3	4	5	6
1.	Cases treated	Nos.	3866712	3783036	3298356
2.	Operations performed	"	121622	118636	110086
3.	Castrations done	"	18502	13626	11782
4.	Vaccinations done	"			
	(i) For Livestock	"	1942213	2021477	2009586
	(ii) For Poultry	"	4379700	4124485	6515239
5.	Anti Rabic Vaccinations done on dogs	"	19596	23220	40322
6.	Artificial inseminations done	"	1312613	1376761	1233760
7.	Calvings Recorded	"	221876	262549	261288
8.	Chicks Hatched Out in the Departmental Poultry Farms	"	807400	636503	882663
9.	Eggs produced in the departmental farms	"	1857271	1887822	2095670
10.	Vaccines produced in the Veterinary Biologicals, Palode				
	For Poultry	Doses	7428500	8558800	11302400
	For Livestock	"	1889700	2558640	2123400
11.	Poultry Feed Produced in the Deptl. production Unit	Ton	1617	1172	36959

## APPENDIX 4.4

## Average price of Livestock Products and feeds in the State for the last 3 years

	1990-91	1991-92	Percentage	1992-93	Percentage
	Rs.	Rs.	increase	Rs.	increase
<b>Meat:</b>					
Chicken - Kg.	32.00	34.00	6.25	38.00	11.76
Mutton - Kg.	39.00	41.00	7.8	51.00	24.39
Beef - "	15.00	17.00	13.33	21.00	23.53
Pork - "	25.00	28.00	12.00	30.00	7.14
<b>Egg:</b>					
Fowl - (100)	69.00	81.00	17.39	95.00	17.28
Duck - "	113.00	126.00	11.50	148.00	17.46
Milk: Litre	5.75	6.40	11.30	7.50	17.18
<b>Feed Products (Price)</b>					
Ground nut cake	4.50	4.90	8.88	5.80	18.37
Gingely oil cake	4.65	5.20	11.82	6.20	20.70
Coconut cake	4.30	4.95	15.12	6.20	25.00
Fish meal	-	-	-	-	-
Straw - (MT)	1154.00	1328.00	15.00	1540.00	15.96
Grass - (MT)	553.00	580.00	4.88	610.00	5.17

## APPENDIX - 4.5

## District-wise Distribution of Fishermen Population in Kerala 1993 (estimated)

Sl. No.	District	Marine				Inland				Marine & Inland Total
		Male	Female	Child- ren	Total	Male	Female	Child- ren	Total	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	Thiruvananthapuram	48084	46053	65738	159875	432	417	441	1290	161165
2.	Kollam	28927	26452	34756	90135	10541	9995	12434	32970	123105
3.	Alappuzha	33239	32306	41307	106852	19758	18963	21170	59891	166743
4.	Pathanamthitta	..	..	..	..	345	420	621	1386	1386
5.	Kottayam	..	..	..	..	7900	7683	8366	23949	23949
6.	Idukki	..	..	..	..	..	..	..	..	..
7.	Ernakulam	22655	21976	25116	69747	21094	20408	20390	61892	131639
8.	Thrissur	20667	20876	25445	66988	6305	6142	6661	19108	86096
9.	Palakkad	..	..	..	..	275	310	409	994	994
10.	Malappuram	22687	23204	31010	76901	1334	1320	1545	4199	81100
11.	Wayanad	..	..	..	..	334	309	355	998	998
12.	Kozhikode	29864	28869	36350	95083	3678	3535	4391	11604	106687
13.	Kannur	16546	15681	21394	53621	395	348	362	1105	54726
14.	Kasaragod	13532	12983	15387	41902	302	287	303	892	42794
STATE		2362021	228400	296503	761104	72693	70137	77448	220278	981382

## Appendix - 4.6

## Species-wise composition of Marine Fish Landings in Kerala from 1986-92

(Qty. in tonnes)

## KERALA

Sl.No.	Species	KERALA						
		1986	1987	1988	1989	1990	1991	1992
1.	Elasmobranches	6057	6579	6761	4680	6968	3441	3323
2.	Catfish	5084	8562	9960	4097	2739	1744	1029
3.	Chirocentrus	2237	992	736	1388	724	706	959
4.	a. Oil sardine	145259	109610	60508	184879	179276	106263	54118
	b. Other Sardine	24245	23469	12701	13752	12900	23730	16967
5.	Achoviella	9500	11899	46007	45127	26880	45273	48217
6.	Thrissodes & other clupeoids	1394	1132	5779	2817	2359	3629	7676
7.	Perches	6577	7225	32304	48986	67356	41122	50159
8.	Redmullet	6329	316	9836	6017	6919	18824	7583
9.	Sciaenids	4601	4695	8490	11402	10868	8816	15603
10.	Ribbon Fishes	3536	4757	8952	7179	9751	2167	6162
11.	Carangids	1852	2082	23852	37278	51708	67682	71928
12.	Leiognathus	3642	4341	6493	5354	6195	5643	4480
13.	Lactaritus	1194	983	835	1320	2340	623	675
14.	Pomfrets	1892	2073	1592	1739	2598	1243	2601
15.	Pomfrets	..	..	..	..	..	..	..
16.	Mackrel	17294	15606	43938	85272	78335	53980	37909
17.	Seerfish	3005	3492	10162	8029	5372	4600	8734
18.	Tunnies	7042	5402	12913	22288	32615	13111	16219

Sl. No.	Species	1986	1987	1988	1989	1990	1991	1992
		19. Soles	5080	6073	12965	20247	15427	14496
20. a. Prawn		29817	25443	67661	53335	45485	60594	51131
	b. Lobster & Crustaceans	1606	1316	13812	16050	21855	14583	17800
21. Cephalopods		3997	3661	15155	23698	24361	19602	31424
22. Miscellaneous		44616	33506	57417	42592	49859	52289	77600
TOTAL:		335856	283154	468808	647526	662890	564161	560742

## Appendix 4.7

## Species-wise Inland Fish Production in Kerala 1990-91, 1991-92 and 1992-93

(Qty. in tonnes)

Sl. No.	Species	1990-91		1991-92		1992-93	
		Actual	Percentage	Actual	Percentage	Actual	Percentage
1. Prawn		8732	24.03	9764	24.19	10845	25.58
2. Etropius		3496	9.62	3907	9.68	4058	9.57
3. Murrels		3145	8.65	3512	8.70	3796	8.96
4. Tilapia		5428	14.93	6047	14.98	6143	14.49
5. Catfish		3532	9.72	3915	9.70	4034	9.52
6. Jaw Fish		2020	5.56	2099	5.20	2280	5.38
7. Others		9989	27.49	11121	27.55	11234	26.50
TOTAL:		36342	100.00	40365	100.00	42390	100.00

