

**GOVERNMENT OF KERALA**

**ECONOMIC REVIEW**

**1990**

**STATE PLANNING BOARD**

**THIRUVANANTHAPURAM**

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## CHAPTER 1

### GENERAL REVIEW

#### *National Science*

The national economic scene witnessed persistent fiscal imbalance during 1990, a situation of almost crisis proportions, with a fast growing budgetary deficit, sharp deterioration in the balance of payments position, a rapid depletion in foreign exchange reserves to as low a level as 1,761 crores January 1991, which was insufficient to finance imports of even one month. The wholesale price index registered an increase of 10.1 percent during the first nine months of the current financial year compared with 7.3 percent in the corresponding period of the previous year. The problems have been exacerbated by the oil shock and the war in the Persian Gulf. The impact of the war on the economy, cannot be assessed immediately, as it will greatly depend on the level at which the oil price stabilises, and the restoration of normalcy in the region. Also in view of the fact that the budget deficit of the Government of India for 1990-91 may be far in excess of the original estimate, inspite of the heavy additional imposts in recent months, the real impact on price levels and production can be gauged fully only after some more time. The outlook therefore for the current financial year as a whole is a mixed one dominated by a massive budget deficit, double digit inflation and extremely precarious balance of payments position.

1.2 The first half of the current financial year, according to the available information, witnessed reasonable growth in the economy, with the farm sectors continuing to perform well and industrial production increasing by

13.5 per cent over the corresponding period last year. It may be difficult however to sustain this growth in the second half of the year, particularly because of the likely depressing impact of the severe balance of payments constraints on the availability of imported raw materials and consequently on industrial production.

1.3 The Gross Domestic Product (GDP) at current prices is estimated at Rs.3,95,143 crores for 1989-90 as against Rs.3,51,724 crores in 1988-89. At 1980-81 prices, the GDP is estimated to have grown by 5.2 per cent from Rs.1,87,725 crores in 1988-89 to Rs.1,97,419 crores in 1989-90. This compares unfavourably with a record growth of 10.4 per cent in the previous year. During the Seventh Plan the GDP has grown at 5.6 per cent per annum, exceeding the target of 5 per cent fixed for the Plan. The latest forecast for 1990-91 is that GDP may grow at a rate of only 4.5 per cent.

1.4 The national income at constant prices has grown by 5.2 per cent from Rs.1,66,200 crores in 1988-89 to Rs.1,74,798 crores in 1989-90, and the percapita income has grown by 3.1 per cent from Rs.2,078 in 1988-89 to Rs.2,142 in 1989-90. At current prices the percapita income is estimated at Rs.4,252 for 1989-90 as against Rs.3,875 in 1988-89.

1.5 Table 1.1 gives summary position of the selected indicators of the economy.

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## CHAPTER 1

### GENERAL REVIEW

#### *National Scene*

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1.5 Table 1.1 gives summary position of the selected indicators of the economy.

Table 1.1

## Selected Economic Indicators

(Percentage change over previous Year)

Economic Indicators	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89 (P)	1989-90 (P)
Gross National Product (1)	7.5	5.6	-4.9	7.2	5.9	2.6	8.0	3.8	5.0	3.9	3.8	10.6	4- 4.5*
Agricultural Production	14.3	3.8	-15.2	15.6	5.6	-3.8	13.7	-1.2	2.4	-3.7	-0.8	20.8	1.0*
Foodgrains Production	13.7	4.3	-16.8	18.1	2.9	2.8	17.6	-4.5	3.4	-4.7	-2.1	21.3	1.8*
Industrial Production (2)	4.2	7.6	-1.7	4.0	9.3	3.2	6.7	8.6	8.7	9.1	7.3	8.8	5.2(3)
Electricity genera:	3.4	12.2	2.1	5.9	10.2	5.7	7.6	12.0	8.5	10.3	7.5	9.5	12.0(4)
Wholesale Price Index (5)	0.4	4.5	21.4	16.7	2.4	7.2	7.2	6.0	4.8	5.1	10.7	5.7	7.0(6)
Monetary Resources (R3)	18.4	21.9	17.7	18.1	12.5	16.1	18.1	18.9	15.9	18.6	15.9	17.7	14.9(7)
Imports at current prices	18.6	13.1	34.2	37.3	8.4	5.0	10.8	8.2	-14.7	2.2	11.5	25.9	20.7(8)
Exports at current prices	5.2	5.9	12.1	4.6	16.3	12.8	11.0	20.2	-7.2	14.3	26.4	28.9	38.3(8)
Foreign exchange Reserves													
(Rs. crores)	4862.0	5821.0	5934	5544	4024	6782	5972	7243	7820	8151	7687	7040	5331(9)

(P) Provisional      \* Anticipated

1. Growth rates are based on new series at 1980-81.

2. Growth rates are based on old index of industrial production (Base 1970-71-100) upto 1980-81 and on the basis of new index (Base 1980-81-100) thereafter.

3. April-November 1989

4. April-December 1989

5. Rate of inflation is based on old index of wholesale prices (Base 1970-71-100) upto 1981-82 and on the basis of new index (Base 1981-82-100) thereafter on point to point basis.

6. Upto February 17, 1990.

7. Between March, 31, 1989 and January 26, 1990.

8. April-December 1989 over the same period of 1988. Rates of growth are in relation to rupee values.

9. As on January 31, 1990, Foreign Exchange include gold, SDR and foreign assets and relate to end-period.



## Development in Kerala's Economy

1.6 Table 1.2 presents selected indicators of the State's economy.

TABLE 1.2

## Important Indicators of State Economy

Item	1970-71	1980-81	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. State Income (At current prices) Rs. Crores	1255	3655	6223	7099	7873	9135	10174
State (1980-81 prices) Rs. Crores	1255*	3655	3969	3899	4047	4444	4705
2. Percapita Income (at current prices) Rs.	594	1444	2251	2519	2754	3146	3651
Output of important commodities							
(a) Rice-Lakh tonnes	12.98	12.72	11.73	11.34	10.33	10.13	11.41
(b) Coconut-Million nuts	3981	3008	3149	3173	3346	4215	4394
(c) Arecanut	12738	10805	10664	53207	10665	11450	--
(d) Pepper 1000 tonnes	25.03	28.52	29.17	30.38	46.82	43.24	39.74
(e) Rubber	78.73	140.33	184.70	202.13	216.56	238.41	275.60
(f) Tea	41.45	50.72	53.10	50.34	56.28	65.77	57.08
(g) Coffee	12.57	23.54	23.64	23.55	22.93	47.43	23.80
Prices							
(a) Wholesale Price Index of agricultural commodities # (Base 1952-53=100)	222	513	800	933	964	904	1017
(b) Consumer Price index Number (Base 1970=100)	364	229	340	368	398	413	431
5. Plan Outlay (Rs.Crores) (Accounts)	59.35	311.31	411.95	455.46	407.77	543	543(R.E)

\* At 1970-71 prices

# Index Numbers relate to the calendar years 1974, 1981, 1986, 1987, 1988 &amp; 1989 (Base 1959-100)

## State Income

1.7 The State Income of Kerala in 1989-90, the latest year for which an estimate is available, was Rs.10,174 crores at current prices as against Rs.9,135 crores in 1988-89. In 1980-81 prices the State income is estimated at Rs. 4,705 crores for 1989-90 as against Rs.4,444 crores for 1988-89. This represents a growth rate of 5.9 per cent in 1989-90 compared to the growth rate of 9.8 per cent during the previous year. The percapita State income in current prices works out to Rs.3,451 for 1989-90 as compared to Rs.3,146 in 1988-89. In 1980-81 prices, the increase in per capita income was from Rs.1,530 in 1988-89 to Rs.1,596 in 1989-90, making an increase of 4.3 per cent which is distinctly higher than all India rate of growth in per capita income of 3.1 per cent.

1.8 The share of the secondary sector in State income, has increased, though marginally, to 22.74 per cent in 1989-90, from 22.04 per cent in 1988-89. With the improvement in power supply, following favourable monsoons and conducive climate for industrial investment, the growth of the secondary sector is likely to sustain its momentum. Still, the tertiary sector continues to dominate the structural profile of state income though there has been a marginal shift in favour of the commodity producing sectors, further efforts to lay down well thoughtout policies to guide investment towards the commodity producing sectors would be necessary to ensure economic growth on a sustainable basis.

## Employment Situation

1.9 Chronic unemployment and under-employment, especially of the educated youth, continue to be one of the major problems being faced by the State. At the end of March 1990, there were 31.03 lakhs job seekers on the live registers of the Employment Exchanges in the State. The number at the beginning of the year was 30.67 lakhs. Out of this number, those who had qualifications of SSLC and above were 18.61 lakhs.

1.10 The total number of professional and technical job seekers increased from 38,205 in 1980 to 87,482 in 1988 and further to 91,356 as on 31-3-1989.

1.11 Of the total employment of 11.06 lakhs in the Organised Sector as on 31-12-1989, the Public Sector accounted for 6.20 lakhs and the Private Sector 4.86 lakhs.

1.12 Under the unemployment assistance scheme the disbursement during 1989-90 was Rs.19.96 crores, and the number of beneficiaries was 2.46 lakhs.

## Price Situation

1.13 The all India Wholesale Price Index for all the commodities rose by 10.1 per cent on a point to point basis upto January 1991 compared to 7.3 per cent in the corresponding period last year. The wholesale price index for Agricultural commodities in Kerala rose by 114 points, from 903.8 in 1989 to 1017.4 in 1990. The Consumer Price Index in Kerala rose from 413 in 1989 to 431 in 1990. This increase of 4.4 per cent in consumer prices in the state was lower than that in the previous year when the increase was of 4.56 per cent.

## Agriculture

1.14 The relatively favourable weather conditions since 1988 have helped to sustain the growth during the three years in the production of most of the agricultural products. Also a number of new innovative programmes have been taken up which should foster growth. The Group Farming programme for rice introduced with the help of Krishi Bhavans, which is located in every Panchayat during 1989-90 and continued in 1990-91 has been very effective in revitalising the rice production scenario of the State with new vigour and enthusiasm.

1.15 The overall production performance of the crops was encouraging, with a number of crops like rice, pulses, cashewnut, tapioca, coconut, rubber, turmeric and sugarcane recording higher production in 1989-90 compared to the previous year. However, two important

crops, viz., coffee and tea suffered declines in production compared to the previous year.

1.16 Production of rice increased from 10.13 lakhs tonnes in the previous year to 11.41 lakhs tonnes in 1990. With a view to increasing rice production, a programme for group farming was introduced in 1989-90 and is gaining wide acceptance. A remarkable feature of the year was that the declining trend both in area under cultivation and production could be reversed after a long gap of more than a decade. The rice production increased by 1.30 lakh tonnes in 1989-90 over the previous year's level. This was achieved by increase in both area (5832 ha.) and productivity (203 kg). The area under high yielding variety increased from 1.37 lakh ha. in 1988-89 to 1.55 lakh ha. in 1989-90. The Group Farming activity is proposed to be extended further.

1.17 Thanks largely to favourable monsoons during the last three years, there has also been significant increase in coconut production. Introduction of Group Management in coconut cultivation and timely market intervention through KERAFED, together created a favourable impact on coconut production during 1989-90, helping it to attain production of 4,394 million nuts as against the production of 4215 million nuts in 1988-89. The support price offered for the last season was Rs.1,600 per quintal of copra.

1.18 Production of cashew, a most important export oriented crop of Kerala, increased substantially to 109 lakh tonnes in 1989-90 from 81 lakh tonnes in 1987-88 achieved primarily through increase in productivity.

### **Livestock**

1.19 Kerala has the record of having the highest percentage of cross bred of the total number of breedable cattle in the state. The total number of artificial inseminations administered increased from 12.95 lakhs in 1988-89 to 13.57 lakhs in 1989-90. Milk production

increased from 15.27 lakh tonnes in 1988-89 to 16.00 lakh tonnes in 1989-90. Egg production increased from 1470 Million in 88-89 to 1500 Million in 1989-90. The formation of Amul Pattern Co-operative Societies in the State has progressed satisfactorily; 1141 societies had been registered upto 1989-90. These societies have made a major impact on the Dairy Sector in the State in regard to production, procurement and marketing of milk.

### **Fisheries**

1.20 The total fish production recovered remarkably in 1989-90. Compared with the production in 1988-89 of 4.69 lakh tonnes that in 1989-90 was 6.47 lakh tonnes. Thus, the increase in fish production was of the order of 38 per cent. The contribution of marine sector was 6.14 tonnes. Export of marine fish products from Kerala during 1989-90 was 47,194 tonnes, compared to 45,614 tonnes in the previous year. In value terms, exports in 1989-90 amounted to Rs.240.82 crore, which work out to about 38 per cent of the total value of fish exports from the country. There are some two lakh fishermen in the State. A major thrust area for fisheries development is housing programme for the fishermen. Upto the end of 1989-90, 25,389 houses for fishermen were completed.

### **Irrigation**

1.21 The total investment in Irrigation, major, medium and minor schemes, till the end of 1989-90, amounts to Rs.889 crores. The total area brought under irrigation is 3.10 lakh ha. (net) or 5.36 lakh ha. (gross). The share of major and medium irrigation schemes is 1.84 lakh ha. (net) or 3.83 lakh ha. (gross), achieved through ten completed schemes and partial commissioning of 7 ongoing schemes. Of the total investment of Rs.829 crores, the amount invested on major and medium irrigation was Rs.729 crores.

1.22 Of the total area irrigated, the share of minor irrigation schemes is 1.26 lakh ha. (net) or 1.52 lakh ha. (gross) with a total investment of

Rs.160 crores. During 1989-90, 64 Minor Irrigation (MI) Class I schemes, 72 MI Class II schemes, 64 Lift Irrigation Schemes II IPD Yela Schemes, 121 works under other categories were completed.

### Power

1.23 Thanks to favourable monsoons, power generation during 1989-90 increased by 11.5 per cent, to 5075 MU from 4548 MU in the previous year. The quantum of power imported increased from 1036 MU in 1988-89 to 1265 MU in 1989-90. Eventhough the availability of power in 1989-90 increased by 13.5 per cent, this was not adequate to meet the internal demand for power. Because of this, the power cut imposed during the previous year on industrial consumers could not be lifted.

1.24 The installed capacity as at the end of 1988-89 was 1476.5 MW. No new project was completed during the year under review. The per capita consumption of power in the State increased to 160 Kwh in 1989-90 from 148.11 kwh. in 1988-89. This was still considerably below the all India per capita consumption of 207 kwh.

### Industry

1.25 The year 1989-90 witnessed improved performance overall. The manufacturing sector is estimated to have registered an increase of 6.7 per cent in 1989-90 compared to 5.9 per cent, at constant prices, in the previous year; the average annual growth rate during the seventh plan period was 2.42 per cent.

1.26 Improvement in the industrial climate witnessed during the previous two years continued in 1989-90. This was clearly reflected in the decline in the number of industrial disputes, mandays lost, and the number of industrial workers affected.

1.27 The total number of registered factories stood at 12,509 in 1989 compared to 12,028 in 1988. The number of workers employed in the factory sector increased from 2,80,738 in 1988

to 2,85,563 in 1989. The cashew industry alone provided employment to 93,000 workers, who constitute nearly 33 per cent of the total number employed in the factory sector. The other major employing industries were general engineering, cotton textiles, chemical industry, rubber, tiles and automobile repairing.

1.28 The number of joint stock companies functioning in Kerala increased to 3,923 by 1989-90 from 3,634 during 1988-89. The number of companies newly registered during 1989-90 was 317. Of this, 291 were private limited companies and 26 public limited companies. The total number of Government companies has increased to 100.

1.29 While a large number of the State Public Sector undertakings/companies have accumulated large losses, adding up to Rs.264 crores as on 31-3-1990, with several of them having large negative networth, there are some signs of improvement. The various major Government owned companies which have shown profits are Kerala Electrical and Allied Engineering Company, Kerala Ceramics Ltd., Kerala Agro-Machinery Corporation and Kerala Clays and Ceramic Products. The Kerala State Textile Corporation, with eight units under its control, has turned the corner and made a net profit of Rs.22 lakhs during 1989-90. Similarly the working of KELTRON is also expected to show profit during 1989-90. Government majority companies such as Travancore Titanium Products Ltd., Travancore Cochin Chemicals Ltd., Metal Industries Ltd., Travancore Cements Ltd., and Traco Cable Company Ltd., Forest Industries (Travancore) Ltd., and United Electrical Industries Ltd., have shown positive working results. Among the 44 state public sector industrial undertakings, 17 companies earned profit, where as 27 companies still incurred losses, which far outweighed the profit earned by the 17 companies.

1.30 The total number of small scale units in the State, as at the end of 1989-90, was 63,698 out of which 8271 were started in 1989-90. The new units

started in 1988-89 are estimated to have provided new employment to 49,620 persons. The comparable figure for the previous year was 41,180. The number of sick units which were revived during 1989-90 was 146. It is estimated that the small scale sector provided employment to 3.82 lakh persons in the State during 1989-90.

1.31 The major promotional agencies attending to small scale industries are Kerala Financial Corporation (KFC) and Small Industries Development Corporation (SIDCO). The latter is engaged in the procurement and distribution of scarce raw materials, development and administration of industrial estates, management of production units and service centres, marketing of small scale industrial products etc. KFC provides long term loans to small and medium industries. It sanctioned considerably higher loans amounting to Rs.69.89 crore in 1989-90. The disbursements during the year amounted to Rs.56.36 crore. The aggregate amount of loan disbursed by KFC as on 31-3-1990 amounted to Rs.267.58 crore.

1.32 The State's traditional industries, cashew, handloom and coir, continued to face various problems. Production of handloom cloth decreased, by 47 per cent in 89-90; the unsold stocks continued to be a major problem, though that came down by 60 per cent in 89-90. Non-availability of adequate quantity of husk at a reasonable price, inadequacy of working capital with the Coir co-operative societies, were the major problems facing the coir industry. Export of coir and coir products increased by 10 per cent in 1989-90 over the previous year.

1.33 The major problem facing cashew industry is the non-availability in adequate quantities of raw cashewnuts, resulting in low capacity utilisation and large scale under employment of workers engaged in the industry. The monopoly procurement of raw cashew introduced in 1988 continued during 1990. Cashew, which was losing on export front during the previous two years recovered lost ground, with an increase

of 32 per cent over 1988-89, Export of cashew increased to 44857 tonnes in 1989-90 from 34023 tonnes in 1988-89. The value of the nuts exported increased by 30 per cent from Rs.276 crores in 1988-89 to Rs.360 crores in 1989-90. During 1989-90, import of raw Cashew was 52,475 tonnes compared to 37,078 tonnes in the previous year.

1.34 Sericulture has been identified as an activity with high employment potential in rural areas. A total area of 2700 acres was brought under mulberry cultivation by the end of 1989-90. A target of 5250 acres has been set for 1990-91. Similarly, a target of 28,000 acres covering all the districts in the state have been fixed, for mulberry cultivation, for the Eighth Five Year Plan.

1.35 Central sector investment in Kerala in terms of gross block, amounted to Rs.1520 crores at the end of March 1989. Kerala's share of Central investment has been steadily declining over the last 14 years. The share came down from 3.24 per cent in 1975 to 1.57 per cent in 1989. The State's share of Central sector investment has hardly improved during the last four years.

#### *Transport*

1.36 Kerala has a fairly well developed transport infrastructure. The total road length in the State increased by 27,69 km. from 1,22,864 km. in 1988-89 to 125,633 km. in 1989-90. About 75 per cent of the road length comes under Panchayats.

1.37 As regards coverage, Kerala has a road length of 323 km. per hundred sq.km. of area and 423 km. per lakh of population (1981 Census). The total number of motor vehicles registered in the State stood at 5.81 lakhs in 1989-90 as against 5.23 lakhs in 1988-89. Kerala had 2056 vehicles per lakh of population (1981 Census) and 1347 vehicles per hundred sq.km of area.

1.38 The Kerala State Road Transport Corporation (KSRTC), the only public sector agency for passenger transport by

road in the State, accounts for only 22 per cent of the total stage carriage. In recent years, efforts to replace the overaged buses have been intensified. Along with various other positive steps initiated by the Corporation by way of increased revenue collection, fare revision, and operational reforms, the working of the Corporation is expected to improve.

### *Tourism*

1.39 The Tourism Department and the Kerala Tourism Development Corporation (KTDC) are the two official agencies engaged in the promotion of tourism in the State. Tourism promotion Councils have been organised in almost all the districts. The KTDC runs a chain of eleven hotels, six motels and two restaurants within the State. About 68,000 foreign tourists and 15.85 lakhs domestic tourists are estimated to have visited the State during 1989-90.

1.40 Institute of Tourism and Travel Studies has been conducting courses with a view to giving a professional orientation to the various aspects of tourism in the State.

### *Education*

1.41 During 1989-90, there were 12,134 schools in the State, comprising 6812 L.P.Schools, 2892 U.P.Schools and 2430 High Schools. Of the total number of schools, 4483 were in Government Sector, 7333 Private aided schools and 318 private unaided schools. The total student strength during 1989-90 was 58.83 lakhs. It is noteworthy that at the lower primary level enrolment came down from 25.96 lakh in 1988-89 to 25.27 lakh in 1989-90.

1.42 Out of the total student strength of 58.83 lakhs, the number of girl students came to 49 per cent. The overall coverage was 92.14 in the 5-9 age group, and 87.7 in 10-14 age group.

1.43 The total number of trained and untrained teachers stood at 1.86 lakh in 1989, of whom, 1.81 lakh were trained

teachers. The teacher-pupil ratio during 1988-89 was 1:30 compared to 1:31 during 1987-88. The vocational higher secondary education at +2 level is implemented in 157 schools. During 1989-90 the total enrolment in vocational education stood at 7,850.

1.44 As regards higher education, the number of Arts and Science Colleges remained unchanged at 172, consisting of 40 Government Colleges and 132 Private Colleges. The student strength at the University level was 3.29 lakhs during 1989-90, same as that of the previous year. The number of teachers in the Arts & Science colleges in 1989-90 was 13,900.

1.45 The technical education institutions in the State during 1989-90 consisted of eight engineering colleges, 28 polytechnics 47 Technical High Schools, and 19 prevocational training centres, one Fine Arts college and 49 vocational training centres. The intake in Engineering Colleges during the year was 2,656. Of the 28 polytechnics, 22 were in the Government sector and the rest under private sector. The total student strength in polytechnics increased from 14,225 in 1988-89 to 14,234 in 1989-90. New intake in polytechnics was 4,231 in 1989-90, same as that in 1988-89.

1.46 The total expenditure on Education in 1989-90, as per revised estimates, was Rs.696.24 crore. Of this, 52.3 per cent was incurred on primary education, 26.5 per cent on secondary education and 14.5 per cent on higher education. The per capita Government expenditure on education during 1989-90 increased from Rs.192.02 in 1988-89 to Rs.232.96 in 1989-90.

### *Health*

1.47 The health standards achieved by Kerala are comparable to some of the developed countries, as reflected in the achievements in respect of birth rate, death rate and infant mortality rate. The birth rate per thousand population was 19.9, death rate 6.0 and infant mortality rate 24 in 1988; all of these show declines compared to the previous year.

1.48 The State's health infrastructure comprised of 140 hospitals, 883 primary health centres, 57 dispensaries, 20 T.B. Centres, 15 leprosy control units, 53 Community health centres, 77 subsidiary health centres and 36 grant-in-aid institutions, all in the Government sector. In addition, there were private hospitals, clinics etc. According to provisional data, the number of hospital beds per lakh of population in 1989-90 was 128.

1.49 There were also 101 Ayurveda hospitals and 498 dispensaries at the end of the year 1989-90.

1.50 The number of homoeopathic hospitals was 26 as compared to 24 in the previous year and the number of dispensaries increased to 274 in 1989-90 from 262, in the previous year.

1.51 The Government expenditure on Medical and Public Health amounted to Rs.172.58 crore during 1989-90. Out of this, allopathy accounted for 89.6 per cent. The per capita expenditure on Medical and Public Health increased to Rs.79.16 in 1989-90 compared to Rs.55.75 in the previous year.

1.52 The Family Welfare Programme in the State is administered through a network of 78 urban main centres and 5,094 rural sub centres including 77 post partum centres in different districts. The achievement by the state in this regard is way ahead of those in the other States. The net reproduction rate for Kerala is 1.3 as against the all India figure of 1.67. The couple protection rate had reached 55.2 on 31st March, 1990 as against 46.3 one year earlier.

### *Housing*

1.53 Several Government agencies in the State are engaged in implementing housing programmes. The major agencies are Kerala State Housing Board, Kerala State Housing Co-operative Federation and Kerala State Corporation for Scheduled Castes and Scheduled Tribes. The main thrust of the Government's housing programmes is directed towards the bene-

fit of the economically weaker sections.

1.54 Under the rehabilitation housing programmes, 1,56,842 houses were constructed upto 1989-90 end, the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes had extended financial assistance for the construction of 31046 houses. The Kerala State Co-operative Housing Federation Ltd., had disbursed an amount of Rs. 12,271 crores for the construction of 43,000 houses as on March 31, 1990. Of the total houses thus assisted, 36,938 houses were completed till 31-3-1990.

1.55 The major programmes of the State Housing Board are the public housing scheme and cash loan scheme. Under the former, land is acquired and developed and then allotted either as plots or after house construction, depending on the category of the programme included.

1.56 The Board of Revenue, the major Government Department engaged in housing activity distributed 2179 house sites for landless labourers. Of these, 947 beneficiaries belonged to Scheduled Castes and Scheduled Tribes. In addition, 335 workers, including 72 from SC/ST, were also given financial assistance.

### *Water Supply and Sanitation*

1.57 According to latest estimates, over 70 per cent of the urban population and 35 percent of the rural population could be provided with protected drinking water. The number of towns having protected water supply was 37 as on 31-3-1990. Out of the total number of 1440 ongoing rural water supply schemes, 76 schemes were completed during 1989-90.

### *Institutional Finance*

1.58 Kerala's share in the loans disbursed by the all India financial institutions as on 31-3-1990 was only 2.85 percent. This is not only lower than the State's population share but also significantly below the shares of several other states; the comparable share of Maharashtra was 15.04 percent,

Tamil Nadu 9.16 per cent, Karnataka 6.90 per cent and Andhra Pradesh 8.86 per cent.

1.59 Deposits of the public sector banks in India increased from Rs.3,897 crores in 1969 to Rs.1,47,134 crores as at the end of June 1989. For Kerala the credit deposit ratio has been declining steadily over the years. The CD ratio declined from 65.8 per cent in 1969 to 62.10 per cent in June 1988. By September 1990, the ratio further declined to 61.8 per cent.

#### *Plan Outlay*

1.60 The plan outlay budgeted for 1990-91 was Rs.635 crores. It is anticipated that this outlay will be utilised in full.

1.61 For the Annual plan 1991-92 an outlay of Rs.807 crores has been approved. This represents an increase of Rs.172 crores in absolute terms and 27.1 in percentage terms over the outlay for 1990-91.



## INCOME AND EMPLOYMENT

*National Income*

The favourable and well distributed monsoon during 1990 has generally contributed to the growth of the national economy. During the first half of 1990-91 the industrial production has increased by 13.5 per cent, mining by 4.2 per cent and manufacturing by 13.5 per cent over the corresponding period of the previous year. However, it might be difficult to sustain the pace of economic growth during the remaining half of the year due to very precarious balance of payments position.

2.2 The gross domestic product (GDP) at current prices is estimated at Rs. 3,95,143 crores in 1989-90 as against Rs. 3,51,724 crores in 1988-89. At constant prices (1980-81), the GDP is estimated to have grown by 5.2 per cent from Rs. 1,87,725 crores in 1988-89 to Rs.1,97,419 crores in 1989-90; this compares unfavourably with the record growth of 10.4 per cent in the previous year. On an average, the GDP has grown at 5.6 per cent per annum during the Seventh Plan period.

2.3 The national income (net national product at factor cost) in real terms increased by 5.2 per cent to Rs. 1,74,798 crores in 1989-90 from Rs. 1,66,200 crores in 1988-89 and per capita income by 3.1 per cent from Rs. 2078 in 1988-89 to Rs. 2142 in 1989-90. At current prices, per capita income is estimated at Rs. 4,252 in 1989-90 as against Rs. 3,875 for the previous year.

*State Income*

2.4 The value added from the commodity producing sectors of the State economy showed substantial growth during 1988-89 and 1989-90 indicating a clear departure from the past. The State income for the

year 1989-90 is estimated at Rs.10,174 crores at current prices as against Rs.9,135 crores in 1988-89 indicating a growth rate of 11.36 per cent. At constant (1980-81) prices, the State income is estimated at Rs.4,705 crores in 1989-90 as against Rs. 4,444 crores in 1988-89. This indicates a growth rate of 5.9 per cent in State income compared to the record growth of 9.8 per cent during the previous year.

2.5 The estimated per capita State income at current prices increased to Rs.3451 in 1989-90 from Rs.3146 in 1988-89. Per capita income in real terms increased to Rs. 1596 in 1989-90 as against Rs.1530 in 1988-89, showing a growth rate of 4.31 per cent. The comparable estimates of total and per capita income of Kerala and India are given in Table 2.1.

2.6 A comparison of rate of growth of State income with that of national income shows that the State has lately performed somewhat better compared to the country as a whole in contrast to the trend observed in recent past. This is particularly so with regard to per capita income in constant prices for 1989-90.

*Trends in Sectoral Share of Income*

2.7 In Kerala, the share of income originating from the primary sector has declined from 39.7 per cent in 1980-81 to 36.9 in 1987-88 and further to 36.3 in 1988-89 at current prices. However, in real terms the share of primary sector has fallen from 39.7 per cent in 1980-81 to 37.2 per cent in 1987-88, but went up to 39.1 in 1989-90.

**TABLE 2.1**  
**National Income and State Income**

Item	1980-81	1988-89	1989-90
		(P)	(Q)
(1)	(2)	(3)	(4)
<b>National Income (Rs. Crores)</b>			
At Current Prices	118684	309925	346925
		(20.17)	(11.96)
At Constant Prices	118684	166280	174798
		(10.82)	(5.2)
<b>State Income (Rs. Crores)</b>			
At Current Prices	3782	9135	10174
		(12.73)	(11.36)
At Constant Prices	3782	4444	4705
		(5.81)	(5.88)
<b>Per Capita National Income</b>			
At Current Prices Rs.	1627	3875	4252
		(17.92)	(9.73)
At Constant Prices	1627	2078	2142
		(8.80)	(3.08)
<b>Per Capita State Income (Rs.)</b>			
At Current Prices	1494	3146	3451
		(11.00)	(9.69)
At Constant Prices	1494	1530	1596
		(8.05)	(4.31)

**Notes:** 1. New Series with 1980-81 as Base.  
2. Figures in Bracket Show the Percentage Change Over the Previous Year  
P. Provisional; Q. Quick Estimate

**Source:** Department of Economics & Statistics.

2.8 The estimates of net state domestic product of Kerala from 1980-81 to 1989-90 at current and constant prices (1980-81) are furnished in Appendix 2.1 and 2.2.

2.9 The share of income from the secondary sector had been declining during the eighties both in nominal and real terms. But the trend was reversed during 1989-90. Over the years, the tertiary sector has been showing an increasing trend in its contribution to the share of State income but its share has fallen somewhat in recent years as a result of the higher growth of commodity producing sectors.

2.10 The trends in sectoral contribution of State income at current and constant prices are given in Appendix 2.1 and 2.2.

#### *Income from Manufacturing*

2.11 The steep decline in the rate of growth of value added at current prices and the negative growth rates in real terms from the unorganised sector require reworking, especially in view of the observed increase in the number of units established under the small scale industries besides certain surrogate indicators of the growth of this sector such as the power consumed by this sector.

2.12 It is estimated that the number of small scale units in the State in 1989-90 was 63.7 thousand with an investment of Rs. 882 crores, employment of 3.82 lakh persons and output worth Rs. 1745 crores. A pilot survey of SSI units has been undertaken by the State Planning Board in collaboration with the Department of Economics and Statistics to update the data base of SSI units. The preliminary estimates based on this survey place the contribution of SSI units alone to the state domestic product at around Rs. 250 crores at current prices during 1989-90 as against the estimate of Rs. 391 crores by the Department of Economics and Statistics for the entire unorganised sector which consists of all units besides the SSI Units not covered by the Annual Survey of Industries. There is clearly a certain amount of underestimation of income originating from the unorganised sector.

TABLE 2.2

★ Sectoral Contribution of Net Domestic Product - Kerala  
(Per cent)

(1)	At Current Prices			At Constant Prices		
	(2)	(3)	(4)	(5)	(6)	(7)
Sector	1980-81	1988-89	1989-90	1980-81	1988-89	1989-90
Primary	39.65	36.29	35.76	39.65	39.16	39.08
Secondary	26.63	23.63	23.90	26.63	22.24	22.74
Transport, Communi- cation & Trade	17.67	19.40	19.45	17.67	18.07	17.28
Finance & Real Estate	6.25	5.92	5.94	6.25	6.89	6.82
Community & Personnel Service	11.80	14.76	14.95	11.80	13.84	14.08
Tertiary	35.72	40.08	40.34	35.72	38.80	38.18
Total	100.00	100.00	100.00	100.00	100.00	100.00

#### District Income

2.13 The estimates of district income at current and constant prices for 1980-81 to 1988-89 are given in Appendix 2.3.

2.14 A comparison of the rate of growth of income in 1988-89 over the previous year in different districts shows that Kasaragod district had the highest growth rate at 24.46 per cent followed by Malappuram (17.59%), Kozhikode (15.73%) and Idukki (13.04%). Wayanad district showed a negative rate of growth of (-) 0.35 per cent.

TABLE 2.3

Growth Rate of District Income During 1988-89 at 1980-81  
Prices by Sector of Origin

(Per cent)

District	Sector			Net Domestic Product
	Primary	Secondary	Tertiary	
(1)	(2)	(3)	(4)	(5)
Thiruvananthapuram	20.05	13.87	-20.71	2.44
Kollam	19.62	17.95	-6.33	8.91
Pathanamthitta	0.28	16.26	0.45	3.18
Alappuzha	12.10	13.40	2.54	8.23
Kottayam	22.66	10.30	0.48	11.49
Idukki	6.97	33.24	6.72	13.04
Ernakulam	20.71	28.17	-10.20	9.40
Thrissur	14.52	22.62	3.39	11.11
Palakkad	0.75	10.94	7.56	5.56
Malappuram	21.86	25.61	11.85	17.59
Kozhikode	17.93	19.46	12.22	15.73
Wayanad	-4.43	10.64	3.80	-0.35
Kannur	23.30	19.18	9.24	16.45
Kasaragod	36.78	19.10	14.60	24.46
State	19.60	8.56	2.06	9.82

2.15 An analysis of the spatial distribution of State income shows that Ernakulam district has the highest share (13.47%) followed by Thrissur (9.49%) and Kozhikode (9.17%). Wayanad district has the lowest share at 2.40 per cent. (See Appendix 2.4)

2.16 The ranks of districts in terms of per capita income for 1980-81 and 1988-89 are given in Table 2.4. The significant association between the respective ranks of the districts indicates the persistence of regional

disparities in economic growth.

TABLE 2.4

Per capita Income at Current and Constant Prices  
1980-81 and 1988-89

(In Rs. lakhs)

District	Constant Prices		Current Prices	
	1980-81	1988-89	1980-81	1988-89
(1)	(2)	(3)	(4)	(5)
Thiruvananthapuram	1359 (8)	1373 (12)	1359 (8)	2826 (9)
Kollam	1508 (5)	1454 (10)	1508 (5)	3032 (7)
Pathanamthitta	..	1510 (9)	..	3647 ..
Alappuzha	1307 (10)	1430 (11)	1307 (10)	2997 (8)
Kottayam	1427 (7)	1628 (5)	1427 (7)	3164 (5)
Idukki	2006 (1)	2019 (2)	2006 (1)	4308 (2)
Ernakulam	1897 (2)	2069 (1)	1897 (2)	4366 (1)
Thrissur	1467 (6)	1516 (8)	1467 (6)	3108 (6)
Palakkad	1342 (9)	1305 (13)	1342 (9)	2630 (10)
Malappuram	1080 (11)	1065 (14)	1080 (11)	2144 (11)
Kozhikode	1629 (3)	1593 (6)	1629 (3)	3280 (3)
Wayanad	..	1687 (3)	..	3640 ..
Kannur	1617 (4)	1555 (7)	1617 (4)	3188 (4)
Kasaragod	..	1669 (6)	..	3268 ..
State	1494	1530	1494	3166

Source: Department of Economics & Statistics.

Note : Figures in brackets show the respective ranks.

2.17 An analysis of the sectoral growth rate of district incomes in 1988-89 over 1987-88 shows that in the primary sector Kasaragod district recorded the highest growth rate of 36.78 per cent at constant prices followed by Kannur (23.30%) and Kottayam (22.66%). In the secondary sector Idukki district recorded the highest growth rate of 33.24 per cent followed by Ernakulam (28.17%) and Malappuram (25.61%). In the tertiary sector Kasaragod district

recorded the highest rate of growth of 14.60 per cent followed by Kozhikode (12.22%). Thiruvananthapuram, Kollam and Ernakulam districts showed a negative rate of growth of (-)20.71 per cent, (-)6.33 per cent and (-)10.20 per cent respectively.

#### Employment Situation

2.18 With a density of population of 655 persons per sq.km. in 1981 as against the national average of 216 persons, Kerala is the most densely populated State in India. In the past three decades, employment generation in the State has not kept pace with the increase in the supply of labour force. The work participation rate in the State declined from 33.3 per cent in 1961 to 29.1 per cent in 1971 and further to 26.7 per cent compared to the national average of 33.4 per cent in 1980-81. Employment exchange statistics on job seekers indicate that the number of live registrants increased from 3.7 lakhs in 1970-71 to 15.8 lakhs in 1980-81 and again to 31.03 lakhs by the end of March 1989-90. With 3.7 per cent of the country's population, Kerala accounts for over 9 per cent of the total registered job seekers in the country. An important dimension of the unemployment problem in Kerala is that more than 50 per cent of the total live registrants in the State have S.S.L.C. or higher qualifications.

#### Distribution of Work Seekers

2.19 The live register figures with the employment exchanges indicate the magnitude of unemployment in the State. The phenomenal growth in the number of job seekers in the State during the last three decades is manifested by the growing number of registrants which increased from 1.51 lakhs in 1960 to 2.94 in 1970 and further to 15.79 lakhs

in 1980 and reached 31.03 lakhs in March 1990. Out of this total number, 15,94,714 were men and 15,09,008 were women. District-wise unemployment position as on 31-3-1990 is shown in Table 2.5.

TABLE 2.5

District-wise Unemployment Position as on 31-3-1990

Districts	No. of Unemployed
Thiruvananthapuram	602971
Koilar	313652
Alappuzha	282554
Pathanamthitta	129146
Kottayam	258568
Idukki	99862
Ernakulam	342885
Thrissur	240985
Palakkad	177926
Malappuram	153305
Kozhikode	233718
Wayanad	43236
Kannur	173068
Kasaragod	51866
<b>Total</b>	<b>3103722</b>

Source: Directorate of Employment &amp; Training

*Distribution of Work Seekers by Educational Levels*

2.20 The most important characteristic feature of unemployment in the State is the high level of educated unemployment. Out of the total number of work seekers, the share of persons having passed S.S.L.C. has been growing rapidly during the last three decades. The number of ~~un~~ graduates and above was 1.78 lakhs in 1970, it increased to 8.1 lakhs in 1980 and finally stood at 18.62 lakhs as on 31-12-1989. The details of work seekers by educational level from 1980

to 1990 are given in Appendix 2.5.

*Professional and Technical Work Seekers*

2.21 The problem of acute unemployment among the professionally and technically qualified persons in the State is reflected in the growing number of live registrants with professional and technical qualifications. The total number of work seekers in this category in the live registers went up by 4.43 per cent from 87,482 in 1988 to 91,356 in 1989. The category-wise distribution of professional and technical job seekers is given in Appendix 2.6.

*Placements through Employment Exchanges*

2.22 The number of placements through employment exchanges continues to be quite small when compared to the number of registrants. Table 2.6 gives the details of placements.

TABLE 2.6

Placements through Employment Exchanges from 1985-86 to 1989-90

Year	No. of Placements	Monthly Average No. of Employers using the Employment Exchange
1985-86	13700	603
1986-87	15571	656
1987-88	13869	675
1988-89	15504	335
1989-90	6791	

(upto 31-8-1990)

Source: Directorate of Employment and Training.

*Employment in the Organised Sector*

2.23 The details of employment in the

organised sector are given in Appendix 2.7. The employment in the organised sector remained virtually unchanged. The figure was 11.04 lakhs in 1988 and 11.02 lakhs by the end of first quarter, 1990.

#### Unemployment Assistance

2.24 The State Government introduced, in 1982, the Unemployment Assistance Scheme to provide temporary relief to the unemployed. During the year 1989-90, an amount of Rs. 19.96 crores was distributed as unemployment assistance to 2.46 lakhs beneficiaries, under the Scheme. The details are given in Appendix 2.8.

#### Overseas Migration

2.25 According to the survey conducted by the Department of Economics and Statistics in 1987, the number of migrants from the State working overseas is given in table 2.7.

TABLE 2.7

#### Number of Migrants from Kerala - 1987

Si. No.	Destination	1987	Percentage to total	Percentage change for 1980
(1)	(2)	(3)	(4)	(5)
1.	Gulf countries	360929	44.1	61.3
2.	Other foreign countries	28727	4.2	32.8
3.	Other States & Union Territories	352604	51.7	17.4
Total		682060	100.0	34.2

Source: Department of Economics and Statistics.

#### Deployment of Personnel - Overseas

2.26 The Overseas Development and Employment Promotion Consultants (ODEPC), a State government agency engaged in helping the work seekers to find overseas employment, could deploy only 201 persons to different countries as given in Table 2.8.

TABLE 2.8

#### Country-wise Deployment of Personnel by ODEPC - 1990

Name of Country	No. of persons deployed
(i)	(2)
Saudi Arabia	133
Abudhabi	40
Malaysia	18
Singapore	7
Kuwait	3
Total	201

Source: Overseas Development and Employment Promotion Consultants Limited.

## CHAPTER 3

### PRICES, COST OF LIVING AND WAGES

#### Wholesale Prices

The wholesale price index of agricultural commodities in Kerala registered an increase of 12.6 per cent in 1990 over the previous year i.e. from 903.8 in 1989 to 1017.4 in 1990 (See Table 3.1). It is indeed contrary to the decline in the wholesale price index of agricultural commodities witnessed during 1989. The marked increase in the prices of condiments and spices by 45 per cent, plantation crops by 20 per cent, and molasses by 18 per cent mainly contributed to this trend. However the increase in the wholesale price of rice, fruits and vegetables, and oilseeds was moderate at 7.9, 8 and 8.3 per cent respectively.

3.2 The month-wise wholesale price index of agricultural commodities in the State showed that the increase in prices was moderate during the first half of the year, whereas it was very high during the subsequent period (see Appendix 3.1). There was a sudden spurt in the wholesale price index of rice from 545.2 in June to 638.1 in July 1990, and remained at that level till the end of the year. The fluctuations in the prices of molasses and plantation

crops was rather erratic. There was a gradual increase in the price of oilseeds since April 1990. Whereas only marginal fluctuations in the prices of fruits and vegetables was evident during the year.

#### Retail Price of Essential Commodities

3.3 The increase in the wholesale prices had its impact on the retail prices of essential commodities in the State. The retail prices of almost all the essential commodities had shown an upward trend during 1990 (see Table 3.2). The exception to this rule were tapioca, dry chillies and babyfood. When the price of tapioca remained stagnant, that of dry chillies and baby food marginally declined during the year. The increase in the price of rice was nominal i.e. 0.96 per cent in 1990 as compared to that of the previous year. The highest increase in price was recorded for onion (28.8 per cent). As regards edible oils, the increase in prices of groundnut oil was the highest being 21.3 per cent followed by coconut oil (17.8 per cent) and refined oil (7.4 per cent). A linear causal relation was evinced in the prices of coconut and coconut oil in the State. With the fall in the price of coconut, the price of coconut oil declined in 1989, and with the increase in its price during 1990, the price of coconut oil moved upwards. The price of electric bulb increased by only 5.7 per cent in 1990 as compared with an increase of 13.6 per cent during the previous year.

TABLE 3.1

Wholesale Price Index of Agricultural Commodities 1988-90

(Base 1952-53=100)

Crops	Weight	Wholesale Price Index			Percentage change <sup>1</sup>	
		1988	1989	1990 <sup>2</sup>	over previous year 1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)
A. Food Crops	63.5	695.9	725.1	831.1	4.2	14.6
Rice	40.4	532.7	544.4	587.4	2.2	7.9
Condiments & Spices	10.4	774.5	754.2	1092.5	(-)2.6	44.9
Fruits and Vegetables	10.7	1199.1	1342.2	1449.6	11.9	8.0
Molasses	2.0	881.1	909.1	1076.2	3.2	18.4
B. Non-Food Crops	36.5	1427.5	1214.6	1341.4	(-)14.9	10.4
Oil Seeds	25.5	1795.2	1411.0	1527.7	(-)21.4	8.3
Plantation Crops	11.0	577.5	760.5	910.9	31.7	19.8
C. All Crops	100.00	962.9	903.9	1017.4	(-)6.1	12.6

<sup>1</sup> Provisional

Source : Directorate of Economics & Statistics.

TABLE 3.2

## Average Retail Prices of Essential Commodities

Sl. No.	Commodity	Unit	Price as at the end of December			Percentage Variation in	
			1988	1989	1990	1989 over 1988	1990 over 1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1.	Rice	Kg.	5.46	5.20	5.25	(-)4.76	0.96
2.	Greengram	Kg.	9.76	10.34	10.59	5.94	2.42
3.	Blackgram	Kg.	11.75	11.63	12.44	(-)1.02	6.96
4.	Redgram	Kg.	6.89	7.42	7.73	7.69	4.18
5.	Dhall	Kg.	12.57	12.20	14.30	(-)2.94	17.21
6.	Coconut Oil	Kg.	35.28	25.95	30.56	(-)26.44	17.76
7.	Groundnut Oil	Kg.	24.75	26.98	32.72	9.01	21.28
8.	Refined Oil Kg.	Kg.	39.67	44.05	47.30	11.04	7.38
9.	Tapioca	Kg.	1.45	2.05	2.05	41.38	-
10.	Banana	Kg.	4.16	4.81	5.56	16.18	15.59
11.	Milk (cow)	Litre	4.93	5.25	5.40	6.49	2.86
12.	Egg (hen)	Dozen	8.10	7.92	8.10	(-)2.22	2.27
13.	Potato	Kg.	3.15	3.26	3.95	3.49	21.17
14.	Corriander	Kg.	9.53	11.86	12.81	24.45	8.01
15.	Chillies (dry)	Kg.	46.11	17.82	17.12	(-)61.35	(-)3.93
16.	Onion	Kg.	3.29	3.61	4.65	9.73	28.81
17.	Sugar	Kg.	6.44	8.08	8.37	25.47	3.59
18.	Coconut (without husk)	100	324.86	245.36	283.76	(-)24.47	15.65
19.	Firewood (local split)	Qtl.	68.45	63.14	66.14	(-)7.76	4.75
20.	Washing soap (sunlight)	Each	3.84	3.73	3.78	(-)2.86	1.34
21.	Electric Bulb (Osram 40W)	Each	5.58	6.34	6.70	13.62	5.68
22.	Baby Food	Each	56.41	60.04	59.93	6.44	(-)0.18

Source: Directorate of Economics and Statistics.



The month-wise average retail prices of essential commodities during 1990 is furnished in Appendix 3.2

### Consumer Price Index

3.4 The annual average consumer price index for Agricultural and Industrial workers in selected centres of Kerala is presented in Table 3.3. As is clear from Table 3.3, the annual average consumer price index in selected centres of the State increased from 413 in 1989 to 431 in 1990, representing an increase of 4.36 per cent. The consumer price index in 1990 was the highest in Kollam (456) and the lowest in Munnar (415). A similar trend was observed in 1989 too. The monthly average indices computed for 15 selected centres is furnished in Appendix 3.3

3.5 Cost of living index is a measure as to the rate of inflation in the economy. In 8 out of the 15 selected centres involved in the calculation of Annual consumer price index number in the State, the percentage increase in the annual index for 1990 over 1989 was lesser than that for 1989 over 1988. From this, it can be inferred that the rate of inflation is comparatively lesser in these centres during the year under review.

### Parity Index

3.6 Parity index is a relative measure as to the gains or loss to farmers as a consequence of the price fluctuations in the economy. It depends on the prices paid and received by farmers. The index is a function of cost of farm cultivation, domestic expenditure and market rate of farm products.

3.7 The prices paid by farmers increased considerably year after year. Whereas the prices received by them for their products is found to be less than what

TABLE 3.3

Annual Average Consumer Price Index Number in Selected Centres of Kerala

Sl. No.	Centre	Average Annual Index Number			Percentage Variation	
		1988	1989	1990 <sup>a</sup>	1989 over 1988	1990 over 1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	401	420	435	4.74	3.57
2.	Kollam	416	437	456	5.05	4.35
3.	Punalur	383	401	422	4.70	5.24
4.	Alappuzha	392	411	424	4.85	3.16
5.	Kottayam	394	419	436	6.35	4.06
6.	Mundakayam	377	404	429	7.16	6.19
7.	Munnar	380	395	415	3.95	5.06
8.	Eranakulam	385	400	416	3.90	4.00
9.	Chalakkudy	401	415	431	3.49	3.86
10.	Thrissur	392	400	419	2.04	4.75
11.	Palakkad	387	406	425	4.91	4.68
12.	Malappuram	408	424	446	3.92	5.19
13.	Kozhikode	404	419	437	3.71	4.30
14.	Meppady	399	419	444	5.01	5.97
15.	Kannur	402	419	432	4.23	3.10
State Average		395	413	431	4.56	4.36

<sup>a</sup> Ten months average

Source: Directorate of Economics and Statistics

they pay. (see Table 3.4). The index as to the prices paid by farmers increased by 65 points in 1990 over 1989. On the other hand, the prices received by them increased by only 27 points during the same period. The high cost of cultivation and unremunerative returns for farm products might have contributed to this phenomenon. The farm cultivation cost increased by 107 points during the period under review, as compared with the previous year.