## Appendix - 4.8

## Details of Fishermen Co-operatives in Kerala (1992-93)

Sl. No.	Particulars	Total No. of Societies	Total No. of Membership	Paid up share capital
1.	Apex Federation	1 (11 non-officials 8 officials)	19	Rs.100.00 lakhs
2.	District Fishermen Development & Welfare Co-operative Societies	5	25	Rs.25.00 lakhs
3.	Marine Fishermen Development and Welfare Co-operative Societies	81	68419	Rs.1586982.00
4.	New Marine Fishermen's Development & Welfare Co-operative Societies	127	--	--
5.	Inland Fishermen's Development & Welfare Co-operative Societies	23	4887	Rs. 48870.00
6.	Harijan/Girijan Fishermen Development & Welfare Co-operative Societies	72	11184	Rs. 316103.00
7.	Primary Co-operative Societies	15	7964	Rs. 324703.00
8.	Matsya Uipadaka Matsya Vyavasaya Co-operative Societies	12	2070	Rs. 182227.00
9.	Others	5	812	Rs. 84569.00
	<b>TOTAL:</b>	<b>341</b>	<b>95436</b>	<b>Rs. 254045.00-</b>

Appendix - 4.9

Details of Physical and Financial Achievements under the Integrated Fisheries Development Project (NCDC Assisted) as on 31-3-1993

(Rs. in lakhs)

Sl. No.	Project components	Phase I		Phase II		Phase III		Total	
		Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
1.	Inputs-Fishing	OBM-819 CRAFT-395 Webbing-64790.30Kg	378.19	OBM-641 Craft 272 Webbing- 105720.88	644.33	OBM-997 CRAFT-715 Webbing- 110281-69Kg	914.77	OBM-2457 CRAFT-1382 Webbing- 280792-87Kg.	1937.29
	Marketing	1. insulated Van & 5 transport vehicles	8.46		15.00		NA		23.46
2.	OBM Service Centre	1 Regional Workshop & 1 Mobile unit	12.38		NA		NA		12.38
3.	Infrastructure		0.00		0.00		0.00		0.00
4.	Extension & Training		90.49		26.82		8.21		125.52
5.	Working Capital		8.47		18.95		4.00		31.42
6.	Project Management		NA		NA		24.57		24.57
7.	Pre-operative expenses		30.00		10.35		36.42		76.77
8.	Project contingencies		27.85		55.41		121.16		204.42
9.	No. of fishermen benefitted	3158	--	6659	--	8085	--	17902	
	TOTAL:		555.84		770.86		1109.13		2435.83

Appendix - 4.10

Details of fisheries works under Harbour Engineering Department

Sl. No.	Name of work	Total estimated cost		Year of starting	Year of Completion/ targetted	Expenditure Upto March 1993	Remarks
		Original Rs. in lakhs	Revised Rs. in lakhs				
1.	2.	3.	4.	5.	6.	7.	8.
A.1	Vizhinjam Fishery Harbour Stage - I IInd & IIIrd Stages	173.00 704.00	208.00 1100.00	1962 1980	1980 1995	-- 824.77	Completed. Work of quay wall, auction halletc. Land could not be commenced. Land Acquisition and rehabilitation not completed.
2.	Neendakara Fishery Harbour	370.00	622.00	1980	1988	719.47	The work partially completed and harbour commissioned. Balance portion of 98 M wharf at Sakthikulangara side not commenced for want of land.
3.	Thangassery Fishery Harbour	1411.00	N11	1991	1994	402.29	Work in Progress
4.	Munambam Fishery Harbour	710.00	N11	1991	1994	259.45	Work in Progress
5.	Puthiappa	527.00	N11	1988	1992	447.51	Work in progress
6.	Chombal Fishery Harbour	556.00	N11	1992	1996	29.46	Prequalification of Contractors finalised.
7.	Mopla Bay	564.00	N11	1992	1996	28.70	Breakwater work retendered as per the direction of High Court of Kerala.
8.	LANDING CENTRES FORMECHANISED BOATS						

1.	2.	3.	4.	5.	6.	7.	8.
1.	Row Nabe	28.43	--	1988	--	41.11	Work completed and commissioning awaited.
2.	Thattappally	25.27	--	1984	--	49.92	Work completed except erection of ice plant.
3.	Palacode	15.00	--	1986	--	5.69	Partially completed
4.	Cheruvathur	18.43	--	1982	--	29.37	Project commissioned
5.	Darmadam	29.95	--	1986	--	25.79	Project commissioned
6.	South Paravoor	24.94	--	1989	--	3.49	Schema deferred
7.	Chettunasi	19.50	--	1989	--	27.89	Work in progress
C.	Landing Centres for Traditional Fishermen.						
1.	Vizhinjam North	18.70	--	1986	--	5.20	Terminated due to objection from local people.
2.	Vizhinjam South	19.10	--	1988	--	24.52	Partially completed
3.	Vallikkunnu	17.90	--	1985	--	19.42	Project commissioned.
4.	Vellayi Beach	22.00	--	1988	--	33.13	Project commissioned
5.	Challi Gopalapettah	25.00	--	1985	--	23.02	Work in progress
6.	Quilon Port	22.00	--	--	--	--	Scheme deferred.
7.	Arthungal	32.22	--	--	--	0.02	Not commenced for want of land to be acquired
8.	Quilandy	23.00	--	--	--	12.69	Land acquired. Tenders invited for the works.

	1.	2.	3.	4.	5.	6.	7.	8.
.....								
1.								
.....								
D.	Brackish Water Fish Farms							
1.	Poyya	23.62	111.75	1984	1989	115.34	Work in Progress	
.....								
E.	National Fish Seed Farms							
1.	Malampuzha	N11	N11	N11	N11	N11	N11	
2.	Polachira	N11	N11	N11	N11	N11	N11	
.....								
<u>Other Fisheries Works</u>								
A.	Setting up of Nurseries 4405-101-94							
1.	Conversion of 5 natural ponds into cemented ponds at Pannivellichira	8.3	--	--	--	8.8	Work completed	
11.	Construction of Nursery ponds Stocking ponds and accommodation at Polachira	10.00	--	--	--	10.08	Work almost completed	
B.	<u>Setting up of Nurseries 2405-101-84</u>	2.345	--	--	--	5.89	Work completed	
C.	Pramm Hatchery, Azhioode	2.635	--	--	--	3.11	Work completed	
.....								



## Appendix-4.11

Physical and Financial Achievements of Kerala Fishermen Welfare Fund board as on 31-11-1993

Sl.No.	Name of the Schemes	No. of beneficiaries	Amount
1.	Old age pension	26826	278,50,000
2.	Financial assistance for the marriage of daughters of fishermen	274(loan) 279(grant)	3,28,00 0 83,700
3.	Group Accident Insurance		
	(a) Death cases	55	13,07,000
	(b) Permanent total disability	2	40,000
	(c) Permanent partial disability	5	60,500
4.	Death immediately after fishing	28	4,20,000
5.	Financial assistance for expenses for death of dependents of fishermen	406	1,21,800
6.	Financial assistance for temporary disability of fishermen due to accident	704	2,28,005
7.	Financial assistance to dependents for expenses for natural death of fishermen	122	61,000
8.	Special cases sanctioned by Board for death or disability	9	76,000
9.	Compensation paid for loss or damages	3	4,090
10.	Financial Assistance to fishermen who undergoes sterilisation operations	6	1,500
11.	Cash awards to S.S.L.C. students of fishermen	3	4,000

Source:- Directorate of Fisheries Department.

## Appendix 4.12

## Average Beach Price of Selected Marine Fishes in Kerala

Sl.No.	Species	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
1.	Elasmobranches	4.40	5.90	7.00	8.00	12.00	15.00
2.	Catfish	3.70	5.50	6.75	7.50	10.00	15.00
3.	Chirocentrus	4.20	4.95	5.00	6.50	8.00	9.00
4.	Oils Sardine	2.25	3.00	4.00	5.00	7.50	12.00
5.	a. Other Sardines	2.25	3.25	4.15	4.50	7.50	12.00
	b. Sciaenids	3.10	3.25	4.00	5.00	7.50	7.00
6.	Carangids	5.00	5.25	6.15	7.50	11.50	13.00
7.	Leignathus	2.60	3.20	3.20	3.50	5.00	6.00
8.	Lactaritus	5.20	6.20	8.00	10.00	15.00	16.00
9.	Pomfrets	9.60	11.00	16.80	17.50	22.00	24.00
10.	Mackerei	5.20	6.50	7.30	8.00	11.50	13.00
11.	Seerfish	12.00	13.50	17.00	18.50	22.50	25.00
12.	Tunnies	6.20	7.00	10.50	11.50	14.00	15.00
13.	Soles	2.40	3.25	3.30	3.50	5.50	6.00
14.	Cephalopods	5.80	6.00	7.80	8.25	10.50	11.00
15.	Prawn	21.40	23.00	28.50	32.50	36.50	40.00
16.	Miscellaneous	2.85	3.00	3.20	4.00	6.50	7.50

## APPENDIX 4.13

## Agency-wise Disbursement of Refinance Assistance by NABARD

(Rs. in Crores)

Sl. No.	Agencies	1990-91			1991-92			1992-93		
		India	Kerala	%	India	Kerala	%	India	Kerala	%
1	2	3	4	5	6	7	8	9	10	11
1.	State Co-operative Agricultural Bank Rural Development Bank	565	29.68	36.52	658	29.69	35.11	885	39.42	37.94
2.	Commercial Banks	934	31.37	38.59	952	31.21	36.90	1004	37.18	35.78
3.	State Co-operative Bank	114	16.16	19.88	149	18.99	22.45	168	20.45	19.68
4.	Regional Rural Bank	289	4.38	5.39	295	4.68	5.53	302	6.86	6.60
Total:		1902	81.28		2054	84.57		2359	103.91	
Percentage share of Kerala to All India		--	4.28		--	4.12		--	4.39	

## APPENDIX 4.14

## Purpose-wise Disbursement by NABARD

Sl. No.	Purpose	Amount disbursed (Rs. Crores)			
		1991-92	%	1992-93	%
1	2	3	4	5	6
1.	Plantation/Horticulture	22.50	26.61	20.76	19.98
2.	Minor Irrigation	15.06	17.81	14.54	13.99
3.	Land Development	2.37	2.80	2.17	2.09
4.	Farm Mechanisation	2.55	3.02	4.70	4.52
5.	Fisheries	1.26	1.49	1.57	1.51
6.	Dairy Development	5.05	5.98	4.62	4.45
7.	Poultry	0.67	0.79	1.04	1.00
8.	IRDP	14.27	16.87	14.88	14.32
9.	Others	5.83	6.89	7.91	7.61
10.	Non-farm sector	15.01	17.73	31.71	30.52
Total:		84.57	100.00	103.91	100.00

## APPENDIX 4.15

Selected indicators of the credit operations of the  
Primary Agricultural Credit Societies

No.	Indicators	As on 30.6.91	As on 30.6.92
1.	No. of Societies	15979	1581
2.	No. of Members (Lakhs)	90.35	90.05
	of which SC (")	8.76	9.29
	of which ST (")	0.63	0.70
3.	Paid Up Share Capital (Rs. lakhs)	9056	10219
4.	Reserves "	7386	8360
5.	Deposits "	95379	117757
6.	Working Capital "	181679	221424
7.	Loans issued		
	Short Term "	74159	99043
	Medium Term "	13771	19502
	Long Term "	3181	4440
8.	Loan Outstanding "	103577	123609
9.	Loan Overdue	29024	25827
10.	ST Loan for Agriculture Purpose alone	26465	41771
11.	ST Loan for Non-Agricultural Purposes	47694	57272
12.	M.T. Loan for Agricultural Purposes	5392	7602
13.	M.T. Loan for Non-Agricultural Purposes	8371	11900
14.	Value of fertilizers sold	4820	6837
15.	Value of Agricultural Produce marketed	5324	8044
16.	Dormant Societies (No.)	25	22
17.	Societies on Profit	695	712
18.	Profit Amount (Rs. lakhs)	1108	1590
19.	Societies on loss (No.)	831	809
20.	Societies without Profit or loss (No.)	53	60
21.	Societies having Paid Secretaries	1559	1562
22.	Societies having own godowns (No.)	1423	1423
23.	Societies having Hired godowns (no.)	558	506

## APPENDIX 4.16

Selected Indicators of the Performance of  
Agricultural Credit Societies

S1. No.	Indicators	Unit	As on 30.6.91	As on 30.6.92
1.	Average Membership per Society	No.	5722	5822
2.	Average Share Capital per Society	Rs. lakhs	5.74	6.46
3.	Average Deposit per Society	Rs. lakhs	60.40	74.48
4.	Average Deposit per Member	Rs.	1056	1279
5.	Average Working Capital per Society	Rs. lakhs	115.06	140.05
6.	Average Loan per Member	Rs.	1108	1336
7.	Percentage of Borrowing Members to total		37.16	39.10
8.	Average Loan Advanced per Advancing Society	Rs. lakhs	59.74	80.70
9.	Average Loan Advanced per Borrowing Member	Rs.	2714	3129
10.	Percentage of Overdue to Outstanding		28.02	20.89
11.	Percentage of Overdue to Demand		26.45	20