TABLE 3.4

Index Number of Prices Received and Prices Paid by the Farmers

Year	Price Received by Farmers	Farm Cuiciva-tion cost	Domestic Expendi-ture	Prices Paid by farmers	Parity as 2 to 5
(1)	(2)	(3)	(4)	(5)	(6)
1986	921	1299	765	984	93
1987	1063	1413	804	1066	100
1988	1064	1520	860	1143	91
1989	1017	1604	897	1200	85
1990	1044	1711	935	1265	83

Source: Directorate of Economics and Statistics  
Average upto 10/90.

### Farm Commodity Prices

3.8 Farm commodity prices in general during 1989-90 were favourable to the

farm front, with the average prices of almost all important commodities the coconut, tapioca, cashewnut, arecanut and banana ruling high. The substantially average prices, compared to 88-89, increased in respect of tapioca (+24.20%), coconut (+12.52%), ginger (+33.33%), arecanut (+66.95%). It is important to note that as a result of the market intervention through KERAFED and also the support price announced for coconut, the price of coconut remained at a relatively high level throughout 1990.

3.9 The only major commodity which has suffered significant set back in prices during the year was pepper (-28.83%). Though the average price of paddy also declined during the period it was only marginal (-5.92%). Trend in farm commodity prices for the period than 1986 to 1990 is given in Table 3.5.

TABLE 3.5

### Average Farm Price of Principal Crops

Commodity	Unit	1986	1987	1988	1989	1990	Changes over 1989	% of Changes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Paddy	Qti.	242.25	248.24	277.43	302.79	285.97	(-)17.94	(-) 5.92
Tapioca	Qti.	95.54	105.33	96.86	118.10	146.64	(+)28.59	(+)24.20
Coconut	100 Nos.	193.85	259.11	284.33	213.32	240.02	(+)26.70	(+)12.52
Pepper	Qti.	4749.75	5262.07	3513.49	4227.00	3008.46	(+)1218.54	(-)28.83
Ginger	Qti.	857.56	1366.01	1537.96	1929.10	2572.00	(+)642.92	(+)33.33
Cashewnut	Qti.	1074.47	1364.35	1093.94	1156.40	1180.40	(+)24.00	(+)2.08
Sugarcane	Tonne	244.51	235.15	301.60	306.57	366.25	(+)59.68	(+)19.47
Arecanut	100 Nos.	12.04	10.33	12.29	11.89	19.85	(+)7.96	(+)66.95
Banana	100 Nos.	65.02	69.76	61.36	65.38	74.41	(+)9.03	(+)13.81

### Public Distribution System (PDS)

3.10 Special intervention programmes like Public Distribution System are implemented to improve the welfare, especially of the weaker and the vulnerable sections of the society. The Public Distribution System (PDS) in Kerala, which covers all the households in the State, ensures the supply of essential commodities at reasonable prices to all the Card holders, through

a well designed network of ration shops. The system continues to be a major component of the State's strategy to improve the welfare of the people and to ensure social justice. Thus, the PDS is an important measure to keep the prices under check and to ensure the supply of essential commodities.

3.11 The number of family ration cards increased to 49.98 lakhs in 1990 from 49.07 lakhs during the previous year, as will be seen from the table 3.6.

TABLE 3.6

## Public Distribution System : Kerala, 1987-1990

Sl.No.	Particulars	Unit:	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	No. of Ration Cards & permits (as on 1st April)					
	a. Ration Cards for families.	No.	4730975	4807111	4907648	4997944
	b. Ration permits for Institutions.	No.	5961	6873	7523	8193
2.	No. of FCI Sub depots (as on 1st April)	No.	22	15	19	20
3.	No. of Wholesale shops (as on 1st April)					
	a. Co-operatives.	No.	43	48	47	47
	b. Others	No.	250	249	247	262
	c. Total Wholesale shops	No.	293	297	294	309
4.	No. of Retail shops (as on 1st April)					
	a. Co-operatives	No.	1302	1251	1252	1234
	b. Others.	No.	11481	11577	11653	11745
	c. Total Retail shops	No.	12783	12828	12905	12979
5.	Quantity of Coarse Cloth:	Bales	2518.02	6381	---	---
6.	Sugar (allotted)	M.T	141351	141152	148353.4	145853.2
7.	Palmolein oil (allotted)	M.T	51500	51850	25800	42900
8.	Kerosene (do)	K.L	291017	308842	321575	338462

Source : Directorate of Civil Supplies

3.12 The number of wholesale shops increased from 294 in 1989 to 309 in 1990, and the total number of retail

shops went up further to 12979 in 1990 from 12905 in the previous year.

The table below gives the details of import of food grains viz. rice and wheat on State account.

TABLE 3.7

Import of Foodgrains on State Account: Kerala 1988-1990

(in '000 Tonnes)

Month	1988		1989		1990	
	Rice	Wheat	Rice	Wheat	Rice	Wheat
(1)	(2)	(3)	(4)	(5)	(6)	(7)
January	145	35	125	15	100	20
February	135	35	100	15.8	125	20
March	125	20	100	15.7	125	20
April	125	20	100	15	125	20
May	125	20	100	15	125	20
June	125	15	100	15	125	20
July	125	15	100	15	135	20
August	145	15	100	15	155	20
September	125	15	120	20	135	20
October	125	15	100	25	145	20
November	125	15	125	25	145	20
December	125	15	100	20	135	20
<b>Total</b>	<b>1550</b>	<b>235</b>	<b>1270</b>	<b>211.5</b>	<b>1575</b>	<b>240</b>

Source: Directorate of Civil Supplies.

3.13 During 1990, the import of rice increased by 24 per cent and that of wheat by 13.5 per cent, over the previous year. The quantity of rice imported has increased from 12,70,000 tonnes in 1989 to 15,75,000 tonnes in 1990 and that of wheat from 2,11,500

tonnes to 2,40,000 tonnes during the same period.

3.14 During the year under review, the distribution of rice also registered an increase of 15 per cent and wheat by 3.2 per cent over the previous year as shown in the Table 3.8.

TABLE 3.8

Distribution of rice and wheat through the Public  
Distribution System: Kerala 1987-1990

Month	Rice distributed (in tonnes)				Wheat distributed (in tonnes)			
	1987	1988	1989	1990	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
January	113135	149659	111147	95419	7702	9449	14245	17847
February	116899	148929	113039	99570	6996	9442	13093	12963
March	148120	162787	104342	118192	7380	10659	15492	17087
April	113566	145876	101297	124854	6260	10191	13724	14664
May	124647	141692	107075	121475	6091	11094	15546	17660
June	138085	133541	109274	128522	8373	14563	18240	18622
July	158587	136561	112249	147936	10533	16712	17813	20067
August	172356	159455	112729	137862	10294	15860	15498	20206
September	143894	127303	118963	107638	8243	13865	14922	14745
October	108629	127304	84345	114444	9566	15064	17241	14828
November	128839	115006	96525	124987	10459	13620	19492	14981
December	131205	112951	99872	141102	12311	12890	19609	17557
<b>Total</b>	<b>1597962</b>	<b>1661064</b>	<b>1270857</b>	<b>1462001</b>	<b>104208</b>	<b>153409</b>	<b>194915</b>	<b>201227</b>

Source : Directorate of Civil Supplies

3.15 The quantity of rice distributed through PDS has thus increased from 12,70,857 tonnes in 1989 to 14,62,001 tonnes in 1990 and that of wheat from 1,94,915 tonnes to 2,01,227 tonnes during the same period.

3.16 Out of the allotment of wheat by the Government of India at the rate of 20,000 tonnes a month, about 29,160 tonnes were distributed for converting into maida and sooji for the year.

#### Wages

3.17 With the increase in the wholesale as well as retail prices of commodities in the State, the wage rate of both skilled and unskilled workers, ~~too~~ increased during 1989-90.

3.18 The daily wage of a carpenter was Rs.49.80 in 1988-89. It increased to Rs.51.82 in 1989-90. A mason, who

received Rs.49.55 in 1988-89, received Rs.51.45 in 1989-90 (see Table 3.9). The increase in the wage rate of both categories was of the order of 4.06 per cent and 3.83 per cent respectively.

3.19 A similar trend was noticed among the unskilled workers. The average daily wage of male worker increased from Rs.31.95 in 1988-89 to Rs.33.31 in 1989-90 and that of a female worker from Rs.18.59 to Rs.19.63 (see Table 3.10). In percentage terms, the increase in the wage of a female unskilled worker (5.59 per cent) was found to be higher than that of a male worker (4.26 per cent).

3.20 There exist wide difference as to the wage of mason I in the rural and urban areas in the construction sector (see Table 3.11). When Mason I in rural areas received only Rs.53.23, that in the urban areas received Rs.63.87 in 1989-90.

TABLE 3.9

Average Daily Wage Rates of Skilled Workers  
in the Agricultural Sector

Year	Average daily wage rates		Percentage of variation over the previous year	
	Carpenter	Mason	Carpenter	Mason
	(2)	(3)	(4)	(5)
1980-81	19.82	19.78	..	..
1981-82	22.42	22.50	13.12	13.75
1982-83	23.40	23.52	4.37	4.53
1983-84	26.17	26.22	11.84	11.48
1984-85	38.74	38.69	48.03	47.56
1985-86	42.84	42.80	10.58	10.62
1986-87	45.93	45.93	7.21	7.31
1987-88	47.50	47.21	3.42	2.79
1988-89	49.80	49.55	4.84	4.96
1989-90	51.82	51.45	4.06	3.83

Source: Directorate of Economics &amp; Statistics.

TABLE 3.10

Average Daily wage rates of Unskilled Workers in  
the Agricultural Sector

Year	Average daily wage rates of paddy field worker		% Variation over the previous year	
	Male	Female	Male	Female
	(2)	(3)	(4)	(5)
1980-81	11.13	7.91	..	..
1981-82	12.74	8.83	14.47	11.63
1982-83	13.29	9.55	4.32	8.15
1983-84	15.86	11.02	19.34	15.39
1984-85	23.60	11.89	48.80	7.89
1985-86	26.08	15.10	10.51	27.00
1986-87	28.36	16.39	8.74	8.53
1987-88	30.36	17.68	7.05	7.87
1988-89	31.95	18.59	5.24	5.15
1989-90	33.31	19.63	4.26	5.59

Source: Directorate of Economics &amp; Statistics.

TABLE 3.11

Average Daily Wages of Skilled Workers in  
the Construction Sector

Year	Daily wages of skilled workers			
	Carpenter I		Mason I	
	Rural	Urban	Rural	Urban
	(2)	(3)	(4)	(5)
1981-82	22.52	22.87	22.66	23.01
1982-83	27.99	30.68	28.13	30.80
1983-84	33.43	35.00	33.29	35.12
1984-85	36.71	37.97	36.65	38.03
1985-86	40.91	40.67	41.10	42.01
1986-87	43.90	45.39	44.24	45.91
1987-88	49.30	50.08	49.32	50.04
1988-89	51.08	51.92	51.17	52.00
1989-90	53.30	53.66	53.23	63.87

Source: Directorate of Economics &amp; Statistics.

TABLE 3.12

Average Daily Wages of Unskilled Workers in the  
Construction Sector

Year	Wages of Unskilled Workers			
	Men		Women	
	Rural	Urban	Rural	Urban
	(2)	(3)	(4)	(5)
1981-82	15.22	15.94	11.40	12.22
1982-83	17.85	19.09	13.53	14.44
1983-84	20.29	21.18	14.81	16.10
1984-85	21.90	22.80	16.37	17.38
1985-86	25.31	25.70	19.08	19.42
1986-87	27.66	28.42	21.05	21.93
1987-88	31.31	32.23	23.26	25.34
1988-89	32.92	33.55	25.32	26.79
1989-90	34.15	34.94	26.88	28.26

Source: Directorate of Economics &amp; Statistics.

## AGRICULTURE

*Rainfall*

4.1 Kerala State is in a region endowed with agroclimatic features that are favourable for a broad based agriculture. Normally the State receives around 3000 mm. of rain per annum with a reasonably good distribution. The State enjoys the advantage of both South West and North East Monsoons. But the spread and intensity of the rainfall had been much less from 1980-81 onwards. Data pertaining to the spread of rainfall, over the 3 important seasons namely summer, South West and North East Monsoons during the last 10 years, given in Table 4.1 and 4.2, show, departures from the normal atleast in two seasons in all these years. Compared to 1987, when the total rainfall was as low as 2318 mm. the situation in subsequent years has shown marked improvement. During 1990 Kerala received an average rainfall of 2780mm. which fall short of the normal of 3065mm by 9 per cent. The deficiency in rainfall during summer was to the extent of 28 per cent; it was 25 and 4 per cent respectively for South West and North East Monsoons. However, with reference to the agricultural year June-July, the rainfall of 2925mm. with adequate spread in all the 12 months during the year 1989-90 could be considered as fairly satisfactory to ensure a reasonably high level of farm production. In spatial distribution also, rainfall in Kerala shows distinct features. Generally the northern districts receive more rainfall, the South West Monsoons being more active, with very scanty summer showers. During 1990 the highest rainfall was recorded in Kasaragod (4048mm) followed by Idukki (3782mm) and Kannur (3214mm), while the lowest was in Thiruvananthapuram district (1521mm). Though Thiruvananthapuram district received only around 37% of the rainfall compared to Kasaragod, it had a good spread covering all the 12 months; Kasaragod which had the highest

intensity in rainfall, had to face totally rainless 4 consecutive months. The average annual rainfall in the districts of Kasaragod, Kannur, Wayanad, Kozhikode, Idukki, Kottayam and Pathanamthitta were much above the state average. Month-wise and district-wise data on rainfall are given in Appendix 4.1.

*Land Use Pattern*

4.2 Data on land use pattern in the State for the year 1989-90 are yet to be finalised. Latest estimates available for the year 1988-89 are presented in Table 4.3. The land use pattern during 1988-89 shows that the areas coming under the categories of 'non-agricultural uses', 'barren and uncultivable land', 'fallow other than current fallows' and 'current fallows' have declined, while the net area sown as well as the total cropped area have increased. With the marginal increase in net area sown (1592 ha.) the percentage of land use for agriculture purposes has gone up to 56.95, which is perhaps the highest for any State in the country. The gross cropped area also increased from 28.99 lakh ha. to 29.63 lakh ha. This has helped attain a higher cropping intensity of 133.92 compared to the previous year's 131.14.

4.3 While 56.95 per cent of the State's geographical area is devoted for crop production, 27.83 percent is under forests and 7.32 percent used for non-agricultural uses. The percentage of land utilization for agricultural purpose including forests thus works out to 84.78 which is very high compared to any other regions in the country. The scope for bringing additional area under cultivation in Kerala is very much limited as it has to be found from the meagre land lying unutilized under the categories of cultivable wastes, fallows

TABLE 4.1

## Percentage Departure of Rainfall (%)

Year	Summer	South West Monsoon	North East Monsoon
(1)	(2)	(3)	(4)
1981	-28	17	-16
1982	-44	-16	-43
1983	-73	+ 2	-33
1984	-12	-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

TABLE 4.2

## Month - wise distribution normal rainfall and average rainfall for last 3 years

Month	Normal	1988 Actual	1989 Actual	1990 Actual	Average for 3 years
(1)	(2)	(3)	(4)	(5)	(6)
January	15	1	6	15	7
February	17	19	0	5	8
March	38	49	19	17	28
April	110	144	107	42	98
May	258	142	153	489	261
June	691	585	725	603	638
July	760	608	577	652	612
August	433	427	354	349	377
September	247	498	294	106	299
October	291	76	313	326	238
November	163	79	87	174	113
December	42	25	7	2	11
<b>Total</b>	<b>3065</b>	<b>2658</b>	<b>2642</b>	<b>2780</b>	
<b>Average</b>	<b>255</b>	<b>221</b>	<b>220</b>	<b>232</b>	



TABLE 4.3

## Land use pattern in Kerala

(Area in ha)

Clarification of land	1986-87	1987-88		1988-89		Change in	
		Actual	Percent	Actual	Percent	area between 1987-88 & 1988-89	Percent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Total Geographical area	3885497	3885497	100	3885497	100	-	-
2. Forest	1081509	1081509	27.83	1081509	27.83	-	-
3. Land put to non agricultural uses	263017	284802	7.33	284391	7.32	(-) 411	(-)0.14
4. Barren and uncultivate land	82343	72491	1.87	71198	1.83	(-)1293	(-)1.78
5. Permanent pastures and grazing land	3711	3089	0.08	3286	0.08	197	6.38
6. Land under Misc. tree crops not included in net area sown	46614	40606	1.05	41543	1.07	937	2.31
7. Cultivate waste	129582	115342	2.97	115786	2.98	444	0.38
8. Fallow other than current fallow	27727	28779	0.74	28295	0.73	(-) 848	(-)1.68
9. Current Fallow	44258	47605	1.23	46623	1.20	(-) 982	(-)2.06
10. Net area sown	2206736	2211274	56.91	2212866	56.95	1592	0.07
11. Area sown more than once	663578	688581	17.72	750607	19.32	62026	9.01
12. Total Cropped area	2870314	2899855	74.63	2963473	76.27	63618	2.19
Cropping intensity	130.14	131.14		133.92			

other than current fallows and current fallows. The total extent of land available under all these categories put together is only 1.90 lakh ha. which accounts for just 4.91 per cent of the geographical area. Though final estimates are not available, the pattern of land utilization during 1989-90 is expected to be better because of the favourable weather conditions that prevailed during the period.

#### Agricultural Production

4.4 The agricultural economy of the state, which registered significant and consistent growth both in area and productivity of almost all important crops till mid seventies, started to decelerate during the latter half of seventies. The situation assumed alarming proportions during the first half of eighties with almost all crops reaching their troughs in overall production. It is to be noted that Kerala performed poorly during a period when Indian Agriculture was making significant strides. Thanks to the bold initiatives taken and the innovative programmes launched lately in the farm front, the agricultural scenario of Kerala has shown marked improvement during the last 3 years. The agricultural income which was stagnating around Rs.1340 crores in 1980-81 prices, for several years, registered an increase of 19.97 per cent in 1988-89 and a further 6 per cent in 1989-90. The agricultural income during 1989-90 was Rs.1737 crores in 1980-81 prices. Relevant data are furnished in table 4.4.

TABLE 4.4

#### Growth of Agricultural Income in Kerala

Year	Agricultural income in 80-81 prices	Rate of growth	Percentage contribution
(1)	(2)	(3)	(4)
1985-86	1379.24	4.50	34.12
1986-87	1309.49	-5.05	33.25
1987-88	1366.01	4.31	33.75
1988-89	1638.98	19.97	36.80
1989-90	1737.32	6.00	36.90

4.5 A remarkable feature of the performance during 1989-90 was that there was a marked increase in the production of almost all the major crops grown in Kerala. Rice production increased by 1.28 lakh tonnes, tapioca 5.98 lakh

tonnes, coconut 179 M nuts, cashewnut 615 tonnes and rubber 36,983 tonnes. Another encouraging trend witnessed during the year was that in respect of all these crops the increases in production have been made possible by increase both in area as well as productivity. In contrast to the steady and sharp decline in area under rice recorded during the last 15 years, there was a recovery during 89-90 when the area under this crop increased by around 5832 ha. over the previous year. Though the increase in area is only marginal, it emerges as a very major achievement in the farm front, as, for the first time in 15 years, the declining trend could be reversed. The productivity of rice also touched a new high of 1956 Kg/ha. during the year.

4.6 Similarly, performance of tapioca was also good with a total reversal of the past trend by recording positive growth in area (36,085 ha.). The increase in production was to the tune of 18.91 percent during 1989-90 though there was a marginal decline in productivity (-1.97%).

4.7 In respect of coconut, the estimated production of 4,394 Million nuts for the year 1989-90 was the highest ever attained by the State, the previous best performance being 3500 million nuts in early seventies. Pepper was the only major crop which performed poorly in respect of both area (-3.56%) and productivity (-26%) during the year. Other annual crops which also recorded declines in area during the year include pulses, sugarcane, ginger, turmeric, cardamom, banana and plantain, sweet potato, sesamum, cotton & tobacco. In the case of crops like pulses, sugarcane, turmeric, banana, groundnut and sesamum the adverse impact of the decline in area was more than compensated by the improvement in productivity. Consequently, the production trend in respect of these crops was positive during the year.

4.8 Among the plantation crops the performance in tea and coffee were rather disappointing with steep decline in productivity. However, rubber could maintain the increasing trend with the increase both in area (2.59 percent) and productivity (5.99 percent) during 1989-90.

4.9 Comparative data on area, production and productivity of important crops in Kerala for the years 1988-89 and 1989-90 are given in Table 4.5.

TABLE 4.5

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			
		1988-89	1989-90	Change over previous year	Per-centage	1988-89	1989-90	Change over previous year	Per-centage	1988-89	1989-90	Change over previous year	Per-centage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Rice	577557	583389	5832	1.01	1012558	1141231	128673	12.71	1753	1956	203	11.58
2.	Jowar	4117	2534	-1583	-38.45	2089	1333	-756	-36.19	507	526	19	3.75
3.	Ragi	1825	1513	-312	-17.10	1491	1228	-263	-17.66	817	812	-5	-0.61
4.	Other small												
	millets	3143	3784	641	20.39	2412	3701	1289	53.44	767	978	211	27.51
5.	Pulses	25501	24285	-1216	-4.77	18459	18552	93	0.50	724	764	40	5.52
	Sugarcane	8245	8137	-108	-1.31	53519	53573	54	0.10	6491	6584	93	1.43
7.	Pepper	157006	151623	-5583	-3.56	43261	37736	-5505	-12.73	275	269	-26	-9.45
8.	Chillies	748	753	5	0.67	734	735	1	0.14	981	976	-5	-0.51
9.	Ginger	14167	13830	-337	-2.38	45020	46388	1368	3.04	3178	3354	176	5.54
10.	Turmeric	3083	2998	-85	-2.76	5787	5872	85	1.47	1877	1959	82	4.37
11.	Cardamom	64548	61610	-2938	-4.55	2820	1985	835	-29.61	44	32	-12	-27.27
12.	Betal nuts												
	(million nuts)	62472	NA	-	-	11450	NA						
13.	Banana	20496	20205	-291	-1.42	262381	263850	1469	0.56	12802	13059	257	2.01
14.	Other plant-												
	On	38801	37968	-833	-2.15	175230	174530	-700	0.40	4516	4597	81	1.79
15.	Cashewnut	124760	124167	-573	-0.46	108264	108879	615	0.57	868	877	9	1.04
16.	Tapioca	169475	205560	36085	21.29	3165265	3763670	598405	18.91	18677	18309	-365	-1.97
17.	Sweetpotato	3174	3169	-5	-0.16	26544	26439	-105	-0.40	8363	8343	-20	-0.24
18.	Groundnut	13264	14894	1630	12.29	9664	16761	5077	42.54	729	990	261	35.80
19.	Sesamum	11753	10572	-1181	-10.05	2029	3710	1681	82.85	173	351	178	102.89
20.	Coconut												
	(million nuts)	816880	875892	59012	7.22	4215	4394	179	4.25	5160	5017	-	-
21.	Cotton	6429	4920	-1509	-23.47	1764	1405	-359	-20.35	274	286	12	4.38
22.	Tabacco	359	355	-4	-1.11	667	645	-22	-3.30	1858	1817	-741	-2.21
23.	Coffee	65637	NA	-		47425	23800	-23625	-49.81	722	362	-360	-49.91
24.	Tea	34642	34690	48	0.14	65771	57083	-8688	-13.21	1898	1646	-252	-13.28
25.	Rubber	366500	376000	9500	2.59	238414	275397	36983	15.5	967	1025	58	5.99
26.	Cocoa	14003	NA	-		5780	NA	-	-	413	-	-	-

TABLE 4.6

Index of Area, Production and Productivity of Crops in Kerala Base : Average of Triennium ending 1979-90

	Area				Production				Productivity			
	Average of 3 years 1976-77 to 1978-79			1989-90	Average of 3 years 1976-77 to 1978-79			1989-90	Average of 3 years 1976-77 to 1978-79			1989-90
	1987-88	1988-89	1989-90		1987-88	1988-89	1989-90		1987-88	1988-89	1989-90	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
All crops(A+B)	101.68	100.15	101.82	105.38	100.17	85.32	87.53	97.91	98.71	85.13	79.12	92.95
A. Food Grains(1+2)	102.55	74.86	71.82	72.22	98.67	80.82	79.30	89.16	96.22	107.73	110.14	123.15
1. Cereals	102.59	74.98	72.38	72.94	98.85	80.23	78.71	88.66	96.35	107.00	109.66	122.61
2. Pulses	101.53	71.96	71.37	67.97	87.06	100.89	99.90	100.62	85.75	140.23	140.03	147.78
B. Non Food Grains (3 to 8)	101.00	111.78	115.62	120.64	100.52	86.29	89.64	99.94	99.52	77.20	77.35	82.86
3. Oil Seeds	101.66	115.25	120.91	129.45	103.68	107.88	135.99	142.23	101.79	93.50	110.41	186.66
4. Plantation crops	95.84	148.89	151.99	154.99	93.84	141.26	172.01	166.24	98.74	93.73	107.66	109.70
5. Condiments and Spices	186.65	121.59	126.85	123.10	89.60	120.76	124.82	103.59	88.82	103.29	99.42	99.22
6. Drugs and Narcotics	82.29	96.94	80.14	80.08	89.54	83.20	70.00	69.00	108.85	86.44	95.68	93.22
7. Fruits and Vegetables	103.20	83.70	85.23	91.15	105.94	85.46	91.24	99.40	102.65	96.64	95.05	101.60
8. Miscellaneous	103.59	101.57	103.35	100.85	98.02	118.68	124.07	118.85	94.62	113.59	102.03	114.03

TABLE 4.8

Area Production and Productivity of Rice in Kerala (Area in Ha, Production in tonnes and Productivity in Kg/Ha)

Season	Area			Production			Productivity					
	1988-89	1989-90	Change over the previous years	1988-89	1989-90	Change over the Previous Years	Percent	1988-89	1989-90	Change over the previous years	Percent	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Virippu (Autumn)	233172	243611	+10439	+4.48	387804	478663	+90839	+23.42	1663	1965	302	18.16
Mundakan (Winter)	274181	268599	-5582	-2.03	472699	501497	+31498	+6.66	1724	1877	153	8.87
Panja (Summer)	78234	71179	-945	+1.35	152055	158391	+6336	+4.17	2165	2225	60	2.77
Total	577677	583389	+5712	+1.01	1012558	1141231	+128673	+12.71	1753	1956	203	11.58

### *Overall Trend in the Performance of Different Categories of Crops*

4.10 The indices of area, production and productivity of major categories of crops for the last 10 years are given in Table 4.6. The index of overall agricultural production which was 100.17 for the triennium ending 1978-79 was in a declining trend till the end of 1987-88 touching its trough point of 85.32 during the year. The resurgence of the crop sector during the years 1988-89 and 1989-90 has helped break this negative trend altogether. The overall index of production increased to 87.53 and 92.91 respectively during these two years. It is important to note that the positive trend is discernable in indices of both the area and productivity pertaining to these periods. The area index which was more or less stagnant throughout the last decade has increased to 105.38 during 1989-90, while the productivity index which showed a declining trend in the past has found a new high of 92.95. The fact that the productivity index for the year 1989-90 is still far below the base level index of 98.71 indicates the untapped potential of productivity improvement.

4.11 The area under foodgrain crops as a group was declining till the end of 1988-89, when the index of area declined to as low as 71.82. The year 1989-90 witnessed a reversal of this trend with the index number of area under food crops registering a marginal improvement to 72.22. On the otherhand the productivity index has gained substantially during 1989-90 from 110.14 in 1988-89 to 123.15. The incremental growth of 12 points within an year is the highest recorded in Kerala on the food production front during the last decade. Consequent on the better performance, both in area as well as productivity, the production index for food crops also registered a very impressive growth of 10 points during the year. Among food crops cereals with the predominance of rice has gained substantially both in production and productivity while in respect of pulses, the increase was confined to productivity alone.

4.12 The area as well as productivity indices of non-foodgrains also registered positive growths during 1989-90 over 88-89. Despite positive growth, however, the productivity index (82.86) was still far behind the base level. The area index (120.64) has shown an increase of around 5 points during 1989-90 largely contributed by oil seeds (9 points), plantation crops (3 points) and fruits and vegetables (6 points). Condiments and spices (-3 points) and Miscellaneous crops (-2 points) recorded negative growth. On the productivity side the largest increase was visible under oil seeds (76 points) followed by miscellaneous crops (12 points), fruits and vegetables (6 points) and plantation crops (2 points). Productivity of condiments and spices group remained the same while drugs and narcotics have recorded negative growth in productivity.

### *Performance of major crops*

#### *(a) Rice*

4.13 Despite substantial improvement in productivity, rice production in the State has been stagnating around 10 to 11 lakh tonnes during the first half of eighties. This was mainly because of the fact that the improvement in productivity had been more than offset by the decline in area under the crop during the period. The declining trend in area under food crops which had set in during mid seventies continued till the end of 88-89, though in varying degrees. This was mainly because of the widening disparities in the net income of rice vis-a-vis other competing crops like coconut, banana etc. The surging pressure exerted by more rewarding crops resulted in a continuous shift in area from rice cultivation to other crops. The State lost more than 3 lakh ha. under rice cultivation during the last 15 years. Consequently, production of rice which touched its peak of around 14 lakh tonnes in mid-seventies plummeted to 10.5 lakh tonnes within a span of 10 years. The steep fall in area had its adverse impact not merely in regard to availability of food for human consumption making the state dependant more and more on external sources for meeting her

food requirement, but it also resulted in weakening the already feeble live-stock supporting system and drastically reducing the employment opportunities for agricultural labourers, particularly women.

4.14 Though the declining trend in production persisted warranted special efforts for bolstering the rice economy, there were problems in launching any major effort in this direction. Being a chronically food deficit state largely dependent on external supplies, the option of promising the rice growers significantly increased prices was not easy to consider. Nor was reduction in the cost of production through wage reduction a practical option as it would adversely affect the livelihood of a vast majority of the agricultural workforce. Under such a challenging situation, State Government came out with the innovative group farming approach. Under this approach emphasis was to be put on group management for improving the economics of paddy cultivation through better management based on low cost technology, improvement in productivity, selective mechanisation and cost reduction. The programme has received around co-operation and the coverage during the first year (1.7 lakh ha.) itself has been substantial. Within one year group management samithis, constituted under the aegis of the Krishi Bhavans emerged as a major farmers movement. As a consequence the farmer-labour relation have become more tolerant and accommodative and it has been possible to introduce selective mechanisation. The improvement in productivity attained is also reported to be substantial. The net benefit consequent on the improvement in productivity and reduction in cost of cultivation during 1989-90 is estimated to be around Rs.2500 per ha. The additional rice production during 1989-90 is estimated to be around 1.30 lakh tonnes which has been contributed by increase both in area (5832 ha.) as well as productivity (203 Kg.). Productivity of rice reached an all time high of 1956 Kgs/ha. Relevant data are furnished in table 4.7.

**TABLE 4.7**  
Trend of Area, Production and Productivity of Rice in Kerala

Year	Area '000 ha.	%change over previous year	Production '000 tonnes	%change over previous year	Productivity Kg/ha	%change over previous year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1985-86	678.28	-7.12	1173.05	-6.5	1729	0.5
1986-87	663.80	-2.21	1133.78	-3.4	1708	-1.2
1987-88	664.08	-8.8	1032.60	-8.9	1709	0.05
1988-89	577.56	4.47	1012.55	-1.9	1753	2.6
1989-90	583.39	1.10	1141.23	12.74	1956	11.58

4.15 An analysis of the production performance of rice season-wise during 1989-90 reveals it was the virippu crop which has contributed the largest share (90,839 tonnes) in additional production. (See Table 4.8) There has been substantial increase in area under cultivation (10439 ha.) as well as improvement in productivity (302 kg/ha.) during the season. The area of over 10,000 ha. brought additionally under rice during the virippu season has been partly nullified by the drop in area reported during the Mundakan season. Though there was marginal improvement in productivity during the Mundakan season (153 kgs.) the average yield per ha. was still very much below that in the other two seasons. Despite a high proportion of high yielding variety coverage, the productivity level during punja season (225 kg/ha.) was also not anywhere near the potential.

4.16 The season-wise variation in coverage of high yielding varieties and their yield levels continue to persist. Maximum coverage was during the punja season (56.5 percent) followed by virippu (33.8 percent) and mundakan (13.4 percent). The poor performance of the crop during mundakan season could be attributed to the low performance of high yielding variety coverage during this season. Though the overall coverage has improved from 1.37 lakh ha. to 1.55

lakh ha. during 1989-90 the increase was largely accounted for by virippu and punja seasons. The scope for securing further increases in rice production therefore lies largely in attaining higher coverage of high yielding varieties during the mundakan season. Inter-seasonal variation in productivity was visible in the case of high yielding varieties also. For the State as a whole, punja season continued to maintain the highest yield level (2533 kg.) followed by mundakan (2315kg.) and

virippu season (2014 Kg.). The picture was not same in all the districts. While the high yielding varieties recorded the highest yield during Virippu season in the districts of Thiruvananthapuram, Kollam, Palakkad, Kannur and Kasargode, mundakan emerged as the top yielding season in Alappuzha, Idukki, Thrissur and Wayanad. Relevant data on season-wise performance of high yielding varieties during 1989-90 are given in Table 4.9.

TABLE 4.9

District-wise Area, Production and Productivity of MYV of Rice in Kerala 1989-90

Sl. No.	District	Autumn			Winter			Summer			Local		
		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)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Thiruvananthapuram	3868	8423	2178	1472	2683	1823	43	54	1256	5363	11160	2075
2.	Kollam	10424	21865	2098	981	2013	2054	9	10	1111	11414	23890	2093
3.	Pathanamthitta	2180	3739	1715	1375	3023	2199	3266	11311	3463	6821	18073	2650
4.	Alappuzha	14804	30009	2027	7873	23176	2944	10541	30109	2856	33218	83294	2507
5.	Kottayam	10608	20885	1969	8111	20553	2534	7232	21991	3041	25951	63429	2444
6.	Idukki	181	422	2331	218	540	2477	-	-	-	399	962	2411
7.	Eranakulam	10713	20577	1921	2666	4601	1726	4376	7263	1660	17755	32441	1827
8.	Thrissur	3946	6710	1700	5442	11896	2186	8036	17296	2152	17424	35902	2060
9.	Palakkad	8617	20639	2395	1478	2632	1781	710	1234	1738	10805	24505	2268
10.	Malappuram	4512	8377	1857	2754	4434	1610	2859	6257	2189	10125	19068	1883
11.	Kozhikode	1009	1445	1432	607	905	1491	1122	1762	1570	2736	4112	1502
12.	Wayanad	-	-	-	1509	4311	2857	1287	2855	2218	2796	7166	2563
13.	Cannur	6060	11435	1887	1650	3006	1822	123	216	1756	7833	14657	1871
14.	Kasaragode	2075	4600	2217	774	1668	2155	114	232	2035	2963	6500	2194
Kerala		78997	159126	2014	36910	85443	2315	39718	100590	2533	155623	345139	2218

TABLE 4.10

Area, Production and Productivity of Rice in Kerala (District Wise)  
(Area in Ha, Production in Tonnes, and Productivity in Kg/ha)

Sl. No.	District	Area				Production				Productivity			
		1988-89	1989-90	Change over previous year	Perce- ntage	1988-89	1989-90	Change over previous year	Perce- ntage	1988-89	1989-90	Change over previous year	Perce- ntage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Thiruvananthapuram	21487	20921	- 566	-2.63	35925	39036	3111	8.66	1672	1866	194	11.60
2.	Kollam	27876	31075	3199	11.48	45974	59093	13119	28.54	1649	1902	253	15.34
3.	Pathanamthitta	13537	13949	412	3.04	30092	31921	1829	6.08	2223	2288	65	2.92
4.	Alappuzha	64404	64534	130	0.20	123723	145133	21410	17.30	1921	2249	328	17.09
5.	Kottayam	28661	30063	1402	4.89	60978	71175	10197	16.72	2128	2368	240	11.28
6.	Idukki	5206	4916	- 292	-5.61	11222	11554	332	2.96	2156	2351	195	9.04
7.	Ernakulam	71266	69801	-1465	-2.06	118566	120101	1535	1.29	1664	1721	57	3.43
8.	Thrissur	78862	74451	-4411	-5.59	122894	124698	1804	1.47	1558	1675	117	7.51
9.	Palakkad	142293	146739	4446	3.12	273758	328812	55054	20.11	1924	2241	317	16.48
10.	Malappuram	52709	54704	1995	3.78	74770	86845	12075	16.15	1419	1588	169	11.91
11.	Kozhikode	13579	14004	425	3.13	15529	16983	1454	9.36	1144	1213	69	6.03
12.	Wayanad	20393	21032	639	3.13	40210	42887	2677	6.66	1972	2039	67	3.40
13.	Kannur	20804	20982	178	0.86	31027	34587	3560	11.47	1491	1648	157	10.53
14.	Kasaragode	16480	16220	-260	-1.58	27890	28406	516	1.85	1692	1751	59	3.49
Kerala		577557	583389	5832	1.01	1012558	1141231	128673	12.71	1753	1956	203	11.58

TABLE 4.14

Area, Production and Productivity of Rubber in Kerala and India

Sl. No.	Year	Kerala			India		
		Area (1000 h.a)	Produ- ction (M.T)	Produ- ctivity (Kg/ha)	Area (1000 h.a)	Produ- ction (M.T)	Produ- ctivity (Kg./ha)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	1985-86	326.7	184563	897	369.3	200465	898
2.	1986-87	343.2	202129	924	389.5	219520	926
3.	1987-88	355.4	216562	942	405.1	235197	944
4.	1988-89*	366.5	238414	967	422.2	259172	974
5.	1989-90*	376.0	275397	1025	440.3	297300	1029

Note : \*Provisional



4.17 The district-wise performance of rice production reveals that all the districts without any exception have improved their performance during 1989-90 compared to the previous year. Noticable among them was the increase in production recorded in the districts of Kollam (28%), Palkkad (20%), Alappuzha (17%), Kottayam (16%) and Malappuram (16%). The declining trend in area under rice continued to persist in the districts of Thiruvananthapuram, Ernakulam and Kasargode. Relevent data are furnished in Table 4.10.

#### Coconut

4.18 Coconut which covers the largest cultivated area in Kerala and supports a vast majority of the small farmers is beset with many problems. Out of a total palm population of 16 crores, more than 2 crores are uneconomig due to either old age, disease or senility and require immediate replacement. The productivity of coconut which was around 5,500 nuts per ha. during the seventies gradually declined to as low a level as 4,500 nuts per ha. during early Eighties. Encouraged by the favourable response from the rice growers for the group farming programme, the idea has been extended to the coconut cultivation also with appropriate modifications. Timely market intervention operations by the State Government through KERAFED also helped to maintain reasonable levels of price for coconut and its products during the last three years. Coconut production has consequently increased and in 1989-90 it attained the highest level of 4,394 M nuts ever recorded in Kerala. The productivity of 5,159 per ha. attained during 1988-89 is also substantial considering the low level of productivity persisting throughout the last decade. Relevant data are furnished in Table 4.11.

TABLE 4.11

Trend in Area, Production and Productivity of Coconut in Kerala

Year	Area		Production		Productivity	
	(000 Ha.)	%change over the previous year	Mill- ion nuts	%change over the previous year	Nuts/ ha.	%change over the previous year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1985-86	704.68	2.47	3377	-2.2	4772	..
1986-87	706.10	0.28	3173	-6.0	4492	-5.86
1987-88	778.37	10.10	3366	0.4	4315	-3.94
1988-89	816.88	4.80	4215	25.9	5159	19.56
1989-90	878.89	7.60	4394	4.2	5016	-2.77

#### Pepper

4.19 The production of pepper which reached its peak level of 46,820 tonnes during 1987-88 has declined to 43,240 tonnes during 1988-89 and 37,730 tonnes during 1989-90. During 1989-90 there was reduction in area under cultivation (3820 ha.) as well as productivity (-9.8 percent). The productivity was only 249 Kg. per ha. which was rather low compared to the potential. The decline in productivity during 1989-90 compared to the previous year can largely be attributed to the inadequacy in rainfall during the flowering season. Data pertaining to pepper during the Seventh Five Year Plan is given in table 4.12.

TABLE 4.12

Performance of pepper in Kerala during the last five years

Year	Area		Production		Productivity	
	000 ha	%change over the previous year	000 tonnes	%change over the previous year	Kg/ ha.	%change over the previous year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1985-86	121.57	15.23	33.12	94.00	272	43.1
1986-87	128.90	5.78	30.37	9.40	236	-13.2
1987-88	146.08	14.06	46.82	53.30	321	37.7
1988-89	157.00	7.53	43.24	-6.50	276	-16.0
1989-90	151.42	-3.82	37.73	-12.74	249	-9.8

## Cashew

4.20 Production performance of cashew, the most important among the export oriented crops of Kerala, was also noteworthy during the last 3 years. The increase in production was more than 30 percent during the last 2 years solely because of the improvement in productivity from 670 Kg/ha. to 877 Kg/ha. Relevant data are furnished in table 4.13.

TABLE 4.13

Performance of cashew in Kerala during the last five years

Year	Area 000 ha.	Production 000 tonnes	Productivity Kg/ha.
(1)	(2)	(3)	(4)
1985-86	137.75	80.20	582
1986-87	133.70	88.71	664
1987-88	121.55	81.48	670
1988-89	124.74	108.26	868
1989-90	124.17	108.88	877

## Plantation crops

4.21 Among the plantation crops, the performance of rubber was excellent during 1989-90 with considerable increase in area (9500 ha.) and marginal improvement in productivity (58 Kg.). The area under rubber having increased from 3.66 lakh ha. to 3.76 lakh ha, the crop ranks second with respect to area coverage in the State. The production of rubber in Kerala also reached a new high of 2.75 lakh tonnes during the year accounting for 92 per cent of the national output. The productivity which was maintaining a steady upward trend during the last decade crossed the 1 tonne per ha. mark this year. Relevant data on production performance of Rubber for the last five years are presented in Table 4.14.

4.22 The consumption of natural rubber in the country, which was steadily on the increase during the last decade, recorded the highest level of 3,41,840 tonnes in 1989-90. The quantity imported was 44,445 tonnes, which was 25 per cent below the import during 1988-89 (59,835 tonnes) (See table 4.15). The average price of Rs.2,131 per qtl. that prevailed in Kottayam Market for RMA-4 grade during 1989-90 was higher by 17 per cent than the price of RS.1,815 per

qtl. during 1988-89 (Year-wise average prices of Rubber given in Table 4.16).

4.23 Coffee production in Kerala plummeted sharply from 47,425 tonnes in 1988-89 to 23,800 during 1989-90. Binneal fluctuation in coffee production is an universal phenomenon. This was the trend in regard to all India production as well. More than 90 per cent of Kerala's production was contributed by Robusta variety.

4.24 Export of coffee from the country picked up considerably during the year despite the marketing difficulties experienced as a result of the repeal of the International Coffee agreement. The export has grown to 1,32,320 tonnes during 1989-90 compared to 98,266 tonnes achieved during 1988-89. Comparative data on export performance during the last 10 years are given in Table 4.17.

4.25 Production of tea in the country during 1989 was estimated to be 6.84 lakh tonnes, of which Kerala's share was 57,083 tonnes (8.11 per cent). This is about 8,000 tonnes less than the production achieved during the previous year. The decline in production of tea during 1989 was mainly due to the long spell of drought experienced in the major producing districts during the first half of 1989. The export of tea from Kerala during 1989 is estimated to be around 33,970 tonnes which accounts for 16.59 per cent of the exports from the country.

4.26 The output of cardamom in Kerala also registered a steep drop of around 30 per cent during 1989-90. The crop suffered set back both in area under cultivation (-2938 ha.) as well as productivity (-12 Kgs/ha.) The drop in production was due to the heavy damage caused to plantations consequent to the heavy rains and strong winds in July 1989. The production was only 1985 tonnes which constitute about 64% of the country's production. Exports of cardamom have suffered severe set back in recent years because of higher prices in the domestic market and severe competition in West Asia from Guatemala. From a level of around 2300 tonnes of cardamom exported during early Eighties the quantum exported in 1989-90 was just 127 tonnes. (See table 4.17). Trend of area, production and productivity of coffee, tea and cardamom during the last 10 years in Kerala vis-a-vis India are given in Appendices 4.2 to 4.4.

### *Supplies and Services*

4.27 With the introduction of group approach for the development of major crops like rice, coconut and pepper emphasis has been on better management of available resources based on low cost technology. A review of the performance in the area of supplies and services during 1989-90 is given below.

#### *Seeds*

4.28 Rice being the only major food crop of Kerala, seed programme is largely centred around this crop. During 1989-90, a total quantity of 4,184 M.T. of certified seeds was procured and distributed by the Department of Agriculture. This was in addition to 21207 minikits of new paddy strains distributed for field trials and 30803 pulses minikits, 25565 sesamum minikits, 1000 groundnut minikits, 500 maize minikits and 500 sorghum minikits distributed under the small and marginal farmers scheme.

#### *Fertilizers*

4.29 The consumption of fertilizers which was maintaining an increasing trend till 1988-89 has declined somewhat from 213,927 tonnes to 212,454 tonnes in terms of nutrients during 1989-90. (See Appendix 4.5). The impressive performance in terms of additional production recorded in the case of major crops without commensurate increase in the use of a key input like fertilizer proved that the low cost technology with accent for optimal management pursued in the farm front had been very effective. The decline in consumption is entirely in Nitrogen (-2%) and Phosphorus (-7%). On the otherhand the consumption of Potash has increased considerably which is a positive trend towards better management of commercial crops like coconut. The average consumption of fertilizers per gross cropped area in Kerala during 1989-90 works out to around 72 Kgs.

#### *Plant Protection Chemicals*

4.30 The strategy of need based application of plant protection chemicals pursued in respect of plant protection has helped the State contain the use of these chemicals within reasonable limits. Agro-clinics are organised as part of the group farming programme for rice for increasing the awareness about the use of appropriate chemicals and their timely applications. Consequently, the consumption of these chemicals

has declined from 1,175 tonnes to 1029 tonnes. The area under plant protection coverage could also be brought down from 7.58 lakh ha. to 6.30 lakh ha. during 1989-90. Other services rendered under plant protection include chemical control of weeds in 1.04 lakh ha., release of 207 lakhs parasites for the biological control of coconut caterpillar 'Nephantis', spraying of 6.65 lakh coconut palms against coconut leaf disease and distribution of 2,556 plant protection equipments.

#### *Soil Testing Service*

4.31 Soil Testing Services were rendered from the existing 12 soil testing laboratories. The number of soil samples analysed during 1989-90 was 2.35 lakhs against 2.21 lakhs for the year 1988-89.

4.32 Comparative data pertaining to selected indicators of agricultural development for the years 1988-89 and 89-90 are given in Table 4.18.

#### *Information Communication Support*

4.33 Major activities of the Farm Information Bureau organised during the year included issue of 827 farm news bulletins, conduct of 14 rural exhibitions, 12 film shows, 10 Kissan melas, 2 major exhibitions, 48 doordarshan coverages and 400 press releases. Publication of the farm fortnightly "Kerala Karshakan" was continued with a circulation of around 40,000 copies. Weekly farm feature service with the co-operation of around 15 prominent dailies was also continued.

#### *Prices of Farm Inputs*

4.34 Excepting coconut and cashew seedlings, prices of almost all the farm inputs remained more or less steady during 1989-90 (See Appendix 4.6). The price of coconut seedlings for departmental supplies was raised from Rs.8.50 to Rs.12 while the increase in respect of cashew seedling was raised from Rs.1.50 to Rs.2.

#### *Agricultural Credit*

4.35 Credit is considered to be one of the critical inputs for increasing agricultural production. The State depends largely on Co-operatives and Commercial banks for meeting its requirements of production finance in the agricultural and allied sectors. The dispensation of agricultural credit through the organ-

ised sector has been increasing over the years.

4.36 In Kerala the Co-operative credit structure comprises of (i) Kerala State Co-operative Bank with its 14 district banks and 1582 primary agricultural credit societies, and (ii) the Kerala State Agricultural Development Bank with its 40 affiliated primary agricultural development banks. The credit operations of these institutions include those financed from own funds as well as refinance from NABARD. Commercial Banks operate through the network of their branches numbering about 2837 in Kerala.

4.37 The refinance assistance provided by NABARD for agriculture and allied sectors under the schematic lending has increased from Rs.44.79 crores in 1985-86 to Rs.71.26 crores in 1988-89. This trend was maintained during 1989-90 also and the refinance support touched an all time high of Rs.80.08 crores, a growth rate of 12.38%.

4.38 The relative share of refinance absorbed by the different financial agencies shows that the Kerala State Co-operative Agricultural and Rural Development Bank had availed the largest share (Rs.29.92 crores) followed by the Commercial Banks (Rs.26.99 crores), Kerala State Co-operative Bank (Rs.18.25 crores) and the Regional Rural Banks (Rs.4.92 crores).

4.39 A purpose-wise analysis of the refinance shows that the major share of Rs.26.11 crores (32.60%) was provided to the plantation and horticultural schemes followed by IRDP Rs.16.31 crores (20.37%). The amount disbursed for Minor irrigation and non-farm activities aggregated to Rs.10.94 crores (13.66%) and Rs.10.85 crores (13.55%) respectively. The refinance provided to plantation sector has increased from Rs.15.58 crores in 1988-89 to Rs.26.11 crores registering an increase of 67.59% over the previous year. The flow to non-farm sector on the other hand decreased while the assistance for IRDP remained more or less stagnant.

4.40 Commercial Banks are increasingly involved in the developmental activities of the State. The total credit disbursed by Commercial Banks during 1989-90 under the priority sector amounts to Rs.914.16 crores. Agriculture and allied sectors account for the largest share of credit Rs.502.17 crores (54.93%) followed by the tertiary sector Rs.236.21 crores (25.83%) and the small scale industrial

sector Rs.101.51 crores (11%). Commercial Banks also involved in providing credit for the poverty alleviation programmes like IRDP, DRI etc. Under IRDP alone 74,150 beneficiaries were assisted during the year. With a view to ensure better involvement of the banks in rural development in an organised manner, service area approach has been implemented by all scheduled commercial banks with effect from 1-4-1989. Under this approach on an average 5 - 6 panchayat wards were allotted to each bank in Kerala.

#### *Short term and Medium term Co-operative Credit*

4.41 Co-operative credit structure has a strong base in Kerala. Kerala State Co-operative Bank is the apex institution in the Short-term & Medium term Co-operative Credit Structure. The total loans disbursed by the bank as on 30-6-1989 was 273.59 crores which includes Rs.86.10 crores provided as short-term agricultural credit and 75.24 crores as medium term agricultural credit. The overdues which stood at Rs.387.07 lakhs in June 1988 has increased to Rs.566.11 lakhs in June 1989.

4.42 Kerala could build a very strong rural credit base over the year. During 1989-90 there were 1582 primary agricultural credit societies functioning in Kerala with a total membership of 82.17 lakhs. The average membership has increased from 4942 to 5193 during the year. The total share capital held by these societies works out to Rs.78.74 crores with an average of Rs.4.97 lakhs per society. The total working capital per society also rose to Rs.1259.29 crores which works out to an average of around Rs.79.60 lakhs. The total loan disbursed by the Primary Agricultural Credit Societies during 89-90 is estimated to be around Rs.745.36 crores which includes Rs.602.71 crores as S.T., Rs.119.21 crores as M.T. and 23.44 crores as Long-term. The amount of loan outstanding at the primary level by the end of the year was Rs.859.75 crores and the amount of loan over due was of the order of Rs.233.42 crores. This is slightly higher than the level of Rs.163.92 crores recorded during the previous year. In regard to deposits the performance of the societies were commendable with a total deposit of Rs.783.36 crores held by the Societies during the year.

4.43 Out of a total of 1582 societies

1561 had own paid Secretaries, the number of societies on profit has declined from 777 to 696 in 1989-90, 866 societies were on loss and 20 were dormant during the year. The selected indicators of the performance and credit operations in respect of Primary Agricultural Credit Societies during 87-88 to 89-90 are given in Appendix 4.7.

#### *Long Term Credit*

4.44 In the Co-operative sector Kerala State Co-operative Agricultural and Rural Development Bank together with its 42 Primary Agricultural Development Banks provided the long term credit support for agricultural development. During 1989-90 the Bank had advanced a total loan of Rs.52.07 crores as term loan for agricultural purposes. This comprises of Rs.23.11 crores disbursed under the schematic lending and Rs.14.43 crores under ordinary lending. The loan disbursed for rural housing was Rs.8.44 crores. The Bank has raised the required resources by floating debentures on Government guarantee. Against the projected long term credit requirement of Rs.52.07 crores the debentures floated were for Rs.46.96 crores. The developmental activities supported by Bank's lending programme include minor irrigation, farm mechanisation, land development, soil conservation etc. During 1989-90 a new loan scheme for rural housing was introduced and an amount of Rs.8.44 crores was advanced. Purpose-wise details of loan disbursed are given in Appendix 4.8 and 4.9.

4.45 National Co-operative Development Corporation has emerged as an effective development financing institution for the Co-operative sector in the country. The Corporation has released a sum of Rs.61.01 crores for the development of Co-operatives in Kerala upto 31-3-1990. This accounts for 3.56% of the total releases in the country. Financial support provided by N.C.D.C. include those meant for development of processing, storage and marketing of agricultural commodities and for supply of consumer goods in rural areas. The total assistance provided during 1989-90 works out to Rs.14.60 crores which accounted for 6.59 percent of the total assistance to the co-operatives in the country during the year. This is against Rs. 15.71 crores provided during 1988-89. The assistance for 1989-90 includes Rs.586.8 lakhs provided to KERAFED, Rs.95 lakhs to Kerala State Co-operative Marketing Federation, Rs.298.4 lakhs provided under the N.C.D.C III storage

project, and Rs.201.85 lakhs under Integrated Co-operative Development Project. Other major activities/agenies supported by the N.C.D.C during the year were training of co-operative personnel, share capital to spinning mills, assistance to co-operative processing societies and federations, Coir Co-operatives, Handloom Co-operatives etc. The integrated Co-operatives Development Programme was under implementation in the districts of Wayanad, Palakkad and Kottayam.

#### *Agricultural Marketing*

4.46 The marketing infrastructure for agricultural commodities in Kerala is not well organised. Bulk of the trade in respect of the major commercial crops is handled and controlled by private trade operated from terminal markets located outside the State. Co-operative marketing was the only segment under Agricultural Marketing which received considerable attention in the past and accordingly a net work of co-operatives for procurement, storage and marketing of selected commodities were promoted.

4.47 The major institutional agencies engaged in the marketing of agricultural produce are the Kerala State Co-operative Marketing Federation, Kerala State Rubber Marketing Federation, Central Arecanut and Cocoa Marketing and Processing Co-operatives, Kerala State Coconut Development Corporation, Cashew Apex Industrial Co-operative Society and the Kerala Kera Karshaka Sahakarana Federation.

4.48 The Kerala State Co-operative Marketing Federation is operating through the primary Marketing Societies and selected primary agricultural credit societies. During 1989-90 the federation handled 940 M.tonnes of copra, 266 M.tonnes of pepper and 6 M.tonnes of other spices valuing around Rs.5.90 crores, this is against commodities worth around Rs.15 crores handled during 1988-89. The performance of the federation under the commodity marketing sector is thus not encouraging poor. However, it could improve its performance under fertilizer business by dealing in 43,803 M.tonnes of fertilizers worth Rs.7.98 crores during 1989-90 against 32,970 M.tonnes worth Rs.5.90 crores dealt during the previous year.

4.49 The Kerala State Co-operative Rubber Marketing Federation is the apex body of 33 Primary Rubber Marketing Co-operative Societies in Kerala. The busi-

TABLE 4.15

Production, Import and Consumption of Rubber						
India						
Sl. No.	Items	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>I. Production</b>						
	Natural Rubber	200465	219520	235197	259172	297300
	Synthetic Rubber	34758	38816	44468	54389	53482
	Reclaimed Rubber	39195	38995	40535	40960	44500
<b>II. Import:</b>						
	Natural Rubber	41431	45356	53685	59385	44445
	Synthetic Rubber	39086	32600	30100	33950	36500
<b>III. Consumption</b>						
	Natural Rubber	237440	257305	287480	313830	341840
	Synthetic Rubber	70035	71785	76410	84150	91055
	Reclaimed Rubber	38125	38635	41140	41200	43935
	<b>Total Consumption</b>	<b>345690</b>	<b>367725</b>	<b>405030</b>	<b>439180</b>	<b>476380</b>

\* incomplete

TABLE-4.16

## Market Price of Indigenous &amp; Natural Rubber in Kottayam Market

(Rupees per quintal)

Year	Variety	
	RMA-4	Upgraded Rubber
(1)	(2)	(3)
1985-86	1732	1661
1986-87	1660	1592
1987-88	1791	1726
1988-89	1815	1745
1989-90	2131	2057
1990 April	2213	2170
1990 May	2266	2195
1990 June	2408	2349
1990 July	2282	2133
1990 August	2027	1880
1990 September	2104	2013
1990 October	2025	1894
1990 November	1980	1888

TABLE 4.17

Plantation Crops of India Tea, Coffee and Cardamom - Exports and  
Price (Quantity of Exports in Tonnes)

Years	TEA			COFFEE			CARDAMOM		
	Quantity of Export		Average price	Quantity of Export		Average price	Quantity of Export		Average price
	Quantity	Value in Rs. crores	Rs/Kg	Quantity	Value in Rs. crores		Quantity	Value in Rs. crores	Rs./Kg
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1980	224026	429.03	19.15	87334	214.24	24.53	2345	34.75	148.18
1981	241246	434.25	18.00	73912	146.29	19.79	2325	30.19	129.87
1982	189933	335.55	18.72	76670	187.11	24.41	1032	16.36	158.60
1983	208476	516.81	24.79	70870	181.74	25.64	258	5.44	210.92
1984	217040	740.46	34.12	68896	209.87	30.44	2383	64.80	271.95
1985	214021	695.30	32.49	99298	272.98	27.49	3272	53.45	163.39
1986	203149	580.85	28.59	86666	362.83	41.86	1447	18.49	128.00
1987	201891	639.25	31.66	92533	260.10	28.11	270	3.40	126.00
1988	215420	651.18	30.23	98266	337.72	34.37	787	10.28	130.73
1989	204670	284.06	40.26	132320	360.92	27.28	171	3.19	186.79

TABLE 4.18  
Selected Indicators of Agricultural Development

Programme (1)	Units (2)	1988-89 (3)	1989-90 (4)
<b>1. Fertilizer Consumption</b>			
a. Nitrogen	Tonnes	80238	78638
b. Phosphorous	"	50884	47252
c. Potash	"	82805	86564
<b>2. Plant Protection</b>			
a. Seed treated	000 tonnes	NA	NA
b. Area under seed treatment	lakh ha.	0.380	0.483
c. Fungicides (Liquid and solid) in terms of (M.T) technical grade	Tonnes	469.08	445.97
d. Insecticides (Liquid and Solid) in terms of technical grade	Tonnes	667.72	547.08
e. Weedicides (in terms of technical grade)	"	27.68	23.40
f. Rodenticides (in terms of technical grade)	"	11.02	12.55
g. Area under plant protection coverage	Lakh ha.	7.58	6.303
h. Rodent control operation	Lakh ha.	0.799	1.055
i. Biological Control of Nephantis scripoph parasites liberated	Lakh Nos.	216.488	207.47
j. Weed control	Lakh ha.	1.317	1.040
k. Trees sprayed for the control of coconut leaf diseases	Lakh. Nos.	..	6,652
l. P.P equipments distributed	No.	844	2556
<b>3. High yielding varieties of paddy seeds distributed from state seed farm and other government agencies</b>			
a. High yielding varieties coverage	Tonnes	1980.14	4184
b. High yielding varieties coverage	Lakhs ha.	1.37	NA
<b>4. Quality planting Material Distributed</b>			
i. W.C.T.	Lakh No.	12.64	15.94
ii. T x D	"	0.64	0.64
iii. D x T	"	0.14	0.099
<b>b. Rooted Pepper cuttings</b>			
i. ponniyoor - I	Lakh No.	10.67	13.58
ii. Other varieties	"		
c. Cashew layers	"	0.19	0.15
d. Nutney seedlings	"	0.19	0.15
e. seedlings	"	0.40	0.75



TABLE 4.18 (continued ...)  
Selected Indicators of Agricultural Development

Programme	Units	1988-89	1989-90
(1)	(2)	(3)	(4)
5. Vegetable programmes			
a. No. of Krishi Bhavan involved	No	815	999
b. No. of kits distributed	Lakh NO	5.00	2.10
6. Soil Testing			
a. Soil samples collected Nos	"	253048	233558
b. Soil samples analysed	"	220998	235346
7. Short term loans			
Amount distributed through Kerala State Co-operative Bank	Rs.in lakhs	720.00	420.00
8. Small and Marginal Farmers Programme			
a. Pulses	4 Kg Kits	30200	30803
b. Oil seeds, sesamum	1 Kg kit	43315	25565
c. Coconut seedlings	No	46498	11200
d. Ground nut	30 Kg Kit	2818	1000
9. Location Specific schemes			
a. No. of credit schemes formulated	No.	3058	2993
b. Amount involved	Rs.in lakhs	4660.08	5268.76
c. Area benefited	Ha.	44294	68107
d. No. of beneficiaries	No.	98730	113342
e. Amount distributed to beneficiaries	Rs. in lakhs	2452.74	3910.68
10. Coconut Development Programme			
a. Pumpsets distributed	No.	243	304
b. diseased/senile palm cut and removed	No.	16701	12509
c. No. of irrigation sources constructed	NO.	115	144
d. Area covered under Multi spices cropping	Ha.	1500	1480
11. Spices Development Programme			
a. Distribution of Pepper cuttings	No. in lakh	19.99	13.58
b. Input kits distributed	No.	47498	48200
c. Sprayers	No.	170	238
+ d. Clove seedling	"	45802	74762
e. Nutmey seedling	"	15863	..

ness handled by the Federation during 1989-90 included procurement and sale of 29,192 MT. of rubber and sale of 26,332 MT. fertilizers. Aerial spraying was also organised by the Federation benefiting an area of 44,650 acres during the year.

4.50 The Central Arecanut and Cocoa Marketing and Processing Co-operative Limited (CAMPCO), a joint venture of the Kerala Karnataka Government handled 12,869 M.tonnes of arecanut and 554 M.tonnes of cocoa during the period from April to November 1989.

4.51 The Kerala State Warehousing Corporation has built up an additional storage capacity of 18,160 M.Ts. during the period increasing its total capacity to 1,31,941 M.Ts. The Corporation has also hired godowns to the tune of 45,475 M.Ts. during the year. The Corporation, apart from its basis function of providing scientific storage facilities to agricultural and other commodities has diversified its activities into many allied fields of warehousing. This included procurement and storage of 6000 M.Ts. of Copra on behalf of NAFED, clearance and transport of 10 ship loads of World Food Programme articles on behalf of Social Welfare Department etc.

#### Grading and Quality Control

4.52 Grading of agricultural commodities under the 'Agmark' grading Scheme was continued by the Marketing Wing of the Department of Agriculture. The commodities packed with Agmark seal during 1989-90 included of coconut oil, gingelly oil, honey and ground spices (See table 4.19).

TABLE 4.19

Commodities graded under Agmark 1985-86 to 1989-90  
(Quantity in Qtis. and value in Rs.lakhs)

Year	Coconut Oil		Gingelly Oil		Honey		Ground Spices	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1985-86	35015	649.33	6502	78.18	879	22.18	1411	36.12
1986-87	33697	950.54	7659	92.76	366	11.53	1391	28.55
1987-88	66990	1992.01	10270	338.88	1496	50.96	1157	34.84
1988-89	27840	779.52	404	13.33	615	21.52	511	20.44
1989-90	27294	NA	842	NA	1964	NA	511	NA

#### Regulated Markets

4.53 Regulated Markets are functioning only in the Malabar region of Kerala under the Malabar Market committee which was constituted in 1950 by the Government of Madras. The Act that is still in force is the old Madras Commercial Crops Market Act of 1933. The Commodities notified are arecanut and coconut and their products. Only four market yards are under this committee. The District Collector, Kozhikode is in charge of the Committee from 1959 onwards.

#### Production Programmes

4.54 The relatively favourable weather conditions prevailed during the last two years in succession has helped in infusing a fair amount of optimism in the farm front. Accordingly a number of innovative programmes were initiated during 1989-90 with a view to providing a sound base to Kerala Agriculture from a long term perspective. Some of the major programmes launched in this direction are given below.

##### (i) Group farming for rice

4.55 As already stated, Group Farming for rice lays emphasis on two aspects of rice cultivation, namely improving productivity of the crop through better management based on low cost technology and cost reduction through group action. The padasekharam committees constituted for the purpose have come to stay as permanent institutions for revitalising and sustaining paddy cultivation. A supporting programme has already been introduced during 1990-91 with an outlay of Rs.4 crores for providing subsidy assistance to the rice growers @ Rs.250 per ha. to be utilized at the discretion of the Padasekharam Committees for any purpose which helps improving productivity of rice in the padasekharams. The coverage under the scheme during 1989-90 is reported to be 1.77 lakh ha. Agro-clinics organised by the Krishi Bhavans as part of the group farming activity and the custom hiring facilities for tractors and power tillers arranged on a group basis are the notable features of this programme. It is estimated that more than 5900 padasekharams involving 4.4 lakh farmers participated in the programme.

##### (ii) Group Management in Coconut

4.56 Group management in coconut is being organised in 600 selected

panchayats covering the important coconut producing regions in the State. Other important Coconut development activities organised during 1989-90 include production and distribution of 45 lakh west coast tall and 75000 hybrid seedlings and cutting and removal of 12500 senile palms and supply of 300 pumpsets under the Coconut Board Scheme.

*(iii) Group Management in Pepper*

4.57 The encouraging results of group farming in rice prompted the State Government to extend the concept of group management for development of pepper also. Under the Centrally Sponsored Integrated Programme for the development of Spices 13.5 lakh pepper cuttings and 48200 fertilizer kits were distributed during 1989-90.

*(iv) Special Employment Programme*

4.58 Agricultural labour force accounting for over 19 lakhs, as per 1981 census, face chronic unemployment particularly during lean season.

4.59 With a view to tackling this problem the State Government introduced a new programme in 1989-90 with an outlay of Rs.10 crores. The programme was conceived as a community effort for taking up employment generating infrastructural works in private holdings with the active involvement of farmers, panchayats and credit institutions. A subsidy of 25% will be paid on investment made on such infrastructural works like developing irrigation sources for coconut development, land development for pepper, sericulture, fodder development etc., and also on farm development works in padasekharams. The implementation of the programme during 1989-90 has helped in the generation of additional employment to the tune of 65.7 lakh mandays and in the creation of additional facilities like minor irrigation and land development in support of rice, coconut and pepper. Particulars of major achievements made under the scheme during 89-90 are given below.

i.	No. of new wells dug	- 40632
ii.	No. of old wells renovated	- 15013
iii.	No. of land development works	- 19433
iv.	No. of works in padasekharams	- 412
v.	No. of farmers benefitted	- 96400

*(v) Integrated Programme for Production Procurement Processing and Marketing of Coconut.*

4.60 During 1989-90 activities of KERAFED under the EEC assisted coconut project were extended throughout the State with the constitution of the 3 regional development units as contemplated in the project. Since May 1989 KERAFED was procuring copra from farmers through the member societies under the price support scheme of Government of India as well as Federation's own Commercial Operations. The quantity procured during 1990 season was 28,700 tonnes. The first product of KERAFED namely two stage filtered coconut oil 'KERA' has already been released to the market. The processing complex meant for the southern region is nearing completion.

4.61 On the production enhancement side all the 18 mobile teams meant for supply and services are now operational. Against 900 Primary Agricultural Credit Societies targeted to be registered as members and involved in the activities of the federation, 772 societies have already been affiliated. Share Capital assistance in support of market operations has been provided to 480 societies and 2127 coconut demonstration plots have been laid out.

*(vi) Horticultural Development*

4.62 The intensive vegetable production programme initiated during 88-89 was continued during 1989-90 also by distributing 2.1 lakh packets of vegetable seeds. There is tremendous potential for development of a wide range of fruit crops in Kerala. More than two lakh grafts and seedlings of different horticultural crops are being distributed from the departmental farms every year.

*Agricultural Research*

4.63 Kerala Agricultural University, Central Plantation Crops Research Institute, Central Tuber Crops Research Institute, Central Spices Research Centre etc. are the important agencies engaged in agricultural research in Kerala. The important research highlights reported by these agencies are given below.

*(i) Kerala Agricultural University*

*Varieties released*

*Rice*

Red Triveni (PTB 45), PTB 46 (Culture-1727), Neeraja (PIB 47), Aruna (MO 8), Makom (MO 9), Remya (MO 10) and Kanakom (MO 11).

#### Coconut

4.65 Three varieties of coconut namely Lakshaganga (PHC 1), Ananthaganga (PHC 2) and Keraganga (PHC 3).

#### Pepper

4.66 Three varieties viz., Panniyur-2 (Culture-141), Panniyur\_3 (Culture-331) and Panniyur-4 (Kuthiravali Selection).

#### Vegetables

4.67 One variety of tomato 'Sakthi', one of Bhindi 'Kiran', one of brinjal 'Surya', two varieties of Chilli, viz., Jwalamukhi and Jwalasakhi, one each of Amaranthus (Kannara local A6), Pumpkin (Ambili CM 14) and Bittergourd (Priya - VK 1).

#### Cashew

4.68 Two varieties viz., MDKA-1 (BLA 39-4) and MDKA-II (NOR-2-1).

#### Sugarcane

4.69 One variety by name Madhury (COTL-88322).

#### Forage crops

4.70 Through chemical mutagenesis, one variety of fodder Haritha (MC 2) was developed.

#### Lemongrass

4.71 A pure line selection of lemongrass 'Sugandhi' (00-19).

#### Crop Management

4.72 A Paddy winnower cum-cleaner capable of cleaning 1000 Kg. paddy per hour of grain and 600 Kg/hour of seed was evolved.

Soft wood grafting in cashew was standardised.

4.73 A new vaccine - NDY-M has been evolved, evaluated and recommended for commercial vaccine production against New Castle disease in chicken.

4.74 A new form of skin disease in cattle caused by *Trichopyton* and *Eumycium* was identified. Treatment methods for the above fungal infections

were studied and recommended.

4.75 Duck-cum-fish culture in ponds at Kumarakom showed fish production rates of 1976 to 4350 Kg/ha. in 331 days, without resorting to supplementary feeding of the fishes, since duck droppings and feed waste were recycled in the pond as feed or manure for the fish.

#### (ii) Central Plantation Crops Research Institute

4.76 W.C.T. X C.O.D hybrid was recommended for release in Kerala coastal, Karnataka, Goa and Coastal Andrapradesh. An experiment on mixed farming system in 1.04 ha. of coconut garden yielded 11276 coconuts, 60 Kg. pepper, 250 Kg. banana and 14995 litres of milk. The total revenue from the farming system was Rs.67705 and expenditure including family labour was Rs.24051 resulting in a net income of Rs.43654.

4.77 Through the introduction of the viral pathogen 'baculovirus' of 'Oryctes' significant reduction in the attack of rhinoceros beetle could be secured in Lakshadweep and at Chittalappally in Thrissur district.

4.78 Freshly fallen areca leaf sheath has been found to be a promising substrate for cultivation of 'Oyster mushroom'.

#### (iii) Central Tuber Crops Research Institute

4.79 Four lines of sweet potato namely H 85 - 16, H 82-2, H 85-168 and H 85-70 developed at Bhubaneswar proved their superiority over the local cultivar.

4.80 In a study on paddy based cropping system involving short duration variety of cassava the variety 'Sree Prakash' when planted after a crop of Khariff paddy at a fertilizer dose of 100 : 50 : 100 recorded an yield of 52.4 tonnes per ha. within a period of seven months.

4.81 Synthetic sex pheromone has been proved to be highly effective for the control of weevil on sweet potato.

#### Soil Survey

4.82 The Soil Survey Organization mainly engaged in two types of Soil Survey namely detailed Soil Survey and reconnaissance survey. During 1989-90 an area of 24,804 ha. was covered under detailed soil survey, covering a total

area of 189804 ha. during the 7th Plan. The coverage under reconnaissance soil survey including the integrated survey of soil and land resources in the catchment area during 1989-90 was 41,050 ha. The soil resource mapping of Kerala was also completed during the year.

#### Soil and Water Conservation

4.83 The area covered under soil conservation during 1989-90 was 700 ha. The pace of implementation of soil conservation programmes in Kerala is rather slow and the coverage till 1989-90 was only around 96,783 ha. which accounts for 6.45 per cent of the vulnerable area. In addition, an area of 1614 ha. was also treated under the centrally sponsored scheme 'Kundah River Valley Project'. The investment made so far for the purpose was entirely met from budgetary resources - 75 per cent as loan and 25 per cent as subsidy. A similar scheme utilising institutional finance for meeting the loan portion was also in operation, but the coverage under the scheme was not very encouraging.

#### Land Use Planning

4.84 During the year 1989-90, the Land Use Board has completed the preparation of land use map for Hosdurg Taluk and land cover maps for Thiruvananthapuram, Kollam, Thrissur, Palakkad, Kozhikode, Kannur and Kasaragod districts. Mapping of forty two watersheds in Kannur has been completed. Preparation of 'Panchayath Resources Atlas' was also initiated. Two publications namely 'Land Resources and Land Use in Kerala' and 'Account of Wastelands in Kerala' were released by the Board during 1989-90.

### ANIMAL HUSBANDRY

4.85 Animal Husbandry plays a significant role in providing gainful employment particularly to small/marginal farmers, agricultural labourers and other rural poor. Its contribution by way of animal protein to a large section of the population is also substantial. Animal power also

constitutes the principal source of farm power in Kerala. The Livestock wealth of Kerala, as per 1987 census, includes over 37 lakh of bovine population and 179 lakh of poultry.

#### Trend in Cattle Population

4.86 The trend in cattle population as revealed by the latest livestock census(1987) is given in Table 4.20.

TABLE 4.20

Year	(Population in lakh Nos.)							
	Cattle	Breadable Cross bred		Buffaloes	Goats	Pigs	Fowls	
		Female	Male					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1982	30.97	9.13	2.17	4.09	20.04	1.27	165.19	
1987	34.24	11.57	1.99	3.29	15.81	1.37	170.92	

Source: Cattle Census 1982 and 1987,  
Department of Animal Husbandry.

4.87 While the number of cross bred female population as well as the number of fowls recorded significant increases over the 5 year period from 1982 to 1987, there was considerable reduction in buffaloes and goat population during the period. The increase in Pig population was only marginal.

4.88 Livestock development activities in Kerala were mostly centred around cross breeding programme in which a number of agencies were associated. The Kerala Livestock Development Board was responsible for perfecting the frozen semen technology as well as for the large scale production and distribution of frozen semen. The Board could produce an all time high of 23.35 lakh doses of semen during 1989-90.

4.89 The artificial insemination programme was implemented through the intensive cattle development project run by the Animal Husbandry Department as well as through the trained cattle improvement assistants recruited by the

Dairy Development Department. Seven ICDP units were functioning during the year 1989-90, the total number of service points operational for artificial insemination, including those run by Animal Husbandry Department and Dairy Development Department was 1,513 as on 30-9-1990. See table 4.21

TABLE 4.21

AI Centres as on 30-9-90 in the State

Department/ Institution	No. of Centres
(1)	(2)
Animal Husbandry Non ICDP	943
-do- ICDP	375
Dairy Development Department	125
APCO	32
Tata	27
Other Voluntary Agencies	11

4.90 Thus there were, on an average, 1207 breedable cows per centre, which is relatively high. The number of inseminations organised increased from 12.95 lakhs in 1988-89 to 13.60 lakhs in 1989-90. See table 4.22.

TABLE 4.22

Period	Production of frozen semen (lakh doses)	Utilization of Frozen Semen (lakh doses)	No. of Artificial Inseminations (lakh Nos.)
(1)	(2)	(3)	(4)
1985-86	19.12	12.53	11.90
1986-87	18.92	13.64	12.95
1987-88	15.29	13.79	13.10
1988-89	28.12	13.63	12.95
1989-90	23.35	16.29	13.57

Source: KLD Board.

4.91 The State has attained remarkable

progress with regard to milk, eggs and meat during the Seventh Five Year Plan. Milk production increased from 12.83 lakh tonnes in 1985-86 to 16 lakh tonnes in 1989-90. Consequently the per capita availability of milk rose from 128 gms. to 150 gms. by the end of 89-90. Production of eggs and meat also present a very encouraging trend with substantial increases during the plan period. Egg production increased from 1,360 Million to 1,500 million while meat production increased from 89,109 tonnes to 1,10,000 tonnes. Relevant data are furnished in table 4.23.

TABLE 4.23

Year-wise Estimates of Milk, Egg and Meat Production

in Kerala for the Years 1985-86 to 1989-90

Year	Milk lakh Tonnes	Egg Million Nos.	Meat Other than poultry Tonnes	Poultry meat Tonnes
(1)	(2)	(3)	(4)	(5)
1985-86	12.83	1360	74109	15000
1986-87	13.36	1397	80469	15255
1987-88	14.26	1440	84991	16969
1988-89	15.07	1470	88386	18832
1989-90	16.00	1500	90000	20000

4.92 As already stated, livestock development efforts in the past were mainly concentrated on the upgradation of existing stock through cross breeding programme. For securing higher productivity levels a programme for feeding and management of cross bred female calves was implemented during the seventh Plan by subsidising the cost of concentrate feeds.

4.93 The Department of Animal Husbandry is the designated agency for executing the health care programmes in the State. KCMF also engaged in this activity on a very limited scale by making available common drugs through their societies.

Steps have been initiated during 1989-90 for widening the health cover through domiciliary services. The net work of various veterinary institutions responsible for providing veterinary aid comprises of Veterinary Polyclinics, Veterinary Hospitals, Mobile Veterinary Hospitals, Mobile Farm Aid Units, Sub Centres and District Veterinary Centres. (Appendix 4.10 gives district-wise institutions under the AHD Kerala as on 30-10-1990). Although 36.22 lakh animals were treated during the year 1989-90 that was 12% less than the previous year. Under the vaccination programme, 20.12 lakhs cattle/buffaloe and 31.20 lakhs poultry birds were vaccinated during 1989-90; besides 20,861 rabies vaccinations were also conducted. Veterinary clinical aid was provided through clinical laboratories attached to the polyclinics and District Veterinary Centres. Advanced Clinical and disease diagnostic facilities for identifying contagious and emerging diseases were provided by the Regional Clinical Laboratories and Avian Disease Diagnostic Laboratory. Chief Disease Investigation Laboratory, Palode liaises with other diagnostic laboratories in the study and investigation of the incidence of contagious and emerging diseases. Preventive Veterinary drugs for most of the contagious diseases are supplied by the Institute of Animal Health and Veterinary Biologicals, Palode. This Institute produced, during 1989-90, R.D.vaccine(k) 38.72 lakhs doses, R.D.Vaccine (F) 12.78 lakh doses, Fowlpox vaccine 6.68 lakh doses, Duck plague vaccine 2.92 lakh doses, H.S.(Oil adjuvant) 0.35 lakh doses, H.S.(Broth vaccine) 0.50 lakh doses, TCRP vaccine 22.81 lakh doses, Rabies Fluri 0.0018 lakh doses and H.S (Alam) 0.014 lakh doses. The Kerala Co-operative Milk Marketing Federation supplemented these efforts by running 19 regular clinical and 13 emergency veterinary routes to treat the animals in the area of Dairy Co-operative Societies. During 1989-90, 1.75 lakh animals were treated by KCMHF.

4.94 Performance of the departmental Poultry Farms during 1989-90 was not very encouraging. There has been some deceleration in the production of

chicks, both layers and broilers. The production of layer chicks during the period 1989-90 was only 7.99 lakhs and broiler chicks 0.44 lakhs compared to 8.99 layer chicks and 1.28 lakhs broiler chicks produced during 1988-89. A Regional Poultry Farm Campus was established at Kodappanakunnu. Poultry Farmers Associations, to take up marketing of eggs, were also registered.

4.95 The total production of meat during 89-90 has been estimated at 1.10 lakh tonnes including 20,000 tonnes of poultry meat, which is marginally higher than the previous year. However, there was a decline(12%) in the production of meat and meat products by MPI a Government undertaking, during 1989-90. The overall capacity utilization of the factory declined to 58.58% from 66.88%. Non-availability of pigs, the major rawmaterial, appears to be the major reason for this decline.

4.96 To safeguard the interest of the small and marginal farmers and other rural population, livestock insurance scheme has been introduced in the State. United India Insurance Company has covered 12343 calves and the State Government provided subsidy to farmers for the payment of premium to the tune of Rs.6.540 lakhs during the 7th Plan Period. The amount of subsidy given in 1989-90 was more than twice that in 1988-89. Year-wise details are given in Table 4.24

TABLE 4.24

Year	Number of Calves insured under the calf feed subsidy	Amount subsidised (Rs. in lakhs)
(1)	(2)	(3)
1985-86	2436	1.904
1986-87	2174	0.983
1987-88	1432	0.654
1988-89	2186	0.992
1989-90	4115	2.007
<b>Total</b>	<b>12343</b>	<b>6.540</b>

Source: Department of Animal Husbandry

### Dairy Development

4.97 The trend in the production and supply of inputs, viz., frozen semen and fodder seed, by the Kerala Livestock Development Board (Government owned company), has been encouraging during the period 1989-90. The production of semen in 1989-90 (23.35 lakh doses) was 16% more than that in 1988-89.

4.98 Livestock Management training centres and Dairy Training Centres under the Department of Animal Husbandary and Dairy Development continued to provide in service training to paraveterinarians, other field staff and farmers. The Department of Animal Husbandry provided training to 169 Livestock Inspectors, 120 field staff, 1105 farmers during 1989-90. The department of Dairy Development trained 80 officers, and 1600 farmers, organised 6138 group discussions/seminars, 111 cattle shows, 117 film shows and 913 milk product demonstrations. It is estimated that about 68000 farmers had participated in the extension activities organised by the Department. Other activities of the Dairy Department during 89-90 include the establishment of 30 model dairy units and analysis of about 16000 milk samples as part of quality control. Village level milk producer's societies were also given support by way of assistance for construction of buildings (27 societies), managerial subsidy (20 societies) and assistance for procurement of milk testing equipments and cans (80 societies). The Kerala Livestock Development Board also offered short term skill oriented courses in different aspects of animal production, viz., frozen semen technology, progeny testing, fertility problems in calves, artificial insemination etc. The number of persons trained by the Board up to 1989-90 is 3138.

### Fodder Development

4.99 Fodder production was promoted in cultivators' fields through demonstrations and by raising nurseries. A total area of 4,060 hectares of land was cultivated with exotic varieties of fodder and indigenous legumes/pulses.

Seeds and fertilizers required for fodder cultivation were distributed to about a lakh of farmers during 1989-90. (For details see table 4.25)

TABLE 4.25

Year	KLD Board	Dairy Development		
	Quantity of seeds produced (in tonnes)	Quantity of seeds procured (in tonnes)	Area Covered under fodder (Hectares)	Quantity of fodder produced (in tonnes)
(1)	(2)	(3)	(4)	(5)
1984-85	20.40	59	1480.00	37000
1985-86	24.98	53	1344.82	33600
1986-87	40.22	40	1025.30	25625
1987-88	14.71	20	525.00	13125
1988-89	17.03	70	1773.00	44325
1989-90	36.16	150	4060.00	101500

Source: KLD Board & Dairy Development Department.

### Supply of Cattle Feed

4.100 KCMMF produced and sold 42,671 tonnes of cattle feed during 1989-90 which is 25% higher than the production achieved during 1988-89.

### Milk Marketing

4.101 KCMMF is the agency for implementing the Operation Flood (OF) programme of the Northern Kerala Dairy Project. The Federation operates through Anand Model Primary Co-operative Societies (APCOS). The number of village level APCOS registered increased from 471 during 1985 to 1141 in 1990. The membership in the co-operatives also registered a substantial increase, from 0.97 lakh to 2.59 lakh during the same period. Important achievements of the Federation during the Seventh Plan period are given in table 4.26



TABLE 4.26

## Performance of KCMHF

Particulars	1985	1986	1987	1988	1989	Upto Nov. 1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of APCOS registered (Cum.)	471	569	692	988	1067	1141
Number of APCOS functional	448	549	676	813	963	1059
Number of members in APCOS (Cum)	84858	103891	13515	162229	206893	249087
Number of women members in APCOS (Cum)	9737	11065	12937	15439	20864	26352
Number of SC/ST families in APCOS	6163	8181	8912	10450	13743	16550
Average Milk procured/day by KCMHF (Lit.)	121788	123788	174992	211463	236517	238948
Average Milk Marketed/day	118035	135928	174905	205861	238857	279224
Direct employment generated (Persons)	1118	1368	1720	1845	2243	2572

Source: KCMHF.

4.102 The procurement and sale of milk by the KCMHF has picked up substantially over the past 5 years. Though the increase during 1989-90 was only nominal, in quantity procured, there was substantial increase in the average quantity of milk marketed (17%).

## FISHERIES

4.103 Kerala has a total coastline of 590 km. which accounts for around 10 percent of the country's coastline. The fishermen population represents 3.13% of the State's total population as per 1981 census. Of the total population of over two lakhs of fisherfolk, 28.46% is concentrated in Ernakulam District. Alappuzha comes next with 27.37%. District-wise details are given in Appendix 4.11.

4.104 The fishable area in Kerala consists of the continental shelf within 200m. depth range spread over 29 lakh ha. It accounts for 8% of the total fishable area of India. However, the per capita availability of area in the marine sector is only 10 ha. in Kerala as against 177 ha. in Gujrat and the national average of 37 ha. Consequently, the pressure of both fishermen and fishing crafts on the sea is very high in Kerala. The inland water areas suitable for promotion of culture fisheries is estimated to be around 3.6 lakh ha.

4.105 During 1989-90 total fish production touched an alltime high of 6.47 lakh tonnes, comprising 6.14 lakh tonnes from the marine sector and 0.33 lakh tonnes from the inland sector. The marine sector which accounts for more than 93% of the total production recorded the largest increase in production (41%) over 1988-89. Production during 1988-89 was 3,58,783 tonnes. The composition of marine fish landing in Kerala during the last 5 years species-wise is furnished in

Appendix 4.12. The catch from Inland sector was 28,475 tonnes in 1988-89 and increased to 33,312 tonnes in 1989-90. Species-wise inland fish production in Kerala during the last three years is furnished in Appendix 4.13.

4.106 During 1989-90 export of marine products from Kerala increased by 3.46% over the previous year. This is against the increase of 11.03% recorded for the country as a whole. Out of a total marine products export of 1,10,788 tonnes from the country during 1989-90 Kerala's contribution was 47,194 tonnes, i.e; 42.60%. The details are given in Appendix 4.14.

4.107 The major schemes implemented during the year for fisheries development were establishment of brackish water fish farms in public sector, setting up of national seed farm, prawn hatchery, Brackish Water Fish Farmers Development Agencies, development and exploitation of Reservoirs, Fish Farmers Development Agencies and setting up of brackish water fish farms in private sector. It was targetted to produce 60 lakhs of fry/fingerlings in the fish farms at Malampuzha, Polachira, Pannivelichira, Parappanangadi, Trichur and Meenkara. The actual production during the year was 55.26 lakhs.

4.108 The Brackish Water Fish Farmers' Development Agencies at Palakkad, Kollam, Alappuzha, Thrissur and Kannur continued to organise supplies and services in support of inland fisheries development. About 900 more farmers registered themselves in these agencies during the year.

4.109 Apart from the additional employment opportunities created by the fisheries development programme in general, the schemes implemented exclusively for the benefit of Scheduled Castes and Scheduled Tribes benefited 3,150 Scheduled Caste families and 1,690

Scheduled Tribe families.

*MATSYAFED (The Kerala State Co-operative Federation for Fisheries Development)*

4.110 Matsyafed was constituted as the apex body of the fishermen co-operatives in the State and started functioning from November 1984 onwards. The main objectives with which the federation was set up include promotion of fish production in the artisanal sector, procurement, processing and marketing of fish products and improving the well-being and quality of life of the fishermen. All the major schemes meant for the development of marine fisheries are implemented through the Matsyafed. There are 81 primary fishermen co-operative societies with a membership of 50,492 active fishermen in the marine sector affiliated to this organization. The details of Fishermen Co-operatives in Kerala are given in Appendix 4.15.

4.111 One of the major schemes implemented by the Federation is the Integrated Fisheries Development Project with assistance from National Co-operative Development Corporation (NCD). Phases I and II of the project have already been implemented in 47 selected fishermen villages of Thiruvananthapuram, Kollam, Allappuzha, Thrissur, Malappuram and Kozhikode. Under phase I, 578 groups comprising 3,192 fishermen were benefited. Under phase II, 243 groups consisting of 3,538 fishermen were benefited till the end of 31-3-1990. An amount of Rs.298.34 lakhs and Rs.296.17 lakhs respectively was spent under phase I and phase II of the project.

4.112 The Federation is also implementing housing schemes for fishermen with assistance from HUDCO and NFWF. Under the subsidised housing scheme assisted by Hudco and State Government, a total of 25,389 houses were

completed till the end of 1989-90. In addition, 1,636 houses were completed under the programme assisted by NFWF.

4.113 Details regarding the educational and training institutions functioning under the department of fisheries during 1989-90 are given in Appendix 4.16.

#### Harbour Engineering Department

4.114 The Harbour Engineering Department was formed in 1982 to serve as a service department for both the Fisheries and Ports Departments. This Department undertakes investigation, planning, design, preparation of project reports, construction, repairs and maintenance of fishing harbours, cargo harbours, fish landing centres, brackish water and fresh water fish farms, hatcheries etc. With the establishment of this department, the construction activities for the establishment of mini-harbours and fish landing centres were expected to receive a new thrust.

4.115 Construction works at Fishing Harbours at Vizhinjam, Neendakara, Thankasserry, Munambam, Puthiyappa and Ponnani are in progress. Likewise fish landing centres at New Mahe, Thottappally, Palacode, Cheruvathur, Dharmadam, South Paravoor and Chettuvasi as well as Landing Centres for Traditional Fishermen at Vizhinjam North, Vizhinjam South, Vallikkunnu Vellayil Beach, Chalil Gopala Pettah and Quilon Port, Brackish Water Fish Farms at Poyya, Njarakkal, Ayiramthengu, and Palaikkari are under different stages of construction, Establishment of National Seed Farms at Malampuzha and Polachira are also being attended to by the Harbour Engineering Department. Physical and Financial details in respect of these works are given in Appendix 4.17.

#### Kerala Fishermen Welfare Fund Board

4.116 The Kerala Fishermen's Welfare

Fund Board was constituted in 1986 with the objective of promoting various welfare and relief measures for fishermen. The funds required are raised through contributions from fishermen, owners of crafts, dealers, owners of prawn filtration areas and farms in addition to the grants and loans made available by the State Government. The details of funds received by the Board since its inception are given in table 4.27.

TABLE 4.27

		(Rs. Lakhs)					
Sl. No.	Particulars	1985-86	1986-87	1987-88	1988-89	1989-90	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	State Government	10.00	20.00	40.00	50.00	78.50	198.50
2.	Central Government Subsidy	..	..	5.46	..	7.26	12.72
3.	Contributions	0.01	23.27	22.99	78.52	53.10	177.89
4.	State Government Loan	..	..	..	..	4.00	4.00
Total		10.01	43.27	68.45	128.52	142.86	393.11

4.117 The welfare schemes of the Board include oldage pension, group insurance, assistance to disabled fishermen, financial assistance for the marriage of daughters of fishermen, financial assistance for expenses in connection with the death of dependents of fishermen, Hut Insurance, Craft Insurance, free ration during monsoon etc. The financial and physical achievements of the Board till the end of 1989-90 are given in Appendix 4.18.

#### Central Institute of Fisheries Technology

4.118 The Central Institute of Fisheries Technology, Kochi (CIFT) is the only national centre in the country

where research investigations are undertaken in all disciplines relating to fisheries technology. The institute has six research centres located in the important fisheries states of the country.

4.119 Development of 'Chitosan', is an important achievement of the institute. This product has tremendous potential as an adhesive for packing paper in corrugated fibre board manufacturing. Chitosan film and Chitosan impregnated gauze were also found suitable for use as a haemostatic agent in neurosurgery, dental surgery etc. These studies were carried out by the Institute in association with the Medical College, Trivndrum. A chitosan plant for commercial production has already been established in Neendakara by Matsyafedin collaboration with CIFT.

4.120 The Institute also provides technical guidance and information support to the various agencies operating in the Fisheries sector, including State Governments.

#### *Central Marine Fisheries Research Institute*

4.121 The Central Marine Fisheries Research Institute, Kochi was established in 1947. The institute has 11 Research Centres, and 28 Field Centres, situated along the east and west coasts of the country.

4.122 The institute has made significant contribution to the overall development of marine fisheries in the country by actively conducting research both in captive and culture fisheries. The Institute is constantly monitoring the rate of exploitation of the fisheries resources and supports a wide

range of research activities covering conservation and management, studies correlating fluctuations in marine production with changes in the environment, development of appropriate vessels, and suitable mariculture technologies for finfish and shellfish production etc.

#### *The Marine Products Export Development Authority (MPEDA)*

4.123 The Marine Products Export Development Authority was established in 1972 as a statutory national agency for developing the Indian seafood industry, especially for export production and promotion. The authority provides a vast range of services to Indian exporters and overseas importers. The prawn hatchery-cum-training complex at Kochi set up by the authority is fully equipped to train entrepreneurs, aquaculture engineers, extension workers etc. in scientific prawn culture techniques. The authority also appraises and monitors projects for export-oriented deep-sea fishing. Specialised food and trade fairs are also organised overseas for promotion of marine products. The authority has 4 Regional Offices, 7 Sub-regional Offices and 11 prawn farming offices spread all over the country.

#### *The Kerala Marine Fishing Regulation Act*

4.124 The Kerala Marine Fishing Regulation Act 1980 came into effect from 24-11-1980. With a view to enforce the provisions of the act, a separate wing was constituted in the Department of Fisheries. Among the various measures adopted, ban on monsoon trawling is an important one. The ban was in force from 2-7-88 to 31-8-88, 20-7-89 to 31-8-89 and from 28-6-90 to 20-7-90 during the last three years. These regulatory measures, particularly the ban on monsoon trawling have been effective in conserving certain species of fishes and thereby helped in augmenting the overall fish production in the State.

4.125 The average annual production during the triennium ending 1986 was 3.67 lakh tonnes of which prawn production was 0.3310 lakh tonnes. During the subsequent 3-year-period, when the regulatory measures were operational, the average fish production was 4.73 lakh tonnes which included a prawn production of 0.5790 lakh tonnes. The average annual growth rate during the period was 25.95% against the overall average increases of 7% recorded during the

preceding 3 years. The production of 6.47 lakhs attained during 1989 was a record one and is considered to be the result of the ban on monsoon trawling enforced during the last 3 years in succession. Trend of production during the last 6 years is given in Table 4.28.

TABLE 4.28

## Marine Fish Production

Year	Total Production (lakh tonnes)	% change over Previous year	Prawn Production (lakh tonnes)	% Change Over previous Year
(1)	(2)	(3)	(4)	(5)
1984	3.93	20.55	0.3553	19.43
1985	3.26	-17.04	0.2669	24.90
1986	3.83	17.48	0.3710	39.00
Average	3.67	7.00	0.3310	11.18
1987	3.03	-20.90	0.5287	42.51
1988	4.69	54.79	0.6750	27.61
1989	6.47	37.95	0.5333	-21.00
Average	4.73	23.95	0.5790	16.39

4.126 Details of average beach price of selected marine fishes in Kerala during 1989-90 are given in Appendix 4.19.

## FOREST

## A. General Forestry

4.127 Endowed with forests ranging from evergreen to dry deciduous, which cover nearly a quarter of its geographical area, Kerala's economy is strongly interlinked with its forests. The total area under forest in the state, as per the records of forest department is 11,22,997.86 ha. which includes 915600.57 ha. of reserve forests, 18544.20 ha. proposed for reservation and 1,88,583.09 ha. of vested forests. Division-wise details of forest area are given in Appendix 4.20.

4.128 The area under forest plantations recorded a decrease during 1990. Against 1,60,372 ha. under forest cover as on 31-3-87 it had come down to 1,53,012 ha. by 31-3-90, a decrease of 4.59%. Among

the species under plantations, teak accounts for 50%. Species-wise area under plantation is given in Appendix 4.21.

4.129 Timber, Firewood, Cardamom, Honey, Reeds, Bamboo, Sandalwood etc. form the major forest produces. Firewood and charcoal declined during 1989-90 over the previous year. On the other hand the production of Honey, Reeds, Bamboo, single wood poles and sandalwood registered increases. Bamboo is perhaps the one which has recorded the maximum increase in production from 3,74,000 Nos. to 12,83,000 Nos. Item-wise details are given in Appendix 4.22.

4.130 The ban on tree felling imposed by Government continued during 1990 also. Though this has helped in enriching the forest wealth through allround regeneration, it naturally had its adverse impact on the forest revenues. The total revenue in 1989-90 was only

Rs.3,218.66 lakhs against RS.4,818.20 lakhs in 1986-87.

4.131 The major source of revenue earnings was at the sale of forest produces like timber and firewood. Revenue from timber which was to the tune of Rs.3,775.30 lakhs in 1986-87 has declined to 2,309.67 lakhs in 1989-90. Details of revenue during the last five years are given in Appendix 4.23.

## B. Social Forestry

4.132 The World Bank aided Kerala Social Forestry Project, which was under implementation from 1984 onwards, was scheduled for completion by December 1990. However, the World Bank has given its consent for its extension for another two years so as to utilize the unspent balance mainly arising out of the Dollar appreciation in exchange rates. In addition to the activities under the World Bank aided project Social Forestry wing is also responsible for organising the afforestation activities under NREP, RLEGP, Rural Fuel Wood Scheme and Decentralised Peoples, Nursery scheme etc.

4.133 Progress of work under the World Bank Project from its inception is given in Appendix 4.24 and 4.25.

4.134 During 1989-90, 90 lakhs seedlings of forest species were produced out of which 84 lakhs were distributed. Plantations covering 3760 ha. and avenue plantations to the extent of 72.73 km.

were organised under the Social Forestry Project. Details of civil works under Kerala social Forestry Project are given in Appendix 4.26.

#### *C. Wild Life*

4.135 The two National Parks and 12 Wild Life Sanctuaries in the State cover an area of around 24 percent of the total forest area. Development works taken up under the Centrally Sponsored Scheme for development of Wild Life during 1989-90 include clearing of fire lines extending to 1488.64 Kms., construction of 12 buildings, 12 check dams, one watch tower, 4.78 Kms of wall, 102.9 Kms. of trek paths and 19.50 Kms. of power fence. The total investment made on these items during the year works out to Rs.1.45 crores. Details of physical achievements are given in Appendix 4.27.

#### *Forest Research Institute*

4.136 The Kerala Forest Research Institute was established in July 1975 with a view to provide research support to forestry and related disciplines. Research activities of the Institute cover problem solving research concerning natural and man made forests, Wild-life management and Wood Science and Technology. Besides the State Government support from its budgetary resources, the Institute also receives assistance from Government of India and other national and inter national organisations based on specific research projects.

#### *Kerala Forest Development Corporation Limited*

4.137 The important activities of the Corporation include production of pulpwood and softwood to meet the raw-material requirement of paper industries and wood based industries/timber for the manufacture of decorative veneer and joinery items. 1951 ha. of Cardamom Plantations and Tea plantations of 100 ha. are also being maintained by the Corporation. Revenue earned by the Corporation during 1989-90 was Rs. 95.86 lakhs mainly from the sale of soft wood, cardamom and Green Tea Leaves.