## APPENDIX 4.17

## Ordinary Loans Advanced by KSCARDS

S1. No.	Purpose	1989-90	1990-91	1991-92	1992-93
1.	New Wells	1.59	3.36	20.66	6.34
2.	New Tanks	--	--	--	--
3.	Pumpsets & Persion Wheels	6.42	4.17	6.72	8.10
4.	Agricultural Machinery	16.59	18.25	7.18	15.12
5.	Repairs to Wells & Tanks	5.65	0.92	0.20	0.92
6.	Cattlesheds & Farm houses & Godowns	425.11	344.06	276.21	207.92
7.	Fencing	305.73	282.12	261.07	202.52
8.	Levelling & Bunding	443.64	335.43	321.51	358.62
9.	Terracing	107.04	85.14	86.47	102.54
10.	Drainage Channels	4.80	1.49	2.46	10.35
11.	Plantation	78.51	95.37	101.16	102.07
12.	Other Major Programmes	87.15	52.46	49.37	254.14
Total :		1482.23	1222.77	1133.01	1268.64

## APPENDIX 4.18

## Scheme loans Advanced by KSC ARDB at Primary Level

(Rs. lakhs)

Sl. No.	Schemes	1989-90	1990-91	1991-92	1992-93
1.	Minor Irrigation	508.34	547	595.81	597.63
2.	Agricultural Machinery	106.83	165	250.67	354.83
3.	Plantation	1271.30	1195	1404.03	1396.58
4.	Dairy	93.84	106	120.04	163.54
5.	Poultry	36.86	63	50.59	122.51
6.	Fisheries	38.67	32	53.91	40.20
7.	Goat Development	4.60	1	6.61	4.24
8.	Gobar Gas/Biogas	1.44	1	1.02	1.28
9.	Bullock & Bullock Cart	0.39	0.15	--	--
10.	Marshy land Reclamation/ interspace filling	113.49	81	169.35	90.54
11.	Others	81.84	15	--	10.62
Total :		2256.39	2206.15	2652.03	2781.97

## APPENDIX 4.19

## Loan Advanced and Debentures floated by K.S.C.A.R.D.B

(Rs. crores)

Sl. No.	Year	Loan Advanced				Debentures Floated			
		Ordinary	Schemes	NFS	Rural Housing	Ordinary	Scheme	NFS	Housing
1.	1987-88	14.99	23.34	10.48	--	17.65	20.93	0.17	--
2.	1988-89	10.78	14.48	16.23	--	11.30	18.98	14.38	--
3.	1989-90	14.44	23.11	6.08	8.44	14.15	27.61	5.20	--
4.	1990-91	12.62	24.86	9.35	34.35	12.20	22.76	9.38	40.00
5.	1991-92	11.44	27.62	10.18	17.29	11.00	23.05	9.17	10.53
6.	1992-93	12.43	27.25	18.45	11.35	12.40	24.74	17.75	9.65

## APPENDIX 4.20

Details of Release of Assistance by  
NCDC during 1992-93

(Rs. lakhs)

Sl. No.	Activity	Achievement
1	2	3
1.		
A.	<u>Central Sector Schemes</u>	
	1) Margin Money to village societies for distribution of consumer articles	0.00
	ii) IDA Storage Project - NCDC III	52.816
	iii) Training Project - NCDC III	0.816
	iv) EEC - Coconut Development Project	206.50
	v) Share Capital participation towards spinning Mills	72.70
	vi) ICDP Programmes	26.6045
	Sub Total :	358.4365
B.	<u>Corporation Sponsored Scheme</u>	
	i) Margin Money to Federations	30.00
	ii) Share Capital to PCMS	28.00
	iii) Assistance to Coop. Processing Societies and Federations	134.93
	iv) Cooperative Storage	0.00
	v) IDA Storage Project - NCDC III	12.954
	vi) Distribution of consumer articles in rural area	0.50
	vii) Students Cooperatives	5.75
	viii) Tribal Cooperatives (SC/ST)	0.00
	ix) Fishery Cooperatives	2.196
	x) Coir/Sericulture Coops:	45.28
	xi) Handloom Co-operatives	6.61
	xii) T and P Cell	0.76514
	xiii) Poultry	0.00
	xiv) Assistance for computerisation	2.115
	xv) ICDP	270.638
	xvi) EEC - Coconut Development Project	0.00
	xvii) Institution Building and Training under NCDC III	0.272
	xviii) Management studies and Market survey	1.715
	xix) Input Manufacturing & Allied Units	0.000
	Sub Total :	541.73314
	Grant Total :	900.140

## APPENDIX 4.21

## Division-wise Area of Forests in Kerala

Sl. No.	Divisions	Area in Ha. as on 31.3.1993			
		Reserve forests	Proposed for reserve forests	Vested forests	Total
1	2	3	4	5	6
<b>A. Territorial Divisions</b>					
1.	Thiruvananthapuram	353.3120	5.8253	3.9750	363.1123
2.	Thermala	563.1147	--	12.3714	575.4861
3.	Punalur	280.0507	--	0.1690	280.2197
4.	Konni	320.6430	11.0210	--	331.6640
5.	Ranni	1050.2894	7.1670	1.6110	1059.0674
6.	Munnar	662.7502	47.2560	5.8349	715.8411
7.	Kottayam	655.4860	5.2570	31.4090	692.1520
8.	Kothamangalam	316.8650	--	0.1523	317.0173
9.	Malayattoor	617.2411	0.5248	--	617.7659
10.	Vazhachal	413.9438	--	--	413.9438
11.	Chalkudy	354.7098	--	--	354.7098
12.	Thrissur	331.0181	--	6.3430	337.3611
13.	Nemmara	205.5173	--	130.6036	336.1209
14.	Palakkad	73.4100	--	165.4969	238.9069
15.	Mannarkad	209.9800	--	454.7003	664.6803
16.	Nilambur South	267.5110	--	98.6675	366.1785
17.	Nilambur North	57.9196	0.0171	336.1837	394.1204
18.	Kozhikode	--	86.1388	208.1170	294.2558
19.	Wayanad South	67.6005	3.5895	252.4400	323.6300
20.	Wayanad North	133.9031	15.0644	67.1200	216.0875
21.	Kannur	206.5127	--	79.3092	285.8219
<b>Total (A)</b>		<b>7141.7780</b>	<b>181.8609</b>	<b>1854.5038</b>	<b>9178.1427</b>
<b>B. Wild Life Divisions</b>					
	Thiruvananthapuram	181.0000	--	--	181.0000
	Agastyavanam	30.4470	0.6730	--	31.1200
	Idukki	289.6020	--	--	289.6020
	Thekkady	777.0000	0.5438	--	777.5438
	Parambikulam	274.1408	--	--	274.1408
	Silent Valley	89.5165	--	--	89.5165
	Wayanad	366.9074	--	32.6428	399.5502
<b>Total (B)</b>		<b>2008.6137</b>	<b>1.2168</b>	<b>32.6428</b>	<b>2042.4733</b>
<b>Grand Total (A+B)</b>		<b>9150.3917</b>	<b>183.0777</b>	<b>1887.1466</b>	<b>11220.6160</b>