#### *Oil Palm India Limited*

4.138 Oil Palm India Ltd., a joint venture of the Government of Kerala and Government of India has a total planted area of 3645 ha. under oil palm in Pathanamthitta Taluk. Entire area has become mature though the yield has not been stabilized. During 1989-90 the company produced 2108 tonnes of oil. The existing facility for processing crude palm oil is being augmented so as to cope with the increased production expected in the coming years.

#### *The Plantation Corporation of Kerala Limited*

4.139 The Plantation Corporation of Kerala Ltd., is fully owned by the Government of Kerala. The plantations established and maintained by the corporation include 8216 ha. of rubber in 9 estates and 5261 ha. of cashew in 4 estates. The Corporation also undertakes processing of the entire latex produced in the estates in the factories owned by them. The main products are centrifuged latex, sheet, crepe and crumb rubber. During 89-90 the Company produced 5415 tonnes of rubber and sold 6250 tonnes valuing Rs.16.75 crores. The sale of cashewnut during the year was for Rs.1.31 crores. The company earned a net profit of Rs.85.64 lakhs during 1989-90 against Rs.65.11 lakhs in the previous year. The rubberwood processing unit started by the corporation during 1988-89 was also operating satisfactorily during the year.

#### *The State Farming Corporation of Kerala Limited*

4.140 The Corporation incorporated in 1972 for cultivation of sugarcane was permitted to take up rubber plantations in the lands allotted by Government. Accordingly the Corporation has established 1927 ha. of rubber and 230 ha. of Cashew plantations. The sales turnover of the Corporation for the year 1989-90 was Rs.310 lakhs. The Corporation made a marginal profit of Rs.4.91 lakhs for the first time in 1988-89. The profit for 1989-90 is provisionally estimated as Rs.35.03 lakhs.

*Kerala Agro Industries Corporation*

4.141 The Corporation was established in 1968 with the main objective of promoting appropriate agricultural mechanisation and agro-based industries in Kerala. The sales turn over of the Corporation during 1989-90 is of the order

of Rs.2.58 crores. The Corporation undertakes after sale service through the 11 field offices and the income generated through this activity during 1989-90 was Rs.5.75 lakhs. Manufacturing activity of the Corporation is confined to trailors for tractors and power tillers, grain storage bins, garbage bins etc. and the total volume of business handled on this account during the year was Rs.75.20 lakhs. The corporation

is imparting training on tractor driving in its training centre at Malampuzha. The number of persons trained during 89-90 was 131. In the fruit processing unit owned by the Corporation at Punalur 532 M.T of fruit products valued at Rs.52.66 lakhs were processed during 1989-90.

*Kerala State Horticultural Products Development Corporation Limited*

4.142 The Kerala State Horticultural Products Development Corporation was registered as a Government undertaking with an authorised share capital of Rs.2 crores on 20-3-89. The Corporation started functioning from 1-8-1989 onwards. The main objective of the corporation is to promote and develop production, processing and marketing of horticultural products including vegetables, fruits and flowers. During 1990 the corporation has organised 10 vegetable villages in Thiruvananthapuram district on a pilot scale involving about 1000 vegetable growers. The Corporation has also opened a sale outlet in the city as a support facility for marketing the vegetables produced. Promotion of ornamental horticulture is another activity taken up by the corporation. Under this programme more than 1000 persons have been trained and a cut flower growers' association has already been registered. Quality goods and seedlings of ornamental plants are also made available from the nursery maintained by the corporation at its Head Quarters.

## CHAPTER 5

### IRRIGATION AND POWER

#### A. Irrigation

The irrigation potential of the State is estimated at 16 lakhs ha. (net) or 25 lakhs ha. (gross). During the year 1989-90 an area of 11098 ha. (net) or 13679 ha. (gross) has been brought under irrigation by incurring an expenditure of Rs.55.94 crores. Till the end of March 1990 an area of 3.10 lakhs ha. (net) or 5.36 lakhs ha. (gross) accounting for 23% of the potential was brought under irrigation through major, medium and minor irrigation schemes with an investment of Rs.889.35 crores.

##### (i) Major and Medium Irrigation

5.2 The total extent of land that can be brought under irrigation through major and medium irrigation schemes is estimated at 6 lakhs ha. (net) or 14 lakhs ha. (gross). The ten completed irrigation schemes viz., Chalakudy, Peechi, Malampuzha, Neyyar, Pothundy, Gayathri, Walayar, Vazhani, Mangalam and Cherakuzhy irrigate an area of 0.77 lakhs ha. (net) or 1.47 lakhs ha. (gross). Till the end of 1988-89 through partial commissioning of seven ongoing schemes viz., Kallada, Pamba, Periyar Valley, Chitturpuzha, Kanhirapuzha, Kuttiyadi and Pazhassi an additional area of 1.07 lakh ha. (net) or 2.36 lakhs ha. (gross) has been brought under irrigation. During 1989-90 an amount of Rs.46.15 crores was spent on major and medium irrigation schemes and the additional area brought under irrigation was 747 ha. (net) or 1124 ha. (gross) which was in Kallada Irrigation Project area.

5.3 Thus till the end of 1989-90, the total investment in major and medium irrigation projects amounted to Rs.729.10 crores and area benefited is 1.84 lakhs ha. (net) or 3.83 lakhs ha. (gross). During the VII Plan period as against the outlay of Rs.280 crores for major and medium irrigation sector the actual expenditure reported was Rs.287.80 crores. The targeted ayacut to be irrigated was 1.95 lakhs ha.

(gross) but the achievement was only 25,035 ha. (gross).

5.4 Non of the ongoing schemes had been completed in all respects during the year under review. The schemes, Pamba, Periyar Valley, Chitturpuzha-Moolathara, Pazhassi, Kuttiyadi and Kanhirapuzha projects are in advanced stages of completion. Other schemes are in various stage of implementation. The project wise details of costs, expenditure and physical and financial achievements of completed and ongoing schemes are given in Appendix 5.1 and 5.2.

##### (ii) Minor Irrigation

5.5 The area reported to be brought under irrigation through minor irrigation schemes in the State till the end of 1988-89 is 1.16 lakhs ha. (net) or 1.39 lakhs ha. (gross) by incurring an expenditure of Rs.8025 lakhs. During the year 1989-90, 271 minor irrigation schemes under various categories were taken up for implementation. The total number of works in hand during the year 1989-90 including the number of works pending completion in the previous year was 905. Out of this 342 works under various categories were completed creating an additional irrigation potential of 10357 ha. (net) or 12550 ha. (gross). 64 M.I. Class I schemes, 72 M.I. Class II schemes, 64 Lift Irrigation schemes, 11 I.P.D. Yelah Schemes 121 works under other categories (repairs etc.) were completed during the year under review. Thus the total area brought under irrigation through minor irrigation schemes till the end of 1989-90 is 1.26 lakhs ha. (net) or 1.52 lakhs ha. (gross), by spending an amount of Rs.160.25 Crore. The physical and financial achievements under minor irrigation schemes are given in Appendix 5.3 and 5.4.

5.6 The outlay fixed for the VII Plan under minor irrigation was Rs.5000 lakhs (Rs.4300 lakhs for surface water and Rs.700 lakhs for ground water development) to provide irrigation to an area of 40730 ha. (net) or 52,645 ha.



(gross). Against this Rs.4291 lakhs was spent and additional area of 39,587 ha. (net) or 49,895 ha. (gross) had been brought under irrigation during the VII plan period.

*(iii) Flood Control and Anti-sea Erosion*

5.7 The details of physical and financial targets achieved under flood control and anti-sea erosion programmes during 1989-90 are given in table-5.5. During 1989-90, nine flood control works, out of 89 works in hand, were completed by spending an amount of Rs.297 lakhs. 3555 ha. of land has been protected from the ravages of flood. Under anti-sea erosion out of 122 works on hand, during the year 9 works were completed spending an amount of Rs.305.16 lakhs. 2.70 km of new sea wall were constructed and 1.51 km of old and damaged sea wall were reformed to standard size.

5.8 The VII Plan outlay for flood control was Rs.750 lakhs, to protect an area of 5115 ha. Against this Rs.773.82 lakhs was spend and area protected by flood control works was 9729 ha. Thus by the end of VII Plan, the cumulative total of physical achievement is protection of 32067 ha. of land by spending Rs.1971 lakhs. Total expenditure on anti-sea erosion works till the end of VII Plan period was Rs.9155 lakhs. The cumulative achievement by the end of VII Plan period was completion of 34.37 Km. of new sea walls and 43.12 Km. of reformation of old sea wall to standard size as per phase I programme and 9.30 Km. of new sea wall and 0.37km. reformation of old sea wall as per phase II Programme.

*(iv) Command Area Development*

5.9 The main activities of Command Area Development Programme are the construction of field channels, field drains, land development scheme, introduction of warabandi etc. and introduction of demonstrations and adaptive trails for better water management practices and scientific and improved methods of cultivation. During the year 1989-90 an amount of Rs.531.73 lakhs was spent for

Command Area Development Programme. Field channels were constructed to cover an area of 18695 ha. of land, warabandi system has been introduced to cover an area of 2275 ha. Till the end of 1989-90 the total amount spent under Command Area Development Programme is Rs.1475.79 lakhs and area covered by this programme is 42583 ha.

*B. Power Development*

5.10 The total investment in Power Development by the end of VII plan period in the State was Rs.1,15,430 lakhs. The installed capacity of the ten completed hydro electric generating stations of Kerala Power System as on March 1990 is 1476.5 MW, with an annual power generation potential of 5620 MU. The approved outlay on Power Development in the State for the VII plan 1985-90 was Rs.39680 lakhs. Against this the actual expenditure was Rs.37419 lakhs.

5.11 Out of the total targeted addition of 530 MW installed capacity during the VII plan period 465 MW has been added to the power system by commissioning the 390 MW Idukki Stage II and 75 MW Idamalayar projects. Kallada Power House works are progressing, Kakkad dam works have been completed and power house structure is almost over. Erection of generating machinery is in progress. In the World Bank aided Lower Periyar Project, power tunnel driving is over and lining is in progress. Excavation for dam, pressure shaft, surge and power house are in progress. The works on all other small and diversion projects are progressing and are in various stages of completion.

5.12 The power generation registered an increase of 11.5% during the 1989-90 over the previous year. The annual generation of Power during 1989-90 was 5075 MU as against 4568 MU in the 1988-89. This increase in electricity generation is mainly because of the good monsoon during the period. The Project wise details of installed capacity, energy potential and energy generated during 1989-90 are given in appendix 5.6. There is no addition in the installed capacity of Kerala power system

during the year as no project was completed and commissioned during the period. During this, full benefits began to accrue from Idukki Stage III (376 MU) and Sabarigiri augmentation scheme (125 MU), and partial benefits from Panniyar augmentation (10 MU) and Kuttiar augmentation (20 MU), also major portion of the work in Peringalkuthu and Idamalayar diversion (60 MU) was completed and partial benefits started accruing (30 MU). Electricity generated during the year 1989-90 was 5075 MU and power sold during the year was 4794 MU as against 4387 MU during the previous year registering an increase of 9.3%. The per capita consumption of power in the state in 1989-90 was 150 KWA registering an increase of 12 percent over the previous year. The State's per capita consumption is thus far below the national average of 207 units and the southern regional average of 205 units. Except for 1989 when an abnormally high monsoon along with import of power contributed sufficient power, the state has been facing a severe power shortage in all areas for the past 7 years. The present gap in demand and supply is 800 MW and it is expected to increase to 1600 MW by the end of the Eight Five Year Plan.

5.13 Apart from the deficiency in power in the overall situation, the marked deficiency in installed capacity in the state has led to chronic problems in meeting the peak load demands from both industrial and domestic sectors. A clear example in this respect is the situation in Malabar area, as the State Electricity Board can only supply about 50 per cent of the power requirements during peak hours.

5.14 The present stage, commissioning programme etc. of the ongoing power generating schemes in the state are furnished in Appendix 5.8.

5.15 In the transmission sector the Idukki-Udumalpet 220 KV transmission line with a length of 83.225 ct.km. has been completed and test charged. Two 110 KV line of length 8.2 ct.km. line 857 km. of 11 KV lines and 586 KV of LT lines have been completed and commiss-

ioned during the year. Two 110 KV Substations and 2 KV substation were commissioned during 1989-90.

5.16 Under distribution sector during 1989-90 a total number of 261589 service connections were given. Of this 15025 were agricultural connections, 3777 were industrial connections and 242787 were domestic and non-domestic connections. 15473 street lights were installed and electricity was provided to 19 more Karas (Census Villages) in the State. Under Special Component Plan and Tribal Sub Plan, 537 Harijan colonies and 37 tribal colonies were provided with electricity.

5.17 Pattern of Power Consumption and revenue collected by the Sale of Power during 1989-90 is given in appendix 5.9.

5.18 Though there has been improvement in the over-all power generation, power shortage continues to be a problem. The steadily rising demand for power outstrips availability. As in the previous years during 1989-90 also. K.S.E.B imposed power cut and load shedding on the consumers. The details of power cut and load shedding imposed to various categories of consumers during 1989 - 90 are given below.

*Power cut Percentage of Power cut*

Period	Power Cut
1-4-1989 to 30-4-1989	40% power cut for HT and EHT consumers
1-5-1989 to 31-5-1989	60% power cut HT and EHT consumers
1-6-1989 to 15-6-1989	100% power cut for EHT only
16-6-1989 to 30-6-1989	40% power cut for HT for connected load less than 250 KVA and LT having connected load greater than 100 KVA and 100% cut for all other EHT.

1-7-1989 to 31-7-1989 60% cut for EHT only

1-8-1989 power cut withdrawn

#### Load Shedding

##### Day time

2-5-1989 to 15-5-1989 3 hours/day  
 16-5-1989 to 15-6-1989 5 hours/day  
 16-6-1989 to 20-6-1989 3 hours/day

##### Night time City Taluk Rural Areas

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 1-6-1989 to  
 15-6-1989 1 hr 1 1/2 hr 2 hrs  
 16-6-1989 to  
 20-6-1989 1/2 hr 1 hr 1 1/2 hr  
 21-6-1989 - onwards no load shedding.

##### Power tariff

5.19 No major change has been made in the power tariff during the period under review.

#### C. Non Conventional Source of Energy

5.20 ANERT is the nodal agency in the State for implementing and popularising various programmes of development of non conventional sources of energy like National Programme on improved chulahs (NPIC). Solar Photo Voltaic Programme

(SPVP), Solar Thermal Extension Programme (STEP), Wind mapping monitoring programme, on demonstrative application of Biomass gasifier programme, sterling engines, urjagram programme, and Intergrated Rural Energy Planning Programme (IREP).

5.21 During 1989-90 total number of 19958 fixed chulahs and 13835 portable chulahs have been distributed making a cumulative achievement of 128204 and 50003 respectively. 140 community chulahs have been installed during the year under review. The total number of chulahs distributed till the end of 1989-90 through various programmes comes to 212601.

5.22 Under Solar Thermal Extension Programme, II Solar water heating systems with a total capacity of 1660 litres per day have been installed in 11 places in the State.

5.23 So far 10 wind mills have been erected and commissioned for water pumping purposes. Three gasifier engines of 5 kw capacity have been installed during 1989-90.

5.24 Under Intergrated Rural Energy Planning Programme 7128 fixed chulahs, 55 community chulahs and 4349 portable chulahs have been distributed in the 4 blocks selected for IREP during this year.

5.25 The total grants received by the ANERT from different sources during 1989-90 amounts to Rs.77.56 lakhs.

## CHAPTER 6

### INDUSTRY

#### *General Review*

The value added (net domestic product) by manufacturing sector, at 1980-81 prices, in Kerala in 1989-90 was Rs. 637.90 crores, registering a growth of 6.7 percent over Rs.597.83 crores in 1988-89, when the growth was 5.9 percent over the previous year. The three year period 1987-90 recorded an average annual rate of growth of 6.8 percent in the State Income from the manufacturing sector at 1980-81 prices. This is in sharp contrast to the deceleration in the growth of value added in the manufacturing sector of the State during the first six years of the eighties, when the State Income from the manufacturing sector declined by 1.5 percent from Rs. 531.52 crores in 1980-81 to Rs.523.45 crores in 1986-87. The average rate of growth of the manufacturing sector of the State during the eighties was only 2.22 percent and that during the Seventh Five Year Plan period (1985-90) 2.42 percent.

6.2 The expansion in the number of small scale industrial units during the Seventh Five Year Plan period, especially during the triennium ended 1989-90 was substantial. Out of the total number of 63,698 Small Scale Industries registered till the end of the Seventh Five Year Plan, 32,199 units, constituting more than 50 percent of the total number of units were registered during the Seventh Five Year Plan period. Of these, 23,356 units were registered during 1987-90, which is an all-time record. The number of units registered during 1989-90 was 8271, as against 8236 units during 1988-89 and 6849 units during 1987-88.

6.3 The Seventh Five Year Plan target was to start 20,000 small scale units with an estimated investment of Rs. 200 crores, employment generation of 1.53 lakhs and output worth Rs. 709 crores.

The actual achievement was 32,199 units, 61 percent in excess of the target, the investment actually made being Rs. 435.42 crores, exceeding the target by 117 percent. The additional employment generated during the plan period is estimated to be 1.87 lakhs, which exceeded the target by 22 percent. The estimated value of goods and services produced by these units was Rs. 1000.91 crores, 41 percent in excess of the target.

6.4 As a result of the sustained efforts to promote industries managed by women, there was substantial increase in the number of small scale industries managed by women entrepreneurs. 2078 women's industrial units were registered during 1989-90, as against 1633 units during 1988-89. The number of units registered during the Seventh Five Year Plan was 7207, of which 5051 (70 percent) were during the last three years of the Seventh Five Year Plan.

6.5 The scope of village industries under the Khadi and Village Industries Board has increased considerably. In addition to the 25 existing village industries under the purview of the Board, 74 new village industries have been added. Production and employment generation in this sub sector showed substantial growth during the Seventh Plan period. Production increased from Rs. 33.23 crores in 1984-85 to Rs. 64.53 crores in 1989-90, registering 94 percent increase over the five year period. Employment during this period increased by 24 percent from 1.52 lakhs to 1.89 lakhs. Major part of the increase in production and employment came about during 1988-90, the last two years of the Seventh Plan. Production increased from Rs. 48.19 crores in 1987-88 to Rs. 55.26 crores in 1988-89 and Rs. 64.53 crores in 1989-90. Employment increased

from 1.73 lakhs in 1987-88 to 1.79 lakhs in 1988-89 and to 1.89 lakhs in 1989-90.

6.6 Sericulture was taken up in the State for the first time in 1986-87. By the end of Seventh Plan period 2,700 acres had been brought under sericulture. Encouraged by the success of the programme, and the keenness shown by the people to propagate Sericulture, the State Planning Board constituted a Special Task Force to go into the various aspects of sericulture and report on the feasibility of extending the industry in the State. Based on the report of the Special Task Force the State Government decided to bring an additional area of 28,000 acres under sericulture during the Eighth Five Year Plan, 1990-95. Out of the target of 3250 acres for (1990-91) as much as 4220 acres were brought under mulberry cultivation as at the end of December 1990. Sericulture has been declared as a village industry and the progress of its expansion is monitored by a State Level Committee under the Chairmanship of the Minister for Industries.

6.7 To strengthen the institutional base for implementing the handloom development programme in the State, the primary handloom weavers' co-operative societies, Hantex and Handveev have been relieved of part of their debt burden. Fifty percent of the loan availed by them as on 30-6-1986 and interest, including penal interest thereon in full, have been converted into share capital. The new schemes viz 'Silk Weaving in Handloom Weavers' Co-operative Societies and Rehabilitation-cum-Production Programme of Loomless Weavers' would be implemented from 1990-91 in order to provide more employment opportunities to the handloom weavers.

6.8 There was perceptible increase in the export of coir and coir products during 1989-90. 27,458.1 tonnes of coir and coir products valued at Rs. 40.18 crores were exported during 1989-90, as against 24,979.2 tonnes valued at Rs.33.52 crores during 1988-89, registering an increase of 9.92 percent in quantity and 19.87 percent in value during the year. The three point levy

system helped to increase the availability of husk to the coir co-operative societies. But the full requirement of coir co-operative societies could not be met by the levy system. In order to remove the bottlenecks in the supply and demand fronts of the Coir Industry, viz, scarcity of raw material and lack of demand for finished products, steps are being taken to restructure the Industry based on the report of a Special Task Force constituted for the purpose. Schemes for the Eighth Five Year Plan have been formulated on the lines of the recommendations of the Special Task Force and action is being pursued to implement the schemes.

6.9 Scarcity of rawnuts continued to be the major problem facing cashew industry. The system of monopoly procurement of cashewnut was continued during the 1990 cashew season also. The quantity of cashewnut procured from within the State, however, decreased somewhat from 94,240 tonnes during 1989 cashew season to 82,673 tonnes during 1990 cashew season. Import of rawnuts during 1989-90, on the other hand, increased to 52,475 tonnes, from 37,078 tonnes during the previous year. The Kerala State Cashew Development Corporation which manages 70 factories could earn a profit of Rs. 68.19 lakhs in 1989-90 as against a loss of Rs.295.16 lakhs in 1988-89. Kerala State Cashew Workers Apex Industrial Co-operative Society Limited (CAPEX) which manages 9 cashew factories could bring down their estimated loss from Rs. 100 lakhs in 1988-89 to Rs. 50 lakhs in 1989-90.

6.10 Consumption of power in the industrial sector of the State recorded marked increase during 1989-90. Consumption of power by industrial consumers of High and Extra High Voltage during 1989-90 was 2406 M.U., as against 1889 M.U. during 1988-89, showing an increase of over 27 percent. The number of High and Extra High Voltage Industrial Consumers registered during 1989-90 was 358 with a connected load of 81.5 MW as against 25 with a connected load of 5 MW during the previous year. Consumption of power of low and medium

voltage by industrial consumers increased by only 2.43 percent from 288 MU to 295 MU during the same period.

6.11 There was perceptible improvement in the number of loans sanctioned and amount disbursed by the Kerala State Industrial Development Corporation Limited and Kerala Financial Corporation, the former in the realm of medium and large industries and the latter for small and medium industries. During 1989-90, KSIDC sanctioned Rs. 25.18 crores and disbursed Rs. 19.01 crores as against Rs. 25.34 crores and 13.35 crores respectively during the previous year. The amount of loan sanctioned by KFC during 1989-90 was Rs. 69.88 crores and disbursement Rs. 56.36 crores, marking an increase of 4.7 percent in sanctions and 35.9 percent in disbursements. Thus the flow of credit to the industrial sector from the state financing institutions was substantially higher during the year.

6.12 Kerala State Industrial Development Corporation Limited has reported big strides in the number of MOUs signed and investments made. The average size of investments made per unit has also gone up. Forty Seven new industrial projects were completed in the private/joint sector with the financial assistance of KSIDC during the Seventh Plan period. These projects, costing Rs. 82.50 crores would provide employment to about 4500 persons. KSIDC also financed 12 expansion/diversification projects. In addition 40 projects, with a total estimated cost of Rs. 73 crores are under various stages of implementation.

6.13 The State Government declared rubber based industries, electronics industries, leather processing, pharmaceuticals and light engineering as thrust industries and announced special incentives for their growth. Three Electronics Technology Parks, one each at Thiruvananthapuram, Kochi and Kozhikode are proposed and steps have been taken already to start the Park at Thiruvananthapuram expeditiously. Computer Software Development has been identified as one of the areas having high employment potential. Based on the

report of a Task Force on Computer Software Development, steps are being taken to develop this branch during Eighth Plan.

6.14 The industrial climate of the State has considerably improved in recent years. Number of strikes in the industrial sector has come down from 75 in 1986 to 47 in 1989. Loss of mandays due to strikes, consequently, came down from 23.38 lakhs to 11.03 lakhs during the period. As regards lockouts also there was considerable improvement. Number of lockouts decreased from 25 in 1986 to 15 in 1989, and the loss of mandays on account of lockouts from 7.24 lakhs to 6.09 lakhs. Total loss of mandays in the industrial sector of Kerala on account of strikes and lockouts was 30.62 lakhs during 1986. This has come down to 17.12 lakhs in 1989, recording 44 percent decrease over three years.

#### *Working Factories and Employment*

6.15 The number of working factories in the state increased to 12509 as on 31st December 1989 from 12028 in December, 1988 registering an increase of about 4 percent. The number of factories increased during this period in all the districts. Maximum increase was in Kollam district where the number rose from 991 to 1072 followed by Ernakulam district where increased from 1950 to 2028 during this period. As in the previous year Ernakulam district stood first in the matter of number of factories.

6.16 The number of workers in the factory sector in the State as at the end of December, 1989 stood at 2,85,563 as against the previous year's 2,80,738. Kollam district stood first in respect of total number of factory workers followed by Ernakulam district. The highest increase in the number of workers was registered in Thrissur district where it rose from 24,278 to 25,001. District-wise distribution of working factories and employment therein during 1988 and 1989 is given in Table 6.1

6.17 As in the past, the Cashew

industry was providing maximum employment in the factory sector during 1989. Of the total number of workers in the State 32.5 per cent was accounted for by the cashew industry. Kollam district accounted for nearly 83 percent of the total workers engaged in the cashew industry in 1989. Factories engaged in general engineering, cotton textiles, chemical and chemical products manufacturing etc. were the other major employers in the factory sector of the State in 1989. Industry-wise and district-wise distribution of working factories and the workers employed there-in in Kerala during 1988 and 1989 is shown in Appendix tables 6.1 and 6.2 respectively.

TABLE 6.1

## Registered Working Factories in Kerala

		(As on 31st December)			
Sl. No.	Districts	Number of Factories		Employment Numbers	
		1988	1989 <sup>a</sup>	1988	1989 <sup>a</sup>
(1)	(2)	(3)	(4)	(5)	(6)
1.	Thiruvananthapuram	518	539	22013	22591
2.	Kollam	991	1072	90583	91130
3.	Pathanamthitta	268	291	2304	2948
4.	Alappuzha	771	797	16597	17110
5.	Kottayam	1024	1030	13157	13263
6.	Idukki	265	273	6176	6305
7.	Eranakulam	1950	2028	43425	43568
8.	Thrissur	1416	1469	24278	25001
9.	Palakkad	1254	1270	15040	15211
10.	Malappuram	608	628	6521	6600
11.	Kozhikode	1473	1522	20131	20350
12.	Kannur	1381	1435	18372	19015
13.	Wayanad	84	113	1673	1882
14.	Kasaragod	25	42	468	589
Total		12028	12509	240738	245563

Note: <sup>a</sup>Provisional.

Source: Department of Economics and Statistics, Thiruvananthapuram.

## Joint Stock Companies in Kerala

6.18 The number of joint stock companies in Kerala was 3,923 as on 31-3-1990 comprising of 3,251 private limited and 672 public limited companies. In the previous year the corresponding numbers were 3,634, 2,983 and 651 respectively. A total number of 317 companies were newly registered during 1989-90 while 27 companies consisting of 23 private limited and 4 public limited companies were either wound up or struck off during this period. Three new companies viz., Kerala Hitech Industries Limited, Tourist Resorts (Kerala) Limited and Kerala State Poultry Development Corporation Limited were registered in the State public sector during 1989-90 whereas the Kerala Shipping Corporation Limited was amalgamated with Kerala Shipping and Inland Navigation Corporation Limited. Thus, the total number of Government Companies in the State as on 31-3-1990 rose to 100 consisting of 78 private limited and 22 public limited companies. The details of joint stock companies in Kerala as at the end of March, 1990 are given in Table 6.2.

**TABLE 6.2**

**Joint Stock Companies in Kerala**

Particulars	Private Limited	Public Limited	Total
(1)	(2)	(3)	(4)
1. Number of Joint stock companies in Kerala as on 31.3.1989	2983	651	3634
2. Number of companies Newly registered during 1989-90	291	26	317
3. (a) Number of companies wound up/ struck off during 1989-90	23	4	27
(b) Number of companies Amalgamated during 1989-90	-	1	1
4. (a) Number of companies transferred to other states during 1989-90	1	-	1
(b) Number of companies transferred from other states during 1989-90	1	-	1
5. Net addition to the Total Number of Joint Stock Companies during 1989-90 (Item 2-(3+4))	268	21	289
6. Total Number of Joint Stock Companies in Kerala as on 31.3.1990 (Item 1+5)	3251	672	3923
7. Total Number of Government Companies Registered in Kerala as on 31.3.1989	75	23	98
8. Number of Government Companies Registered during 1989-90	3	-	3
9. Number of Government Companies wound up/Amalgamated during 1989-90	-	1	1
10. Net addition to the Total Number of Government Companies during 1989-90 (Item 8-9)	3	-1	2
11. Total Number of Government companies in Kerala as on 31.3.1990. (Item 7+10)	78	22	100

Source: Registrar of Joint Stock Companies, Kochi



### Industrial Promotion Agencies

#### *Kerala State Industrial Development Corporation Limited*

6.19 This Corporation, the pioneer institution set up for the development of large and medium scale industries in the State has, since its inception in 1961, sanctioned gross financial assistance of Rs.168.77 crores to various projects till the end of March, 1990. The total disbursement during the period amounted to Rs.115.33 crores. With the assistance of this corporation, 134 large and medium units have so far completed their 164 projects. These projects involved a total investment of about Rs.500 crores and provided direct employment to 38,120 persons.

6.20 During 1989-90, the Corporation sanctioned financial assistance amounting to Rs.25.18 crores and disbursed Rs.19.01 crores. Sixteen projects involving a capital investment of Rs.20.74 crores and employment potential of 1112 have been completed during the year. They are the projects of Industrial Accumulators Ltd, Diamond Roller Flour Mills (P) Ltd, Thompson Tools Ltd, Nagarjuna Herbal Concentrates Ltd, Guardian Controls Ltd, Alliance Leathers (P) Ltd, Aark Synthetics (P) Ltd, Danntex Rubber (P) Ltd, Universal Gloves (P) Ltd, Peejay Rubber Industries Ltd, Kerala Rubber and Reclaims Ltd, Indian Express (Madurai) Pvt Ltd, Mc. Glan Pharmaceuticals (P) Ltd, Crans (India) Polymers Ltd, Quality Mix (India) Pvt Ltd, KEK Prestressed Concretes Ltd. In addition, 40 projects involving an investment of Rs.73 crores and employment potential of 3400 were under various stages of execution in March, 1990.

#### *Kerala State Electronics Development Corporation Limited*

6.21 The Corporation was set up in 1972 for promoting an integrated and self-reliant electronic industry in Kerala. The Corporation has so far set up nine manufacturing divisions of its own and promoted eight subsidiary companies and five joint sector projects. The sub-

siary companies of the Corporation are the Keltron Counters Ltd, Keltron Electro Ceramics Ltd, Keltron Crystals Ltd, Keltron Magnetics Ltd, Keltron Power Devices Ltd, Keltron Resistors Ltd, Keltron Rectifiers Ltd and Keltron Component Complex Ltd. The Keltron Group of companies are manufacturing a wide range of electronic products including consumer electronics and professional grade electronic items covering control and instrumentation system.

6.22 The provisional accounts of the Corporation for the year 1989-90 shows that goods worth Rs.32.34 crores were manufactured during this period. Total sales turnover of the 'Keltron Group' of companies increased to Rs.99.16 crores in 1989-90 compared to Rs.92.00 crores in 1988-89 registering a growth of 7.72 percent. The working of the Corporation during 1989-90 was expected to end with a profit of Rs.50 lakhs. The Corporation has taken steps to implement certain expansion/modernisation/diversification projects with a view to improving the working of its own divisions and their subsidiary companies. The total sales turnover of the 'Keltron Group' of companies is projected at Rs.144.60 crores in 1990-91, as against Rs. 99.16 crores in 1989-90.

#### *Kerala State Industrial Enterprises Limited*

6.23 This holding company was managing six Government owned companies viz., Kerala Ceramics Ltd, Kerala Soaps and Oils Ltd, Kerala State Drugs and Pharmaceuticals Ltd, Kerala State Detergents and Chemicals Ltd, Kerala State Salicylates and Chemicals Ltd and Travancore Plywood Industries Ltd, during 1989-90. The Kerala Ceramics Ltd has become an independent unit in July, 1990. Another subsidiary company viz., the Trivandrum Rubber Works Ltd is now being managed by the State Road Transport Corporation Ltd. The Kerala State Salicylates and Chemicals Ltd started trial production in 1989-90 and commercial production from 1-6-1990.

6.24 The total value of goods produced by six subsidiary companies increased

from Rs.23.40 crores in 1988-89 to Rs.23.79 crores in 1989-90. The sales turnover of this group of companies increased from Rs.20.60 crores in 1988-89 to Rs. 23.48 crores in 1989-90.

6.25 The Kerala Ceramics Ltd was the only unit under this group which earned a marginal profit in 1989-90. Improvement in sales turnover was achieved despite resource constraints faced by the subsidiaries due to continuous cash losses incurred by them. In addition, raw material shortage, outdated technology, hike in raw material prices etc. contributed to the poor performance of these subsidiaries.

6.26 Acute shortage of working capital was the main problem faced by the Kerala Soaps and Oils Ltd in increasing production and thereby its sales turnover. Credit facilities available from the consortium of banks were the only source open to the Company for the purchase of raw materials and for other transactions. Arrangements with the Hindustan Lever Ltd. for processing their products remained the main source of revenue for the Kerala State Detergents and Chemicals Limited. Shortage of working capital, severe competition from established units, lack of sales promotion and advertisement efforts, frequent power interruption and voltage fluctuations are the main problems now being faced by this company.

6.27 The reduction in the price of Vitamin 'A' with effect from 14.9.1989 affected the profitability of the Kerala State Drugs and Pharmaceuticals Ltd. The formulations plant of the Company could achieve a higher production level in 1989-90 and achieved a profit of Rs.31.34 lakhs in 1989-90 whereas the Vitamin 'A' Division incurred a loss of Rs.218.60 lakhs.

6.28 The production and sales of Travancore Plywood Industries declined during 1989-90 as compared to the previous year. Non availability of quality softwood was the major problem faced by this company. The company has made arrangements with the Kerala Forest Development Corporation to get around 10,000sq.Mtrs.

of wind fallen trees. Erosion of working capital due to continuous cash loss suffered in the past was another problem for the company.

6.29 The problems common to all the subsidiaries of the Kerala State Industrial Enterprises Ltd. were outdated technology underlying constant upgradation, inadequate liquidity position and poor quality of products. As a first step, the Holding company has identified projects employing appropriate technologies for implementation under the Eighth Plan. Certain rehabilitation packages have been drawn up and they are in different stages of implementation with the assistance of financial institutions, banks and State Government.

6.30 The Air Cargo operations remained the main source of income for the Kerala State Industrial Enterprises during 1989-90. The earnings from these operations during this period were Rs.82.25 lakhs as against Rs.66.51 lakhs in 1988-89. The Cargo Complex handled 7316 MTs of cargo during 1989-90 as against 6638 MTs in the previous year but the value of cargo (C&F) exported in 1989-90 was Rs.13.32 crores as compared to Rs.21.75 crores in 1988-89.

#### *Kerala State Textile Corporation Limited*

6.31 This corporation was managing five textile mills during 1989-90. They were the Kottayam Textiles, Prabhuram Mills, Malabar Spinning and Weaving Mills, Edarikode Textiles Ltd and Sitaram Textiles Ltd. Besides, it was running certain units aimed at the overall development of textile industry in the State. They include the Kelnit Division, Kelastic Tape Unit, Central Testing Laboratory and the two yarn banks in Thiruvananthapuram and Kannur districts. The Corporation earned a net profit of Rs.22.35 lakhs and a cash profit of Rs.105.76 lakhs in 1989-90 as against a net loss of Rs.202.24 lakhs and a cash loss of Rs.133.65 lakhs in 1988-89. The better performance during 1989-90 is attributable to the buoyant market conditions for yarn and easy availability of cotton. Other factors contributed to the better performance include improvement in capacity utilisation.

tion, comfortable power position, beneficial effects of modernisation schemes under implementation in the Kottayam Textiles and Prabhuram Mills, stoppage of weaving operations in the Malabar Spinning and Weaving Mills and stabilisation of production in the Edarikode Textiles Limited.

6.32 The modernisation schemes launched for Kottayam Textiles and Prabhuram Mills in 1988-89 are expected to be completed in 1991. The IDBI has so far released loan assistance of Rs.151 lakhs for Kottayam Textiles and Rs.125 lakhs for Prabhuram Mills towards their modernisation schemes. The delay in the completion of these schemes was mainly due to the tight supply position prevailing in the textile machinery market.

6.33 The total value of yarn, knitwear, hosiery cloth and elastic tapes produced by the units under the management of the Corporation during 1989-90 amounted to Rs.1361.28 lakhs compared to Rs.963 lakhs in the previous year. The sales income of the Corporation increased to Rs.1447.29 lakhs in 1989-90 from Rs.1079.28 lakhs in 1988-89 marking a growth of 34.10 percent over the previous year. The consolidated production details of the four textile mills managed by the Corporation (except those of Sitaram Textiles Ltd) for the period from 1985-86 to 1989-90 are shown in Table 6.3.

TABLE 6.3

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

Year	Cotton Yarn		Cloth		Total value of production (Rs. in lakhs)
	Production (Lakh Kg)	Value (Rs. lakhs)	Production (Lakh Mtrs.)	Value (Rs. lakhs)	
(1)	(2)	(3)	(4)	(5)	(6)
1985-86	17.25	588.25	16.35	89.84	678.09
1986-87	13.86	468.16	11.28	59.31	527.47
1987-88	11.40	519.05	9.18	53.04	572.09
1988-89	N.A	N.A	N.A	N.A	963.00
1989-90	19.57	1349.94	..	..	1361.28

Source: Kerala State Textile Corporation Limited

#### Kerala State Industrial Products Trading Corporation Limited

6.34 The main activity of this corporation, set up in 1976, is to canalise monopoly products of Government owned companies and industrial concerns. The Corporation sold titanium dioxide worth Rs.45.47 crores during 1989-90 and earned a net profit of Rs.13.62 lakhs during this period after paying a sum of Rs.17.94 lakhs as service charges to the State Government. In addition the contribution to state revenues by way of sales tax, as a result of canalisation is estimated at Rs.758.80 lakhs under KST and Rs.163.68 lakhs under CST for 1989-90.

#### Government Owned Companies

6.35 As on 31-3-1990, there were 27 manufacturing industrial units in Kerala, with paid up capital fully held by the State Government. Six of these companies were being managed by the Kerala State Industrial Enterprises Limited one of the holding companies of the Government. The Kerala State Engineering Works Ltd. was under orders of liquidation and the Foam Matings (India) Ltd. was under lock out from 16-6-1984 to 10-4-1990. A new company, Kerala Hitech Industries Ltd. was incorporated in June, 1989. The Steel Industrials Kerala Ltd., another holding company, was managing two of the Government owned companies viz., Autokast Ltd. and Steel and Industrial Forgings Ltd. The Kerala State Salicylates and Chemicals Ltd. started trial production in their aspirin plant in 1989-90 and commercial production from 1-4-1990. Some of the units under this group are yet to finalise their accounts for 1989-90. However, an attempt is made in the following paragraphs to review the performance of this group of companies on the basis of the details available.

6.36 The total capital invested by 19 companies in this group (see Appendix Table 6.3) increased to Rs.397.60 crores by the end of March, 1990 from Rs.365.06 crores in March, 1989 marking a growth

of 8.91 percent over the previous year. The Kerala Minerals and Metals Ltd. alone accounted for 36.02 percent of the total capital invested by these 19 companies as on 31-3-1990 followed by the Malabar Cements Ltd. with an investment share of 16.17 percent. These companies were employing a total number of 9661 persons on 31-3-1990 showing a marginal increase of 57 from 9604 persons in March, 1989. The major employer in this group was the Kerala Minerals and Metals Ltd. with a total number of 1138 employees followed by the Malabar Cements Ltd.

6.37 The total value of production of this group of companies declined to Rs.184.46 crores during 1989-90 as compared to Rs.187.72 crores in the previous year. Major decrease was on account of Kerala Minerals and Metals Ltd, Malabar Cements Ltd. and Steel Industrials Kerala Limited. The units such as Kerala Electrical and Allied Engineering Co. Ltd., Autokast Limited, Steel and Industrial Forgings Ltd., Sitaran Textiles Ltd., Kerala Agro Machinery Corporation Ltd. and Kerala Automobiles Ltd. increased their production during this period. The total sales turnover of this group of companies increased to Rs.188.35 crores in 1989-90 from Rs.182.68 crores in the previous year. Considerable improvement has been noticed in the sales turnover of companies like Kerala State Drugs and Pharmaceuticals Ltd., Kerala Electrical and Allied Engineering Co. Ltd., Steel Industrials Kerala Ltd., Steel and Industrial Forgings Ltd., Sitaran Textiles Ltd., Kerala Automobiles Ltd. and Kerala Agro Machinery Corporation Ltd. while that of the Kerala Minerals and Metals Ltd. and Malabar Cements Ltd. decreased. The details of value of production and sales turnover of the Government owned companies are shown in Appendix 6.4.

6.38 The Kerala Ceramics Ltd., Kerala Electrical and Allied Engineering Co. Ltd., Kerala Agro Machinery Corporation Ltd. and Kerala Clays and Ceramic Products Ltd. were working on profit during 1989-90 while all the other com-

panies in this group were incurring losses. The major reasons for the poor performance of majority of the companies in this group include acute shortage of working capital due to accumulated cash losses over the years, delay in the execution of development projects aimed at modernisation and rehabilitation, stiff competition in the market for products and shortage of major raw materials. The Steel and Industrial Forgings Ltd. has suffered a loss of around 75 to 100 MTs of forgings per month due to power failure and low voltage. The increased import of titanium dioxide in the Country affected adversely the marketing of products by Kerala Minerals and Metals Limited. However, the Company could indigenise most of the raw materials which were initially being imported. The Trivandrum Spinning Mills Ltd. could not enhance its capacity utilisation due to power cut and heavy break down of machineries on account of their obsolescence. But, the increase in the yarn price helped the Company to improve its working results in 1989-90.

6.39 The Kerala Agro Machinery Corporation Ltd. produced 2710 power tillers raising capacity utilisation from 84 per cent to 90 per cent in 1989-90. The Company achieved record production and sale of power tillers, spare parts and accessories. It has taken over a unit of the SIDCO at Kalamassery for manufacturing diesel engines and other parts required for power tillers.

6.40 The details of capacity utilisation in the Government owned companies are furnished in Appendix 6.5.

#### *Government Majority Companies*

6.41 As on 31-3-1990, the total capital invested by 21 out of 22 companies in which the State Government held majority share in the paid up capital (See Appendix Table 6.6) stood at Rs.128.19 crores as against Rs.135.76 crores in March, 1989 marking a decline of 5.58 per cent. The capital invested by companies like Keltron Counters Limited, Keltron Rectifiers Ltd., Keltron Component Complex Ltd. and Traco Cable

Company Ltd., increased during 1989-90 while that of the Keltron Electro Ceramics Limited, Keltron Crystals Ltd., Keltron Power Devices Ltd., Steel Complex Ltd., Travancore Cochin Chemicals Ltd. and Transformers and Electricals Kerala Ltd. decreased during the year. The total number of persons employed in this group of companies stood at 8603 as at the end of March, 1990 compared to 8596 during the corresponding period of the previous year.

6.42 The twenty one companies referred to above produced goods valued at Rs.188.37 crores during 1989-90 as against Rs.141.18 crores during 1988-89 registering an increase of 33.43 per cent, while their total sales turnover increased from Rs.169.36 crores in 1988-89 to Rs.197.17 crores, registering a growth of 16.42 per cent. The performance of this group of companies in respect of their value of production and sales turnover is shown in Appendix 6.7.

6.43 Nine companies in this group viz. Keltron Crystals Ltd., Keltron Component Complex Ltd., Travancore Titanium Products Ltd., Travancore Cochin Chemicals Ltd., Travancore Cements Ltd., Traco Cable Company Ltd., United Electrical Industries Ltd., Metal Industries Ltd. and Forest Industries (Travancore) Ltd., were working on profit during 1989-90. However, six subsidiary companies of the KSEDC incurred losses amounting to Rs. 333.44 lakhs in 1989-90. The production performance of the Steel Complex Ltd. was also affected adversely. The rehabilitation scheme implemented by the Transformers and Electricals Kerala Ltd. has helped improve its financial performance since 1987-88. The Company which has secured supply orders worth Rs.75.69 crores has drawn up a five year investment plan for doubling its production from the existing level of Rs.55.50 crores to Rs.120 crores by 1994-95. The Travancore Sugars and Chemicals Ltd. incurred a loss of Rs.23.76 lakhs in 1989-90 as compared to a net profit of Rs.23.85 lakhs in the previous year. The main reasons for the loss were reported as the reduction in the sale of arrack, reduced margin on sale of arrack during certain periods of the year and reduction in the quality of cane crushed.

6.44 The Travancore Cochin Chemicals Ltd. has earned a net profit of Rs.346.51 lakhs during 1989-90. The output of Travancore Titanium Products Ltd. declined from 10702 tonnes in 1988-89 to 9050 tonnes of titanium dioxide in 1989-90. This was due to strike by a section of employees for 81 days from 10-3-1989. However, an all time record in monthly production of 1306 tonnes was established in March, 1990. The Travancore Cements Ltd. earned a profit of Rs.46.53 lakhs in 1989-90 as against Rs.2.83 lakhs in the previous year through better revenue realisation for its products and revenue from hiring barges and dredger. The Company also exported 18 tonnes of white cement to USSR in 1989-90. The details relating to installed capacity and its utilisation in the Government majority companies in the State are furnished in Appendix 6.8.

#### *Summary of Performance of State Public Sector Industrial Undertakings*

6.45 Seventeen out of 44 State public sector industrial undertakings, the details of which are available were working on profit during 1989-90. They together earned a profit of Rs.10.05 crores during the year. As in the previous year, the major contributors were three units under the chemical group viz. Travancore Titanium Products Ltd., Travancore Cochin Chemicals Ltd. and Travancore Cements Ltd. They together earned a profit of Rs.577.43 lakhs accounting for 57.47 per cent of the total profit earned by the seventeen companies. On the otherhand, 27 units were incurring losses during 1989-90. They together incurred a total loss of Rs.41.09 crores during the year. The Kerala Minerals and Metals Ltd. and Malabar Cements Ltd. incurred a total loss of Rs.16.31 crores accounting for 39.69 per cent of the total loss incurred by these 27 companies in 1989-90. Six units under the engineering group incurred a total loss of Rs.12.21 crores during 1989-90. The total accumulated loss of 31 units amounted to

Rs.311.17 crores as against the total paid up capital of Rs.268.44 crores of the 44 companies as at the end of March,

1990. The accumulated loss of two companies in the chemical group viz. Kerala Minerals and Metals Ltd, and Malabar Cements Ltd, amounted to Rs.93.98 crores accounting for more than 30 per cent of the total accumulated loss of the 31 companies. As on 31-3-1990, the total accumulated loss of five units in the KSIE group amounted to Rs.55.55 crores.

6.46 Total investment in the 64 companies under review in terms of their gross block, increased from Rs. 424.07 crores in March 1989 to Rs.464.11 crores as on 31-3-1990 registering a growth of 9.44 per cent. The group wise working results of these 64 companies are presented in Appendix 6.9.

6.47 Some of the State public sector manufacturing units are running on loss for the past few years. Though they are trying to put their operations on sound

footing through various measures, they could not achieve targetted production and liquidate losses accumulated in the past for several reasons. As a result, the accumulated losses of a number of these companies have already exceeded their paid up capital. According to the details available, the accumulated losses of 23 manufacturing companies have exceeded their paid up capital by the end of March, 1990. The total accumulated loss of these companies as on 31-3-1990 stood at Rs.264.58 crores as against their total paid up capital of Rs.100.11 crores. The Kerala Minerals and Metals Ltd., Transformers and Electricals Kerala Ltd., Kerala Soaps and Oils Ltd., Autokast Limited, Sitaram Textiles Ltd., Kerala Ceramics Ltd. and Kerala State Drugs and Pharmaceuticals Ltd. were the major contributors to the total accumulated loss. The details of the manufacturing companies whose accumulated losses have exceeded their paid up capital by the end of March, 1990 are given in Table 6.4.

TABLE 6.4

Details of State Public Sector Manufacturing Companies whose Accumulated Loss Exceeded their Paid up Capital

Name of Company	Paid up capital as on 31-3-90	Accumulated loss as on 31-3-90
(1)	(2)	(3)
<b>Electronics</b>		
1. Keltron Counters Limited	393.90	455.81
2. Keltron Electro Ceramics Limited	195.00	267.00
3. Keltron Power Devices Limited	410.23	878.60
4. Keltron Resistors Limited	139.81	173.34
5. Keltron Rectifiers Limited	274.36	610.07
6. Sidkel Televisions Limited	36.00	77.63
<b>KSIE Group</b>		
7. Kerala Ceramics Limited	966.08	1229.98
8. Kerala Soaps and Oils Limited	185.59	1783.46
9. Kerala State Drugs and Pharmaceuticals Limited	420.00	1136.57
10. Travancore Plywood Industries Limited	48.59	555.12
11. Kerala State Detergents and Chemicals Limited	154.63	849.72
<b>Chemical</b>		
12. Kerala Minerals and Metals Limited	3093.27	7658.38
<b>Textiles</b>		
13. Sitaram Textiles Limited	267.00	1580.20
14. Trivandrum Spinning Mills Limited	186.99	488.82
<b>Electronics And Cables</b>		
15. United Electrical Industries Limited	379.07	422.70
16. Transformers and Electricals Kerala Limited	1057.54	4467.08
17. Metropolitan Engineering Co Limited	43.17	327.48
<b>Engineering</b>		
18. Autokaat Limited	760.00	1717.32
19. Steel and Industrial Forgings Limited	350.00	589.00
20. Kerala Automobiles Limited	293.00	779.00
<b>Ceramics and Refractories</b>		
21. Chalakudy Refractories Limited	306.64	331.08
22. Kerala Preonpipe Factory Limited	34.50	46.50
<b>Wood based</b>		
23. Forest Industries (Travancore) Limited	17.71	33.39
<b>Total</b>	<b>10011.00</b>	<b>26458.25</b>

### Central Sector Investment in Kerala

6.48 The Central Sector industrial investment, in terms of gross block, in Kerala was Rs.1520 crores, as on 31.3.1989, constituting 1.57 per cent of the total Central Sector investment of Rs.96581 crores in the Country. The State's share in the total additional investment of Rs.14401 crores during 1988-89 in the Country as a whole, was only Rs.213 crores i.e., just 1.48 per cent. The percentage share of the State in the Central Sector investment in the industries sector which started declining from 1974-75 remained around 1.6 per cent since 1984-85. The data relating to the Central Sector investment in the Country are given in Table 6.5.

6.49 Out of total investment of Rs. 96581 crores till the end of March 1989, as large a share as 56 per cent amounting to Rs. 54111 crores was made in five states of Andhra Pradesh, Madhya Pradesh, Maharashtra, Bihar and Uttar Pradesh. Even in the case of additional investment in 1988-89, these five states received more than 55 per cent, major beneficiaries being Uttar Pradesh and Maharashtra States which received Rs.2201 crores and Rs.2186 crores respectively during this period. The state-wise distribution of Central Sector investment in the Country as on 31.3.1989 is given in Appendix 6.10

TABLE 6.5

### Central Sector Industrial Investment in Kerala

Year	Investment (Rs. crores)		Percentage of column (3) to column (2)
	as on 31st March		
	All India	Kerala	
(1)	(2)	(3)	(4)
1970	3795	116	3.06
1975	6242	202	3.24
1980	18161	423	2.33
1985	47323	831	1.76
1986	56806	923	1.62
1987	68052	1074	1.58
1988	82180	1298	1.58
1989	96581	1520	1.57

6.50 There were eighteen Central Sector Industrial undertakings in Kerala as on 31-3-1990 including five textile mills managed by the National Textile Corporation. They were:

1. Cochin Refineries Ltd, Kochi
2. Cochin Shipyard Ltd, Kochi
3. Fertilisers and Chemicals Travancore Ltd. Ernakulam
4. Hindustan Newsprint Ltd. Kottayam
5. Hindustan Latex Ltd., Thiruvananthapuram
6. Indian Rare Earths Ltd. Aluva and Chavara
7. Indian Telephone Industries Ltd. Palakkad
8. Instrumentation Ltd. Palakkad
9. Hindustan Insecticides Ltd. Udyogamandal
10. Modern Food Industries (India) Ltd. Kochi
11. MMT Ltd. Kalamassery
12. Balmer Laurie and Co. Ltd, Aroor
13. Hindustan Organic Chemicals Ltd. Kochi

*Units under National Textile Corporation*

14. Cannanore Spinning and Weaving Mills, Kannur
15. Vijayaashini Mills, Thiruvananthapuram
16. Pervathi Mills, Kollam

17. Kerala Lakshmi Mills, Trissur
18. Aiyappa Textiles (Cochin) Mills, Thrissur

6.51 Certain basic details regarding the Central Sector manufacturing companies functioning in Kerala are given in Appendix tables 6.11 to 6.14.

*Labour Problems in Kerala*

6.52 The total number of labour strikes in the State decreased to 47 in 1989 from 57 in 1988 and 77 in 1987. Number of mandays lost due to strikes has also come down to 11.03 lakhs in 1989 from 13.22 lakhs in 1988 and 18.02 lakhs in 1987. In 1989, the total number of lock outs in the State was 15 as against 16 in 1988 and 26 in 1987. Total number of mandays lost on account of this has also decreased to 6.09 lakhs in 1989 from 8.10 lakhs in 1988. Thus the total number of mandays lost due to strikes and lock outs in the State declined to 17.12 lakhs in 1989 from 21.32 lakhs in 1988 and 23.57 lakhs in 1987. The total number of mandays lost including that due to lay off has come down to 21.75 lakhs in 1989 from 25.11 lakhs in 1988 and 25.25 lakhs in 1987. The details of strikes, lock out and lay off and the resultant loss of mandays in Kerala from 1984 to 1989 are furnished in Table 6.6.

TABLE 6.6

Number of Strikes, Lockouts, Lay off and Mandays lost in Kerala  
cw 10

Particulars	1984	1985	1986	1987	1988	1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Number of Strikes	65	37	75	77	57	47
2. Mandays lost due to strike	693930	758255	2337720	1801881	1322304	1103213
3. Number of lock outs	14	23	25	26	16	15
4. Mandays lost due to lockouts	142470	426486	724406	554803	809616	609044
5. Mandays lost due to strike and lock outs	836400	1184741	3062126	2356684	2131920	1712257
6. Number of lay off	14	16	20	14	12	12
7. Mandays lost due to lay off	156990	114429	53940	167913	379173	462688
8. Total Mandays lost	993390	1299170	3116066	2524597	2511093	2174945

Source: Labour Statistics at a Glance, Kerala; Labour Department, Kerala.



### Small Scale Industries

6.53 During 1989-90, 8271 small scale industrial units were newly registered in the State, against a target of 8000 units. The capital invested by these units amounted to Rs.110.38 crores. These units provide employment to 49620 persons and generate goods and services worth Rs.226.60 crores.

6.54 The achievements made by the small scale sector during the Seventh Five Year Plan include starting of 32199 new units against the initial target of 20,000 units with a total investment of about Rs.431.00 crores, employment potential of 1.93 lakh persons and production of goods and services valued at Rs.882.25 crores. Similarly there was substantial improvement in respect of capital invested, generation of employment and value of production which exceeded the target by 116 percent, 26 percent and 24 percent respectively. By the end of 1989-90, there were 63698 registered small scale industrial units in Kerala. The capital investment made by all the units is estimated to be of the order of about Rs.854.00 crores. The small scale sector also provides employment to 3.82 lakh persons and produces goods and services worth Rs.1745.00 crores.

6.55 Other major achievements of small scale industries sector during 1989-90 included distribution of seed capital loan to 1139 entrepreneurs and central and state investment subsidies to 2184 entrepreneurs. Besides, 146 sick small scale units were revived through rehabilitation measures, 500 persons were trained under entrepreneurship development programmes.

#### Kerala Financial Corporation

6.56 The Kerala Financial Corporation is the main financial institution in the State providing loan assistance to industrial units, especially to small scale sector. The gross sanction of loans during the year was Rs.6988.96 lakhs as against Rs.6676.33 lakhs in the previous year, registering an increase of 4.68 percent. The disbursement during

the year under review amounted to Rs.5636.44 lakhs while it was only Rs.4167.44 lakhs in 1988-89, an increase of 35.90 percent. Arrear collection also rose from Rs.2501.00 lakhs in 1988-89 to Rs.3725.76 lakhs in 1989-90 showing an increase of about 49 percent. Another important aspect was that the Corporation earned an operating profit of Rs.56.63 lakhs during 1989-90 after incurring losses during the previous two years.

6.57 The salient features of the functions of the Corporation during 1989-90 include improved inflow of applications resulting in increased sanctions, reduction in average time for sanction of loans from 90 days to 63 days, reduction in the average amount sanctioned from Rs.4.29 lakhs to Rs.3.40 lakhs per loan, reckoning of the amount spent by the promoters on preliminary expenses for the purpose of eligibility for disbursements, streamlining the procedure for recovery action etc.

6.58 The Corporation received 8431 applications for an aggregate amount of Rs.320.45 crores during the Seventh Five Year Plan Period. Of this, 6761 (80.19%) applications for a total amount of Rs.260.42 crores (81.26%) have been sanctioned. The details on receipts of applications and gross sanctions are given in Table 6.7.

TABLE 6.7

#### Applications Received and Amount Sanctioned by KFC During 1985-90

Year	Applications Received		Gross Sanction	
	No.	Amount (Rs.lakhs)	No.	Amount (Rs.lakhs)
(1)	(2)	(3)	(4)	(5)
1985-86	1171	5083.10	884	3561.58
1986-87	1332	5956.33	1234	4751.24
1987-88	1405	5813.40	1033	4063.45
1988-89	2145	7453.74	1556	6676.33
1989-90	2378	7738.48	2054	6988.96
<b>Total</b>	<b>8431</b>	<b>32045.05</b>	<b>6761</b>	<b>26041.56</b>

6.59 The gross sanction of loans since inception of the Corporation up to the end of 1989-90 amounted to Rs.401.35 crores for 13459 cases. Of this, the effective sanction was Rs.345.29 crores for 11797 cases. Actual disbursement by KFC from the inception upto 31-3-1990 was Rs.267.58 crores for 11679 cases. The cumulative disbursement constitutes 66.67 percent in terms of amount and 86.77 percent in terms of cases of gross sanction.

6.60 As in the past, in 1989-90 also the major share of loan assistance given by the Corporation has gone to small scale sector. During the year; the Corporation sanctioned loans to 1095 small scale industrial units for an amount of Rs.4400.75 lakhs. This works out to 62.96 percent of the total amount sanctioned and 53.31 percent of the units assisted by the Corporation. Besides, certain concessions in the rate of interest is allowed for small scale units newly started, revival of sick units, units promoted in the tiny sector, for acquisition of quality control equipment by the units etc. Other areas to which priority in lending is given include hotel industry, hospitals and nursing homes, special schemes etc.

6.61 Even though the recovery of loan during 1989-90 amounted to Rs.3725.76 lakhs accumulated arrears at the end of the year was Rs.7469.00 lakhs as against Rs.6477.00 lakhs at the beginning of the year under review. This was mainly due to a large amount of Rs.4717.00 lakhs becoming due during the year.

6.62 The State Government has contributed Rs.275.00 lakhs as share capital to the Corporation during 1989-90. The Industrial Development Bank of India also made a matching contribution. The paid up share capital of the Corporation reached to Rs.2410.42 lakhs as on 31-3-1990. Of this, the contribution by the State Government and the Industrial Development Bank of India constituted 49 per cent each and the rest by scheduled banks, insurance companies etc. The Corporation issued bonds valued at Rs.1870.00 lakhs during 1989-90 as

against the repayment of bonds worth Rs.357.50 lakhs. The amount outstanding with the Industrial Development Bank of India at the beginning of the year was Rs.7287.06 lakhs. Consequently the balance outstanding with the Industrial Development Bank of India at the end of the year rose to Rs.8658.47 lakhs.

*Kerala Small Industries Development Corporation (SIDCO)*

6.63 The Small Industries Development Corporation is engaged in the promotion and development of small scale industries through procurement and distribution of scarce raw materials, revitalisation of sick units, construction and maintenance of industrial estates, marketing of industrial products etc. The scarce raw materials such as iron and steel, parafin wax, coke and coal, titanium dioxide etc., are distributed to registered small scale units by the Corporation. During 1989-90, 2945 small scale industrial units have been benefited by supply of the above items as against 2936 units during the previous year.

6.64 The Corporation manages 11 production units and service centres which are mainly engaged in the manufacture of wooden furniture, survey instruments, drafting machines, tiles, dies and pressure cast components etc. Of the total eleven units, the turn-over of nine units amounted to Rs. 258.81 lakhs during the year. Seventeen major industrial estates and 36 mini-industrial estates are managed by the Corporation. Altogether 924 sheds (531 in major and 393 in mini-industrial estates) are available in all the industrial estates and mini-industrial estates. Of these, 909 sheds (527 in conventional and 382 in mini) have been under occupation by 665 industrial units. Among them 558 units were working properly while 107 units were defunct, idle or closed. Thus the rate of occupancy works out to 98.37 percent and the working units constitute 83.91 percent of the total number.

6.65 Marketing of products manufactured by small scale industrial units is another activity undertaken by the

Corporation. During 1989-90, the Corporation assisted 96 units to sell their products through the sales emporia and other channels. The value of products marketed through SIDCO during 1989-90 was Rs.101.02 lakhs, as against Rs.97.89 lakhs during the previous year. The Corporation also takes up civil works on behalf of other public sector undertakings and autonomous bodies. During the year under review, civil works amounting to Rs.153.00 lakhs have been completed and works costing Rs.250.00 lakhs are nearing completion.

6.66 The financial performance of the Corporation shows that the total turn over has increased from Rs.2200.42 lakhs in 1988-89 to Rs.2437.00 lakhs in 1989-90. Though the turnover has increased by 10.75 percent the Corporation was running on loss. The loss incurred by the Corporation increased from Rs.78.79 lakhs in 1988-89 to Rs.137.66 lakhs in 1989-90.

#### *Small Industries Service Institute*

6.67 The technical and managerial services provided by the Institute through its various centres at the headquarters as well as field units including mobile demonstration units enable the traditional artisans and workers to improve their skills and also induce them to set up self employment ventures.

6.68 During 1989-90, the Institute executed a total number of 1159 jobs providing common facility services which benefited as many as 732 small scale industrial units. Besides, it prepared and/or updated 28 project profiles, 6 technology transfer information documents and 1149 technical schemes to prospective entrepreneurs.

6.69 The Institute also provided consultancy services to a total number of 6724 cases, of which 4387 cases (65%) were dealt with at the Institutes 746 cases (11%) at the unit premises and 1591 cases (24%) through correspondence. Of the total number of consultancy services provided, 2208 cases (33%) were of purely technical in nature. Consultancy services by way of dissemination of

information relating to scope, infra-structural facilities, financial availability, market potential and availability of various incentives and facilities were provided to 3385 cases (51 percent). Similarly such services were provided to 1102 (16 percent) new industrial units. The summary position of consultancy services offered by the Institute is given in Table 6.8.

TABLE 6.8

Details of Consultancy Services Offered by the Small Industries Service Institute During 1989-90

Type of Services	Location		Through Corr-respondence	Total
	At units Premises	At SISI and EC'S		
(1)	(2)	(3)	(4)	(5)
1. Technical	459	1073	676	2208
2. Managerial	8	18	3	29
3. Economic & Statistical	4	803	167	974
4. Starting New Industries	34	702	366	1102
5. Others	241	1791	379	2411
Total	746	4387	1591	6724

6.70 The Institute organised various training programmes for the prospective entrepreneurs and also for the development of technical and managerial skills. Details of the training programmes organised during 1989-90 are given in Table 6.9.

TABLE 6.9

Details of Training Programmes Conducted by the Small Industries Service Institute During 1989-90

Sl. No.	Name of Programme	No. of Courses	Number of Trainees		
			Total	Women	SC/ST
(1)	(2)	(3)	(4)	(5)	(6)
1.	Technical Training	25	171	23	15
2.	EDP for Educated Unemployed Youths	4	113	46	33
3.	Integrated Intensive EDP	1	26	6	-
4.	EDP for Self Employment Beneficiaries	7	222	82	8
5.	Management Development Courses	2	54	4	1
Total		39	586	161	57

6.71 A "Buyers - Sellers Meet" was sponsored by the Institute involving the participation of representatives of small scale ancillary units, large and medium scale industries, public sector undertakings, Department of Industries and Commerce, industries associations etc. The objective of the programme was to identify new product lines having scope for ancillarisation, designs and specifications, quality control, pricing, contractual obligations and settlement of payments.

6.72 Under the sub contract exchange system, 50 small scale units were registered, 188 tender enquiries were processed and passed on to 1467 small scale units and 28 small scale ancillary units were helped to get registration for assistance under Government purchase programme.

6.73 As part of revitalisation of sick units, indepth study reports in respect of 21 sick units were prepared. Above all, industrial potential surveys in respect of Malappuram and Thiruvananthapuram Districts were completed during the year.

*Kerala Industrial and Technical Consultancy Organisation (KITCO)*

6.74 Expert opinion on project preparation, civil works, engineering aspects, energy conservation, industrial management, business promotion etc. are the broad areas of consultancy services offered by KITCO to entrepreneurs and managements. During 1989-90, the company has completed 148 project reports involving a total investment of Rs.595.00 lakhs as against 117 project reports involving a total investment of Rs.985.00 lakhs during the previous year (nine months). Two project appraisal reports involving a total investment of Rs.131.00 lakhs and employment potential of 187 persons were also completed as against seven reports with an investment of about Rs.242.00 lakhs and employment potential of 150 persons during the previous year. Besides, twelve rehabilitation and diagnostic studies (seven studies in the previous year) were also completed. Other reports such as modernisation of rubber industry in Kottayam, prospects of rubber-based industries in Tripura, market survey on ribbons and tapes for office equipment, survey on micro wave ovens, market survey for kubota reapers, survey on availability of waste lubricating oil etc. have been completed.

6.75 Organisation of entrepreneurship development programmes assigned by various agencies such as the Department of Industries and Commerce, Industrial Development Bank of India, Department of Science and Technology etc. is another major activity of KITCO. During 1989-90 about 395 entrepreneurs were trained under the programme. Among the trainees, 46 persons (11.6%) have set up their own industrial units. Eighteen persons (4.6%) have been sanctioned loans for starting industries and 47 persons (11.9%) are awaiting sanction of loans.

6.76 During 1989-90, KITCO was able to achieve a turn over of about Rs.40.47 lakhs, as against a turn over of Rs.23.63 lakhs in 1988-89 (consisting of a period of only nine months due to change in accounting period from calendar year to financial year).

**Handicrafts Industry**

*Handicrafts Development Corporation Kerala Ltd.*

6.77 The Handicrafts Development Corporation is engaged in the development of handicrafts industry in the State by marketing the products within the country and abroad. For the marketing of handicrafts items, the Corporation is running 19 sales emporia, of which 8 are in the State and 11 are outside Kerala. The value of products procured by the Corporation from artisans increased from Rs.154.80 lakhs in 1988-89 to Rs. 192.81 lakhs in 1989-90. The Corporation is also running common facility service centre, raw material depot and procurement centre for distribution of raw materials and procurement of finished products. About 150 artisans are availing themselves of facilities in the common facility service centre at Thiruvananthapuram. Experienced master craftsmen who are recipients of national and state awards, offer necessary technical guidance and advice to needy artisans who make use of the facilities in the common facility service centre. Besides, training in wood carving is provided by the Corporation. Altogether, 10,000 artisans are getting the benefits, through the programmes implemented by the Corporation.

6.78 With a view to projecting the image of handicrafts goods made in Kerala and to boost sales, 16 demonstration-cum-exhibition programmes were organised in several parts of the

country during 1989-90.

6.79 The total sale value of handi-crafts products effected through the Corporation during 1989-90 was Rs.338.59 lakhs as against Rs.282.21 lakhs in the previous year, an increase of 20 per cent in 1989-90. The value of exports under the auspices of the Corporation during 1989-90 was Rs.19.24 lakhs as against Rs.19.82 lakhs during the previous year. The aggregate amount of sales turn over of the Corporation during the Seventh Five Year Plan period works out to Rs.1404.16 lakhs including Rs.83.11 lakhs as export value.

6.80 The working results of the Corporation show that it has been earning a marginal profit since 1986-87 onwards. The net profit, after provision for depreciation, interest and financial charges has increased from Rs.1.43 lakhs in 1988-89 to Rs.5.06 lakhs in 1989-90.

#### *Kerala Artisans' Development Corporation*

6.81 The Kerala Artisans' Development Corporation was incorporated in 1981. The major activities of the Corporation consists of distribution of composite loans, organisation of primary production units, making arrangements for marketing of products, registration of traditional workers etc. for the benefit of artisans belonging to Carpentry, blacksmithy, goldsmithy, copper/bronzesmithy, masonry and shoe making trades. During 1989-90, one primary production unit for promoting copper/bronzesmithy trade was started under the auspices of the Corporation. Arrangements were made during the year with the commercial banks to distribute composite term loans amounting to Rs.65.00 lakhs to 625 traditional artisans as against Rs.61.80 lakhs to 380 artisans during the previous year. The registration scheme enables to indentify the genuine workers who pursue the above trades. Altogether, 1000 skilled artisans have been got registered with the Corporation under the scheme during 1989-90 while the figure for the previous year was 1403.

6.82 The only source of fund to the Corporation, since its inception, is financial assistance from the State Government by way of share capital and loan. During 1989-90, an amount of Rs.10.50 lakhs was received as share capital (Rs.9.00 lakhs) and loan (Rs.1.50 lakhs), a major part of which was used for meeting the establishment costs and administrative charges of the

Corporation. Consequently, the Corporation suffered a net loss of Rs.9 lakhs during the year. The accumulated loss of the Corporation as on 31-3-1990 was Rs.39.52 lakhs. The main reason attributed to the heavy loss is that the Corporation is functioning solely as a promotional agency and not concentrating on commercial activities.

#### *Bamboo Industry*

6.83 About three lakh workers, belonging to the weaker sections of the society, are engaged in production of bamboo mats, basketry wares and other household items. The Kerala State Bamboo Corporation is entrusted with the promotion and development of this traditional industry by organising the dispersed workers in the sector. Equitable distribution of raw materials to the workers and procurement and marketing of the products are the major functions of the Corporation. About 15,000 weaver families, 2000 reed cutters and 1000 other workers are directly attached to the activities of the Corporation. During 1989-90, nearly 123 lakh reeds were collected and distributed among the workers. As a result, employment opportunities were provided to 11,500 weaver families, in addition to 1500 reed cutters and 1000 other workers. Thus the Corporation was able to handle about 80 per cent of the products manufactured by the bamboo industry in the State.

6.84 During 1989-90, the Corporation received Rs.28.50 lakhs as share capital and Rs.28.00 lakhs as loan assistance from the State Government. The sales turn over of the Corporation was Rs.407.48 lakhs during the year. The Corporation earned a total income of Rs.431.75 lakhs as against the expenditure of Rs.438.89 lakhs resulting a net loss of Rs.7.14 lakhs.

6.85 The only source of funds to the Corporation is the assistance from State Government. Since its inception in 1971, the Corporation has received Rs.149.80 lakhs as share capital and Rs.107.16 lakhs as loan from the State Government. Thus the total assistance amounted to Rs.256.96 lakhs. The accumulated loss of the Corporation as on 31.3.1990 works out to Rs.127.95 lakhs.

#### *Beedi Industry*

6.86 Beedi industry in Kerala is considered to be a dispersed type of occupation pursued primarily by individual

workers and small traders. However, beedi making is developing as an organised industry in the northern districts of Kerala mainly because of the efforts made by the Kerala Dinesh Beedi Workers' Central Cooperative Society. The Central society and its 22 primary societies together provide employment to 42,000 beedi workers, including 18,000 women, in Kasaragod and Kannur Districts and Badagara Taluk of Kozhikode District. The central society procures raw materials in bulk and distributes to primary societies. The primary societies make beedies under one brand name and the marketing is done by the central society. The primary societies make and sell beedies worth Rs.15.00 lakhs every day. The central society remit central excise to Govt. of India on an average of Rs.300.00 lakhs per year. About 67 percent of the product cost is paid as wages and incentives to workers. The incentives paid to workers include holiday wages, surrender leave salary, maternity leave, gratuity, provident fund, bonus etc. Besides, a welfare-cum-pension scheme is in operation as a social security measure.

6.87 Though beedi making is considered to be the means of livelihood of the weaker sections of the society, this industry has developed in the State as a flourishing enterprise doing sizeable business due to the concerted efforts made by the Kerala Dinesh Beedi Co-operative Society. This society does not avail itself of any financial assistance from banks or State Government except the share capital assistance of Rs.20.10 lakhs made as initial investment by Government. This investment works out to Rs.50 per worker. It is revealing to note that a one rupee subscription by each worker as his share collected at the time of the formation of the primary societies in 1969 formed the initial source of fund of the Society. The society, besides safeguarding the living conditions of the beedi workers in the northern parts of the State, has made valuable contribution to improve the social status of these workers.

6.88 The salient features of the working of the Kerala Dinesh Beedi Co-operative Society are as follows: The paid up share capital of the central society stood at Rs.35.75 lakhs, consisting of Rs.15.65 lakhs contributed by members and Rs.20.10 lakhs given by State Govt. The purchase value of raw materials procured by the society during the 1989-

90 worked out to Rs.1541.03 lakhs. The primary societies produced a total number of 741.28 crores of beedies during 1989-90. The value of beedies purchased from primary cooperative societies during the year amounted to Rs.4422.98 lakhs while the sale proceeds of beedi by the central society was Rs.4566.20 lakhs. The total number of members of the primary societies as on 31.3.1990 was 50,727. The central and primary societies together provided employment to 33771 workers during the year. Out of this, fresh enrolment during the year was 4080 persons. An amount of Rs.2143.70 lakhs has been disbursed by the primary societies as wages and incentives during 1989-90. Besides, an amount of Rs.91.13 lakhs has been paid as salary to staff by the central and primary societies during the year. The central excise duty remitted by the primary societies during 1989-90 amounted to Rs.314.48 lakhs. The net profit earned by the Society during the year amounted to Rs.38.92 lakhs.

#### *Khadi and Village Industries*

6.89 The Kerala Khadi and Village Industries Board has started 25 co-operative societies exclusively for Scheduled Castes during 1989-90 utilising the Budget allocation of Rs.25.00 lakhs under Special Component Plan, which benefited 1250 Scheduled Caste families engaged in various Village Industries. 10 Co-operative Societies under Tribal Sub Plan were also started for the benefit of 500 Scheduled Tribe families. Thus the total number of co-operative societies under the Khadi and Village Industries Board increased to 2032 by the end of 1989-90. During the year under review, the Board has provided employment to 1.89 lakh persons (including part-time and casual) through its various production centres, registered institutions and co-operative societies as against 1.79 lakhs in the previous year. An amount of Rs.27.55 crores was paid as wages to the workers engaged in Khadi and various Village Industries during 1989-90, as against Rs.19.50 crores during previous year. The value of production of Khadi cloth increased by 22.61 percent from Rs.360.31 lakhs in 1988-89 to Rs.441.79 lakhs during 1989-90. The sales value also showed an increase of about 6 percent from Rs.510.98 lakhs in 1988-89 to Rs.541.43 lakhs in 1989-90. The value of production of Village Industries increased from Rs.5166.18 lakhs in 1988-89 to Rs.6001.43 lakhs in 1989-90. The sales turnover also showed an increase of

17.64 percent from Rs.5385.61 lakhs in 1988-89 to Rs.6335.74 lakhs in 1989-90. 6.90 The Khadi Workers Welfare Fund Act was passed by the Kerala Legislature during the year. The act would benefit about 26000 workers in the Khadi field. The performance of Khadi and Village Industries during 1989-90 is depicted in the Table 6.10. Detailed Performance Indicators are given in Appendix 6.15.

TABLE 6.10

## Khadi and Village Industries-Performance During 1989-90

Particulars	1988-89	1989-90	Increase over previ- ous year(%)
(1)	(2)	(3)	(4)
<b>1. Khadi</b>			
1. Production (Rs. lakhs)	360.31	441.79	22.61
2. Sales (Rs.lakhs)	510.98	561.58	5.99
3. Employment (Nos.) (including part-time and casual)	16449	18482	12.35
4. Wages paid (Rs.lakhs)	327.21	420.28	28.44
<b>2. Village Industries</b>			
1. Production (Rs. lakhs)	5166.18	6001.43	16.17
2. Sales (Rs.lakhs)	5385.61	6335.74	17.64
3. Employment (Nos.) (including part-time and casual)	162808	170708	4.86
4. Wages Paid (Rs.lakhs)	1622.49	2335.19	43.93
<b>3. Total (Khadi &amp; Village Industries)</b>			
1. Production (Rs.lakhs)	5526.49	6443.22	16.59
2. Sales (Rs.lakhs)	5896.59	6877.32	16.63
3. Employment(Nos.) (including part-time & casual)	179257	189190	5.54
4. Wages paid (Rs.lakhs)	1949.70	2755.47	41.33

*Sericulture*

6.91 Sericulture was introduced in the State for the first time in 1986-87 in certain pockets in the districts of Idukki and Palakkad. Encouraged by the success of the programme, sericulture was extended on a very modest scale in the remaining districts in the following year. As at the end of Seventh Plan a total area of 2700 acres (1080ha) has been brought under sericulture in the State. A plan provision of Rs.20 lakhs was made under sericulture for the first time in 1988-89. In the subsequent year an outlay of Rs.25 lakhs was provided for implementing the programme. During 1989-90 an area of 1532 acres involving 1795 farmers, has been brought under sericulture, as against 585 acres involving 786 sericultural farmers during 1988-89. About 47.96 tonnes of cocoon have been produced in the State and six chawki rearing centres started in 1989-90.

6.92 As sericulture is found to be a profitable labour-intensive industry there was demand for starting the industry from all parts of the State. The State Planning Board, therefore, constituted a Special Task Force to study the feasibility of sericulture in all its aspects and recommend various infrastructural facilities required for the expansion of the industry. The Task Force recommended to expand sericulture in all the districts of the State. A target of 28,000 acres, at an average extent of 2000 acres per district has been fixed for the Eighth Five Year Plan. Sericulture has been declared as a village industry. A technical wing has been established in the Kerala State Khadi and Village Industries Board, under a Director (Seri-Tech) for the implementation of the programme. Sericulture is proposed to be implemented through Panchayat Sericultural Co-operative Societies. In view of the high employment potential of sericulture a budget outlay of Rs.300 lakhs has been provided for 1990-91.

6.93 A target of 5250 acres has been set for the year 1990-91. During 1990-91, up to the end of December 1990 an area of 4220 acres was brought under mulberry cultivation by 4955 farmers. Silk worm rearing is yet to start in respect of this area. Steps are under way to establish the infrastructure facility units.

6.94 The programme is implemented under

the guidance of the State Committee on Sericulture under the Chairmanship of the Hon. Minister for Industries and Social Welfare. At the District level, Khadi and Village Industries Project officers are in charge of the programme, assisted by Sericultural Officers and Field Assistants. District Level Sericultural Committees under the chairmanship of the concerned District Collectors have been constituted in all districts to help implement the programme in the districts.

#### *Coir Industry*

6.95 Coir Industry, a labour-intensive cottage industry of Kerala, provides employment to 3.83 lakh coir workers belonging to 2.13 lakh coir worker house holds. A noteworthy feature of this industry is that 84 percent of the Coir workers are women. 80 to 85 percent of the coir and 90 percent of coir products of the country are produced in Kerala.

6.96 The Coir Development programmes pursued by the State aim at bringing more and more coir workers into the co-operative fold so as to ensure reasonable wages to them. There were 844 coir co-operative societies in the State as on 31-3-1990 as against 838 societies at the end of 1988-89. These include 770 primary coir co-operative societies, 53 manufacturing societies, 7 small scale producers' co-operative Societies, 12 husk procurement and distribution societies and one fibre society. Out of 844 coir co-operative societies only 451 (53.4 percent) are working. The Kerala State Co-operative Coir Marketing Federation (Coirfed) is an Apex organisation of 538 primary coir co-operative societies affiliated to it. The Coirfed is undertaking marketing of coir yarn and coir products through 85 owned/Agency show rooms. Besides, Coirfed has set up industrial units of its own such as mechanised defibering unit, mechanised rubber backing unit and power operated rubberised coir mattress unit.

6.97 During the year 1989-90 the primary coir co-operative societies could purchase only 1181 lakh husk valued at Rs.271.00 lakhs, compared to 1341 lakh husk valued at Rs. 273.00 lakhs purchased during the previous year, representing a decline of 11.93 per cent and 0.73 per cent respectively. 77,000 workers in the primary coir co-operatives and 2045 workers in the manufacturing societies were provided work during the year under report. Produc-

tion of coir and coir products in the co-operative sector was 14118.5 tonnes valued at Rs.1521.00 lakhs, as against 12023 tonnes of coir and coir products valued at Rs. 1293.00 lakhs during 1988-89, a percentage increase of 17.4 and 17.6 respectively.

6.98 There was perceptible increase in the export of coir and coir products during 1989-90. Quantity-wise export increased by 10 percent from 24979 tonnes in 1988-89 to 27458 tonnes during 1989-90. The value realised increased by a little over 20 percent to Rs.4017.77 lakhs from Rs.3331.52 lakhs during the previous year.

#### *Handloom Industry*

6.99 There was a drastic reduction in the production of handloom cloth in the State from 104.86 million metres in 1988-89 to 55.15 million metres in 1989-90. Though the quantity decreased by 47.4 percent, the total value of production decreased only by 12 percent from Rs.69.83 crores in 1988-89 to Rs.61.46 crores in 1989-90. The Co-operative Sector contributed 78 percent of the total production which is estimated at 43.00 million metres valued at Rs.51.00 crores during 1989-90. This was 28 percent less in quantity, but 22 percent more in value compared to 59.91 million metres of handloom cloth valued at Rs.41.90 crores produced in the previous year. There were 592 handloom weavers co-operative societies in the State at the end of 1989-90. Of these, 110 were factory type and 482 cottage type societies. During the year under review 80 Weavers' Co-operative Societies were given financial assistance for purchasing modern looms. 350 Chitharanjan looms were purchased and distributed.

6.100 The number of looms in the Corporate Sector decreased by 850 from 6984 in 1988-89 to 6134 in 1989-90. Production of handloom cloth in this sector also showed a decline by 27 percent from 2.95 million metres in 1988-89 to 2.15 million metres in 1989-90. The Handloom Development Corporation has a net work of 38 own show rooms, 31 exclusive show rooms and 5 mobile sales vans. The total sales turnover during 1989-90 was Rs.4.23 crores.

6.101 The number of looms in the unorganised sector at the end of 1989-90 is reported to be only 5254. (The drastic reduction may be on account of adoption of the 1987 census data for 1989-90 and the data obtained in the



previous census for earlier years). The Quantity of handloom cloth produced also decreased by 76 percent from 42 million metres in 1988-89 to 10 million metres in 1989-90 and the value of production decreased by 69 percent from Rs.25.50 crores to Rs.8 crores.

6.102 The Budget provision (Plan and Non-plan) for the Handloom Industry for the year 1989-90 was Rs.1155.08 lakhs and the expenditure were Rs. 1125.26 lakhs being 97.4 percent of the total budget provisions. The total expenditure on handloom schemes during 1989-90 was 9 percent higher than the expenditure of Rs.1033.16 lakhs during 1988-89. Provisions were made in the budget under Special Component Plan (SCP) and Tribal Sub Plan (TSP) for the welfare of Scheduled Castes and Scheduled Tribe Weavers. During the Year under report 425 SC/ST Weavers were given training in handloom weaving as against 280 persons in the previous year. 950 families (SC 900 and ST 50) were also assisted to cross over the poverty line during the period under review as against 290 (250 SC and 40 ST) during the previous year.

6.103 Twenty one dormant weavers' co-operative societies were revitalised by providing financial assistance of Rs. 34.35 lakhs during 1989-90. An amount of Rs.595.50 lakhs was disbursed as rebate during 1989-90 as against Rs.463 lakhs in the previous year. The value of unsold stock in the Co-operative Sector has decreased considerably from Rs.28.00 crores at the end of 1988-89 to Rs.16.83 crores in 1989-90 while that in the corporate sector remained unchanged at about Rs.2 crores at the end of the period under review. The details regarding production, productivity, value of unsold stock etc. are furnished in Appendix 6.19.

6.104 The Kerala State Handloom Weavers' Apex Co-operative Society (HANTEX) established in 1961, had Paid up Capital of Rs.384.71 lakhs as on 30-6-90 against the authorised share capital of Rs.500 lakhs. The Apex Society has purchased yarn worth Rs.2.42 crores and distributed yarn worth Rs.2.48 crores during the period under review.

6.105 It has procured handloom cloth worth Rs.8.65 crores from Primary Societies during 1989-90. The sales turnover Hantex has increased from Rs.8.35 crores in 1988-89 to Rs.10.34 crores in 1989-90 registering about 24 percent increase over the previous year. Hantex has conducted 54 sales cum exhibitions

during 1989-90. The working results of the Handloom Apex Society are furnished in Appendix 6.20.

6.106 The Kerala State Handloom Development Corporation with a Paid Up Capital of Rs. 222.14 lakhs at the end of 1989-90 covered 6134 looms. During the Year 1989-90 out of the total number of 6134 looms under the Corporation 2126 were under Co-operative fold and 4008 household individual looms. The Corporation produced handloom goods worth Rs.245.85 lakhs and achieved a sales turnover of Rs.422.98 lakhs during 1989-90. The working results of the Corporation are furnished in Appendix 6.21.

6.107 The Corporation has a subsidiary company viz., Kerala Garments Ltd. with an installed capacity to produce 3 lakh shirts per annum. During 1989-90 the Company exported garments worth Rs.40.98 lakhs. A generator costing Rs.10.70 lakhs and a steam iron equipment costing Rs.6.71 lakhs were installed in the company to increase productivity. Since the working of the company continued to be much below the installed capacity the sustained loss persisted.

6.108 The main problems confronting handloom industry are lack of adequate working capital, non availability of raw materials, increase in the price of materials used and high wage rates, stiff competition from the mill and powerloom sector and low sales turnover.

6.109 All the production units in the organised sector viz., Co-operative societies and Handloom Development Corporation including its subsidiary company, Kerala Garments Ltd are working on loss. As a result, these organisations experience difficulty in getting working capital loan from financial institutions, resulting in further production loss. In order to break this vicious circle these organisations have to show better operating results by reducing their huge overhead costs and administrative expenses and by increasing production and productivity.

#### Cashew Industry

6.110 Cashew industry provides employment to about one lakh labourers, mostly women. The share of labour in the value added by manufacture in cashew industry is about 60 to 65 per cent.

6.111 At the end of December 1989, there were 220 working cashew factories in the State (excluding the packing

centres) employing 0.93 lakh labourers, which shows a marginal reduction both in the number of factories and labourers employed compared to those at the end of previous year. Though cashew industry

accounts for only 1.8 per cent of the total number of registered factories in the State, it provides employment to about one third (33.10 per cent) of the total factory workers.

6.112 As per the Kerala Raw Cashewnuts (procurement and Distribution) Act 1981 the Government of Kerala appointed the Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd. (CAPEX) as the sole agent for procuring raw cashewnuts during 1990 cashew season also. CAPEX procured 82673 tonnes of raw cashew nuts through its 852 primary co-operative societies during 1990 cashew season as against the targeted quantity of 1.10 lakh tonnes. The procurement infact decreased by 12.27 per cent compared to 94240 tonnes in the previous year. An amount of Rs.50.00 crores was made available to CAPEX from the Kerala State Co-operative Bank Ltd. for the procurement purpose during the period under report. The procured raw cashewnuts were distributed to the registered factories in the State. The procurement price fixed ranged between Rs.11.50 and Rs.13.00 per kg. and the selling price from Rs.13.00 to Rs.14.50 per kg.

6.113 An amount of Rs.104.41 crores was paid to farmers as value of the raw cashew nuts through the primary co-operative societies during 1990 cashew season. In addition, the sub agent primary co-operative societies were paid commission of Rs.2.04 crores and transportation charges of Rs.50.45 lakhs during the period under review. The District-wise details of raw cashew nuts procured during 1990 cashew season, procurement price and selling price are furnished in Table 6.11.

6.114 Compared to the previous year, the net foreign exchange earnings from cashew export increased from Rs.227.08 crores in 1988-89 to Rs. 290.43 crores during 1989-90. Exports of cashew

TABLE 6.11

District-wise Quantity of Rawnuts procured in 1990  
Cashew Season

Sl. No.	District	Quantity (MT)		Procurement price Rs./Kg.	Selling Price to factories Rs./Kg.
		Target (Tonnes)	Achievement (Tonnes)		
(1)	(2)	(3)	(4)	(5)	(6)
1.	Thiruvananthapuram	5000	2711		
2.	Kollam	7500	4293		
3.	Pathanamthitta	2000	1238	11.50	13.00
4.	Alappuzha	1500	997		
5.	Kottayam	2000	1368		13.50
6.	Eranakulam	2500	1259		13.50
7.	Idukki	1000	708	12.50	13.50
8.	Trissur	10000	6624		14.00
9.	Palakkad	3500	3405		14.00
10.	Malappuram	15000	12177		14.00
11.	Kozhikode	8000	5610		14.00
12.	Wayanad	1000	562		14.00
13.	Kannur	35000	28092	13.00	14.50
14.	Kasaragod	16000	13629		
Total		110000	82673		

kernels during 1989-90 was 44857 tonnes valued at Rs.360.34 crores which showed an increase of 32 per cent in quantity and 30 per cent in value over the exports in 1988-89. The export of cashew shell liquid declined from 3043 tonnes in 1988-89 to 3014 tonnes during 1989-90. However, the export earning showed a marginal increase from Rs.2.49 crores in 1988-89 to Rs.2.53 crores in 1989-90. This was due to the higher export price realised during the year, which stood at Rs.8379 per tonne against Rs.8133 per tonne during the previous year. Raw cashew nuts imported during the year was 52475 tonnes valued at Rs.72.44 crores, which shows an increase both in quantity and value compared to the previous year.

The import in the previous year was only 37078 tonnes valued at Rs.51.89 crores. The unit import price was also lower at Rs.13.81 per kg. which was Rs.13.99 per kg in the previous year.

6.115 The Kerala State Cashew Development Corporation has 70 factories under its control employing 50367 workers. During the year under review it has provided 119 days of work to the workers which is higher than 100 days of work given during the previous year. The Corporation has processed 56479 MT of raw cashew valued at Rs.8013.54 lakhs which shows a marginal increase in quantity by 2707 tonnes over the previous year. Production of cashew kernels increased from 13108 tonnes valued at Rs.10860 lakhs in 1988-89 to 14200 tonnes valued at Rs.13215 lakhs in 1989-90. Eventhough the quantity of kernels increased only by 8.3%, the value increased by 21.68% due to increased sale price realised during the year. The sales turnover of the Corporation increased by 21 per cent from Rs.85.00 crores during 1988-89 to Rs.102.78 crores during 1989-90. The estimated turnover for 1990-91 is Rs.141.00 crores. The Corporation earned a profit of Rs.68.19 lakhs during 1989-90 and the accumulated loss has been brought down to Rs.42.24 crores.

6.116 Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd. (CAPEX) registered on 9-8-1984 for taking over the closed cashew factories and organising them into Industrial Co-operative Societies. There were 8 Primary societies under the Apex Society. Out of the 10 closed down cashew factories handed over to CAPEX for management, 9 factories were working during 1989-90, employing 4350 labourers. These factories processed 4642 tonnes of rawnuts valued at Rs.6.58 crores during the year. CAPEX exported 1199 tonnes of cashew kernels valued at Rs.9.67 crores as against 935 tonnes valued at Rs.7.22 crores during 1988-89. The CAPEX has sold 279.60 tonnes of cashew kernels valued at Rs.64.22 lakhs in the domestic market during 1989-90 making the total turnover to Rs.10.37 crores. As per provisional estimate the

CAPEX could bring down their losses from Rs.100 lakhain 1988-89 to Rs.50 lakhs during 1989-90.

#### Mining

6.117 The State Department of Mining and Geology entrusted with the functions under the Mines and Minerals (Regulation and Development) Act of 1967 has improved its administrative set up for the control of mining activities and enhancement of revenue from the mineral sector in the State. The Department has four regional offices one each in Alappuzha, Ernakulam, Kozhikode and Kannur districts and four district offices at Thiruvananthapuram, Kollam, Palakkad and Kasaragod. The Geologists in charge of the regional offices and district offices are now empowered to grant quarrying permits for minor minerals and movement permits for major minerals. During 1989-90, the Department issued 291 quarrying permits and 85 quarrying leases as compared to 163 quarrying permits and 77 quarrying leases in 1988-89 and 77 quarrying permits and 62 quarrying leases in 1987-88. Improvement in the administration of mines, including establishment of the 'Kerala Mineral Squad' for checking clandestine mining in the State has been reflected in the revenue collection from the mining sector since 1986-87. The revenue collection from this sector during 1989-90 increased to Rs.145.56 lakhs from Rs.125.57 lakhs in 1988-89 and Rs.111.92 lakhs in 1987-88. The details of revenue collected during the period from 1985-86 to 1989-90 are given in Appendix 6.25.

6.118 Substantial improvement in the production of minerals in the State has also been noticed during 1989-90. Production of all the major minerals viz, China Clay, Ball Clay, Limestone, Mineral sands, Silica sand and Lime shell increased during 1989-90 from the previous year's level. The details of mineral production in the State are furnished in Appendix 6.26.

6.119 The Kerala Mineral Exploration and Development Project, now working under

this department prepared a mine plan for commencing pilot scale mining and establishing a beneficiation plant on the basis of the graphite deposit at Chirakadavu in Kottayam district. A project profile was prepared for the commercial exploitation of graphite deposits occurring at Nagapuzha and Vadakode in Ernakulam district. A survey for delineating potential gemstone bearing tracts in Thiruvananthapuram and Kollam districts was carried out with a view to demarcating areas for gem development/mining. The Project undertook

intensive investigation in Nileswar of Kasaragod district as a priority item of work as directed by Government. This was taken up for reassessing the grade and reserves of the bauxite deposits, to establish the possibility of developing the bauxite reserves for an Alumina Aluminium Complex in the State. In collaboration with the Department, this project undertook a preliminary survey in Thiruvananthapuram and Kollam districts to locate potential kaolinitic clay bearing areas for commercial exploitation.

## CHAPTER 7

### TRANSPORT AND COMMUNICATIONS

The last three years witnessed a spurt in the growth of transport and communication facilities in the State. The total road length increased by 13,400 km during the last three years compared to 17,400 km in the previous six years. Passenger buses continued to register a 15 per cent increase per annum. With the commissioning of the Erankulam-Alappuzha railway line in 1989-90, the total length of Railway line which remained the same during the past seven years, went up by 57 kms.

7.2 The total length of roads increased from 1,22,864 to 1,25,633 km during the year under review, showing an increase of 2,769 km. The coverage of road length in Kerala is 323 km per hundred sq.km of area and 423 km per lakh of population. The number of motor vehicles registered in the State increased by 57,992 vehicles, over 5.23 lakh vehicles registered till the previous year. The total number of Motor Vehicles registered at the end of 1990 in the State is reported as 5.81 lakhs, showing an increase of 11 per cent over the year. There were 1,495 vehicles per hundred sq.km of area and 1,956 vehicles per lakh of population (1990). The passenger transport operations in the State are undertaken by both the public sector and private sector; of which the private sector enjoys a predominant position. The Kerala State Road Transport Corporation (KSRTC) is the only public sector organisation which operates passenger transport services in the State. K.S.R.T.C. owns 3,313 buses which constitute 22 per cent of the total stage carriages in the State. With regards to goods transportation, the private sector enjoys virtually a monopoly.

7.3 The aggregate route length of Rail-  
road in the State constitutes 998 km of which the broad gauge consists of 885 km

and the metre gauge 113 km. It may be pointed out that the length of railway lines in Kerala is very low when compared to many other States in India. The air traffic in the State is operated from the three Airports viz. Thiruvananthapuram, Kochi and Calicut. International flights to Gulf Countries, Colombo and Male are operated from Thiruvananthapuram.

7.4 Freight traffic originating from the airports in the State went up by 21.12 per cent in the year 1989-90. The actual quantity of freight carried during 1989-90 was 2,517.90 tonnes as against 2,078.83 tonnes in the previous year. The freight traffic terminating at the air ports had come down to 2,899.49 tonnes during 1989-90 from 3,170.27 tonnes in 1988-89. Details regarding the Air traffic are given in Appendix 7.15

7.5 The passport authority issued 3.17 lakhs of passports in the State in the year under review against 2.08 lakhs given in the year 1988-89, representing an increase of 52 per cent. Details regarding the number of passports issued, emigration clearance granted etc. are given in Appendix 7.16.

7.6 Kerala, with its natural waterways, offers tremendous scope for developing an alternative transport system, which when developed would give a fillip to the tourist promotion activities in the State. At present the waterway's share in the total traffic handled in the State is rather small. The three agencies viz. State Water Transport Department (SWTD), Kerala Shipping and Inland Navigation Corporation (KSINC) and the water transport wing of KSRTC are responsible for the entire water transport operations in the State. The three agencies together carried 256.29 lakh passengers and 1.87 lakh tonnes of

cargo during 1989-90. In all the three organisations together a total number of 1,663 persons were employed during the year under review.

7.7 The total quantity of cargo handled at Kochi Port during 1989-90 was 71.25 lakh tonnes as against the previous year's achievement of 78.24 lakh tonnes, thus registering a decrease by 8.9 percent. The number of passengers who sailed from Kochi Port was 21,003 and those arrived at the port was 20,978.

7.8 The shipping and landing operations were carried out in all the three intermediate ports and in the minor port at Azhikkal during the year under review. The quantity of cargo handled at all the 13 intermediate and minor ports during 1989-90 amounted to only 1.58 lakh tonnes as against 3.04 lakh tonnes handled in the previous year representing a steep fall of about 48 per cent. The main reason for such a drop was the fall in the import of foodgrains.

7.9 The passenger steamer service introduced in the 1987 between Beypore and Lakshadweep Islands continued the services during the reporting year also. The services of the small oil barge between the above said terminals were also continued during the year under review.

7.10 The departmental dredgers conducted dredging operations at Beypore, Neendakara and Ponnani ports during the year under review. Apart from this, private dredging works were also conducted for other agencies during 1989-90.

7.11 The total revenue collected at all the 13 intermediate and minor ports during 1989-90 was Rs.50.83 lakhs which showed an increase of 22.9 percent over the previous year's collection of Rs.41.35 lakhs, the increase in revenue is mainly due to the additional receipts from private dredging.

7.12 Kerala Postal Office Circle comprises of 23 Postal Services Divisions and 3 Other Postal Services Divisions with a total number 4,861 post offices. This includes the 10 post offices in Lakshadweep and 4 post offices in Mahe. On an average, one post office served 8.108 sq.km area and a population of 6,166 during 1989-90. The average area covered by one post office has come down by 1.6 percent when compared to 8.151 km of coverage during the previous year. Average population served by one post office during the previous year was 6,157 persons.

7.13 Kerala Telecom Circle is divided into 10 Secondary Switching Areas with 636 exchanges during 1989-90. In the 636 exchanges, there were 231442 number of working connections against 208884 during the previous year, 1988-89. Based on the projected population of 1990, average population served by one telephone during the reporting year was 129 persons. The figure corresponding to the previous year was 140 persons.