## APPENDIX 4.22

## Species-wise area under Forest Plantations

Sl. No.	Name of Species	Area in Hectares						Percentage to total as on 31.3.1993
		1988	1989	1990	1991	1992	1993	
1.	Teak	78583	78799	76502	76202	75355	74914	48.30
2.	Eucalyptus	33986	32095	31609	30675	29923	29633	19.11
3.	Mixed Plantations	17832	23480	30660	31490	32887	33999	21.92
4.	Soft wood	10695	5907	1239	1239	919	895	0.58
5.	Cashew	4157	4138	3784	3784	4558	4570	2.95
6.	Bamboo	280	444	404	509	646	996	0.64
7.	Mistle	3085	3183	3247	3524	3735	3890	2.51
8.	Hard wood	588	718	849	849	849	859	0.55
9.	Fuel wood	1448	385	86	122	96	138	0.09
10.	Pepper	508	508	314	314	408	459	0.30
11.	Pine	449	449	449	452	452	452	0.29
12.	Mahogany	80	89	170	170	169	169	0.11
13.	Rose wood	183	193	149	146	155	155	0.10
14.	Balsa	81	77	97	97	93	93	0.06
15.	Cardamom	--	--	--	--	--	--	--
16.	Sandal wood	14	14	12	12	11	11	0.01
17.	Kongu	14	--	--	--	--	--	--
18.	Zylocium	--	--	--	--	--	--	--
19.	Others	2364	3622	3441	3563	3502	3855	2.48
<b>Total :</b>		<b>186337</b>	<b>174681</b>	<b>163012</b>	<b>153148</b>	<b>153758</b>	<b>155088</b>	<b>100.00</b>

Source: Forest Department

## APPENDIX 4.23

## Production of Major Forest Produce

Item	Unit	1989-90	1990-91	1991-92	1992-93	Actual increase or decrease over the year
Teak (Round Log)	Cum.	38539	37981	42009	51554	+9545
Teak (Round Poles)	Nos.	635615	315705	742419	867932	+125513
Teak (Swan & Squard)	Cum.	38	--	81	52	-29
Wood	MT.	11111	9520	16983	24328	+7345
Pal	KG	4860	64695	5200	1244	-3956
Tom	KG	6375	2778	2461	4109	+1648
	KG	50214	16574	44480	38285	-6195
	Nos.	76510860	76006486	41998909	41586809	-412100
Bamboo	Nos.	1282977	3756175	1006062	1077480	+71418
10. Jungle wood poles	Nos.	76947	6702	290	433	+143
11. Sandal wood	KG	77398	72276	84059	147395	+63336

## APPENDIX 4.24

## Forest Revenue in Kerala

(Rs. in lakhs)

Sl. No.	Item	Sale Proceeds					Increase or Decrease		
		1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	Actual Rs. in lakh	Percentage
1		3	4	5	6	7	8	9	10
<b>A. Revenue from Forest</b>									
1.	Timber	3356.93	2738.33	2308.84	2962.57	4631.11	6794.63	+2163.52	46.72
2.	Fire wood and char coal	98.23	72.15	44.64	53.56	65.55	89.30	+ 23.75	36.23
3.	Live stock					1.40	1.48	0.08	5.72
4.	Others	365.05	384.97	479.02	484.35	593.54	654.02	+ 60.48	10.19
	Sub Total (A)	3820.21	3195.45	2832.50	3500.48	5291.60	7539.43	+2247.85	42.48
B.	Other receipts	194.32(x)	183.55(x)	392.87(x)	242.14(x)	286.71	348.68	+ 61.97	21.62
C.	Total (A+B)	4014.53	3379.00	3225.37	3742.62	5578.31	7888.11	+2309.80	41.41
D.	Refunds	9.79	4.57	9.12	9.66	14.62	16.72	+ 2.10	14.37
E.	Net Revenue (C-D)	4004.74	3374.43	3216.25	3732.96	5563.69	7871.39	+2307.70	41.48

(x) Including live stock.

## APPENDIX 4.25

Physical and Financial Achievements under social forestry  
(1991-92 and 1992-93)

Sl. No.	Particulars	Unit	Physical Achievement		Financial Achievement	
			1991-92	1992-93	1991-92	1992-93
<b>A. Social Forestry</b>						
1.	Block plantations in Government lands					
	(a) Large Blocks	Ha.	4803.90	6332.67		
	(b) Small Blocks	"	182.44	425.49		
					549.91	459.32
2.	Strip plantations	"	2.69	34.74		
3.	Tribal fuel wood plantations	"	73.00	104.20 km.		
4.	Tribal Medicinal					
5.	Form forestry-Distribution of seedlings	Lakhs (Nos.)	92.50	115.20	104.12	132.45
6.	Seedlings production	"	93.80	169.80	156.35	100.72
7.	Rural Fuel wood scheme (50% centrally sponsored)	Ha.	--	Nil	--	--

## APPENDIX 4.26

Performance of Kerala Social Forestry Project  
during 1991-92 and 1992-93

Sl. No.	Item	Unit	1991-92		1992-93		Percentage of Achievement	
			Target	Achievement	Target	Achievement	1991-92	1992-93
1.	Distribution of Seedlings	Lakh Nos.	99.00	92.50	100	115.20	93.43	115.20
2.	Block plantation on Government land							
	(a) Large Block	Ha.	10000	4803.90		6332.67	48.04	
	(b) Small Block	"	100	182.44		425.49	182.44	
3.	Strip Plantations	"	50	2.69	5560	34.71 +104.20 Km.	5.38	122.17
4.	Tribal Fuel wood Plantations	"	660	73.00			11.06	
5.	Tribal Medicinal Plantations	"						
6.	Seedling production (Governmental)	Lakhs (Nos.)	228.30	93.80	139	169.8	41.09	122.16

## APPENDIX 4.27

Statement showing selected physical Achievements (Civil Works)  
Under Kerala Social Forestry Project as on 1993 March  
(Since Commencement of the Project)

S1. No.	Name of the work	Year of commencement Target *	Year of completion Achievement	If not completed percentage of work completed
1	2	3	4	5
<b>A. <u>Office Buildings</u></b>				
1.	Headquarters and circle Headquarters	4	2	50
2.	Division offices	13	8	61.54
3.	Range offices	32	28	88
4.	Others	119	111	93
<b>B. <u>Quarters</u></b>				
1.	Chief conservator of Forests and conservator of Forests	8	5	62.5
2.	Assistant conservator of Forests	21	17	86
3.	Range officers	71	54	76
4.	Others	439	290	66
<b>C. Roads (Kms.)</b>				
<b>D. Vehicles (Nos.)</b>				
<b>E. Others (specify)</b>				

\* Target revised based on the work approved by the steering committee on 15.5.1992.