7.14 The growth of transport and communications infrastructure in the State over the years is given in Table 7.1.

TABLE 7.1

## Growth of Transport &amp; Communications Infrastructure Since 1975

Sl. No.	Item	Unit	1975	1980	1985	1986	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Road Length (PWD)	km	14870	17408	19107	19460	19752	19808	19815	19836
2.	Road Length (Panchayats)	km	54812	66158	81515	81539	82913	90301	94687	96951
3.	Motor Vehicles	Nos.	119720	174704	319259	361617	414310	473789	523343	581054
4.	Passenger Buses	"	7828	8705	12910	13497	16704	18121	19034	20290
5.	Goods Vehicles	"	15875	21121	40879	45325	51284	57388	58528	61106
6.	Buses under K.S.R.T.C.	"	2212	2935	3239	3070	3019	3219	3240	3313
7.	Railway Route Length									
	(a) Broadgauge	km	774	803	828	828	828	828	828	885
	(b) Metregauge	"	122	113	113	113	113	113	113	113
	Sub-total	km	896	916	941	941	941	941	941	998
8.	Minor Ports	Nos.	10	11	9	9	10	10	10	10
9.	Intermediate Ports	"	2	3	4	4	3	3	3	3
10.	Traffic through Minor & Intermediate Ports									
	(a) Export	Lakh tonnes	17.30	1.87	1.49	0.99	0.75	0.74	1.29	1.18
	(b) Import	"	1.28	0.76	0.26	0.12	0.15	0.09	1.74	0.60
11.	Traffic through Kochi Port									
	(a) Export	"	12.82	11.10	3.90	7.19	12.83	12.17	12.83	10.72
	(b) Import	"	35.90	43.60	36.76	45.59	56.00	55.85	65.41	60.53
12.	Length of navigable waterways	km	N.A.	1895	1895	1895	1895	1895	1895	1895
13.	Passenger Boats in Public Sector									
	(a) State Water Transport Dept. (SWTD)	Nos.	..	..	74	75	75	75	79	86
	(b) Kerala Shipping & Inland Navigation Corporation (KSINC)	"	68	76	8	8	8	9	9	9
	(c) Kerala State Road Transport Corporation - Water Transport Wing	"	..	..	12	12	12	12	12	12
14.	Post Offices	Nos.	4024	4512	4751	4748	4748	4782	4782	4861
15.	Telephone Exchanges	"	286	441	561	584	608	621	632	636
16.	Total Equipped Capacity*	"	70410	104595	144462	162721	178821	195852	224377	246198
17.	Public Call Offices	"	2352	2292	2766	2858	2944	2938	3107	3794

Note: \*Number of Telephone connections that can be given.

### Roads

7.15 A total road length of 1,25,633 kms in the State is maintained by various Departments such as National Highways, Public Works Department, Municipalities, Corporations, Panchayats, Forests, Kerala State Electricity Board etc. Among these, the Public Works Department maintains only 19,836 kms of road length. The length of black-topped/metalled roads was 25,607 kms during 1989-90. The road length under different departments is shown in Table 7.2.

TABLE 7.2

Length of Roads in Kerala under Different Departments as on 31st March 1989 and 1990

Sl. No.	Name of Department	As on	As on 31-3-1990	
		31-3-1989	Road Length (km)	Per-centage
(1)	(2)	(3)	(4)	(5)
1.	National Highways	842	1011	0.80
2.	Public Works Department	19815	19836	15.79
3.	Panchayats	94487	96951	77.17
4.	Municipalities (including Corporations)	4995	5049*	4.02
5.	Forests	2413	2590	2.06
6.	Others <sup>0</sup>	312	196*	0.16
Total		122864	125633	100.00

Note: \*Provisional

<sup>0</sup>Others<sup>0</sup> denote road maintained by Kerala State Electricity Board and Railways. Roads under Irrigation Projects are included under the roads maintained by Public Works Department.

7.16 The length of National Highways in the State stood at 1011 kms, showing an increase of 169 km over the previous year. The present length of 1,011 km of 419 km of N.H.47 and 169 km of N.H.49, which is the newly declared Kochi-Madurai Road. The N.H.49 starts from Kochi by-pass at Kundannur and ends at Bodimettur, the State boundary in Idukki District. The increase in road length under Public Works Department during the year 1989-90 was 21 km, while the length of Panchayat roads increased by 2,464 km, the roads under Municipalities and Corporations together had shown an increase of 54 km. During the year 1989-90 the Public Works Department handed over 169 Km of road to National Highways Department from Idukki, Muvattupuzha and Ernakulam divisions to form N.H.49 and 16 kms of road from Idukki Division to the Kerala State Electricity Board.

7.17 Out of the total length of Public Works Department road, 85 percent is black-topped/cement concrete roads. The surface-wise distribution of Public Works Department roads in the State is furnished in Table 7.3.



TABLE 7.3

Distribution of Public Works Department Roads by Type of Surface as on 31-3-1990

						(km)
Sl. No.	Category	Cement concrete	Black topped	Water Bound Macadam	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	State Highways	16.612	1901.086	8.350	0.920	1926.968
2.	Major District Roads	8.263	5843.470	63.051	20.581	5935.365
3.	Other District Roads	..	8112.510	357.184	628.576	9098.270
4.	Village Roads	..	1077.393	183.234	1614.634	2875.261
Total		24.875	16934.459	611.819	2264.711	19835.864

7.18 During 1989-90, the Public Works Department developed/improved 298 km of roads. The Department also had taken over 31 village roads of 137 km in length during the year under review. The district-wise length of roads improved/developed in the State during the year under review is shown in Appendix 7.1.

7.19 There are fifteen divisions in the roads wing of the Public Works Department to undertake the road development activities in the State. Kottayam Division maintains the maximum road length viz. 1985 kms, about 93 per cent of which is black topped/cement concrete. The road length of Wayanad Division, is only 596 kms, the lowest among the divisions. The division-wise distribution of roads under the Public Works Department is given in Appendix 7.2.

7.20 The total length of roads under the Panchayats was 96,951 km during the year 1989-90. But only 8.3 per cent of this is black-topped/metalled. The percentage of gravelled and earthen roads were 30.3 and 61.4 respectively. The district-wise analysis of panchayat roads shows that Kollam district ranks first with the maximum length of 13,331 km of roads. The lowest being Wayanad District having a length of 2,723 km of

roads. The district-wise length of roads, by type of surface, is presented in Appendix 7.5.

#### Road Accidents

7.21 The number of road accidents in the State has increased by 2,796 during 1989-90, from 14,933 in 1988-89 to 17729. The number of persons injured during 1989-90 stood at 25,758, showing an increase of 28.16 per cent. The number of fatal cases stood at 1,814 in 1989-90 as against 1,604 in 1988-89. It is reported that around 92 per cent of the accidents are due to the fault of drivers. The Appendices 7.6 and 7.7 give the number of accidents classified by different causes.

#### Road Transport

7.22 The road transport operations in the State are undertaken both by the public and private sectors; but the private sector enjoys a predominant role. The Kerala State Road Transport Corporation is the only public sector agency undertaking passenger services in the State. The goods transport by road is more or less monopoly of the private sector.

7.23 The number of motor vehicles registered in the State during the year 1989-90 stood at 5.81 lakhs against 5.23 lakhs in 1988-89, registering an increase of 11 per cent. The growth of motor vehicles in the State from 1975 onwards is presented in Appendix 7.9. Kerala has a high motor vehicles density when compared to other States in India. Kerala had 2,056 vehicles per lakh of population based on 1981 census figures and 1,347 vehicles per hundred sq.km of area during 1988-89, compared to the All India figures of 2,159 and 450 respectively. During 1989-90, Kerala had 2,283 vehicles per lakh of population (1981 census) and 1,495 vehicles per hundred sq.km of area.

7.24 Of the total number of 5,81,054 vehicles as at the end of 1989-90, 2,48,444 (43 per cent) were scooters/motor cycles, 1,79,514 (31 per cent) cars, stations wagons including taxi cars and jeeps, 61,106 (11 per cent) goods vehicles, 71,700 (12 per cent) other vehicles and 20,290 (3 per cent) buses. Ernakulam district ranked first and Thiruvananthapuram district second, while Wayanad district ranked last in regard to vehicles having valid registration.

7.25 The registration of new vehicles in the State showed an increase of 26.58 per cent during the year under review. The number of new registrations during the year 1989-90 was 57,992 as against 45,815 in 1988-89. A category-wise analysis of newly registered vehicles in the State reveals that nearly 60% of the newly registered vehicles were scooters/motor cycles. The category-wise details are given in Appendix 7.12. In the case of new registration of vehicles, while Thiruvananthapuram district ranked first (10,600 nos.) followed by Ernakulam district (10,004 nos.), Wayanad district had the lowest rank (480 nos.).

7.26 The Regional Transport Authorities issued 6,757 temporary and 411 permanent stage carriage permits in the year 1989-90. Under National Permits Scheme, 1,709 permits were issued. The details

regarding permits issued under various categories are given below (Table 7.4).

TABLE 7.4

Details Regarding the Issue of Permits and National Permits Granted under National Permits Scheme

-----	
1. Permits granted under:	1989-90
(i) existing inter-state operators (Nos.)	
(ii) existing intra-state operators ( " )	
(iii) ex-army personnel ( " )	
(iv) unemployed drivers ( " )	1709
(v) scheduled castes/scheduled tribes ( " )	
-----	
Total	1709
-----	
2. State quota of National Permits (end of March 1990)	No quota
-----	
3. Number of goods vehicles having inter-state permits (not included under National Permits' Scheme):-	
(i) Vehicles registered in Kerala having permit to operate in other States	3500
(ii) Vehicles registered in other states having permit to operate in Kerala	2980
-----	
Total	6480
-----	
4. Number of stage carriage permits issued by R.T.A.S:-	
(a) Temporary	6757
(b) Pucca	411
-----	
Total	7168
-----	

7.27 The revenue collected under the Motor Vehicles Act and Rules by way of taxes and other items amounted to Rs.69.91 crores during 1989-90 as against Rs.62.85 crores during 1988-89, registering an increase of 11.23 per cent. The cumulative tax arrears from the private sector at the end of 1989-90 stood at Rs.4.53 crores. K.S.R.T.C., had to remit Rs.14.45 crores as tax arrears as on 31-3-1990.

### Passenger Transport

7.28 The passenger transport operations in the State are undertaken both by the public sector and private sector. The stage carriages under the public sector accounted for only 22 per cent of the total during the year under review. This is very low when compared to the percentage of public sector vehicles in the neighbouring States of Tamil Nadu, Karnataka and Andhra Pradesh. The corresponding shares of Tamil Nadu, Karnataka and Andhra Pradesh in 1988-89 were 46, 41 and 98 in that order. The district-wise distribution of stage carriages in the public sector and private sector in Kerala is given in Table 7.5.

TABLE 7.5

#### District-wise Distribution of Stage Carriages in the State

Sl. No.	Name of District	K.S.R.T.C. <sup>a</sup>		Other stage carriages	Total stage carriages
		No. of Transport Units	No. of buses held in each unit		
(1)	(2)	(3)	(4)	(5)	(6)
1.	Thiruvananthapuram	13	1158	222	1380
2.	Kollam	4	264	731	995
3.	Pathanamthitta	3	149	414	563
4.	Idukki	1	34	356	390
5.	Alappuzha	6	319	533	852
6.	Kottayam	6	287	930	1217
7.	Eranakulam	6	297	1555	1852
8.	Thrissur	5	192	1685	1877
9.	Palakkad	1	96	853	949
10.	Malappuram	3	86	907	993
11.	Kozhikode	2	121	1201	1322
12.	Wayanad	2	161	99	260
13.	Kannur	2	123	1313	1436
14.	Kasaragod	1	26	345	371
Total		55	3313	11144	14457

NOTE: <sup>a</sup>Includes vehicles held in various workshops of KSRTC also.

Source: 1. Kerala State Road Transport Corporation  
2. Office of the Transport Commissioner

7.29 The number of stage carriages registered in the State has increased from 14,432 in 1988-89 to 15,056 in 1989-90. The private sector has a greater role in the passenger transport operations in the northern districts of the State when compared to that in the southern districts.

#### Kerala State Road Transport Corporation (KSRTC)

7.30 The Corporation had a fleet strength of 3,313 vehicles during 1989-90 as against 3,240 vehicles during the previous year. The Corporation added 280 new vehicles and disposed of 207 vehicles in 1989-90 as against 392 and 413 in 1988-89, the previous year. The number of schedules operated by the Corporation was 2,948 during 1989-90 which show an increase of 60 over 2,888 schedules operated in 1988-89. The Corporation operated its services in 3,838 routes with a route distance of 1.74 lakhs km during 1989-90. The corresponding figures for the previous year were 3,865 and 1.73 lakhs, respectively. The aggregate number of passengers carried stood at 8,406 lakhs in the year 1989-90 as against 8,545 lakhs in the preceding year, registering a decrease of 1.63 per cent. Out of the total passengers carried the number of students accounted for 596 lakhs, ie. 7 per cent of the total number of passengers carried. The figure for the previous year was 585.91 lakhs.

7.31 The total revenue earnings of the Corporation stood at Rs.155.92 crores during 1989-90 as against Rs.148.90 crores during the preceeding year, showing an increase of 4.71 per cent. The present fare structure of K.S.R.T.C. is given in the Table 7.6.

TABLE 7.6

#### Fare Structure of K.S.R.T.C with effect from December 1990

Sl. No.	Type of Service	Basic fare per Km (paise)	Minimum fare (paise)
(1)	(2)	(3)	(4)
1.	City	13	70
2.	Ordinary	13	70
3.	Fast Passenger	16	150
4.	Express	18	400
5.	Deluxe Express	20	500

7.32 The average earnings per passenger stood at 181 paise during 1989-90 as against 170.9 paise during 1988-89, showing an increase of 5.91 per cent. The average earnings per km of buses operated went up to 545 paise from 520 paise during the previous year, an increase of 4.81 percent.

7.33 The total revenue expenditure of the Corporation increased from Rs.172.05 crores in 1988-89 to Rs.175.49 crores in 1989-90 (2.00 per cent). Out of the total expenditure, the staff cost stood at Rs.86.61 crores (49.35 percent); repairs and maintenance Rs.22.95 crores (13.08 percent); fuel Rs.33.52 crores (19.10 percent); others Rs.32.41 crores (18.47 percent). While the gross revenue earnings of the Corporation went up by 4.71 per cent while the gross expenditure increased by 2.00 per cent when compared to the preceding year.

7.34 The Corporation continued to incur heavy loss. The loss incurred however during 1989-90 at Rs.19.57 crores was less than the loss of Rs.23.15 crores incurred during the preceding year. The accumulated loss of the Corporation has reached as high a figure of Rs.143.82 crores in 1989-90.

7.35 The total share capital contribution by the Government of Kerala and Government of India aggregated Rs.66.02 crores as at the end of 1989-90. Loans outstanding at the end of the year 1989-90 amounted to Rs.81.85 crores. Out of this the outstandings to Government of Kerala were Rs.36.51 crores, L.I.C. Rs.12.37 crores and I.D.B.I. Rs.32.97 crores.

7.36 The efficiency and productivity of a transport corporation mainly depends on the age and composition of its fleet, staff productivity, fleet utilisation etc. During 1989-90 as high as 41 percent of the fleet of K.S.R.T.C. was overaged, which is very high compared to other Transport Corporations in the country. Low fleet utilisation, high percentage of overaged buses, frequent accidents and breakdowns and frequent cancellation of schedules contributed to low efficiency and productivity of K.S.R.T.C. During 1989-90, the Corporation showed some improvement in the case of fleet utilisation. It is estimated that the fleet utilisation of K.S.R.T.C. during 1989-90 was 84.2 percent where as the All-India average was 85.50 percent during 1986-87. The staff productivity of KSRTC per day is 26.4 km in 1989-90 compared to the All-India average of

32.50 during 1986-87. The cost per employee per day was Rs.80 during 1989-90 as against the All-India average of Rs.49.46 in 1986-87.

7.37 As regards the bus-staff ratio,<sup>4</sup> declining trend was noticed during 1989-90. The number of staff-per-bus had come down to 8.96 in 1989-90 from 9.44 in 1988-89. This figure is however less than 8 in the Transport Corporation of the neighbouring States of Andhra Pradesh, Tamil Nadu and less than 7 in Karnataka. At the same time, the staff-strength of the K.S.R.T.C. has decreased from 30,146 to 29,680 during the year under review. The category-wise staff position of the Corporation is given in Table 7.7.

TABLE 7.7

## Category-wise Staff Position of KSRTC

Sl. No.	Category	At the end of March 1989	At the end of March 1990
(1)	(2)	(3)	(4)
1.	Administrative staff including watch and ward	4756	4676
2.	Traffic Personnel	18543	18259
3.	Maintenance Personnel	6847	6745
Total		30146*	29680*

Note: \*Excludes the staff under the water transport wing of Kerala State Road Transport Corporation.

## Goods Transport

7.38 The private sector plays a predominant role in the goods transport operations by road in the State. The number of goods vehicles in the State stood at 61,106 in 1989-90 as against 58,528 in 1988-89. The table below presents the growth of goods vehicles in the State since 1966. The number of goods vehicles increased by 66.5 percent between 1985 and 1990.

TABLE 7.8  
Growth of Goods Vehicles in  
Kerala since 1966

Year	No. of goods vehicles	Index
(1)	(2)	(3)
1966	8848	100
1975	15875	179
1980	20128	227
1981	22896	259
1982	25696	290
1983	29153	329
1984	30966	350
1985	36699	415
1986	45325	512
1987	51284	579
1988	57388	648
1989	58528	661
1990	61106	691

#### Railways

7.39 The three major Railway Divisions- Thiruvananthapuram, Palakkad and Madurai serve rail routes in the State. The route length of the railway network consists of about 988 km, which comprises of 885 km broad-gauge and 113 km metre-gauge. The Thiruvananthapuram Division introduced no new train services during the year under review, except the Ernakulam-Alappuzha route.

7.40 The Ernakulam-Alappuzha railway route was opened for traffic on 15-10-1989. The Kayamkulam-Alappuzha line is expected to be completed in June 1991. The total estimated cost of the work is Rs.35 crores. In respect of Thrissur-Guruvayoor line, the estimated cost is Rs.17 crores and the work is nearing completion.

7.41 The Thiruvananthapuram division consists of 104 railway stations comprising of 59 Block stations and 45 flag/halt stations. It is estimated that 340 lakh passengers originated from the stations of Thiruvananthapuram division as against 309 lakhs in 1988-89. The number of wagons loaded from the station under the Thiruvananthapuram division was 1.70 lakhs in 1988-89 and 1.53 lakhs in 1989-90, which showed a decrease of 10 percent. The number of wagons received in the division increased from 1.08 lakhs in 1988-89 to 1.14 lakhs in 1989-90. The quantity of goods originated from and terminated at Thiru-

vananthapuram division was 29.96 lakh tonnes and 23.97 lakh tonnes respectively during 1989-90. The freight operations are mainly undertaken by the three minor yards viz. Irimpanam, Kochi and Ernakulam Marshalling Yard. The Irimpanam yard looks after the freight operations of M/s. Kochi Refineries Ltd. and M/s. FACT Kochi division. The Kochi yard undertakes the traffic originating in the port area and the FACT godown of the division. The Ernakulam Marshalling yard deals with the divisions such as Thirunelveli, Nagarcoil and the industrial area in an around Ernakulam.

7.42 The revenue receipts both from passenger and goods traffic of the Thiruvananthapuram Division showed upward trend during the year under review. The revenue collection from passenger transportation increased from Rs.4785 lakhs in 1988-89 to Rs.5252 lakhs in 1989-90 and that of goods transportation increased from Rs.7571 lakhs to Rs.7885 lakhs during the same period. Details are shown in Table 7.9.

TABLE 7.9

#### Revenue Receipts - Thiruvananthapuram Division

Item	(Rs. lakhs)			
	1988-89		1989-90	
	Outward	Inward	Outward	Inward
(1)	(2)	(3)	(4)	(5)
Passengers	4785*	..	5252	..
Goods	7571*	..	7885	..
<b>Total</b>	<b>12356</b>	<b>..</b>	<b>13137</b>	<b>..</b>

Note: \*Corrected figures

7.43 The Government of India have set up the Konkan Railway Corporation to undertake the construction of Railway line between Bombay and Mangalore. The Government of Kerala will have to meet, as per the agreement signed, 6 percent of the equity capital of the Corporation which amounts to Rs.15 crores. First instalment of the State share has been released.

#### Air Transport

7.44 The Air India and Indian Airlines are the two important airlines which undertake the air transport operations

in the State. Indian Airlines operates services from Thiruvananthapuram, Kochi and Calicut to other major cities in the country along with two international flights to Colombo and Male. Air India operates international services from the Thiruvananthapuram Airport to the Gulf countries.

7.45 The total number of passengers originated from Thiruvananthapuram, Kochi and Kozhikode Airports declined by 2.85 per cent in 1989-90 when compared to the preceeding year. The actual number of passengers originated decreased from 3.51 lakhs in 1988-89 to 3.41 lakhs in 1989-90. The passengers terminated had also come down to 3.66 lakhs during 1989-90 from 3.71 lakhs in 1988-89, registering a decline of 1.35 per cent.

7.46 The freight traffic originated from the above airports in the State had increased by 21 per cent during the year under review. The actual quantity of freight carried during the year 1989-90 stood at 2517.90 tonnes as against 2078.83 tonnes during the preceeding year. The freight traffic terminated declined from 3170.27 tonnes in 1988-89 to 2899.49 tonnes during 1989-90 (Appendix - 7.15).

#### Passports

7.47 The total number of passports issued in the State was 3.17 lakhs in 1989-90 compared 2.08 lakhs in 1988-89, showing an increase of 52 per cent. Emigration clearances issued from Kozhikode increased from 6956 to 7474 i.e., by 7.4 percent. Information about clearances from Kochi is not available. The details of passports issued, emigration clearance granted etc. are given in Appendix - 7.16.

#### Inland Water Transport

7.48 Water transport is the cheapest mode of transport. Three agencies viz. State Water Transport Department (SWTD), Kerala Shipping and Inland Navigation Corporation (KSINC), and the Water Transport wing of KSRTC are entrusted with the total inland water transport operations in Kerala.

7.49 The three agencies together carried 256.29 lakh passengers (50%) were carried by SWTD, 85.88 lakh passengers (33%) by KSRTC and the remaining 43.8 lakh passengers (17%) by KSINC. The passengers travelled by water transport

registered a decrease of 1 percent over the previous year's number of 259.1 lakh passengers.

7.50 Cargo handled by the three agencies stood at 1.87 lakh tonnes during 89-90 which shows a fall of 3 percent over the previous year's achievement of 1.92 lakh tonnes. Out of the total cargo moved more than 98 percent was carried by KSINC and the remaining portion by SWTD. There was no cargo transportation by KSRTC. A total number of 1663 persons were employed in all the three agencies indicating an increase of 3 percent over the preceding year.

#### State Water Transport Department

7.51 SWTD operates boat services with 54 schedules in 87 routes covering a total distance of 1828 kms. The total distance covered in a day is 7345 kms. There are 12 sub offices at Alappuzha, Kottayam, Changanassery, Kollam, Pulinkunnu, Changannoor, Pulikkezhu, Edathua, Muhama, Vaikkom, Eranakulam and Payyannoor. Revenue earnings during the year was Rs.140.03 lakhs and the loss sustained was estimated at Rs.110.80 lakhs.

7.52 The department has a fleet strength of 86 boats of which only 44 boats are in operation. Out of the 86 boats, 21 boats are over 20 years old. The State Water Transport Department boat services carried 126.91 lakh passengers during 89-90 showing a short fall of 1.4% compared to the previous year. More details are given in table 7.10.

#### Kerala Shipping and Inland Navigation Corporation

7.53 KSINC mainly deals with cargo transportation. It operates cargo and passenger boat services in and around Kochi. Of the 9 passenger boats owned by the Corporation, only 8 were in operation during 1989-90. The passenger boat services carried 43.8 lakh passengers during the year 89-90 showing an increase of 16% over the previous year's figure of 37.68 lakh passengers. Cargo carried during 89-90 was 1.84 lakh tonnes which was a decrease of 2 percent from the last year.

7.54 The total revenue receipts was Rs.79.65 lakhs recording a shortfall of 8% over the previous year's revenue.

#### Water Transport Wing of K.S.R.T.C.

7.55 Water Transport Wing of KSRTC operates only passenger boat services in and around Kochi. KSRTC owned 12 boats, operated in 8 routes during 1989-90. Passengers carried during the year stood at 85.5 lakhs which showed a shortfall of 8% over the previous years achievement.

7.56 Total revenue receipt during 89-90 amounted to Rs.50.80 lakhs, and it showed an increase of 2% over the previous year's revenue collection of Rs.49.63 lakhs. Statistics relating to the boat services are given in table 7.10.

TABLE 7.10

## Inland Water Transport on Operational Statistics

Sl. No.	Particulars	1988-89			1989-90		
		SWTD	KSINC	KSRTC	SWTD	KSINC	KSRTC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Total number of boats	79	9p <sup>a</sup> & 9b <sup>a</sup>	12	86	9p <sup>a</sup> & 8b <sup>a</sup>	12
2.	Boats aged over 20 years	20	Nil	Nil	21	Nil	Nil
3.	Boats in Operation.	47	7p <sup>a</sup> & 8b <sup>a</sup>	12	44	9p <sup>a</sup> & 8b <sup>a</sup>	12
4.	No. of trips or schedules operated per day:	54	82	243	54	82	243
5.	Gross route distance (km)	7345	896	..	7345	896	..
6.	No. of passengers carried (lakhs)	128.69	37.68	93.13	126.91	43.80	85.58
7.	Volume of Cargo carried (lakh tonnes)	0.04	1.88	Nil	0.03	1.84	Nil
8.	Total revenue receipts (Rs.lakhs)	141.11	86.80	49.63	140.03	79.65	50.80
9.	Total expenditure (Rs.lakhs)	251.22	94.27	101.09	250.83	91.16	103.07
10.	Net loss	110.11	1.14	51.46	110.80	11.51	52.27
11.	No. of persons employed.	1115	172	268	1166	261	236

Note: <sup>a</sup> p - Passenger boat  
b - barges.

Ports and Harbours

7.57 Kerala has a major port at Kochi and thirteen other intermediate and minor ports. The intermediate ports are at Neendakara, Aalappuzha and Kozhicode. The other 10 ports are minor ports which are at Vizhinjam, Thiruvananthapuram, Kollam, Kodungallore, Vadakara, Ponnani, Thalassery, Kannur, Azhikkal and Kasaragod.

7.58 During 1989-90 the port at Kochi handled only 71.25 lakh tonnes of cargo as against 78.24 lakh tonnes of cargo

handled during the previous year, registering a shortfall of 8.9%. There was only a slight decrease of 0.6% in the case of coastal traffic whereas in foreign traffic the downfall stood at 18.5%. The fall in the Petroleum traffic during 89-90 was the reason for the negative growth rate in the foreign trade. The following table (table No. 7.11) shows a comparative position relating to the achievements during 1988-89 and 1989-90.

TABLE 7.11

Coastal and Foreign Traffic through Kochi Port during 88-89 and 89-90  
(in lakh tonnes)

Traffic	Export			Import			Total		
	88-89	89-90	% variation increase(+)/ decrease(-)	88-89	89-90	% variation increase(+)/ decrease(-)	88-89	89-90	% variation increase(+)/ decrease(-)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Coastal	6.03	5.89	- 2.32	35.80	35.70	- 0.31	41.84	41.59	- 0.60
Foreign	6.80	4.83	-28.97	29.60	24.83	-16.11	36.40	29.66	-18.52
Total	12.83	10.72	-16.45	65.41	60.53	- 7.46	78.24	71.25	- 8.93

Source : Administration Report of Kochi Port Trust 1989-90

7.59 The import traffic during 1989-90 stood at tonnes as against 65.41 lakh tonnes 60.53 lakh during the preceding year. Commodity-wise details are given in table 7.12.

TABLE 7.12

Commodity-wise Details of Import through Kochi Port  
during 88-89 & 89-90  
(in lakh tonnes)

Commodities	1988-89		1989-90		%variation increase (+)/decrease (-)
	Quan- tity	% to total	Quan- tity	% to total	
(1)	(2)	(3)	(4)	(5)	(6)
Fertilizers and raw materials	8.24	12.6	8.89	14.7	(+) 7.9
Foodgrains	1.64	2.5	0.43	0.7	(-) 73.8
Iron, Steel and Machinery	0.14	0.2	0.21	0.4	(+) 50.0
News print	0.17	0.3	0.13	0.2	(-) 23.8
Cashew nuts	0.22	0.3	0.21	0.3	(-) 4.5
Miscellaneous*	55.00	84.1	50.66	83.7	(-) 7.9
Total	65.41	100.0	60.53	100.0	(-) 7.5

Note : \*includes P.O.L.

Source : Administration Report of Kochi Port Trust  
1989-90.

7.60 The export traffic through Kochi



Port during 89-90 also registered a decline being 10.71 lakh tonnes as against 12.83 lakh tonnes during 88-89. Commodity-wise details on exports during 88-89 and 89-90 are given in Table 7.13.

TABLE 7.13

Commodity-wise Statement of Exports during the Years  
1988-89 and 1989-90

Commodities	(in tonnes)				
	88-89 Quantity	% to total	89-90 Quantity	% to total	% variation over 88-89 Increase (+)/ decrease (-)
(1)	(2)	(3)	(4)	(5)	(6)
Tea	22884	1.8	12347	1.2	(-146.0
Cashew Kernels	33932	2.7	46095	4.3	+35.8
Sea foods	52810	4.1	53123	5.0	+ 0.6
Coir Products	24116	1.9	26117	2.4	+ 8.3
Spices	41317	3.2	41268	3.8	- 0.1
Coffee	41248	3.2	57852	5.4	+40.3
Miscellaneous*	1066663	83.1	834666	77.9	(-21.7
Total	1282970	100.0	1071468	100.0	(-)16.5

Note : \* includes P.O.L.

Source : Administration Report of Kochi Port Trust  
1989-90.

7.61 The number of ships which called at Kochi Port increased to 816 during 89-90 showing an increase of 4.6% over 1988-89. Category-wise details of ships and their Net Registered Tonnage (NRT) during 88-89 and 89-90 are given in Appendix 7.17.

7.62 Total passengers who sailed from and arrived at the Port during the year were 21,003 and 20,978 respectively as against 20,497 and 21,425 in 1988-89.

7.63 The shipping and landing operations were carried out in all the three intermediate ports at Neendakara, Aalappuzha and Kozhikode/Beypore and at the minor port at Azhikkal. The total quantity of cargo handled at the intermediate and minor ports during 1989-90 came to 1.58 lakh tonnes against 3.04 lakh tonnes of cargo during the preceding year, recording a shortfall of 48.07%. The reason for this is mainly due to the decrease in foodgrain import. Details of commodity-wise cargo handled at the intermediate and minor ports are given in Appendix 7.18.

7.64 The number of Steamers and sailing vessels arrived were 416 during 89-90 against 402 steamers and sailing vessels which called at the intermediate and minor ports during the previous year an increase of 3.48 percent. Port-wise details of steamers and sailing vessels which called at the intermediate and minor ports with their registered tonnage

are given in Appendix table 7.19.

7.65 The passenger steamer service introduced in 1987 between Beypore and Lakshadweep Islands continued during the year under review also. The passenger service carried 1743 passengers to the Islands and 894 passengers from the Islands during 89-90. The services of the small oil barge between Beypore and the Islands were also continued during the year.

7.66 During the year 89-90 the departmental dredgers conducted dredging operations at Beypore, Neendakara and Ponnani Ports. Private dredging works were conducted at Kochi shipyard, Kochi-Udyogamandal Canal for Irrigation department, and for certain other private agencies. Particulars of dredging operations conducted during 89-90 are given in Appendix 7.20.

7.67 The number of harbour crafts registered at the intermediate and minor ports was 520 during 1989-90 as against 823 harbour crafts in the previous year. Category-wise details of harbour crafts registered at the intermediate and minor ports are given in Appendix 7.21.

7.68 The total revenue collected at the intermediate and minor ports during the year 1989-90 amounted to Rs.50.83 lakhs against Rs.41.35 lakhs during the previous year recording an increase of 22.9%. The increase in revenue was mainly on account of additional revenue earned from private dredging. Category-wise break-up of revenue collected during 89-90 is given in Appendix 7.22.

7.69 Hydrographic surveys were conducted at Azhikkal, Beypore, Ponnani, Kodungalore, Neendakara, Vizhinjan etc. during 1989-90 A new survey vessel 'Sarvekshanam' was commissioned during the year under review.

7.70 Construction on the wharf at Neendakara Cargo Harbour was continued and two break waters at Beypore were also completed during 1989-90. Repairs and replacement of rails, girders, fenders, trolley line etc. at Aalappuzha, Kozhikode and Valiyathura were done during the year. Construction works of 4 Type II Duplex quarters at Beypore and one dormitory at Neendakara were completed during 89-90.

7.71 Investigation work for new fishing harbours at Kayamkulam, Thottappally and Muthalapuzhi and on going ones at Munambam and Thangassery were carried out. The project reports on Fish Landing Centres at Vadakkal and Elathur were prepared and the project reports already prepared for Fish Landing Centres at Quilandy and Arthungal were under consideration.

#### Communications

7.72 Kerala Postal Circle consists of 23 postal services divisions and 3 other

postal services divisions. During 1989-90 under the 23 postal services divisions there were 50 Head Post Offices, 1971 departmental and other extra departmental Sub Post Offices and 2840 Branch Offices. The 3 other postal services divisions are Railway Mail Services, Mail Motor Services and Central Stamp Depot. Category-wise details of post offices are given in Appendix 7.23 and the growth of postal system during the last ten years is given in Appendix 7.24.

7.73 Speed post centres were introduced in Kerala during 1987. In Kerala there were 4 speed post centres at Thiruvananthapuram, Kollam, Kochi and Aaluwai during 1989-90. Names of speed post centres in India and foreign centres where speed post services available are given in Appendix 7.25.

7.74 On an average one post office served 8.018 sq.kms. and 6166 persons during the year under report. The corresponding figures during the previous year were 8.151 sq.kms and 6157 persons. The total number of post offices in Kerala (excluding the 14 post offices in Mahe & Lakshadweep coming under Kerala Postal circle) has increased to 4847 during 89-90 from 4768 during 88-89. District-wise details of area and population served by one post office and details of division-wise post offices in different categories are given in Appendix tables 7.26 and 7.27.

7.75 Kerala Telecom Circle comprises of 10 Secondary Switching Areas (SSAs) with a total number of 636 exchanges during 89-90, against 632 exchanges during 88-89 showing an increase of 0.63%. These 636 exchanges are provided with a total equipped capacity of 246190 telephones and 231442 working connections. The total number of public call offices under Kerala circle was 3794 during the year 1989-90, which showed considerable increase of 22.11% over the previous year's figure of 3107. SSA-wise details of the Telecom system are given in Appendix 7.28. As in 1989-89, Eranakulam stood first in the case of number of exchanges, equipped capacity, working connections and public call offices.

#### **Tourism**

7.76 During the year under review 68,000 foreign tourists and 15.85 lakh domestic tourists are estimated to have visited the State as against 52,083 foreign tourists and 12.40 lakh domestic tourists in the previous year. This shows an increase of about 30 per cent in both foreign and domestic tourists in 1989-90.

7.77 The Department of Tourism carried out the following activities during the

year under review. District Tourism promotion councils were formed in all the districts and they were provided with RS.15.50 lakhs for carrying out tourism development activities in their respective districts. The Institute for Tourism and Travel studies has undertaken 29 training programmes in various aspects of tourism management. An amount of Rs.19.42 lakhs was spent towards promotion and publicity during the year under review. The construction of ropeway at Malampuzha by M/s Brico Ltd. is nearing completion. Nishagandhi Dance Festival and Elephant March were organised and 1990 was observed as tourism awareness year.

7.78 The construction of Yatri Nirvases at Thiruvananthapuram, Kollam, Kochi, Thrissur and Kannur, Wayside amenities at Kasaragod, Badagara, Valara, Kayamkulam and Palaruvi and Forest Lodge at Neyyar Dam were under way during the year under review. Construction of two beach resorts at Varkala and Kappad was completed. Two buses were bought by the Department of Tourism and handed over to KTDC. One was put into operation on the Ponmudi - Neyyar dam route and the other for city sight seeing. The construction of Luxury Cruiser for Pathiramanal is also nearing completion. Works connected with floating restaurant at Veli, flood lighting of Kanakakkunnu palace and Museum were also completed during the year under review.

7.79 The main activities of the Kerala Tourism Development Corporation are hoteliering, transport operation, centralised reservation services and tourism information and publicity.

7.80 The Corporation runs eleven hotel units, one yatriniwas and six motels. All the hotel units except Hotel Chaithram and Periyar House had an occupancy ratio of less than sixty per cent. Altogether 68,188 domestic tourists and 17,164 foreign tourists availed themselves of the hotel facilities of KTDC during the year under review. The total income of the Corporation was Rs.272.92 lakhs as against the expenditure of Rs.234.85 lakhs. The administrative and operating expenses are in the ratio of 56:44. The accumulated loss of the Corporation as on 31.3.90 was Rs.620 lakhs. The operational details of KTDC are shown in the Appendix Table 7.29.

7.81 Tourist Resorts (Kerala) Ltd., a subsidiary of KTDC, was formed in 1989-90 with a view to complete the construction of the 4-star hotel project at Kochi. The total cost of the project is Rs.600 lakhs, part of this cost will be met from IFC and Tourism Finance Corporation.

## CHAPTER 8

### EXPORT IMPORT TRADE

#### India's Foreign Trade

The decade beginning from 1980-81 witnessed a sharp deterioration in India's balance of trade. The trade deficit which was of the order of Rs.5,700 crore per annum on an average during the first half of the eighties increased to Rs. 7,700 crore per annum during the later half of the decade. While the preliminary estimates for 1989-90 found that trade deficit at Rs. 7,731 crore, for the first eight months, April-November of 1990-91, trade deficit reached Rs. 7,181 crores. The deficit for the full year may therefore well be as wide as Rs. 10,000 crores, if not more.

8.2 The level of trade deficit is a major cause of concern, especially because, it is at the root of and is a major determining factor of the deficit on current account in the balance of payments. The adverse effects of the burgeoning trade gap on the balance of payments position became particularly disturbing on account of the following developments:

- (i) Plummeting surplus on account of invisibles in recent years.
- (ii) Large repayment liabilities to the International Monetary Fund (IMF).
- (iii) Decline in the flow of concessional capital coupled with poor utilization of external aid.

8.3 The deteriorating balance of payment (BOP) position and the mounting external liabilities have led to the erosion of India's credit rating internationally. The war in the Gulf and the resultant adverse impact on India's export trade and additional import bill especially on account of the rise in crude prices, fall in foreign remittan-

ces and the expenditure on massive evacuation of Indian nationals in the Gulf, have further exacerbated the position in 1990-91. A combination of these adverse developments had the consequence of a sharp decline in the country's foreign exchange reserves comprising foreign currency assets, gold and SDR of Rs. 3,632 crore during the period, April 1, 1990 to January 11, 1991, the decline during the corresponding period of 1989-90 was only of Rs.1,068 crore. In the circumstances, the Government of India was forced to go for an immediate new loan of \$ 1786 million (about Rs.3275 crores) from the International Monetary Fund, in January 1991.

8.4 According to provisional figures released, the trade deficit of Rs. 7,731 crores in 1989-90, is marginally smaller than the deficit of Rs. 7,892 in 1988-89 as shown in Table 8.1.

TABLE 8.1

India's Foreign Trade			
(Rs. in crores)			
Year	Export (+)	Import (-)	Balance of Trade
(1)	(2)	(3)	(4)
1980-81	6711	12549	-5838
1981-82	7806	13608	-5802
1982-83	8803	14293	-5490
1983-84	9771	15831	-6060
1984-85	11744	17134	-5390
1985-86	10895	19658	-8763
1986-87	12452	20096	-7644
1987-88	15674	22264	-6570
1988-89(PR)	20302	28194	-7892
1989-90(P)	27681	35412	-7731

PR - Partially Revised; P - Provisional  
Source: Reserve Bank of India Bulletin, October 1990.

8.5 During 1989-90, imports stood at Rs. 35,412 crore, which meant an increase by 25.6 per cent from the previous year. Even though India's export showed a phenomenal increase of about 36 per cent from Rs.20,302 crore in 1988-89 to Rs. 27,681 crore in 1989-90, the increase was not sufficient enough to make a major dent to the trade deficit of the country. The substantial increase in value realisation from exports may be partially attributed to the depreciating Indian rupee.

8.6 According to provisional data released by DGCI&S, export (in rupee terms) during April to November 1990 rose by 20.6 per cent to Rs.20,303 crore recording a substantial deceleration from the rate of growth of 38 per cent recorded during the corresponding period of the preceding year. Imports, however, at Rs. 27,484 crore rose by 28.6 per cent during the same period which was significantly higher than the 20.7 per cent during April - November 1989. The trade deficit as a result, widened by Rs.2648 crore to Rs.7181 crore from that of Rs.4533 crore during the same period of the previous year.

8.7 Commodity-wise analysis shows that the major foreign exchange earners for the country are gems & jewellery, engineering goods, readymade garments, cotton fabrics, leather and leather manufactures and basic chemicals. On the import side, the major items are crude petroleum products, machinery and transport equipments, pearls and precious stones, organic chemicals, iron and steel and vegetable oil.

#### Direction of Trade

8.8 During the three years, 1986-87 to 1988-89, about 70 per cent of India's export earnings came from only 16 countries. Nine of these belong to the OECD group, four to the Middle East and

three to the Soviet bloc. Of all these, the U.S.A was the leading country with a share of about 19 per cent in the country's total exports, followed by the U.S.S.R, with a share ranging from 12.15 per cent, and Japan with 11 per cent. During 1988-89 also, the U.S.A. topped the list with a share of 18.4 per cent, followed by U.S.S.R's 12.9 per cent and Japan's 10.7 per cent. U.A.E. and Saudi Arabia together account for about 3.7 per cent of the country's exports.

8.9 As regards India's imports, during 1988-89, the U.S.A was the leading trade partner with a share of 11.3 per cent followed by Japan's 9.3 per cent, West Germany's 8.7 per cent, and U.K's 8.5 per cent. Saudi Arabia accounted for about 6.7 per cent and U.S.S.R 4.5 per cent.

#### Trade Through Kochi Port

8.10 During 1989-90, Kochi Port handled 71.25 lakh tonnes of traffic as against 78.24 lakh tonnes in the previous year, indicating a decline of 9 per cent. The fall in traffic handled during the year was attributed to a 12.4 per cent decline in respect of wet bulk cargo handled, despite an increase of 2.7 per cent in dry bulk cargo handled and that of break bulk cargo handled by 19 per cent.

8.11 While coastal traffic handled showed a slight fall by 0.6 per cent, foreign trade showed a fall by 18.6 per cent compared with the preceding year as shown in the table 8.2. This was mainly due to the fall in the petroleum traffic.

#### Exports

8.12 The commodity - wise statement of exports during the year through the port of Kochi is given in table 8.3. There has been a pronounced decline in the quantity of tea exported during 1989-90. However, significant increases were registered in respect of coffee (40.3%) and cashew kernels (35.8%).

TABLE 8.2

Cargo Handled by Kochi Port - 1988-89 and 1989-90  
(In lakh tonne)

Traffic	Export		Import		Total	
	1989-90	1988-89	1989-90	1988-89	1989-90	1988-89
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coastal	5.89 -(2.32)	6.03	35.70 -(0.31)	35.81	41.59 -(0.60)	41.84
Foreign	4.83 -(28.97)	6.80	24.83 -(16.11)	29.60	29.66 -(18.52)	36.40
Total	10.72 -(16.45)	12.83	60.53 -(7.46)	65.41	71.25 -(8.93)	78.24

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

Source: Cochin Port Trust, Administration Report 1989-90.

TABLE 8.3

Commodity-wise Exports through Kochi Port - 1988-89 and 1989-90  
(Tonnes)

Commodities	1989-90		1988-89		Percentage variation over 1988-89 increase(+)/Decrease(-)
	Quantity	Percentage to total	Quantity	Percentage to total	
(1)	(2)	(3)	(4)	(5)	(6)
Tea	12347	1.2	22884	1.8	(-) 46.0
Cashew-Kernels	46095	4.3	33932	2.7	(+) 35.8
Seafoods	53123	5.0	52810	4.1	(+) 0.6
Coir Products	26117	2.4	24116	1.9	(+) 8.3
Spices	41268	3.8	41317	3.2	(-) 0.1
Coffee	57852	5.4	41248	3.2	(+) 40.3
Miscellaneous*	834666	77.9	1066663	83.1	(-) 21.7
Total	1071468	100.0	1282970	100.0	(-) 16.5

\*Includes P.O.L

Source: Cochin Port Trust, Administration Report 1989-90.

8.13 The commodity - wise value of foreign export trade is given in table 8.4. It is seen that in value terms, the export of cashew kernels, coffee, ginger, seafoods and coir products registered a positive growth rate while that of tea, pepper and cardamom declined.

8.14 The commodity-wise data on imports during the last two years is given in table 8.5. It is seen that fertilizers and raw materials accounted for a substantial share of the imports through Kochi port and that this import increased by 7.9 per cent.

TABLE 8.4

Commodity-wise Value Export through Kochi Port - 1988-89 and 1989-90  
(Rs. in crores)

Commodities	1987-88		1988-89		1989-90		Percentage Variation over 1988-89
	Value	Percentage	Value	Percentage	Value	Percentage	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tea	33.35	3.23	43.46	4.02	32.38	2.66	-25.49
Pepper	233.65	22.60	156.23	14.46	148.00	12.16	-5.27
Cardamom	0.56	0.05	1.41	0.13	0.90	0.07	-36.17
Cashew Kernels	278.42	26.93	251.23	23.24	334.58	27.48	33.18
Coffee	111.35	10.77	127.05	11.76	136.35	11.20	7.32
Ginger	3.84	0.37	7.83	0.72	9.42	0.77	20.31
Seafoods	187.47	18.14	224.15	20.74	236.72	19.44	5.61
Coir products	20.97	2.03	20.94	1.94	23.95	1.97	14.37
Miscellaneous	164.10	15.88	248.53	22.99	295.28	24.25	18.81
<b>Total</b>	<b>1033.71</b>	<b>100.00</b>	<b>1080.83</b>	<b>100.00</b>	<b>1217.58</b>	<b>100.00</b>	<b>12.65</b>

Source: Cochin Port Trust.

TABLE 8.5

Commodity - wise Value of Import through Kochi Port  
(Rs. in crores)/(Qty in tonnes)

Commodities	1989-90		1988-89		Percentage variation over 1988-89
	Quantity	Percentage to total	Quantity	Percentage to total	
(1)	(2)	(3)	(4)	* (5)	(6)
Fertilizers & raw materials	889429	14.7	824460	12.6	(+) 7.9
Foodgrains	42881	0.7	163666	2.5	(-) 73.8
Iron Steel & Machinery	20772	0.4	14178	0.2	(+) 46.5
Newsprint	13060	0.2	17143	0.3	(-) 23.8
Cashewnuts	21060	0.3	21847	0.3	(-) 3.6
Miscellaneous*	5065957	83.7	5499864	84.1	(-) 7.9
<b>Total</b>	<b>6053159</b>	<b>100.0</b>	<b>6541158</b>	<b>100.0</b>	<b>(-) 7.5</b>

Source: Cochin Port Trust, Administration Report 1989-90.

\*Includes P.O.L

#### Export of Marine Products

8.15 The year 1989-90 has witnessed significant improvement in the export of marine products from the country. The exports touched an all time high of 110843 tonnes valued at Rs.635 crores,

indicating a growth rate of 11 per cent in terms of quantity exported and 6% in value realised over the previous year, as shown in table 8.6.

TABLE 8.6

Exports of Marine Products: Kerala/India 1990-81 to 1989-90

(Qty. in tonnes, Value in lakh Rs.)

Year	Kerala		India	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1980-81	29148	9534	75591	23484
1981-82	32006	12513	70105	28601
1982-83	32525	14147	78175	36136
1983-84	32840	14086	92691	37302
1984-85	31570	14798	87187	38429
1985-86	29580	13808	83651	39800
1986-87	33906	16457	85843	46067
1987-88	35576	18394	97179	53120
1988-89	45614	22131	99777	59785
1989-90	47245	24094	110843	63499

Source: The Marine Products Export Development Authority, Kochi.

8.16 In the total export of marine products from the country, Kerala's export during 1989-90 has touched the peak of 47245 tonnes valued at Rs.240.94 crores, showing a growth of 3.6 per cent

in quantity and 8.9 per cent in value, over 1988-89. Thus, Kerala accounts for about 38 per cent of the total export earnings and 42.6 per cent of the total quantity exported.

8.17 Deep sea fishing has started contributing considerably to the export earnings. New items' like frozen

octopus, have entered the export stream. Value of items like lobster tails, cuttlefish, squid and frozen fresh fish registering an upward trend added to the

value realisation. Concerted efforts in market diversification have yielded positive results and the European Economic Community (EEC) markets have emerged as a second largest market for Indian marine products accounting for a share of 34 per cent in terms of volume and 24 per cent in value, thereby relegating the United States to the third position with a share of 12 per cent both in terms of quantity and value. Japan continued to be the largest market for Indian products accounting for a share of 36 per cent and 57 per cent respectively in volume and value.

#### Export of Spices

8.18 Spices, particularly pepper and cardamom (small) have got a significant position in Kerala's agricultural economy. Pepper, Cardamom, Ginger and Turmeric are the major spices grown in Kerala. Almost the entire quantity of pepper and about 80 % of the cardamom



exported from India are contributed by Kerala. The total export earnings from spices for 1989-90 was Rs.274.36 crores of which Kerala's share is estimated to be around Rs. 175.85 crores.

#### Pepper

8.19 Pepper continued to be the highest foreign exchange earner among the spices. During 1989-90, as per provisional figures available, we have exported 36601 M.T. of pepper valued at Rs.159.88 crores. The earnings from pepper constitute about 58% of the total export earnings from spices.

TABLE 8.7

Export of Black Pepper: India; 1984-85 to 1989-90

Year	Qty. (MT)	Value (Rs.crores)	U.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	38020	164.20	43.19
1989-90	36601	159.88	43.68

Source: Spices Board

8.20 Export of pepper has declined in 1989-90 both in terms of quantity and value compared to 1988-89 mainly because

of the 30% decline in production during the year. Kerala accounts for about 97% of the total pepper production in the country and nearly 100% of the pepper exported.