## Appendix - 5.1

Irrigation, Flood Control, Anti-Sea Erosion and Command Area Development -  
Outlay and Expenditure during various Plan periods

(Rs. in lakhs)

Plan period	Irrigation Sector			
	Outlay	% to total	Expenditure	Expenditure as % outlay
First Plan (1951-56)	578	19.2	911	88.4
Second Plan (1956-61)	1286	14.8	1308	101.7
Third Plan (1961-66)	2135	12.6	2116	99.1
Annual Plan 1966-67 to 1968-69)	1914	13.4	1902	99.4
Fourth Plan (1969-74)	4258	16.5	4722	110.9
Fifth Plan (1974-78)	10921	19.2	9609	87.9
Annual Plan (1978-79 & 1979-80)	8729	22.2	9025	103.4
Sixth Plan (1980-85)	31242	21.0	32145	102.9
Seventh Plan (1985-90)	34850	15.8	27925	108.8
Total - I Plan to VII Plan	95913	17.9	99663	103.9
Annual Plan (1990-91)	9395	14.8	9182	91.7
(1991-92)	10390	12.9	10076	97.0
Eighth Plan (1992-97)	63000	11.5	-	-
(1992-93)	12000	13.1	11142	92.9
(1993-94)	14000	14.0	-	-

Appendix - 5.2

Major and Medium Irrigation Projects in Kerala

Sl. No.	Name of Schemes, Year of Starting and Year of Completion	1	2	3	4	5	6		7	8	9	10
							Original Estimated cost (Rs. in lakhs)	Latest estimated cost (Rs. in lakhs) (1988)				
							Net	Gross		Net	Gross	
<b>A. Completed Schemes</b>												
1.	Chalakkudy (1949-55)	188	188.25	188.25	188.25	26680	39380	18530	27258			
2.	Peechi (1947-59)	235	235.00	235.00	235.00	17555	28080	15262	23718			
3.	Malampuzha (1949-55)	388	580.00	580.00	580.00	29463	42090	19802	40208			
4.	Meiyar (1951-73)	248	461.00	461.00	461.00	16042	17952	8300	16716			86
5.	Pethandy (1959-71)	234	234.25	234.25	234.25	8792	10930	4685	10046			
6.	Gayathri (1955-70)	220	220.00	220.00	220.00	7651	10930	4880	10114			
7.	Matayar (1953-64)	92	131.66	131.66	131.66	4536	6470	3752	6503			43
8.	Vazhani (1951-62)	108	108.00	108.00	108.00	3565	7130	2113	4226			
9.	Mangalam (1953-56)	45	106.00	106.00	106.00	4816	6880	3313	6608			13
10.	Cheerakkuzhi (1957-73)	91	90.76	90.76	90.76	2268	2828	952	1846			
<b>TOTAL - A.</b>		1849	2354.92	2354.92	2354.92	121368	172670	81589	147243			

	2	3	4	5	6	7	8	9	10
<b>B. Ongoing Schemes</b>									
11. Kallada (1961 - )		1328	45780.00	39297.00	61630	92806	23087	39631	3347
12. Pamba (1964 - )		349	6300.00	6104.00	21135	49456	20728	48480	1555
13. Muvattupuzha (1976 - )		2086	8925.00	6709.00	18616	52200	-	-	327
14. Periyar Valley (1956 - )		383	6340.00	8216.00	832800	85600	27225	70783	1711
15. Chinni - Mupli (1975 - )		633	3615.00	3589.00	13000	26200	13000	13000	471
16. Chitturpuzha (1961 - )		106	2080.00	2289.00	15700	29202	14975	27854	1882
17. Kanjirapuzha (1961 - )		365	7500.00	6046.00	9713	21853	7266	16348	1959
18. Kuttialy (1962 - )		496	5500.00	5741.00	14570	35850	14111	34710	1808
19. Pazhassi (1964 - )		442	7736.00	7894.00	11525	23050	6124	12248	1650
20. Vamanapuram (1981 - )		1982	3640.00	436.00	8803	18014	-	-	83
21. Idamalayar (1981 - )		1785	6740.00	2955.00	14396	43190	-	-	277
22. Kuriankutti-Karappara (1978 - )		1036	6018.00	173.00	11736	23472	-	-	480
23. Challyar (Beyporepuzha) (1981 - )		1061	37800.00	145.00	73235	108035	-	-	-
24. Kakkadavu (1979 - )		1335	9885.00	220.00	13986	41760	-	-	640
25. Attappady (1975 - )		476	5000.00	765.00	4500	8378	-	-	950
26. Karappuzha (1975 - )		760	4066.00	2857.00	4650	9300	-	-	435
27. Meenachil (1980 - )		3500	4956.00	185.00	9960	14510	-	-	50
28. Banasuragar (1979 - )		800	1798.00	163.00	2800	4800	-	-	124
<b>TOTAL - B.</b>									
		18922	173679.00	93834.00	323733	687676	126516	263054	
<b>TOTAL - A + B</b>									
		20771	176033.92	96188.92	445101	1305447	208105	410297	

## Appendix - 5.3

## Major and Medium Irrigation - Physical and Financial Achievements during 1992-93

Sl. No.	Name of Project	Physical Achievement during '92-93 (Ha)		Cumulative Achievement till the end of 1992-93 (Ha)		Expenditure 1992-93 (Rs. lakhs)	Cumulative Expenditure till the end of 1992-93 (Rs. lakhs)
		Net	Gross	Net	Gross		
1	2	3	4	5	6	7	8
<u>On going Schemes</u>							
1.	Kallada	1995	2993	23087	39631	3171	39297
2.	Pamba	-	-	20728	48480	125	6104
3.	Periyar Valley	1395	3625	27225	70783	471	8216
4.	Chimoni-Mupli	-	-	13000	13000	278	3589
5.	Chitturpuzha	661	1230	14975	27854	99	2289
6.	Kanjirapuzha	384	863	7266	16348	320	6046
7.	Kuttiady	-	-	14111	34710	77	5741
8.	Pazhassi	396	792	6124	12248	335	7894
9.	Muvattupuzha	-	-	-	-	1477	6709
10.	Vamanapuram	-	-	-	-	54	436
11.	Idamalayar	-	-	-	-	309	2955
12.	Kuriarkutty-Karappara	-	-	-	-	11	173
13.	Chaliyar(Baypore puzha)	-	-	-	-	63	195
14.	Kakkadavu	-	-	-	-	5	220
15.	Attappady	-	-	-	-	16	765
16.	Karapuzha	-	-	-	-	492	2857
17.	Meenachil	-	-	-	-	45	185
18.	Banasura Sagar	-	-	-	-	7	163
<b>TOTAL:</b>		<b>4831</b>	<b>9503</b>	<b>126536</b>	<b>263054</b>	<b>7355</b>	<b>93834</b>



## Appendix - 5.4

## Physical and Financial Achievement under Minor Irrigation Programmes

Sl. No.	Item	Cumulative Achievement at the end of 1991-92 (Ha.)		Actual Expenditure during 1992-93 (Rs. lakhs)	Achievement during '92-93 (Ha.)		Cumulative Area brought under Irrigation till the end of 1992-93 (Ha.)	
		Net	Gross		Net	Gross	Net	Gross
1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	M.I. Class I	25163	37744	253.14	1266	1899	26429	39643
2.	M.I. Class II	62906	62906	208.77	1044	1044	63950	63950
3.	Lift Irrigation	29227	44576	291.71	1459	2189	30686	46765
4.	M.I. works in IPD Yelah	14097	14097	32.16	160	160	14257	14257
5.	Repairs to M.I. Structures	2895	2895	237.91	2379	2379	5274	5274
6.	Community Irrigation	1020	1020	9.01	72	72	1092	1092
7.	M.I. Special Component Plan	561	561	130.99	640	640	1201	1201
8.	M.I. Tribal Sub-Plan	269	269	27.68	287	287	556	556
TOTAL:		136138	164068	1191.37	7307	8670	143445	172738

## Appendix - 5.5

## Details of Minor Irrigation works implemented during 1992-93

Sl. No.	Category of Work	No. of works pending	No. of works during 1992-93 (including the Spill over)	No. of works completed during 1992-93
1.	Minor Irrigation Class I	50	56	24
2.	Minor Irrigation Class II	26	88	48
3.	Lift Irrigation	81	84	12
4.	Minor Irrigation works in IPD Yelah unit	-	18	11
5.	Repairs to M.I. works	-	119	68
6.	Community Irrigation M.I. works	119	71	10
7.	M.I. works in SCP	65	87	31
8.	M.I. works in TSP	21	22	8

## Appendix - 5.6

Physical and Financial Achievement of Flood Control and  
Anti-Sea Erosion Programme

Sl. No.	Item	Achievement till the end of 3/92		Achievement during 1992-93		Cumulative achievement till the end of 3/93	
		Expenditure (Rs. lakhs)	Area benefited	Expenditure (Rs. lakhs)	Area benefited	Expenditure (Rs. lakhs)	Area benefited
1	2	3	4	5	6	7.	8.
1.	Flood Control Programme	2527.43	37192 (Ha)	210.47	2500(Ha.) (Protected)	2737.90	39692(Ha)
2.	Anti-Sea Erosion	11271.13	320.42 km. new sea wall 49.38 km. reformation of old sea wall to standard size	953.21	6.80 km. new sea wall 2.65 km. reformation of old sea wall to standard size.	12224.34	327.22 km. new sea wall 52.03 old sea wall renovated.

## Appendix - 5.7

## Details of Flood Control and Anti-Sea Erosion works completed during 1992-93

Sl. NO.	Item	No. of works pending	No of works taken up during 1992-93	No. of works completed during 1992-93
1	2	3	4	5
1.	Flood Control Works	9	30	19
2.	Anti-Sea Erosion Programme	38	4	22

## Appendix - 5.8

Physical and Financial Achievement of  
Command Area Development Programme during 1992-93

Item	Achievement till the end of 3/92		Achievement during 1992-93		Cumulative Achievement till the end of 3/93	
	Expendi- ture	Area benefited	Expendi- ture	Area benefited	Expendi- ture	Area benefited
	(Rs. in lakhs)	Area (in Ha.)				
A. Construction of Field Channels	3795.94	69709	1920	9252	5715.94	78961

## Appendix - 5.9

## Growth of Kerala Power System at a Glance - 1992 &amp; 1993

Sl. No.	Particulars	Position as on	
		31-3-1992	31-3-1993 (Provisional)
1.	2.	3.	4.
1.	Installed capacity-MW	1476.5	1476.5
2.	Maximum demand-MW		
	(a) System	1264.6	1403
	(b) Internal	1308.8	1302
3.	Generation per annum-MU	5325.79	6158.07
4.	Import per annum-MU	1855.82	1232.49
5.	Export per annum-MU	2.18	--
6.	Energy sales per annum-MU	5596	5838.55
7.	Energy losses of percentage of energy available for sale	21.73	21
8.	Per capita consumption KWH	192	198
9.	220 KV lines - CT.KM	1064.55	1067.355
10.	110 KV lines - CT.KM	2192.244	2207.206
11.	66 KV lines - CT.KM	2612.601	2630.201
12.	11 KV lines - CT.KM	21686	22556
13.	LT lines - CT.KM	107408	115589
14.	Step up transformer capacity - MVA	1726	1726
15.	No. of the EHT substations	143	148
16.	Step down transformer capacity - MVA	4994.2	5474.4
17.	Distribution Transformer		
	(a) Numbers	18969	19885
	(b) Capacity - MVA	2294	2405
18.	No. of Villages electrified	1268	1268
19.	No. of consumers (in lakhs)	37	39.31
20.	Connected load - MW	5526.01	6575.94
21.	No. of street lights	545652	568709
22.	No. of irrigation pumps	238206	260406
23.	Total revenue per annum (Rs. in lakhs)	29062.32	43875.28

## Appendix - 5.10

## Outlay and Expenditure during various plan periods on Power Development

(Rs. in lakhs)