8.21 It is observed that there has been an unprecedented rise in the price of pepper during 1985-86 onwards mainly on account of lower world supply position. However, the prices have shown a declining trend from 1988-89 onwards due to the revival in world supply.

#### Small Cardamom

8.22 Kerala accounts for about 61% of the area under small cardamom cultivation in India. On an average 65% of the country's production is contributed by the State of Kerala. Estimated export of small cardamom from Kerala during the last 5 years averaged 82% of the total export from India. During 1989-90, the export of Small Cardamom from India sharply declined to 171 M.T. valued at Rs. 3.19 crores as against 760 M.T. valued at Rs. 9.88 crores during 1988-89, is shown in Table 8.8.

TABLE 8.8

Export of Small Cardamom: India, 1982-83 to 1989-90

Year	Estimated Export from Kerala		Total Exports from India		% share of Kerala	
	Qty (M.T)	Value (Rs.crs.)	Qty (M.T)	Value (Rs.crs.)	Qty (%)	Value (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1982-83	844	13.75	1032	16.37	82.00	84.00
1983-84	194	4.10	258	5.44	75.00	75.00
1984-85	2170	59.05	2383	64.81	91.00	91.00
1985-86	2994	49.20	3272	53.46	92.00	90.00
1986-87	1268	16.46	1447	18.50	88.00	89.00
1987-88	212	2.67	270	3.40	79.00	79.00
1988-89	406	7.88	760	9.88	80.00	80.00
1989-90	127	2.37	171	3.19	74.00	74.00

Source: Spices Board.

8.23 The exports performance of small cardamom shows a declining trend after the peak level of achievement in 1985-86. The major reasons are stiff competition from Guatemala in the international markets, fluctuation in production and high domestic demand.

#### Dry Ginger

8.24 Kerala accounts for 30% of total area under ginger and 34% of total production in the country. About 90% of the exportable variety of ginger is being produced in Kerala. The trend in export of dry ginger from India during the last few years is given in Table 8.9.

TABLE 8.9

Export of Dry Ginger: India to 1984-85 to 1989-90		
Year	Total export from India	
	Qty (MT)	Value (Rs.Crs)
(1)	(2)	(3)
1984-85	7330	18.73
1985-86	6820	10.89
1986-87	4840	5.71
1987-88	2630	4.89
1988-89	6228	9.53
1989-90	7315	12.72

Source: Spices Board.

8.25 In recent years, export earnings from ginger ranged between Rs.5 to 12 crores per annum although the earnings in 1984-85 was more than Rs.18 crores. After a peak level of export in 1984-85, it has steadily declined because of the fall in production in Kerala and increasing competition from China, the other major supplier of ginger to the world market. However, during the last years, export has shown an increasing trend.

#### Turmeric

8.26 Kerala's production of turmeric is around 6000 M.T. Although Kerala accounts for only 2% of the country's production of turmeric, a major share of its production is exported as Alleppey Turmeric. India's export of turmeric from 1983-84 onwards are given in Table 8.10.

TABLE 8.10

Export of Turmeric: India 1983-84 to 1989-90		
Year	Total export from India	
	Qty (MT)	Value (Rs.Crs.)
(1)	(2)	(3)
1983-84	10890	11.06
1984-85	12800	17.16
1985-86	8560	12.09
1986-87	19530	19.18
1987-88	8750	9.23
1988-89	18996	19.38
1989-90	16468	15.72

Source: Spices Board.

8.27 The export of turmeric has declined from 18996 M.T. valued at Rs.19.38 crores in 1988-89 to 16468 M.T. valued at Rs.15.72 crores in 1989-90 mainly because of the lower intake by Iran, a major importer of Indian Turmeric. According to trade sources, around 2000-2500 M.T. of Alleppey Turmeric is being exported from Kerala.

#### Coir and Coir Products

8.28 Coir and coir products are one of the traditional foreign exchange earners for the country. Kerala accounts for the bulk of their export. Item-wise exports of coir and coir products during 1989-90, with the respective figures for previous year are given in Table 8.11.

TABLE 8.11

## Export of Coir and Coir Products: India

Items	1988-89 and 1989-90 (Qty. in tonnes, Value in Rs.lakhs)			
	1989-90		1988-89	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Coir fibre	49	3.70	7	0.74
Coir yarn	13770	1369.67	12598	1123.50
Coir mats	8273	1571.68	7612	1325.81
Coir matting	3580	744.92	2974	579.89
Coir rugs & carpets	1573	289.10	1714	289.06
Coir (other sorts)	46	7.70	28	3.87
Coir rope	74	8.85	39	4.52
Curled coir	67	4.03	-	-
Rubberised coir product	26	18.12	7	4.13
<b>Total</b>	<b>27458</b>	<b>4017.77</b>	<b>24979</b>	<b>3331.52</b>

Source: Coir Board.

8.29 The export of coir and coir products registered a growth rate of 9 per cent in quantity and 17 per cent in terms of value during 1989-90. Of the various items, coir yarn and coir mats together account for almost three fourth of the total value of exports of coir and coir products in 1989-90.

*Coir Yarn*

8.30 Export of coir yarn from India during 1989-90 amounted to 13,770 tonnes valued at Rs.13,69.67 lakhs as against the export of 12,598 tonnes valued at Rs.11,23.50 lakhs, in 1988-89. Export of coir yarn thus recorded an increase in terms of both quantity (9%) and value (22%) when compared to the previous year.

8.31 Destination-wise export of coir yarn, during 1989-90 is given in Table 8.12.

TABLE 8.12

Export of Coir Yarn: Destination-wise - India  
1988-89 & 1989-90

Item	(Qty. in tonnes, Value in Rs.lakhs)			
	1989-90		1988-89	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Australia	5	0.58	17	1.74
Belgium	953	97.26	936	88.22
Denmark	394	54.51	138	13.94
France	2659	257.19	2256	204.82
West Germany	1383	128.90	1083	86.91
Italy	1495	140.66	1892	158.73
Netherlands	2796	270.57	2758	242.83
Portugal	1222	129.69	1091	102.55
Turkey	281	27.64	447	40.59
Singapore	370	41.27	38	3.93
U S A	238	24.57	190	18.02
U A E	130	11.08	42	3.40
Yugoslavia	112	12.62	56	4.51
G D R	352	37.03	241	27.90
Others	1380	136.10	1413	125.41
<b>Total</b>	<b>13770</b>	<b>1369.67</b>	<b>12598</b>	<b>1123.50</b>

Source: Coir Board.

*Coir Mats*

8.32 Export of coir mats during 1989-90 amounted to 8,273 tonnes valued at Rs.15,71.68 lakhs as against the export of 76,12 tonnes valued at Rs.13,25.81 lakhs in 1988-89. Export of coir mats thus recorded an increase in terms of both quantity and value when compared to the previous year. The increase in export in terms of quantity was 661 tonnes (9%) and in terms of value, it was Rs.245.87 lakhs (19%).

8.33 Destination-wise export of coir mats during 1989-90 is given in Table 8.13.

TABLE 8.13

Export of Coir Mats: Destination-wise  
India, 1988-89 and 1989-90

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

Item	1989-90		1988-89	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Canada	191	35.09	287	47.09
U S A	1601	298.46	1217	200.94
Australia	1114	189.56	1234	191.58
Japan	96	19.33	79	12.82
Saudi Arabia	48	9.86	25	5.18
U A E	116	22.02	93	17.27
Belgium	62	13.73	49	9.11
Denmark	72	13.64	90	16.17
France	61	13.55	96	20.15
Greece	463	107.72	399	90.77
Germany West	646	130.57	670	131.38
Italy	613	142.40	805	162.28
Netherlands	862	151.70	225	33.74
U.K.	1609	277.55	1880	305.31
Others	719	146.50	463	82.02
<b>Total</b>	<b>8273</b>	<b>1571.68</b>	<b>7612</b>	<b>1325.81</b>

Source: Coir Board.

#### Coir Mattings

8.34 Export of coir mattings from India during 1989-90 amounted to 3,580 tonnes and valued at Rs. 7,44.92 lakhs as against the export of 2,974 tonnes valued at Rs.5,79.89 lakhs during 1988-89. Export of coir mattings from India during 1989-90 showed an uptrend both in terms of quantity and in terms of value. The increase in export in terms of quantity was 606 tonnes (20%) and in terms of value it was Rs.165.03 lakhs (28.46%) indicating a higher unit value realisation.\*

8.35 Export of coir mattings to the major importing countries during 1989-90 is given in Table 8.14.

TABLE 8.14

Export of Coir Mattings: Destination-wise  
India, 1988-89 and 1989-90

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

Country	1989-90		1988-89	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
Canada	130	22.54	249	34.91
U S A	203	37.32	157	26.56
U K	422	84.49	375	68.13
Australia	190	42.37	150	32.21
Japan	71	13.62	65	12.91
Belgium	358	87.47	225	58.25
Denmark	335	70.46	316	64.14
France	270	54.38	334	63.35
Greece	68	14.99	58	11.52
West Germany	676	146.81	619	123.19
Italy	313	58.61	167	31.79
Netherlands	424	90.70	183	36.79
Others	100	21.16	76	16.14
<b>Total</b>	<b>3580</b>	<b>744.92</b>	<b>2974</b>	<b>579.89</b>

Source: Coir Board.

#### Coir Rugs & Carpets

8.36 Export of coir rugs and carpets during 1989-90, amounted to 1,573 tonnes valued at Rs.2,89.10 lakhs as against the export of 1,714 tonnes valued at Rs.2,89.06 exported in 1988-89. Export of coir rugs and carpets registered a decline in terms of quantity whereas in terms of value it remained more or less the same as a result of higher unit value realisation. Export of coir rugs and carpets to the major importing countries during 1989-90 is given in Table 8.15.

TABLE 8.15

## Export of Coir Rugs and Carpets: Destination-wise

India, 1988-89 and 1989-90

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

Country	1989-90		1988-89	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
U S A	182	41.78	11	2.43
U S S R	1314	229.68	1660	276.28
U K	16	3.26	14	2.46
Denmark	14	2.91	2	0.58
Germany	9	1.47	0	0.00
Netherlands	11	2.62	6	1.23
Spain	12	3.39	6	1.87
Others	15	3.99	15	4.21
<b>Total</b>	<b>1573</b>	<b>289.10</b>	<b>1714</b>	<b>289.06</b>

Source: Coir Board.

## Other Items

8.37 In addition to the items reviewed, India had exported 49 tonnes of coir fibre valued at Rs. 3,70 lakhs, 67 tonnes of curled coir valued at Rs. 1.03 lakhs, 74 tonnes of coir rope valued at Rs. 8.85 lakhs and 26 tonnes of rubberised coir products valued at Rs. 18.12 lakhs during the year 1989-90.

## Cashew Kernels

8.38 Export of cashew kernels, another major export of Kerala, totalled 44,857 tonnes valued at Rs.360.34 crores during 1989-90. This marked an increase of 32 per cent in quantity and 30% in value over 1988-89, as shown in Table 8.16. Despite the substantial increase in quantity exported and value realised,

the unit value realisation declined marginally from Rs.81 in 1988-89 to Rs.80 in 1989-90.

TABLE 8.16

## Export of Cashew Kernels: India, 1960-61 to 1988-89

Year	Quantity (MT)	Value (Rs.Crores)	Unit value (Rs./Kg)
(1)	(2)	(3)	(4)
1960-61	39436	18.47	5
1965-66	53793	28.76	5
1970-71	54074	55.82	10
1975-76	53640	76.13	14
1980-81	32805	141.09	43
1981-82	31357	186.95	60
1982-83	30195	132.28	44
1983-84	36897	150.87	41
1984-85	32439	180.54	56
1985-86	35153	215.27	61
1986-87	41759	334.11	80
1987-88	36949	322.71	87
1988-89	34023	276.48	81
1989-90	44857	360.34	80

Source: Cashew Bulletin, January 1990  
Cashew Export Promotion Council.

Note: Upto 1975-76, the figures correspond to Calendar Year.

8.39 Direct exports to major markets viz. Canada, Czechoslovakia, German Democratic Republic, Kuwait, Netherlands, New Zealand, Singapore and the Soviet Union were much higher during the year, while it was lower in the case of Australia, Federal Republic of Germany, Hong Kong, Japan, Saudi Arabia, U.A.E., U.K., and the U.S.A.

## Cashewnut Shell Liquid

8.40 During 1989-90, this item's export totalled 3,014 tonnes valued at Rs.2.53 crore as against 3,034 tonnes valued at Rs.2.49 crore in the previous year, as can be seen in Table 8.17.

TABLE 8.17

Export of Cashew Shell Liquid: Kerala  
and India 1982-83 to 1988-89

(Qty. in tonnes, Value in Rs.crores)

Year	Kerala		India	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1982-83	6260	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	1.25
1986-87	1888	-	2716	1.45
1987-88	3607	2.42	6534	4.86
1988-89	890	0.63	3034	2.49
1989-90	-	-	3014	2.53

Source: Cashew Export Promotion Council.

8.41 The marginal increase in the export earnings during the year could be attributed to higher unit export price realised during the year which stood at Rs.8379 per tonne in 1989-90 as against Rs.8133 per tonne during the previous year.

#### Raw Cashewnuts

8.42 The import of raw cashewnuts during the year under review stood at 52,475 tonnes valued at Rs.72.44 crores, as given in Table 8.18.

8.43 The import in 1988-89 was only 37,078 tonnes valued at Rs.51.89, indicating a growth rate of 41.5 per cent in quantity and 39.6 per cent in value. Thus the unit import price in 1989-90 was lower at Rs.13.81 per kg compared to Rs.13.99 per kg during the previous year. Among the States, Kerala has a virtual monopoly in the export of cashew and accounts for 85-90 per cent of the country's total export, as shown in Table 8.19.

TABLE 8.18

Import of Raw Cashewnuts: Kerala & India

1982-83 to 1989-90

(Quantity in Tonnes, Value 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	7.73	23310	25.88
1986-87	26529	37.57	49045	69.46
1987-88	30499	48.54	42256	67.25
1988-89	21847	30.57	37078	51.89
1989-90	21060	29.07	52475	72.44

Source: Cashew Export Promotion Council.

Note: \* Import through Kochi Port.

TABLE 8.19

Export of Cashew Kernals: Kerala and India  
1982-83 to 1989-90

(Rs. in crores)

Year	Kerala		India		Kerala's Share	
	Quantity (MT)	Value (Rs)	Quantity (MT)	Value (Rs)	Quantity (MT)	Value (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1982-83	28075	122.44	30195	132.38	93.0	92.5
1983-84	35245	144.08	36897	150.87	95.5	95.8
1984-85	31409	174.47	32439	180.57	96.8	96.5
1985-86	31904	196.16	35153	215.27	90.8	91.1
1986-87	37508	302.81	41759	334.11	89.8	90.6
1987-88	33163	290.36	36949	322.71	89.8	90.0
1988-89	30234	245.74	34023	276.48	88.9	88.9
1989-90	..	..	44857	360.34	..	..

Source: Cashew Export Promotion Council.

8.44 Coffee production in India in 1989-90 was 1.20 lakh tonnes, against 2.16 lakh tonnes in 1988-89, indicating a sharp decline of 80 per cent in 1989-90, the production of arabica was 57000 tonnes and robusta 63000 tonnes. Another good crop is expected during 1990-91 which is anticipated to touch 1.73 lakh tonnes. In 1989-90 Kerala's production was of the order of 25854 tonnes with a share of 21.5 per cent, of the national production.

8.45 Export of coffee from the country during 1989-90 stood at 133361 tonnes valued at Rs.35786 crores. It is reported that about 87134 tonnes of coffee was exported during April-January 1990-91. The coffee industry in general has been badly hit by the dissolution of the International Coffee Agreement (ICA) which resulted in the suspension of quotas, and the crash in coffee prices. However India did rather well in the export front, and the most disturbing feature of the industry at present the stagnating domestic demand at around 60,000 tonnes per annum.

#### Tea

8.46 Although India's production of tea has more than doubled during the last 30 years, its exports has remained around 200 - 220 m.kgs, as shown in Table 8.20.

TABLE 8.20

Production, Retention & Export of Tea: India-1985-89  
(Million Kg.)

Year	Production	Exports	Retention
(1)	(2)	(3)	(4)
1985	656	214	442
1986	621	203	418
1987	674	202	472
1988	701	222	479
1989	684	223	461

Source: Tea Board.

8.47 Tea production during 1989 was affected by insufficient rainfall in some of the tea producing areas, especially South India including Kerala, but it was made good to some extent by increased output in the North. Despite the increase in output over the years, India could not scale up her tea export substantially. In 1989, there had been an unprecedented rise in domestic tea prices generally attributed to lower level of carry over stocks at the beginning of 1989, decline in tea production, increasing pressure of domestic demand and higher level of export during the first half of 1989 when compared to the corresponding period of the previous years, as given in Table 8.21.

TABLE 8.21

Quarterly Tea Exports: India - 1987-89

Quarter	(Million Kg.)		
	1987	1988	1989
(1)	(2)	(3)	(4)
January - March	39.4	38.0	54.3
April - June	24.1	28.6	30.7
July - September	64.0	65.3	67.0
October - December	74.8	90.4	71.0

Source: Tea Board & DGCI&S.

8.48 In 1989-90, Kerala accounted for 6.1 per cent of total tea exports from India and 3.8 per cent of total value. The respective share was 11 per cent in quantity and 6.8 per cent in value 1988-89 as can be seen below.

TABLE 8.22

## Export of Tea - Kerala, 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	204075+	63928
1989 - 90	12347	3238	202810++	86246

Sources: 1. Tea Board.  
2. Cochin Port Trust.

Note: + Provisional; ++ Estimate;

\* Since separate figures of exports from Kerala are not provided by the Tea Board, export of tea through Kochi Port is taken as export from Kerala.

8.49 It is seen that the tea exported through Kochi Port has declined 46 per cent from 22884 tonnes in 1988-89 to 12347 tonnes in 1989-90. Correspondingly, the value realisation has fallen by 25 per cent from Rs. 4346 lakhs to Rs. 3238 lakhs during the same period.

## Cochin Export Processing Zone

8.50 During 1989-90, it was hoped that 17 units (cumulative) would become operational and start exporting from the Cochin Export Processing Zone (CEPZ). Against the target, 16 units had started production and 12 units commenced exporting goods. During the year, the units under CEPZ exported goods worth Rs. 10.99 crore against the target of Rs. 15 crore. The total imports to the zone during 1989-90 under review were of the order of Rs. 13.61 crore i.e. higher than the value of exports from the zone.



## CHAPTER 9

### SOCIAL AND COMMUNITY SERVICES

The success achieved by Kerala State in providing public services, particularly in the field of education and health is notable. The overriding importance given to these two areas is reflected in the expenditure commitment year after year and the standards achieved. Table 9.1 gives the growth since 1957-58 in total revenue expenditure and expenditure on Education and health through the State Budget.

TABLE 9.1

Expenditure on Education and Health  
1957-58 to 1989-90

(Rs. crores)

Year	Total Revenue Expenditure	Expenditure on Education and Health	Percentage of column 3 to 2
(1)	(2)	(3)	(4)
1957-58	33	13	39.4
1960-61	45	21	46.7
1970-71	164	74	45.7
1982-83	783	371	47.4
1983-84	992	454	45.8
1984-85	1138	460	40.4
1985-86	1145	537	37.1
1986-87	1654	615	37.2
1987-88	1780	680	38.2
1988-89	2028	751	37.0
1989-90*	2265	832	37.0

Note: \* Budget Estimates.

#### Education

9.1 The State's Literacy according to 1981 Census was 70 percent as against

all India rate of 36 per cent. Ernakulam district and Kottayam town have already attained 100 per cent literacy. All out effort is now being made to achieve total literacy in the entire state. Female literacy was 66 per cent as against male literacy rate of 75 per cent in 1981. The difference with other states with regard to female literacy was sharper.

#### School Education

9.2 The infrastructure in the state for school education comprised 12,134 schools consisting of 6,812 LP schools, 2,892 UP schools and 2,430 High Schools during 1989-90. Of the total number of schools; 4483 (36.9 percent) were in Government sector, 7,333 (60.5 percent) were private aided schools and only 318 (2.6 percent) private unaided schools. The details are given in Appendix 9.1.

#### Un-Economic Schools

9.3 There were 891 uneconomic schools in the state during 1989-90, comprising 277 government schools and 614 private schools. The number of uneconomic schools in the private sector increased from 500 during 1988-89 to 614 in 1989-90. Appendix 9.2 presents the distribution of uneconomic schools by Educational districts.

#### Enrolment in Schools

9.4 The total strength of students in schools increased marginally from 58.52 lakhs during 1988-89 to 58.83 lakhs during 1989-90. At the lower primary school level, there was infact a slight reduction in strength from 25.96 lakhs in 1988-89 to 25.27 lakhs in 1989-90. At the Upper Primary level however it increased to 18.93 lakhs in 1989-90 from 18.47 lakhs in 1988-89 and at high school level the increase was from 14.08 lakhs to 14.60 lakhs. The total increase

in strength during the year under review was of 30,765 students. This can be seen from Table 9.2. The School enrolment for the period 1985-86 to

1989-90 is given in Table 9.3.

#### Enrolment Ratio

9.5 Out of the total number of school students in 1989-90 those in urban area constituted 8.78 lakhs while those in rural area stood at 50.05 lakhs (86 per cent). The details are given in Appendix 9.3. The total number of girl students was 28.81 lakhs i.e. 49.2 per cent of the total during 1989-90. In the previous year their number was 28.40 lakhs. The enrolment ratio i.e. the ratio of school going students to population in that age group during the year under review was 92.14 in the age group 5-9 and 87.7 in the age group 10-14. The standard wise enrolment is furnished in Appendix 9.4

#### Teachers

9.6 The total number of trained and untrained teachers together stood at 1.86 lakhs in 1989, of which only 5087 were untrained teachers. The number of teachers in the government sector was 72117 (38 percent) and that in the private sector 114243. Of the 1984 protected teachers in the state 580 are high school teachers, 978 are primary teachers and 426 are special teachers.

#### Vocational Higher Secondary Education

9.7 Vocational Higher Secondary Education at Plus 2 level was implemented in 157 schools. During 1989-90 the total admission capacity under this course was 7,850 students.

#### Examinations

9.8 A total number of 5.20 lakh students appeared for the SSLC examination in March 1990 of these 2.80 lakhs passed, the percentage of pass was 53.85. Out of the 2.80 lakhs students who passed, the number of girls stood at 1.42 and boys 1.38 lakhs. The percentage of girls passing was 55.03 and that of boys 52.67.

TABLE 9.2

#### Enrolment in Schools - Stage wise

Stage	Enrolment		Vari- ation (Nos)	Vari- ation (per cent)
	1988-89 (Nos)	1989-90 (Nos)		
(1)	(2)	(3)	(4)	(5)
Lower Primary	25,96,018	25,27,068	(-)68,950	(-)2.66
Upper Primary	18,47,843	19,95,249	(+)147,406	(+)2.57
Secondary	14,08,090	14,60,399	(+)52,309	(+)3.71
<b>Total</b>	<b>58,51,951</b>	<b>58,82,716</b>	<b>(+)30,765</b>	<b>(+)0.53</b>

Source: Directorate of Public Instruction.

TABLE 9.3

#### Enrolment in Schools from 1985-86 to 89-90

Year	Enrolment		
	Boys (lakhs)	Girls (lakhs)	Total (lakhs)
(1)	(2)	(3)	(4)
1985-86	29.20	27.95	57.15
1986-87	29.17	28.00	57.17
1987-88	29.49	28.40	57.89
1988-89	29.88	28.64	58.52
1989-90	30.02	28.81	58.83

Source: Directorate of Public Instruction

#### University Education

*Number of Colleges*

9.9 The total number of Arts and Science Colleges in the State in 1989-90 was 172, spread under the three Universities of the state i.e. Kerala (44 colleges), Calicut (71 colleges) and Mahatma Gandhi (57 colleges). Of the 172 colleges 40 were Government colleges and 132 were in the private sector. The district wise distribution of the colleges is furnished in Appendix 9.5.

9.10 The number of teachers in the Arts and Science Colleges in the state shows a slight fall from that of the previous year i.e. from 14090 to 13900. While the number of teachers in government colleges declined that in private colleges increased some what. The details are furnished in Table 9.4.

TABLE 9.4

Number of Teachers in Arts and Science Colleges 1987-88 to 1988-90

Years	Number of Teachers		
	Government	Private	Total
(1)	(2)	(3)	(4)
1987-88	2566	11180	13746
1988-89	2881	11209	14090
1989-90	2580	11320	13900

Source: Directorate of Collegiate Education

*Enrolment*

9.11 The total number of students at the University level stood at 3.29 lakhs in 1989-90 which was almost the same as in 1988-89. The relevant data are given in Table 9.5. The enrolment in the three universities together came to 1.52 lakhs of whom 52 per cent were girls.

The enrolment at predegree level was 1.05 lakhs, at degree level it was 41628 and at Post graduate level 5,194. The percentage of enrolment of girl students was 52, 54 and 59 respectively. The relevant data on enrolment in Arts and Science Colleges are given in Table 9.6. The intake and outturn under various courses in Arts and Science Colleges under the three Universities are presented in Appendix 9.6.

9.12 Over and above the enrolment in regular system of education, the state government has allowed private registrations. More than one lakh candidates appear every year through private registration. Data on private registration in Calicut and Kerala Universities are given in Appendix 9.7.

*Technical Education*

9.13 There are 8 Engineering Colleges, 28 Polytechnics, 47 technical high schools, 1 college of Fine Arts, 2 Fine Arts Institutes, 17 Commercial Institutes, 7 Food Craft Institutes and 47 Vocational training centres in the state. Besides there are three autonomous institutions namely Lal Bahadur Sastri Centre for Science and Technology, Institute of Human Resources Development for Electronics and Kerala State Science and Technology Museum.

*Engineering Colleges*

9.14 The engineering colleges in the State are situated at Thiruvananthapuram, Kollem, Kothamangalam, Thrissur, Palakkad, Kozhikode, Eranakulam, and Kannur. Of these, the one at Kozhikode is a Regional Engineering College and the Model Engineering College, Eranakulam is functioning under the Institute of Human Resources Development in Electronics.

*Polytechnics*

9.15 Of the 28 Polytechnics in the State 5 are Women's Polytechnics. Diploma courses of three year duration, in

TABLE 9.5

Strength of Students by Sex in Arts and Science Colleges in Kerala during 1989-90\*

Name of University	No. of Colleges	Pre Degree			Degree			Post Graduate			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Kerala University	44	31628	34897	66525	17842	23327	41169	1108	1798	2906	50578	60022	110600
Mahatma Gandhi University	57	29766	36763	66529	15317	23261	38578	1435	2454	3889	46518	62478	108996
Calicut University	71	36365	32486	68851	19256	18752	38008	1339	1270	2609	56960	52508	109468
<b>Total</b>	<b>172</b>	<b>97759</b>	<b>104146</b>	<b>201905</b>	<b>52415</b>	<b>65340</b>	<b>117755</b>	<b>3882</b>	<b>5522</b>	<b>9404</b>	<b>154056</b>	<b>175008</b>	<b>329064</b>

Note : \*Figures furnished are provisional  
Source: Directorate of Collegiate Education

TABLE 9.6

Enrolment by Stages in Arts and Science Colleges in Kerala 1989-90

Name of University	No. of Colleges	Enrolment											
		Pre-degree			Degree			Post Graduate			Total		
(1)	(2)	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Kerala University	44	16065	17410	33475	6350	8332	14682	553	945	1498	22968	26687	49655
M.G. University	57	15802	19307	35109	5927	7314	13241	801	1358	2159	22530	27979	50509
Calicut University	71	19147	17234	36381	6856	6849	13705	780	757	1537	26783	24840	51623
<b>Total</b>	<b>172</b>	<b>51014</b>	<b>53951</b>	<b>104965</b>	<b>19133</b>	<b>22495</b>	<b>41628</b>	<b>2134</b>	<b>3060</b>	<b>5194</b>	<b>72281</b>	<b>79506</b>	<b>151787</b>

18 different disciplines are offered in the various polytechnics. The annual intake is of 4,231 students. Every year 100 students are admitted under post diploma courses conducted in Six subjects. The parttime diploma courses in Three branches are offered in five polytechnics with an annual intake of 300.

#### Technical High Schools

9.16 In the 47 technical high schools intake capacity is 2,570 per annum. The intake and outturn in Engineering Colleges, Technical Schools and Polytechnics are furnished in table 9.7. The districtwise distribution of Polytechnics and Technical High Schools is given in Appendix 9.8. The students strength and staff position in Polytechnics and Technical High Schools are furnished in Appendix 9.9 and Appendix 9.10 respectively. The coursewise intake and outturn in Engineering Colleges at Degree level is presented in Appendix 9.11 and at post graduate level in Appendix 9.12.

#### Expenditure on Education

9.17 An analysis of the State Government's expenditure on education during 1989-90 shows that there was considerable increase from that of the previous year. The total expenditure during the

year under review stood at Rs.696.24 crores (Revised Estimate 1989-90) as against Rs.572.40 crores during 1988-89. Of the total expenditure on education 52.28 percent was incurred on Primary Education and 26.60 percent was on Secondary Education. The expenditure on University Education showed an increase from Rs.76.97 crores during 1988-89 to Rs.101.34 crores in 1989-90. On Technical Education the expenditure in 1989-90 was Rs.29.08 crores as against Rs.22.95 crores in 1988-89.

9.18 The details of expenditure on education are furnished in Table 9.8 which also gives the progress in expenditure from 1985-86 to 1989-90. The percapita government expenditure on Education for the last 5 years is given in Table 9.9. The cost of education per pupil at the primary stage increased from Rs.479 during 1985-86 to Rs.805 during 1989-90. See Table 9.10. At secondary stage the cost per pupil went upto Rs.1269 during 1989-90 from 1137 during the previous year. The increase in percapita expenditure especially in Primary Education can be attributed to the considerably heavy expenditure on non-plan side on staff. The state wise total and percapita expenditure on education are given in Appendix 9.13.

TABLE 9.7

Intake and Out-turn in Engineering Colleges, Polytechnics and  
Technical High Schools from 1985-86 to 1989-90

Year	Engineering Colleges				Polytechnics				Technical High School			
	No. of Insti- tutions	Intake Sanct- ioned	Actual	Out- turn	No. of Insti- tutions	Intake Sanct- ioned	Actual	Out- turn	No. of Insti- tutions	Intake Sanct- ioned	Actual	Out- turn
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1985-86	7	2514	2514	1014	25	3533	3404	2109	44	2480	2310	1074
1986-87	7	2514	2514	2073	25	3533	3404	2200	47	2570	2510	1371
1987-88	7	2524	2524	2104	25	3544	3544	2305	47	2570	2570	1475
1988-89	8	2656	2656	2110	28	4231	4231	2436	47	2570	2570	1505
1989-90	8	2656	2656	2127	28	4231	4231	2472	47	2570	2570	1531

Source: Directorate of Technical Education

TABLE 9.8

## Expenditure on Education 1985-86 to 1989-90)

Stages	1985-86 (Accounts)	1986-87 (Accounts)	1987-88 (Accounts)	1988-89 (Accounts)	1989-90 (Revised Estimate)
(1)	(2)	(3)	(4)	(5)	(6)
Primary Education	20951.95	24632.47	26254.58	30085.67	36398.77
Secondary Education	12188.82	13976.58	14680.32	16270.92	18522.68
University and other Higher Education	5313.56	6211.88	6817.76	7696.50	10133.68
Adult Education (Special Education)	238.01	257.48	144.73	128.16	222.00
Language Development General (Research & Training)	696.25	306.36	231.63 141.57	266.34 497.66	293.49 1144.55
Technical Education	1920.09	2423.02	2063.39	2295.05	2908.53
<b>Total</b>	<b>41308.68</b>	<b>47807.79</b>	<b>50333.98</b>	<b>57240.30</b>	<b>69623.70</b>

TABLE 9.9

## Per Capita Government Expenditure on Education

Year	Population (lakhs)	Government Expenditure on Education (lakhs)	Index of Growth	Percapita Expenditure (Rs)	Index of Growth
(1)	(2)	(3)	(4)	(5)	(6)
1961-62	173.02	1854.84	100	10.72	100
1985-86	274.06 <sup>a</sup>	41308.68	2227	150.73	1506
1986-87	275.06 <sup>a</sup>	47807.79	2577	173.80	1621
1987-88	282.06 <sup>a</sup>	51317.43	2766	181.94	1697
1988-89	286.07 <sup>a</sup>	54931.36	2962	192.02	1791
1989-90	298.87 <sup>a*</sup>	69623.70	3754	232.96	2173

Source : <sup>a</sup> Projected school age population of Kerala 1981-91 by Shri. R.Ramakumar.

<sup>a\*</sup> Projected population -- Bureau of Economics & Statistics.

TABLE 9.10

Cost of Education Per Pupil from 1984-85 to 1988-89

Year	Primary stage	Percentage increase from previous year	Secondary stage	Percentage increase from previous year
(1)	(2)	(3)	(4)	(5)
1984-85	416.63	11.22	737.31	12.12
1985-86	479.23	15.64	906.91	23.00
1986-87	563.03	17.49	1043.00	15.00
1987-88	596.67	5.97	1130.00	8.34
1988-89	638.32	6.98	1137.00	0.62
1989-90	804.93	26.10	1268.67	11.58

Note: Cost per pupil includes expenditure on Midday Meals programme in schools also.

## Health

9.19 The importance given to health care services by the Kerala State has paid rich dividends and as a result the State today enjoys a unique position in the country. The life expectancy at birth in Kerala is 67 years for men and 70 years for women in 1988 as against the all India rate of 55 years and 54 years respectively. The maternal mortality rate in Kerala is below 2, where as the all India figure is 5.8. Infant mortality rate in Kerala came down to 24 per 1000 live births where as the all India rate was still as high as 94 per 1000 live births. Some of the basic health indicators are presented in Table 9.11.

TABLE 9.11

Birth, Death and Infant Mortality Rates in Kerala

Year	Birth rate per thousand population		Death rate per thousand population		Infant Mortality rate per 1000	
	Kerala	All India	Kerala	All India	Kerala	All India
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1941-50	39.8	39.9	22.3	27.4	153	147
1951-60	38.9	41.7	16.9	22.8	120	146
1970	32.3	36.8	9.2	15.7	61	129
1980	26.8	33.7	7.0	12.6	42	114
1981	25.6	33.9	6.6	12.5	37	110
1985	22.9	32.9	6.4	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	10.9	24	94

## Health Care

## Infrastructure

9.20 The health infrastructure under allopathy consisted of 1199 institutions with 38,223 beds in 1989-90 as against 1126 institutions with 37,100 beds in 1988-89. There were 140 hospitals with 27,411 beds, 883 primary health centres and 5 MCH units with 4480 beds, 51 dispensaries with 159 beds, 20 T.B Centres/clinics with 377 beds, 15 leprosy control units, 53 community Health Centres with 3127 beds and 36 grant-in-aid institutions with 2669 beds during

1989-90. The number of primary health centres increased from 740 in 1988-89 to 883 in 1989-90. The district-wise and category-wise distribution of medical institutions and beds are given in Appendix-9.14. The number of beds per lakh of population has increased from 126 in 1988-89 to 128 in 1989-90. The expansion of rural health infrastructure during the seventh plan period is given in Table 9.12. As a support to implement the health care programme effectively there is a net work of transport infrastructure available and the district-wise availability of vehicle under DHS is given in Appendix 9.15.

TABLE 9.12

Rural Health Infrastructure from 1985-86 to 1989-90

Year	Primary Health Centres		Sub Centres		Community Health Centres		Subsidiary Health Centres	
	No	Beds	No	Beds	No	Beds	No	Beds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1985-86	299	2842	3071	..	..	..	..	..
1986-87	444	3404	3374	..	..	..	..	..
1987-88	577	3274	3874	..	29	2226	79	289
1988-89	740	3686	4374	..	29	2292	77	629
1989-90	883	4680	5094	..	54	3127	..	..

Source: DHS

TABLE 9.13

Number of Medical Institutions and Beds under Allopathy in Kerala 1980-81 to 1989-90

Year	No. of Medical Institution	Index of Growth	No. of beds	Index of Growth	No. of beds per lakh of population
(1)	(2)	(3)	(4)	(5)	(6)
1980-81	968	100	32447	100	127
1981-82	991	102	32532	100	126
1982-83	1005	104	32880	101	125
1983-84	1009	104	33380	103	124
1984-85	1014	105	33529	103	124
1985-86	1015	105	35744	110	128
1986-87	1038	107	36404	112	128
1987-88	1066	110	36668	113	127
1988-89	1126	116	37100	114	126
1989-90	1199	124	38223	118	128

Source: DHS



TABLE 9.14

Distribution of the Number of Medical Institutions, Beds and Patients Treated under Allopathy

District	Number of Medical Institutions.		Number of Beds		Number of Beds per lakh of population		Number of Patients Treated	
	1988-89	1989-90	1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Thiruvananthapuram	107	111	6550	6556	219	215	3832829	3880918
2. Kollam	80	85	1973	2068	78	80	2295844	2183736
3. Alappuzha	83	86	4043	4375	188	200	2267497	2503473
4. Pathanamthitta	57	60	1262	1179	99	91	1079769	1048779
5. Kottayam	75	80	3506	3756	179	188	2300876	2207149
6. Edukki	55	58	609	689	54	54	1016170	843108
7. Ernakulam	116	113	3846	3915	132	132	3274296	3182031
8. Trissur	186	113	3929	3941	148	138	2681257	2728348
9. Palakkad	92	103	1705	2081	72	87	2485401	2259143
10. Malappuram	104	113	1816	1831	65	65	2929145	2244892
11. Kozhikode	76	85	4224	4239	163	161	2470319	2195106
12. Wayanad	36	40	590	590	92	91	644726	597838
13. Kannur	89	94	2399	2435	108	107	1620606	1738161
14. Kasaragode	56	59	648	648	64	63	765766	750171
<b>Total</b>	<b>1126</b>	<b>1199</b>	<b>37180</b>	<b>38223</b>	<b>126</b>	<b>128</b>	<b>29664501</b>	<b>28362853</b>

TABLE 9.15  
Medical and Paramedical Personnel in  
the Health Services Department

Sl.No	Category	1985	1986	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Medical						
	Officers	3126	3514	3514	2831	2903	2796
2.	Dentists	71	71	71	64	64	69
3.	Senior Nurses	917	932	1024	1733	1761	1733
4.	Junior Nurses	4176	4589	4589	4416	4486	4486
5.	Health						
	Inspectors	500	600	1009	690	690	857
6.	Pharmacists	1620	1626	1731	1620	1620	1679
7.	Junior P H						
	Nurses (ANMS)	3817	3919	4236	4484	4484	5116
8.	Junior Health						
	Inspectors	2150	2583	3381	3381	3381	4505
9.	Health						
	Inspectors	845	1076	845	845	845	845
<b>Total</b>		<b>17222</b>	<b>18910</b>	<b>20400</b>	<b>20064</b>	<b>20234</b>	<b>22086</b>

Source: D.H.S.

TABLE 9.16

Details of Registered Medical Practitioners  
in the State

Sl. No.	System	Class of Registration	Number in	
			1988-89	1989-90
(1)	(2)	(3)	(4)	(5)
1.	Modern Medicine	A	16754	17741
		B	635	635
		Listed	204	204
		<b>Sub Total</b>	<b>17593</b>	<b>18580</b>
2.	Homeopathy	A	3403	3700
		B	1486	1486
		Listed	279	279
		<b>Sub Total</b>	<b>5168</b>	<b>5465</b>
3.	Ayurveda	A	5551	5732
		B	6100	6100
		Listed	599	599
		<b>Sub Total</b>	<b>12250</b>	<b>12431</b>
4.	Sidha	A	61	62
		B	1218	1218
		Listed	41	41
		<b>Sub Total</b>	<b>1320</b>	<b>1321</b>
5.	Unani	A	1	1
		B	51	51
		Listed	5	5
		<b>Sub Total</b>	<b>57</b>	<b>57</b>
<b>Grand Total</b>			<b>36388</b>	<b>37854</b>

Source: Registrar of Medical Councils

TABLE 9.17

List of Registered Para-Medical Practitioners

Sl. No.	Category	1988-89			1989-90		
		Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Nurses	257	12356	12613	268	12734	13002
2.	Midwives	..	11301	11301	..	11683	11683
3.	Nurse and Midwives (integrated)	..	10687	10687	..	11835	11835
4.	Auxiliary Nurse- Midwives	..	8238	8238	..	9181	9181
5.	Health Visitors	..	318	318	..	318	318
<b>Grand Total</b>		<b>257</b>	<b>42900</b>	<b>43157</b>	<b>268</b>	<b>45751</b>	<b>46019</b>

Source: Registrar of Medical Councils

#### Patients Treated in Health Institutions

9.21 A total of 283.63 lakh patients had taken treatment during 1989-90 under allopathy. The statement showing the number of patients treated for principal diseases during 1988-89 and 1989-90 is given in Appendix 9.16.

#### Medical Education

9.22 There are five medical colleges in the State at Thiruvananthapuram, Kottayam, Alappuzha, Thrissur and Kozhikode, two Dental Colleges at Thiruvananthapuram and Kozhikode and 3 Nursing Colleges at Thiruvananthapuram, Kottayam and Kozhikode, with a total annual intake of 700 students for MBBS, 70 students for B.D.S., 28 students for B.Pharm, 24 students for B.Sc-MLT and 75 students for B.Sc-Nursing. There are about 329 seats for various post graduate degrees, diploma and super speciality courses and 630 seats for para medical courses in the medical colleges.

### Nursing Education

9.23 Medical Colleges at Thiruvananthapuram, Kottayam and Kozhikode have Nursing Colleges attached to them. Twenty five students are admitted in each of these colleges for B.Sc Nursing. M.Sc Nursing Course is being conducted in Nursing College, Thiruvananthapuram with an annual intake of 4 students. Also, certificate course in General Nursing is being conducted at Thiruvananthapuram and Kozhikode. The Directorate of Health Services and approved private nursing schools also conduct nurses training courses. The annual intake in the certificate course is 1,306 of which as many as 976 are enrolled in private nursing schools. A

junior public health nursing course of 18 month duration is also conducted by both Government and private nursing schools with annual intake of 1,066 of which private nursing schools account for 441. The annual admission for various nursing courses in different categories is given in table 9.18.

### Indian Systems of Medicine

#### Ayurveda

9.24 There were 101 Ayurveda hospitals with 1929 beds and 498 dispensaries at the end of the year 1988-89. During the year 1989-90. 8 dispensaries were newly opened, one hospital was upgraded to the status of district hospital with 50 beds, one 10 bedded hospital was upgraded to taluk hospital with 30 beds and more speciality sections were started in two district hospitals. Thus there were 101 hospitals and 506 dispensaries at the end of 1989-90. The total number of

patients treated during 1989-90 was nearly 160 lakhs. The district wise details of institutions, beds and the number of patients treated are given in Appendix 9.17. Number of Ayurveda hospitals and dispensaries from 1985-86 to 1989-90 is given in Table 9.19.

TABLE 9.18

Annual Admission for Nursing Courses in Different Categories 1989-90

Institutions	No. of Insti- tutions	Total Annual intake
(1)	(2)	(3)
<b>I. Integrated (General Nurses Cum Mid-wives) 3.5 years course</b>		
Government Nursing Schools	9	270
Private Nursing Schools	50	976
Medical College, Kozhikode	1	30
Medical College, Thiruvananthapuram	1	30
<b>II. Junior Public Health Nurses 18 months course</b>		
Government Nursing Schools	13	625
Private Nursing Schools	18	441
<b>III. B.Sc Nursing 4 years course</b>		
Medical College, Thiruvananthapuram	1	25
Medical College, Kottayam	1	25
Medical College, Kozhikode	1	25
<b>IV. M.Sc Nursing</b>		
Medical College, Thiruvananthapuram	1	4

TABLE 9.19

Number of Ayurveda Hospitals and Dispensaries from 1985-86 to 1989-90

Year	Ayurveda Hospitals	Ayurveda Dispensaries
(1)	(2)	(3)
1985-86	94	473
1986-87	97	497
1987-88	101	496
1988-89	101	498
1989-90	101	506

## Ayurveda Education

9.25 There are two Government Ayurveda Colleges in the State with an annual intake of 50 in Ayurveda College, Thiruvananthapuram and 30 in Ayurveda College, Tripunithura for BAMS and 24 for M.D. (Ay). M.D. course is imparted only in the Ayurveda College, Thiruvananthapuram. Besides, there are two private Ayurveda Colleges at Kottakkal and Ollur. The details of the courses conducted in the Ayurveda Colleges together with the intake capacity are presented in table 9.20.

TABLE 9.20

Courses Offered and Admission to the Courses in the Ayurveda Colleges during 1989-90

Sl. No.	Name of College	Course	Nature of course (Degree/Diploma/Certificate)	Annual Intake of students		
				Total Number	S.C. students	S.T. students
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Govt. Ayurveda College, Thiruvananthapuram	B.A.H.S. M.D.(Ay)	Degree Post Graduate Degree	50 24	4 3	1 -
2.	Govt. Ayurveda College, Tripunithura	B.A.H.S.	Degree	30	2	-
Total				104	9	1

## Homoeopathy

9.26 The number of homoeopathic hospitals has increased from 24 with 715 beds in 1988-89 to 26 hospitals with 780 beds in 1989-90. The number of dispensaries has increased from 262 in 1988-89 to 274 in 1989-90. During the period under review, 12 homoeo dispensaries were started of which 10 were under general sector and 2 under special component plan. A district office at Palakkad was opened during the year. The bed strength in Government Homoeo hospital at Kurichy was enhanced from 90 to 105 during 1989-90. The district wise distribution of institutions, beds and patients treated under Homoeopathy is furnished in Appendix 9.18. The number of homoeo hospitals and dispensaries from 1985-86 to 1989-90 is given in Table 9.21.

TABLE 9.21

Number of Homoeo Hospitals and Dispensaries from 1985-86 to 1989-90

Year	Homoeo Hospitals	Homoeo Dispensaries
(1)	(2)	(3)
1985-86	24	227
1986-87	24	255
1987-88	24	255
1988-89	24	262
1989-90	26	274

## Homoeo Education

9.27 There are 5 homoeopathic colleges in the State of which two are in the Government sector and the remaining three are in the private sector. Enrolment of students in degree and diploma courses in these colleges is furnished in Table 9.22.

TABLE 9.22

Description of Various Courses and Annual Intake of Students in Different Homoeopathy Colleges in Kerala 1989-90

Name of College	Course	Nature of course (Degree/ Diploma)	Annual Intake of students
(1)	(2)	(3)	(4)
<b>Government</b>			
1. Govt. Homoeo Medical College, Thiruvananthapuram	BHMS	Degree	50
2. Govt. Homoeo Medical College, Kozhikode	BHMS	Degree	50
Sub Total - Govt.			100
<b>Private</b>			
3. A.N.S.S. Homoeo Medical College; Kurichy	BHMS	Degree Diploma	50 120
4. Dr. Padiar Memorial Homoeo Medical College, Ernakulam		Diploma	60
5. Sree Vidhyadhiraja Homoeo Medical College, Nemon, Thiruvananthapuram		Diploma	65
Sub Total - Private			295
Grand Total			395

#### Family Welfare Programme

9.28 Given the all India target of net reproduction rate (NRR) of one by 2000 A.D, with the present rate of 1.3 Kerala has a reasonable chance of attaining the target. The present rate is 1.67 for all India. The percentage of couples effectively protected as on March 1989 was 55.2 for Kerala as against 39.9 for All India.

9.29 The family welfare services are rendered to the public through a net work of 78 urban main centres and 5094

rural sub centres including 77 post partum centres in different districts. There are 2 regional family welfare and health training centres, 2 lady health visitors training centres and 7 ANM training schools.

9.30 The number of sterilisation operations increased from 2,07,457 in 1988-89 to 2,08,537 in 1989-90, of which 1,34,601 (64.5 per cent) were P.P.S., 41,773 (20 per cent) were laproscopy, 24,622 (11.8 per cent) minilap and the remaining 7541 (3.6 per cent) vasectomies. The district wise details on family welfare programme for 1989-90 are furnished in Appendix 9.19. The target and achievement of family welfare programmes for 89-90 are given in Appendix 9.20. District-wise distribution of Family Welfare Centres and couple Protection Rate and the expenditure under family welfare programme since 1980-81 are given in the following tables.

TABLE 9.23

No. of Family Welfare Centres and Couple Protection Rate 1989-90 : District-wise

Sl. No.	District	Urban		Rural		Couple Protection Rate
		Main Centres	Sub Centres	Main Centres	Sub Centres	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	9	76	455	531	70.1
2.	Kollam	5	63	449	512	65.0
3.	Alappuzha	8	64	368	432	59.9
4.	Pathanamthitta	4	46	260	306	55.2
5.	Kottayam	6	58	359	417	66.2
6.	Idukki	3	56	231	287	46.4
7.	Ernakulam	9	79	351	430	65.5
8.	Thrissur	7	80	492	572	61.3
9.	Palakkad	6	81	471	552	37.9
10.	Malappuram	7	91	508	599	37.8
11.	Kozhikode	4	66	389	455	57.8
12.	Wayanad	3	30	204	234	46.3
13.	Kannur	5	71	352	423	52.9
14.	Kasaragode	2	47	205	252	39.5
State		78	908	5094	6002	55.2

Source: D.H.S.

89.60 percent while Ayurveda, Sidha and Homoeopathy systems shared 8.16 percent, 0.04 percent and 2.20 percent respectively. The analysis of expenditure under the Directorate of Health Services during 1989-90 revealed that 73.37 percent of the expenditure was for staff salary and only 26.25 percent was accounted for patients' care (medicine, diet etc.). The Plan and Non Plan expenditure during 1989-90 under the directorate is given in Appendix 9.21. The percapita expenditure

on health including family welfare increased from Rs.55.75 in 1988-89 to Rs.79.16 in 1989-90. (Tables 9.25, 9.26 and 9.27). A comparative statement showing state-wise total and percapita expenditure on Health from 1980-81 to 1988-89 is given in Appendix 9.22.