Plan Period	Power Development			
	Outlay	% of Total	Expenditure	Expenditure as % outlay
First Plan (1951-56)	1185	39.5	1060	89.5
Second Plan (1956-61)	2345	26.9	2192	93.5
Third Plan (1961-66)	4356	25.6	6084	139.7
Annual Plan (1966-67 to 1968-69)	4691	32.9	4195	89.4
Fourth Plan (1969-74)	7625	10.5	10740	140.9
Fifth Plan (1974-79)	12990	22.8	11057	85.1
Annual Plan (1978-79 to 1979-80)	8378	21.3	7060	84.3
Sixth Plan (1980-85)	28007	18.8	32180	114.9
Seventh Plan (1985-90)	44131	19.9	41912	95.0
<b>Total I Plan to VII Plan:</b>	<b>113708</b>	<b>21.3</b>	<b>116478</b>	<b>102.4</b>
Annual Plan (1990-91)	13542	21.3	12493	92.3
Annual Plan (1991-92)	15620	19.4	14642	93.7
Eighth Plan (1992-97)	130000	23.8	-	-
Annual Plan (1992-93)	18500	20.3	19660 *	97.5
Annual Plan 1993-94	20900	20.9	-	-

\* Provisional

## Appendix - 5.11

## Power Projects and Power Generation as on 31-3-1993

Sl. No.	Name of Projects	Installed capacity (MW)	Energy potential (MU)	Units generated during 1992-93 (MU)
1.	2.	3.	4.	5.
1.	PallivasaI	37.5	204	232.0851
2.	Sengulam	48	182	171.6070
3.	Meriamangalam	45	237	284.1
4.	Panniar	30	158	144.151
5.	Peringalkuthu	32	170	198.7272
6.	Sabarigiri	300	1338	1550.81
7.	Sholayar	54	233	224.8313
8.	Kuttiady	75	268	251.211
9.	Idukki	780	2398	2737.76
10.	Idamalayar	75	380	397.4501
TOTAL:		1476.5	5648	6192.7327

## Appendix - 5.12

## Details of Cost, Expenditure, Potential, - expected year of Commissioning of Hydro-Electric Projects in Kerala - 1993

Sl. No.	Name of Project	Year of start-ing	Original Estimated cost (Rs. in lakhs)	Latest Revised Estimate (Rs. in lakhs)	Expenditure till the end of 3/93 (Rs. in lakhs)	Expected year of Commissioning	% increase of Revised Estimate over the Original Estimate	Energy Potential (M.U.)
1.	Kakkad	1976	1860	9869	7246	1995-96	430	262
2.	Kallada	1981	1180	1606	1408	1993-94	36	53
3.	Lower Periyar	1983	8843	26000	12963	1995-96	194	493
4.	Malampuzha	1987	295	425	311	1993-94	44	5.6
5.	Madupetty	1987	292	435	343	1993-94	48	6.4
6.	Peppara	1987	393	580	245	1994-95	47	11.5
7.	Chimoni	1987	314	425	70	1995-96	35	65
8.	Malankara	1987	780	1600	89	1995-96	105	36
9.	Peechi	1989	244	287	-	1995-96	17	5
10.	Pooyankutty Stage I	1985	2500	-	450	-	-	645
11.	Azhutha Diversion	1988	370	600	352	1994-95	62	57
12.	Kuttiar Diversion	1989	214	660	34	1995-96	208	36.6
3.	Vadakkepuzha Diversion	1989	131	160	-	1994-95	22	12
4.	Vazhikkadavu Diversion	1989	185	359	-	1996-97	94	24
	Peringalkuthu L.B. Extension	1989	902	2600	760	1996-97	188	38
	Kuttiar Diversion	1992	214	310	121	1995-96	44	37

## Appendix - 5.13

## Pattern of Power Consumption and Revenue Collected during 1992-93

Category	No. of consumers on 31.3.93 (Nos.)	Connected load as on 31.3.'93	Energy (MU) sold	Consumption as percentage to total	Revenue collected (Rs.lakhs)	Revenue as % to total
2	3	4	5	6	7	8
1. Domestic lights, heat and small power	2941920	1997.74	1841	31.53	10023.54	22.85
2. Commercial lights, fans, heat and power	654284	446.50	706	12.09	7448.36	16.98
3. Industrial (Low and Medium Voltage)	69920	977.43	445	7.62	4019.94	9.16
4. Industrial (High and Extra High Voltage)	1184	2506.76	2172	37.20	17582.07	40.07
5. Irrigation	260433	515.84	235	4.02	590.00	1.34
6. Public lighting	1398	30.08	133	1.94	1073.57	2.45
7. Water Works and Sewerage	1146	80.51	100	1.71	900.36	2.05
8. Bulk supply to licencees	5	21.08	122	2.09	763.29	1.74
9. Miscellaneous (Outside State supply and other miscellaneous receipts)			105	1.80	1474.15	3.36
<b>TOTAL:</b>	<b>3930290</b>	<b>6575.94</b>	<b>5839</b>	<b>100.00</b>	<b>43875.28</b>	<b>100.00</b>

## Appendix - 5.14

## Average realisation from sale of Power

Consumer Category	Average realisation in paise per unit	
	1991-92	1992-93
Domestic	53	54.45
Commercial	89	105.50
Public lighting	80	95.01
Irrigation and Dewatering	25	25.11
Public Works	75	90.04
Industrial (a) LT	73	90.34
(b) HT & EHT	57	80.95
Bulk Supply	37	62.56
Outside Supplies	--	73.22
<b>TOTAL:</b>	<b>60</b>	<b>73.95</b>

## APPENDIX - 6.1

Index of Industrial Production (Base 1980-81 = 100)

Sl.No.	Item	Weight	Index for 1990-91	Index for 1991-92
1	2	3	4	5
1.	General Index	100	190.45	216.21
2.	Manufacture of Food Products	8.82	123.67	213.92
3.	Manufacture of Beverages, Tobacco and Related Products	1.46	72.47	52.07
4.	Manufacture of Cotton Textiles	0.02	167.64	180.12
5.	Manufacture of Wool, Silk and Man-made Fibre Textiles	1.26	117.53	113.57
6.	Manufacture of Textile Products	3.26	88.86	92.28
7.	Manufacture of Wood and Wood Products	1.35	116.70	99.09
8.	Manufacture of Paper and Paper Products	3.16	1275.82	1275.14
9.	Manufacture of Basic Chemicals and Chemical products (except products of petroleum and Coal)	19.78	165.41	175.02
10.	Manufacture of Rubber, Plastic, Petroleum and Coal Products and Processing of Nuclear Fuels	10.06	151.50	146.05
11.	Manufacture of Non-metallic Mineral Products	3.42	84.50	107.52
12.	Manufacture of Basic Metal and Alloys Industries	3.43	191.28	183.46
13.	Manufacture of Metal Products and Parts except Machinery and Equipment	0.50	272.52	240.31
14.	Manufacture of Machinery and Equipment other than Transport Equipment	9.46	346.96	607.36
15.	Manufacture of Transport Equipment and parts	2.67	43.54	31.70
6.	Other Manufacturing Industries	1.42	12.31	21.08
7.	Electricity Generation, Transmission and Distribution	21.93	117.81	113.64

Department of Economics and Statistics.