TABLE 9.24

## Expenditure on Family Welfare Programme

Year	Plan	Non-plan	Total
(1)	(2)	(3)	(4)
1971-72	162.79	1199.22	1362.01
1972-73	209.02	1351.17	1560.19
1973-74	243.59	1394.82	1638.41
1974-75	180.46	2022.17	2202.63
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	3051.68	3577.14
1979-80	472.51	3667.19	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	11375.93
1987-88	1532.08	10207.12	11739.20
1988-89	1802.43	11408.10	13210.53
1989-90(R.E)	1988.83	15269.34	17258.17

Year	Amount (Rs. lakhs)
(1)	(2)
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 (R.E.)	6400.78

Source: Budget Document

## Trend in Government Expenditure on Health

9.31 The expenditure on Medical and Public Health has gone up by 30.6 percent from Rs.132.10 crores in 1988-89 to Rs.172.58 crores in 1989-90. During 1989-90, Allopathy system accounted for

TABLE 9.26

## Expenditure under Health other than Family Welfare

Sector	1988-89 (Accounts)			1989-1990 (R.E.)		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Allopathy	1459.97	10321.32	11781.29 (89.18)	1713.30	13750.04	15463.34 (89.60)
Ayurveda	235.49	879.80	1115.29 (8.44)	173.97	1233.75	1407.72 (8.16)
Sidha	0.52	4.31	4.83 (0.04)	1.00	5.99	6.99 (0.04)
Homoeopathy	106.45	202.67	309.12 (2.34)	100.56	279.56	380.12 (2.20)
<b>Total</b>	<b>1802.43</b>	<b>11408.10</b>	<b>13210.53</b> <b>(100.00)</b>	<b>1988.83</b>	<b>15269.34</b>	<b>17258.17</b> <b>(100.00)</b>

Note: Figures in bracket indicate percentage to Total

TABLE 9.27

## Per capita 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
(1)	(2)	(3)	(4)	(5)	(6)
1980-81	253.84	4857.25	100	19.13	100
1981-82	254.03	5811.56	120	22.88	119
1982-83	259.49	5907.12	122	22.76	119
1983-84	268.47	6946.80	143	25.88	135
1984-85	270.05	8841.13	182	32.73	170
1985-86	274.05	11082.09	228	40.44	211
1986-87	275.06	13789.93	284	50.13	262
1987-88	288.39	15109.42	311	52.39	274
1988-89	293.58	16368.36	337	55.75	291
1989-90	298.87*	23658.95**	487	79.16	414

Note: \*Projected population of Kerala-Department of Economics and Statistics.

\*\*Revised Estimate

## Housing

9.32 The State has come to play an increasing role in assisting house construction activity particularly where it concerns the low income groups. Presently more than 20 agencies, including some Government departments and autonomous bodies, are implementing housing programmes in the State. Kerala State Housing Board, Kerala State Housing Co-operative Federation and Kerala State Development Corporation for Scheduled Caste and Scheduled Tribes are the major autonomous bodies engaged in housing activity in the State.

9.33 Kerala State Housing Board is the major organisation implementing a number of housing programmes which cater to the requirements of various income groups. The two important schemes presently being implemented by the Board are the Public Housing Scheme and the Cash Loan Scheme. During 1989-90, 172 buildings under Public Housing Scheme and 78 flats under Rental Housing Scheme were constructed by the Housing Board. Under Low Income Group (LIG) Housing, cash loans of a maximum amount of Rs. 10,000 are given to people whose monthly income is between Rs. 701-1500 at an

interest rate of 9%. For Middle Income Group (MIG) Housing, the maximum loan amount is Rs. 60,000/- at the rate of interest of 12.5 percent. During 1989-90 1609 loans under L.I.G. and 287 loans under MIG schemes given. The Housing Board also received Rs.2983 crores from HUDCO for meeting the loan component of the various housing schemes implemented by the Board including Rehabilitation Housing Scheme

9.34 The major housing scheme that is presently being implemented by the Kerala State Development Corporation for SC/ST is the one started during 1988 which envisaged the construction of 10000 houses each costing Rs. 8500 for the benefit of Scheduled Caste and Scheduled Tribes. According to the norms, the beneficiary will get Rs. 2500 as Government subsidy and Rs. 4500 as HUDCO loan. The remaining Rs. 1500 will have to be raised by the beneficiary himself in the form of labour, material or cash. During 1989-90, the Corpora-

tion gave financial assistance for the construction of 1,283 houses. Cumulatively, the Corporation had given financial assistance for the construction of 31,046 houses by March 1990.

9.35 The Kerala State Co-operative Housing Federation with its 207 affiliated primary societies is the premier organisation which is implementing housing programmes in the Co-operative Sector. The Federation raises financial resources mainly through the issue of shares and debentures and borrowings from LIC and HUDCO. As on 31-3-1990 the Federation has disbursed Rs. 122.71

crores and the number of houses completed at the end of March 1990 was 36,938.

9.36 The Board of Revenue is implementing six housing schemes and the most important among them being the schemes for allotment of house sites to landless rural labourers and the Rehabilitation Housing Scheme. During the year under reference 2,179 house sites were distributed for which the expenditure incurred was Rs. 149.87 lakhs. The number of beneficiaries belonging to SC/ST was 947. During 1989-90, house construction assistance was also given to 335 persons, including 72 from SC/ST. The relevant data are given in Table 9.28

TABLE 9.28

## Housing Schemes (HNP) Implemented by the Board of Revenue

Year	Allotment of sites		Expenditure (Rs. Lakhs)	Construction of Houses	
	No. of sites allotted	of which SC/ST		No. of persons assisted	SC/ST
(1)	(2)	(3)	(4)	(5)	(6)
1985-86	5151	2341	111.36	888	335
1986-87	5517	2321	154.00	1043	407
1987-88	1869	883	95.86	366	139
1988-89	2903	1291	150.92	852	222
1989-90	2179	947	149.87	335	72

9.37 Under Rehabilitation Housing Scheme 6,497 houses were completed during 1989-90. Viewed against the achievements recorded in the previous years this may look a little discouraging. The reason for this fall in achievement is that 3rd phase of the programme was taken up during 1989-90 only and therefore even though the initial instalments were given to a large number of persons, the number of houses completed were less compared to the previous years.

9.38 House building advance to government employees is sanctioned for the purpose of construction/completion/extension and repair of residential buildings. The budget provision for the

scheme during 1989-90 was Rs. 650 lakhs comprising Rs. 500 lakhs under Non-Plan, Rs. 135 lakhs under Plan and Rs. 15 lakhs under Special Component Plan. A total number of 2,090 applications for house building advance was sanctioned during the year as against 2,350 in the previous year.

9.39 The Scheduled Caste Development Department gave financial assistance for the construction of 1,131 houses incurring an expenditure of Rs. 59.48 lakhs during 1989-90. During the year, the Scheduled Tribe Development Department extended financial assistance for the construction of 286 houses. The expenditure incurred for this programme was Rs. 36.23 lakhs. Tribal Housing is a hundred percent subsidised scheme and the State Public Works Department is entrusted with the task of constructing the houses.

9.40 During April 1989, Jawahar Rozgar Yojana was introduced in the place of RLEGP and NREP. As a result, the housing scheme for the benefit of Scheduled Castes/Scheduled Tribes implemented under the above two programmes continue as one of the activities under the Jawahar Rozgar Yojana. During 1989-90, 22932 houses were constructed under Jawahar Rozgar Yojana. For the benefit of fishermen, 869 houses were constructed by the Fishermen Welfare Corporation during 1989-90, incurring an expenditure of Rs. 57.10 lakhs. The relevant data showing the progress made by the housing sector in the State are given in table No.9.29



TABLE 9.29

## Achievement in Housing - Major Schemes

Sl. No.	Scheme	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Provision of House-sites to rural landless workers	4841	3022	5517	1869	2903	2179
2.	Huts/Houses for rural workers	1234	700	974	366	852	335
3.	Village Housing Project	138	-	-	-	-	29
4.	Low Income Group Housing	248	184	-	-	-	28
5.	Middle Income Group Housing	197	113	59	22	27	53
6.	Co-operative housing scheme for economically weaker section	11600	2427	2625	-	-	-
7.	Subsidised aided self help housing scheme with Co-operation of voluntary Agencies	12960	12125	2090	-	-	-
8.	Rental Housing Scheme	-	152	-	-	11	78
9.	Public Housing Scheme	152	528	613	544	488	172
10.	Kudikidappukar Housing	1201	743	212	-	-	-
11.	Kerala State Development Corporation for SC/ST	1033	3870	2215	1916	675	1283
12.	Scheduled Tribe Development Dept.	541	590	90	350	377	286
13.	Scheduled Caste Development Dept.	264	313	159	1166	957	1131
14.	Kerala Fishermen Welfare Corporation	1098	17019	2290	3870	6143	869
15.	Kerala State Co-operative Housing Federation	4700	4869	8387	8658	6716	3502
16.	Rehabilitation Housing Scheme	-	-	85364	35000	29981	6497
17.	N R E P	1570	2301	9544	7560	9451	-
18.	R L E G P	2045	4802	14888	11040	8554	-
19.	Jawahar Rozgar Yojana	-	-	-	-	-	22932
Total		43822	33764	123762	72361	67135	39374

### Water Supply and Sanitation

9.41 The State Government has been giving utmost importance in providing drinking water facilities under development planning. At the beginning of the First Five Year Plan only Thiruvananthapuram, Alappuzha, Kochi and Kozhikode were the only towns having protected water supply system. Through concerted

efforts during the last 40 years about 35% of the rural population and 70 per cent of the urban population could be covered under protected water supply. During the last ten years more than 1477 water supply schemes, both in the rural and urban areas were taken up. The achievements under this sector during 1989-90 is briefly presented below.

#### Rural Water Supply

9.42 According to 1985 figures, out of 1219 villages in the State 1196 were identified as problem villages. Out of these only 15 Villages were fully covered with protected water supply, the rest were partially covered.

9.43 There were 1440 schemes in operation during 1989-90. Of these 76 schemes were completed during that year. The district wise details on the number of schemes in operation and schemes completed during 1989-90 are presented in Table 9.30

TABLE 9.31

Flow of Funds from L.I.C, Government of India and External Agencies (Rs.lakhs)

Year	Flow of funds from		
	LIC	External Agencies	Government of India
(1)	(2)	(3)	(4)
1985-86	543.61	342.71	1085.00
1986-87	600.00	411.63	1213.00
1987-88	660.00	1328.15	1398.32
1988-89	861.00	931.29	920.75
1989-90	947.00	734.49	890.00

TABLE 9.30

Number of Rural Water Supply Schemes in Operation and Schemes Completed during 1989-90

Sl. No.	District	No. of schemes in operation during 1989-90	No. of Schemes completed during 1989-90
(1)	(2)	(3)	(4)
1.	Thiruvananthapuram	88	5
2.	Kollam	67	4
3.	Pathanamthitta	42	3
4.	Alappuzha	87	6
5.	Kottayam	108	8
6.	Idukki	114	7
7.	Eranakulam	124	5
8.	Thrissur	176	1
9.	Palakkad	163	4
10.	Malappuram	144	14
11.	Kozhikode	101	6
12.	Wayanad	40	8
13.	Kannur	110	5
14.	Kasaragod	76	..
Total		1440	76

9.44 The Village-wise distribution and percentage of population provided with safe drinking water as on 1-4-89 is given below:

Below 10%	354 Villages
Between 10% and 25%	268 ,,
Between 25% and 50%	256 ,,
Between 50% and 75%	195 ,,
Between 75% and 100%	146 ,,
Total	1219 Villages

9.45 The rural water supply schemes in the state are implemented with assistance from Government of India, World Bank, bilateral agencies and L.I.C. The flow of funds from external agencies and Government of India since 1985-86 for rural water supply schemes and accelerated rural water supply schemes are given in table 9.31

TABLE 9.32

Additional Population Covered During  
VII Plan

Year	Population covered (In lakhs)		
	Total	SC	ST
(1)	(2)	(3)	(4)
1985-86	5.10	0.48	0.06
1986-87	2.41	0.26	0.48
1987-88	5.15	0.80	0.10
1988-89	5.25	0.67	0.32
1989-90	4.81	0.95	0.10
Total	22.72	3.16	1.06

9.46 There are seven rural water supply schemes under implementation with World Bank Assistance. The total estimated cost (revised) for these schemes amount to Rs.87.41 crores. These schemes when completed would benefit a population of 16.07 lakhs. It is expected that almost all the schemes would be completed by 1993-94.

9.47 There are eleven bilaterally assisted rural water supply schemes. Of these eight are financed by the Royal Netherlands Government and three are financed by DANIDA. The revised estimated cost of these schemes amount to Rs.114.82 crores. It is expected that on completion of these schemes a population of 24.59 lakhs would be benefited. The revised estimated cost of these 18 major water supply schemes amount to Rs.202.23 crores. On completion of these schemes a population of 40.66 lakhs would be benefited.

9.48 During the Seventh Plan 410 rural water supply schemes were commissioned. Of these 226 schemes were under special component plan and 38 schemes were under Tribal Sub Plan. The year wise population additionally covered during the VII Plan is given in Table 9.32

#### Urban Water Supply Schemes

9.49 As on 1-4-1990, 37 towns in the State were provided with protected water supply benefiting 70 percent of the urban population. Among the 15 major

states, Kerala occupies the 10th place regarding coverage of urban water supply (Appendix 9.22).

9.50 There are 12 major water supply schemes started with loan assistance from LIC. These schemes are now posed for World Bank assistance. The revised estimated cost of these schemes is Rs.68.2 crores. With the completion of these schemes a population of nearly 10 lakhs will be benefited.

#### Expenditure

9.51 The total expenditure on water supply and sanitation schemes during 1989-90 was Rs.51.25 crores as against Rs.48.59 crores during 1988-89. Of this Rs.45.83 crores was for rural water supply schemes Rs.4.95 crores was for urban water supply schemes and Rs.46.44 lakhs, was for sanitation schemes. The year wise expenditure (Plan and Non plan) from 1985-86 on rural water supply schemes, urban water supply schemes and sanitation schemes is given in Table 9.33

#### Expenditure

9.52 The total expenditure on water supply stood at Rs.294.32 crores. During the five year period from 1985-86 to 1989-90 the expenditure on water supply and sanitation amounted to Rs.307.40 crores. The percapita expenditure on water supply and sanitation during 1989-90 was Rs.26.53.

#### Urban Development

9.53 The State has an urban population of 48 lakhs as per 1981 census. This accounted for 18.8 per cent of the total population. The Urban Area constituted 4.6 per cent of the total area of the state. The urban population in the state is expected to increase from 48 lakhs in 1981 to 90 lakhs in 2001 AD.

9.54 The major agencies implementing urban development programmes are 3 City

TABLE 9.33

Expenditure on Sewerage and Water Supply in the State, Plan and Non Plan

(Rs.inlakhs)

Year	Water Supply Scheme						Sanitation Scheme			Grand Total (Plan & Non Plan)
	Urban Water Supply			Rural Water Supply			Plan	Non-plan	Total	
	Plan	Non-plan	Total	Plan	Non-plan	Total				
(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(12)
1985-86	667.39	1455.60	2122.98	2821.48	..	2821.48	254.43	..	254.43	5198.89
1986-87	579.57	1536.47	2116.04	2023.17	..	2023.17	261.69	129.64	391.33	4530.54
1987-88	2398.57	2015.00	4413.57	1578.21	..	1578.21	155.24	..	155.24	6167.02
1988-89	1129.69	2214.00	3343.69	3234.01	34.86	3268.87	148.14	312.52	460.66	7073.22
1989-90*	495.16	2666.00	3161.16	4583.00	..	4583.00	46.44	..	46.44	7790.60
<b>Total</b>	<b>5270.37</b>	<b>9887.07</b>	<b>15157.44</b>	<b>14239.87</b>	<b>34.86</b>	<b>14274.73</b>	<b>865.94</b>	<b>442.16</b>	<b>1308.10</b>	<b>30740.27</b>

Note: \* Provisional

corporations, 59 Municipalities 11 Development Authorities and 1 township.

9.55 The Kerala Urban Development Finance Corporation Ltd. is a company incorporated in 1970 for rendering financial assistance to urban local bodies for (i) their remunerative development schemes (ii) town improvement schemes including housing scheme and (iii) Non remunerative development schemes. The Corporation has so far disbursed Rs.37.95 Crores as loans for implementation of 474 schemes. The urban local bodies have completed 393 such schemes as on 31-3-1990. During 1989-90 HUDCO has sanctioned Rs.32.90 lakhs as loan for housing schemes. The amount disbursed as loan for housing schemes during the year 1989-90 was 30.82 lakhs.

9.56 The Department of Municipal Administration is concerned with the implementation of (i) Non-remunerative town improvement scheme (2) Environmental Improvement of urban slums (3) Integrated Development of small and medium towns (4) Urban Basic Services and (5) Nehru Rozgar Yojana. During 1989-90 under Non remunerative town improvement schemes, 6 schemes were taken up by the urban local bodies. Under Environmental improvement of slums during 1988-89 20,866 slum dwellers were benefited and during 1989-90 19336 slum dwellers were covered.

9.57 The Urban Basic Services Scheme was implemented in the municipal towns of Allppey and Ernakulam districts. The Nehru Rozgar Yojana was introduced from 1989-90, for generation of employment opportunities to those living below poverty line. The components of the scheme are (i) Setting up of Microcenter-

prises in all towns (ii) Providing of wage employment in urban towns up to one lakh population and (iii) Housing and shelter upgradation in towns with population of one lakh and upto 20 lakhs.

9.58 The eleven Development Authorities have so far mobilised resources to the tune of about Rs.70 Crores since inception. The major source of funds flow is from HUDCO. The Thiruvananthapuram Development Authority through HUDCO, assistance Supported construction of 1920 houses of which about 70 per cent is for Economically Weaker Sections. It has also formulated over 20 DTP schemes. The Greater Cochin Development Authority has assisted/constructed houses to the tune of about 20000. The Calicut Development Authority has also implemented schemes under housing/urban renewal, Market complexes etc. The other Development Authorities though have drawn up ambitious schemes, they are yet to make a headway in promoting Urban Development.

9.59 The Kerala Urban Development Project is proposed to be taken up with World Bank assistance at a cost of Rs.306 crores and to be implemented in the three major city regions of Thiruvananthapuram, Kochi and Kozhikode. The consultancy and studies are in progress.

#### Labour and Labour Welfare

##### *Industrial Training Institutes*

9.60 There are at present 28 government ITIs and 227 private ITCs in the state with a seat strength of 37544. During the year under review 6 new ITIs were started. The number of students in

Govt. ITIs increased from 10248 to 10536. Out of 28 Government ITIs, three are exclusively for women. Moreover, women strength in ITIs constitutes about 20 percent of the total. The Government ITIs impart training in 14 trades with one year duration and 15 trades with two year duration. Districtwise number and seat strength of government ITIs and private ITCs in the state are given in Table 9.34.

9.61 The government ITIs have imparted training to 356 trainees sponsored by the Kerala Labour Welfare Fund Board. Special training programmes like Training for Rural Youth in Self employment (TRYSEM), Special training scheme for Scheduled Caste/Scheduled Tribe trainees, Post ITI intensive training schemes, crash programme for training of service technicians in common Electronic products with the assistance of Department of Electronics, Government of India etc. were conducted in the ITIs.

#### Trade-wise Strength in ITIs

9.62 An analysis of the courses in ITIs would show that out of 10536 trainees in the Government ITIs, 29% are undergoing one year course and 71% in two year course. In the case of private ITCs out of 27,008 trainees 9% are in one year course and 91% in two year course. It is seen that there are as many as 18 trades imparted in the one year course and 16 trades in the two year course are conducted.

#### Outturn in Government ITIs and Private ITCs

9.63 In Government ITIs a total of 3888 trainees were admitted under 15 trades in the two year course. Out of this the SC/ST segment stood at 494. Out of 494 SC/ST students only 68 were girls. The relevant data are given in table 9.35 & 9.36. The tradewise intake and outturn in private ITCs are given in Tables 9.37 and 9.38.

TABLE 9.34

District-wise No. of Industrial Training Institutes and Seat Strength in Kerala as on 31-12-1990

Sl. No.	District	No. of Institutions			Seat strength		
		Govt. ITIs	Pvt. ITCs	Total	Govt. ITIs	Pvt. ITCs	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Thiruvananthapuram							
	thapuram	5	32	37	2848	2976	5824
2. Kollam							
	Kollam	2	26	28	968	3770	4738
3. Pathanamthitta							
	Pathanamthitta	1	25	26	176	2504	2680
4. Alappuzha							
	Alappuzha	2	34	36	792	4492	5284
5. Kottayam							
	Kottayam	2	18	20	884	2672	3556
6. Idukki							
	Idukki	1	5	6	224	448	672
7. Ernakulam							
	Ernakulam	2	35	37	792	5428	6220
8. Thrissur							
	Thrissur	3	20	23	996	2156	3152
9. Palakkad							
	Palakkad	2	4	6	728	432	1160
10. Malappuram							
	Malappuram	1	6	7	248	526	774
11. Wayanad							
	Wayanad	1	2	3	80	176	256
12. Kozhikode							
	Kozhikode	3	10	13	880	836	1716
13. Kannur							
	Kannur	2	9	11	872	528	1400
14. Kasaragod							
	Kasaragod	1	1	2	48	64	112
Total		28	227	255	10536	27008	37544

TABLE 9.35.

Trade wise Intake and Out-turn in Government ITIs during 1988-90 - Two Years Duration Course

Sl. No.	Name of Trade	Number Admitted in 1988			Number Passed in 1990		
		Total			Scheduled Caste	Scheduled Tribe	Total
		Total	Boys	Girls	Total	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	D/man Mechanical	96	78	18	14	4	52
2.	D/man Civil	304	182	122	45	-	267
3.	Surveyor	80	44	36	11	3	69
4.	Fitter	576	576	-	62	4	373
5.	Turner	300	300	-	18	-	284
6.	Mechanist	276	276	-	12	1	194
7.	Refre:&Air Cond: Mech.	224	224	-	15	3	218
8.	Mech. Instrt.	80	80	-	6	-	38
9.	Watch & Clock Repairer	48	-	48	3	-	46
10.	Electrician	368	368	-	48	2	288
11.	Wireman	336	336	-	67	6	290
12.	Mech. (Mot.Veh)	416	416	-	32	2	120
13.	Mech. (R & TV)	352	214	138	54	5	243
14.	Electronic Mech.	384	227	157	57	2	244
15.	Painter General	48	48	-	16	2	37
<b>Total</b>		<b>3888</b>	<b>3369</b>	<b>519</b>	<b>460</b>	<b>34</b>	<b>2763</b>

TABLE 9. 36

District-wise Intake and Out-turn in Government I.T.Is during 1989-90

Sl. No.	Name of Trade	Number admitted in 1989					Number passed in 1990
		Total	Boys	Girls	Sch. Caste Total	Sch. Tribe Total	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Forger & Heat Treater	352	352	-	35	2	175
2.	Carpenter	384	372	12	32	1	216
3.	Dress Making	80	-	80	7	1	65
4.	Mech. Diesel	112	112	-	18	3	92
5.	Mech. Tractor	64	64	-	2	-	36
6.	Houlder	224	224	-	32	2	106
7.	Plumber	352	352	-	39	4	297
8.	Secretarial Practice	48	-	48	2	-	46
9.	Stenography (Eng.)	368	162	206	47	3	188
10.	Stenography (Hindi)	32	-	32	2	-	30
11.	Sheetmetal Worker	272	204	68	35	4	174
12.	Upholsterer	16	16	-	2	-	13
13.	Welder	696	696	-	92	16	560
14.	Data Preparation and Computer Software	40	40	-	3	-	38
Total		3040	2594	446	348	36	2036



TABLE 9.37

Trade-wise Intake and Out-turn in Private I.T.Cs during 1988-90

Duration of Course: Two years

Sl. No.	Name of Trade	Number admitted in 1988			Number Passed in 1990	
		Total	Total Boys	Girls	Total scheduled Caste	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Draughtsman Mechanic	124	111	13	25	112
2.	Draftsman Civil	2927	2276	651	222	1595
3.	Surveyor	35	27	8	7	14
4.	Fitter	1836	1836	-	99	1112
5.	Turner	14	14	-	14	10
6.	Mechinist	-	-	-	-	-
7.	Mech. Ref. and Air cond.	281	281	-	6	275
8.	Instrument Mech.	-	-	-	-	-
9.	Watch and Clock Repairer	-	-	-	-	-
10.	Electrician	2269	2269	-	81	1884
11.	Wireman	145	145	-	14	49
12.	Mech. Motor Vehicle	447	447	-	15	225
13.	Mech. Radio & Television	683	649	34	21	374
14.	Electronic Mechanic	929	868	61	32	498
15.	Painter General	-	-	-	-	-
16.	Tool and Die Maker	18	18	-	-	16
Total		9808	9041	767	536	6164

TABLE 9.38

Trade-wise Intake and Out-turn in Private I.T.Cs during 1989-90

Sl. No.	Name of Trade	Number admitted in 1989					Number passed in 1990
		Total			Sch. caste	Sch. Tribe	Total
		Total	Boys	Girls	Total	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Welder	169	169	-	11	-	139
2.	Moulder	-	-	-	-	-	-
3.	Carpenter	13	13	-	1	-	13
4.	Sheet Metal Worker	-	-	-	-	-	-
5.	Forger & Heat Treater	19	19	-	2	-	9
6.	Plumber	663	663	-	18	-	533
7.	Upholster	-	-	-	-	-	-
8.	Mechanic (Diesel)	162	162	-	4	-	78
9.	Data Preparation and Computer Software	135	102	33	-	-	112
10.	Mechanic Tractor	-	-	-	-	-	-
11.	Stenography (Hindi)	3	-	3	-	-	3
12.	Stenography (English)	809	271	538	38	-	388
13.	Dress Making	-	-	-	-	-	-
14.	Secretarial Practice	67	6	61	-	-	9
15.	Cutting & Tailoring	92	-	92	12	-	19
16.	Hand Compositor and Proof Reading	25	11	14	2	-	22
17.	Letter Press Machine Winder	30	30	-	1	-	25
18.	Book Binder	8	2	6	-	-	3
Total		2195	1448	747	89	-	1353

CHAPTER 10

SPECIAL PROGRAMMES FOR THE WEAKER SECTIONS

*Integrated Rural Development Programme (IRDP)*

The Integrated Rural Development Programme (IRDP) is an important poverty alleviation programme financed by Central and State Governments on a 50:50 basis. Under this programme, financial aid is given by way of loan and subsidy to the families below the poverty line to enable them to engage in self employment ventures so as to attain an income level above poverty line. The allocation for 1989-90 under the scheme was Rs.18.40 crores, meant for supporting 72,843 families. The actual expenditure was Rs.19.27 crores, benefiting 74,150 families. The performance under the programme for 1988-89 and 1989-90 is given in Table 10.1. Among the 74,150 families assisted under IRDP during 1989-90, 23,034 were Scheduled Caste families and 2,711 were Scheduled Tribe families. Further, 28,184 women beneficiaries were also assisted. The percentage coverage of SC/ST and women were 34.72% and 38.01% respectively. For the Seventh Plan period as a whole, a total of 4.87 lakh families were assisted under IRDP. Of this number SC/ST beneficiaries constituted 1.63 lakhs (33.5%) and 1.66 lakhs (34.1%) women beneficiary families.

10.2 A total of Rs.15.60 crores was disbursed as subsidy during 1989-90, out of which Rs.5.01 crores was spent exclusively for SC/ST families and Rs.5.45 crores for the benefit of women. The total subsidy disbursed during the Seventh Plan (1985-90) amounted to Rs.74.61 crores of which the subsidy disbursed to SC/ST amounted to Rs.23.90 crores (32%). Loan disbursed to IRDP beneficiaries through the banks during the year 1989-90 was Rs.31.57 crores. The per family investment including subsidy and loan in respect of new families rose to Rs.6362 during 1989-90 from the level of Rs.3747/- at the

begining of the Seventh Plan period. Information on achievements under various poverty alleviation programme including IRDP during the Seventh Plan period is furnished in Table 10.1 and 10.2.

TABLE 10.1

Physical and Financial Achievements under Rural Development Programmes (1988-89 and 1989-90)

Sl. No.	Programme	Unit	Achievement	
			1988-89	1989-90
(1)	(2)	(3)	(4)	(5)
<b>I. (a) I.R.D.P</b>				
1.	Families assisted	No.	87006	74150
2.	No. of SC families assisted	"	29678	23034
3.	No. of ST Families assisted	"	2465	2711
4.	No. of Women assisted	"	35602	28184
5.	Subsidy adjusted	Rs. in lakhs	1539.53	1560.22
6.	Loan disbursed	"	3234.51	3157.11
7.	Per family investment (new families)	Rs.	6254.00	6362.00
<b>(b) TRYSEM</b>				
1.	Persons trained	No.	5925	6146
2.	S.C persons trained	"	2093	1975
3.	S.T. persons trained	"	110	148
4.	Women trained	"	3569	3987
5.	Trained persons who set up their self employment ventures	"	2188	1527
6.	Of which number of SCs	"	648	407
7.	Of which number of STs	"	35	32
8.	Of which number of women	"	1365	1074
9.	Trained persons who have taken up wage employment	"	3169	2666
10.	Of which number of SCs	"	1063	795
11.	Of which number of STs	"	57	62
12.	Of which No. of women	"	1584	1445
13.	Total No. settled including self employed and wage employed	"	5357	4193
14.	Percentage of youth settled out of No trained	%	90	68

TABLE 10.1 (continued ...)

Training of Rural Youth for Self

(1)	(2)	(3)	(4)	(5)
(c) DMCRA				
1. Women groups organized	No.	193	136	
2. Women groups functioning	No.	182	169	
II. NREP/JRY				
1. Total expenditure	Rs. lakhs	4066.98	6587.35	
2. Expenditure for SCs	"	1288.61	1677.20	
3. Expenditure for STs	"	90.64	138.65	
4. Mandays generated	Lakh Mandays	149.57	231.79	
5. Mandays generated for SCs	"	50.67	74.37	
6. Mandays generated for STs	"	7.29	10.37	
7. Mandays generated for women	"	40.34	65.81	
8. Food grains utilised	M.T.	13879.88	28345.69	
9. Houses completed	No.	9451	22932	
10. New roads constructed	km	823.65	3532.28	
11. Sanitary latrines completed	No.	486	7853	
12. Drinking water wells constructed	"	159	591	
13. Irrigation canals/wells and tanks	"	228	275	
14. Area planted under social forestry	Ha	1849.36	415.12	
15. No. of seedlings distributed	Lakh Nos.	247.35	126.04	
16. Building construction (schools and other buildings)	No.	25	224	
III. RLEGP				
1. Total Expenditure	Rs. lakhs	2180.90	-	
2. Expenditure for SCs	"	949.31	-	
3. Expenditure for STs	"	96.10	-	
4. Mandays generated	lakh mandays	74.11	-	
5. Mandays generated for SCs	"	26.20	-	
6. Mandays generated for STs	"	3.95	-	
7. Food grains utilised	M.Ts	8942.97	-	
8. Length of roads constructed	km	520.82	-	
9. Houses constructed	No.	8554	-	
10. Sanitary latrines constructed	"	1139	-	
11. Social Forestry Area Planted	Ha	466.74	-	
12. Social Forestry (distribution of seedlings)	lakh No.	28.79	-	
IV. Scheme for Small and Marginal Farmers				
1. Amount of subsidy disbursed	Rs. lakhs	145.50	272.90	
2. Small and Marginal Farmers assisted	No.	124231	99070	
3. Of which SC farmers assisted	"	10378	7803	
4. Of which ST farmers assisted	"	1306	909	
5. SF/MF wells constructed	"	1186	2798	
6. SF/MF pumps distributed	"	3624	11016	
7. SF/MF Area benefited	Ha	869.76	6892.02	
8. SF/MF Pump houses constructed	No.	628	1330	

Source: Rural Development Department

Employment (TRYSEM)

10.3 This programme aims at providing technical skills to Rural Youth in the age group of 18 to 35 belonging to families below the poverty line with a view to enabling them to take up self employment ventures. Against the target of 6,040 set for training, 6,146 youth were trained during 1989-90. They included 1,975 schedules Caste, 148 Scheduled Tribe and 3,987 women beneficiaries. The rate of settlement of the trained Youth was also better during the year, with 41,93 finding their own avenues for employment. The cumulative achievement under TRYSEM for the Seventh Plan period works out to 26,472 persons; they include 9,172 SC/ST beneficiaries (35%) and 16,858 (64%) women. The total number settled including self employed and waged employed during the period was 18,858 (71%) of which SC/ST constituted 5859 (31%), and women 11247 (60%). Details are furnished in Table 10.2. The lag between the number trained and the number settled thus continued to persist. To bridge the gap between the two, and for rehabilitating the youth trained under TRYSEM, a new programme viz. Rehabilitation of TRYSEM trainees has been introduced during the financial year 1990-91 and a budget provision of Rs.100 lakhs has been provided as State share for the scheme during 1990-91.

TABLE 10.2

## Achievements under IRDP &amp; TRYSEM during Seventh Plan (1985-90) Period

Sl. No.	Name of Scheme/Programme	1985-86	1986-87	1987-88	1988-89	1989-90	Total 1985-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>I. I.R.D.P</b>							
i.	No of families assisted	71376	143399	110684	87006	74150	486615
ii.	No. of SC families assisted	24954	46387	34059	29678	23034	163288
iii.	No. of ST families assisted				2465	2711	
iv.	No. of women assisted	19778	44846	38029	35602	28184	166439
v.	Disbursement of Subsidy to families (Rs.lakhs)	775.28	2010.98	1575.02	1539.53	1560.22	7461.03
vi.	Subsidy out of (v) above to						
	(a) S.C families (Rs.lakhs)	244.76	627.03	467.23	492.89	436.74	2389.79
	(b) S.T families (Rs.lakhs)				56.02	65.12	
	(c) Women (Rs.lakhs)	167.66	555.81	499.78	580.65	544.85	2348.75
vii.	Subsidy out of (v) above to						
	(a) Primary Sector activities (Rs.lakhs)	418.21	891.72	634.15	583.24	616.50	3143.82
	(b) Secondary Sector activities	93.06	287.01	260.99	342.20	322.45	1305.71
	(c) Tertiary Sector activities	264.01	832.25	679.88	614.08	621.27	3011.49
viii.	Loan disbursed (Rs.lakhs)	1677.23	4189.60	3370.15	3234.51	3157.11	15628.60
ix.	Per family investment (new-families) (Rs)	3748	5714	6197	6254	6362	-
<b>II. TRYSEM</b>							
1.	Total No. of youth trained	3717	4835	5849	5925	6146	26472
2.	Of which						
	(a) No. of SCs	1264	1592	1990	2093	1975	9172
	(b) No. of STs				110	148	
	(c) No. of Women	2526	3089	3687	3569	3987	16858
3.	Total No. settled including self-employed and wage employed	2201	3254	3853	5357	4193	18858
4.	SC/ST persons settled out of total trained (No)	504	1078	1178	1803	1296	5859
5.	Women settled out of total trained (No)	1250	1983	2546	2949	2519	11247
6.	Percentage of youth settled out of No. trained (%)	59%	67%	66%	90%	68%	71%

Source: Rural Development Department

### *Jawahar Rozgar Yojana (JRY)*

10.4 In 1989-90 a new employment generation programme known as Jawahar Rozgar Yojana (JRY) was introduced by merging the two earlier schemes of, NREP (50% centrally assisted) and RLEGP (100% centrally assisted) which were under implementation till then. The expenditure on this programme is to be shared between the Centre and State in the ratio of 80:20. The main programmes taken up under this include:

(i) All rural works which result in creation of durable productive community assets

(ii) Preference is to be given to works having potential of maximum direct and continuing benefits to the members of the poverty group and which can be owned or assigned to groups of beneficiaries

The panchayats are entrusted with the implementation of the programme.

10.5 During 1989-90, a sum of Rs.65.87 crores was utilised, of which Rs.16.77 crores and Rs.1.39 crores were spent exclusively for the benefit of SCs and STs respectively. Altogether 231.79 lakh mandays were generated during the period, of which mandays generated for SC and ST constituted 74.37 and 10.37 lakhs respectively. The mandays generated for women were 65.81 lakhs. The quantity of foodgrains utilised for JRY during the year was 28346 M.Ts. Comparative achievements under NREP, JRY and RLEGP during VII plan (1985-90) period are presented in Table 10.3.

### *Development of Women and Children in Rural Areas (DWCRA)*

10.6 The programme was introduced by Government of India as a subscheme of IRDP in 50 selected Blocks during September 1982. The scheme provides opportunities to women members of families of the target groups to increase their income and supportive services needed to enable them to take up income generating activities. The beneficiaries are women belonging to identified families living below poverty line. The scheme was continued during 1989-90 in 5 selected districts viz. Wayanad, Palakkad, Idukki, Malappuram and Kannur.

10.7 The scheme envisages formation of a group of 15 to 20 women and identification of a group leader to liaise with the Banks and the Government offices. Child care facilities are also provided to the children of working women.

10.8 In addition to loan from Banks and subsidy from the Blocks an amount of Rs.15,000 per group is also available as one time grant which is borne by State and Central Governments and UNICEF equally. The scheme is under implementation in (12 blocks) in Palakkad District, (3 blocks) in Wayanad, (8 blocks) in Idukki and (14 blocks) in Malappuram district. During 1989-90 the programme was extended to Kannur district covering 9 blocks. The total beneficiaries under the scheme during 1989-90 numbered 180 in Palakkad, 588 in Idukki and 810 in Malappuram district. Total expenditure under DWCRA during 1989-90 was Rs.17.28 lakhs. Year-wise details of achievements during Seventh Plan under DWCRA Programme is given in Table 10.4

TABLE 10.3

Achievements under NREP, JRY and RLEGP during Seventh Plan Period 1985-90

Items	N R E P				R L E G P			J R Y		
	Units	1985-86	1986-87	1987-88	1988-89	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Mandays Generated	Lakhs	72.34	105.32	98.75	149.57	77.62	113.72	85.32	74.11	231.79
2. Mandays generated for SC/ST	"	27.34	44.05	36.76	57.96	33.74	52.93	33.61	30.15	84.74
3. Foodgrains utilised	MT	24178.24	36553.48	42388.82	13879.88	21810.92	59123.49	32331.17	8942.97	28345.69
4. Construction of Houses	No.	2301	9544	7560	9451	4802	16888	11040	8554	22932
5. Length of Roads	Km	950	1037.92	790.80	823.65	197.4	555.36	573.06	520.82	3532.28
6. Improvement of Irrigation canals/wells/Tanks	No.	..	44	68	228	12	17	-	-	275
7. Sanitary latrines constructed	No.	..	2240	1663	486	..	3322	2224	1139	7853
8. Drinking water wells constructed	No.	..	84	91	159	-	-	-	-	591
9. Other works including school Buildings, dispensaries etc.	Nos.	293	73	14	25	-	-	-	-	224
10. Seedlings distributed	Lakhs	290.66	220.64	341.69	247.3	-	-	66.78	28.29	126.04
11. Area planted under social forestry	in.ha.	935.38	-	-	1849.3	-	-	-	-	415.12

Source: Rural Development Department

TABLE 10.4

Achievements under DWCRA Programme during Seventh Plan Period (1985-90)

Seventh Plan	Name of District	Physical		No. of beneficiaries		
		No. of groups formed	No. of groups assisted	Total	S.Cs	S.Ts.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i.1985-86	Palakkad	105	105	1761	226	62
ii.1986-87		255	44	1224	296	97
iii.1987-88		-	94	885	234	132
iv.1988-89		-	78	2151	943	8
v.1989-90		-	12	180	-	-
i.1985-86	Wayanad	45	19	660	64	177
ii.1986-87		45	50	467	41	175
iii.1987-88		-	20	309	28	81
iv.1988-89		-	1	14	-	-
v.1989-90		-	-	-	-	-
Idukki						
i.1985-86	(Scheme sanctioned from 1986-87 and					
ii.1986-87	implementation began from 1987-88)					
iii.1987-88		100	100	1057	133	77
iv.1988-89		100	89	1423	320	186
v.1989-90		40	11	588	82	150
i.1985-86	Malappuram (Scheme sanctioned from					
ii.1986-87	1988-89)					
iii.1987-88						
iv.1988-89		93	93	879	198	19
v.1989-90		81	81	810	152	-
1989-90	Kannur	15	-	-	-	-
(Scheme sanctioned from 1989-90 only)						

Source: Rural Development Department.

*People's Action for Development (Kerala) (PAD(K))*

10.9 This is an organisation under the Rural Development Department registered in 1986 under Charitable Societies Registration Act 1955. The objective of the society is to ensure the involvement of voluntary organisations in Rural Development activities. It helps voluntary organisations in preparing projects to enable them to get financial assistance from Council for Advancement of People's Action and Rural Technology (CAPART) New Delhi. It also gives guidance and help in the proper implementation of projects sanctioned by CAPART.

10.10 During 1989-90, PAD (K) processed and forwarded 56 projects to CAPART for approval and financial assistance. Sanction was obtained for 33 projects costing Rs.176.87 lakhs. Year-wise details of the projects sent to CAPART and sanctioned during 7th plan period are given in Table 10.5.

TABLE 10.5

Projects Sent to CAPART and Sanctioned during the Seventh Plan Period

Year sent to CAPART	No. of Projects	Amount involved (Rs.in lakhs)	No. of projects sanctioned	Cost of the projects sanctioned (Rs.lakhs)
(1)	(2)	(3)	(4)	(5)
PAD Started functioning during 1986-87				
1986-87	52	374.61	-	-
1987-88	20	34.72	19	44.73
1988-89	28	90.29	47	158.78
1989-90	56	177.14	33	176.87

Source: People's Action for Development-Kerala

**Kerala Rural Development and Marketing Society (KERAMS)**

10.11 A State level marketing agency viz. KERAMS is functioning at Thiruvananthapuram with a view to organise marketing facilities for the products manufactured by the IRDP beneficiaries. Under the auspices of KERAMS trade fairs are being organised every year in different parts of Kerala during festival seasons since 1984. For the regular sales of IRDP products, a separate organization viz. "Grama Sree" is functioning at Vazhuthacaud, Thiruvananthapuram since 1987 October. During 1989-90 the organisation could obtain products of over 200 IRDP beneficiaries from various parts of the State. The total sale proceeds of KERAMS during the year amounted to Rs.6.55 lakhs.

**Land to the Landless**

10.12 The extent of land declared surplus as on 30.11.1990 was 1,64,962 acres. Of this 92,817 acres have been taken possession of by Government and 39,904 acres remain to be taken over. The extent of land available for taking over, excluding the land covered by stay orders, disputes etc. is only 721 acres. Out of 92,817 acres of land taken over 62,673 acres have been distributed and 20,202 acres are reserved for public purposes. Out of 62,673 acres of land distributed, so far, 24,508 acres (39.1%) were given to the Scheduled Castes (57,270 beneficiaries), 5086 acres (8.12%) to the Scheduled Tribes (7102 beneficiaries) and 33,079 acres (52.78%) to others (69879 beneficiaries) see Appendix 10.3.

10.13 Annual target for distribution of surplus land and the achievements made since the commencement of the Seventh Five Year Plan are given in Table 10.6

TABLE 10.6

Distribution of Surplus Land during Seventh Plan

Year	Target fixed (in Acres)	Achievement (in Acres)			
		SC	ST	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)
1985-86	1500	687	117	658	1462
1986-87	1000	381	52	508	941
1987-88	1670	481	75	672	1228
1988-89	1000	445	42	664	1151
1989-90	1000	363	16	366	705

Source: Land Board-Kerala

10.14 Under the scheme for Financial Assistance to the Assignees of Surplus Land for the development and cultivation of land, the present pattern of assistance is Rs.1000/- per acre. (Rs.2500 per hectare). The entire amount is given as grant and the expenditure is shared equally between the Central and State Governments. The achievements made under the scheme are given in Table 10.7

TABLE 10.7

Financial Assistance to the Assignees of Surplus Land during 1985-86 to 1989-90

Item	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)
1. Total amount sanctioned (Rs.lakhs)	18.00	24.00	24.00	24.00	24.00
2. Amount spent (Rs.lakhs)	17.52	17.46	20.13	18.85	23.79
3. Number of beneficiaries					
a.General	3199	2504	2722	3343	2275
b.S.C.	1314	1566	1928	2091	1964
c.S.T.	220	257	486	450	207
Total (3)	4733	4327	5136	5884	4446

Source: Land Board, Kerala



### Development Programmes of Panchayats

10.15 The Department of Panchayats controls, guides and supervises the activities of 987 panchayats in the State. The various development activities undertaken by the panchayats include construction, repair and maintenance of public roads in the panchayat area, lighting of public roads and places, construction of petty irrigation works and drains and disposal of drainage water, cleaning of streets and public places, construction and maintenance of burning and burial grounds and public comfort stations. The panchayats also undertake agricultural programmes, as well as activities under Animal Husbandry, Education and Culture, Social welfare, Public health, sanitation and public works. For the implementation of the scheme "Rehabilitation of poramboke Dwellers" under Eleven Point Programme, 28 panchayats were selected during 1989-90. They include 3 panchayats in Thiruvananthapuram, one panchayat in Kasargod and three panchayats in each of the remaining 12 districts. The objective of the scheme is rehabilitation of the poramboke dwellers by providing 5 cents of land in suitable localities. Under the low cost sanitation scheme 5010 ESP type latrines were constructed up to March 1990. The total amount spent under the scheme added up to Rs.93.18 lakhs. With the intention of making the entire population literate, the New Literacy Programme 'Saksharatha' was introduced covering all the panchayats. In order to meet the expenditure in connection with the programme, each panchayat was empowered to spend an amount not less than Rs.10,000 from the Panchayat funds.

### Rural Development Board

10.16 The Kerala State Rural Development Board was constituted by the Government of Kerala as per the provisions of the Kerala State Rural Development Board Act 1971 to utilise institutional finance for developmental activities in rural areas. The funds required for the implementation of the Remunerative Development Schemes are raised by the Board by floating debentures with the permission of Reserve Bank of India and on the guarantee of State Government. The Board has so far floated debenture bonds amounting to Rs.19.38 crores. The Board has so far completed 460 remunerative development works, costing about Rs.15.60 crores and handed over to the beneficiary panchayats. The details of open market-

loans raised, amount spent on remunerative development schemes and amount repaid by the Panchayats during the Seventh Five Year Plan period are furnished in the Table 10.8

TABLE 10.8

Kerala State Rural Development Board - Performance			
Year	Amount of open market loans	Expenditure incurred on R.O.Schemes	Repayment by panchayats
(1)	(2)	(3)	(4)
1985-86	210.0	203.30	187.08
1986-87	217.5	197.83	204.09
1987-88	135.0	235.70	262.00
1988-89	135.0	249.96	236.27
1989-90	145.0	266.35*	85.12 <sup>2</sup>

Note : \*Provisional

Source: Rural Development Board

### Western Ghats Development Programme

10.17 The various programmes implemented under Western Ghats Development programme are soil conservation, minor irrigation, agriculture development, pasture development, afforestation, drinking water supply programmes, forest schemes, foot bridges and soil survey in the main catchment areas. The Planning Commission had approved Rs.23.80 crores during Seventh Plan for the implementation of the various schemes. The total amount utilised till the end of the Seventh Plan was of the order of Rs.23.49 crores.

10.18 Under soil and water conservation against the Seventh Plan target of 6,890 ha. the achievement was 6,779 ha. (98%). Regarding Pasture Development the achievement was 72% of the physical target and in respect of Construction of Cattle sheds, the achievement had far exceeded the Seventh Plan target. Sericulture programme introduced in Vattavada and Pambar in Idukki districts is being continued and during 1989-90, certain areas of Kollam and Wayanad districts were also brought under the programme. The scheme envisages the development of bivoltine sericulture for mulberry cultivation and provides additional income to the poor farmers of the area viz. SC/ST and Small and Marginal farmers. Under the Forest Consolidation scheme, the progress was rather slow and only 67% of the target could be achieved by the end of the Seventh Plan. All the eco-preservation schemes under Forests, recorded satisfactory physical

achievements during the Seventh Plan. Under the scheme for development of Heterogenous forest vegetation by profuse mixed seeding technique 1130 ha. have been covered till 1989-90. Under the scheme for conservation and protection of forests, fire line tracing was completed in 4017 kms till 1989-90. Under the scheme establishment of an Arboretum it is reported that 470 tree species have been established. In addition a nursery shed, a green house and infrastructural facilities such as road, fencing and irrigation facilities were also provided at the Arboretum. The scheme for water harvesting, soil conservation and afforestation in the cardamom growing areas (udumbanchola) of Idukki district is implemented by the Spices Board. So far the Board has completed, the construction of 461 ponds/wells and 46 check dams in the project area of Udumbanchola taluk benefiting irrigation in an area of 2400 ha. Soil conservation and afforestation programmes have also been carried out in these areas. The drinking water supply programme has benefited nearly 3000 families in the watershed areas up to 1989-90. The scheme Construction of Foot Bridges envisages the improvement of communication facilities in the most inaccessible areas of Western Ghata region. Under this scheme only foot bridges (1.5 metres width) which allow the movement of people alone are taken up. During the Seventh Plan construction of 400 foot bridges have been completed.

#### *Social Security and Welfare*

10.19 During the period from 1985-86 to 1990-91, the budget flow under social security and welfare schemes amounted to Rs.300.04 crores. During the past three years, 1987-88 to 1989-90, the State Government introduced several social security and welfare schemes for the benefit of weaker sections particularly for the poor children, women, handicapped, aged and destitutes. Several autonomous bodies and corporations have also introduced welfare schemes for the benefit of weaker sections in the Society.

10.20 While the Board of Revenue implements Pension to destitutes and widowed/divorced and special pension for the physically handicapped, the Labour Department Administration agricultural workers pension scheme construction workers pension scheme, head load workers pension scheme, cashew sorkers pension scheme, abkari workers pension handloom workers pension scheme. Details about major pensions schemes being implemented in state are presented in Table 10.9. Out of the total of 2,93,913 beneficiaries under the agricultural workers pension scheme during 1989-90, 58 percent were women. The district-wise distribution of the beneficiaries under this scheme is furnished in Table 10.10.

TABLE 10.9

## Social Security and Pension Scheme

Name of Scheme No.	Qualifying Eligibility conditions	Year of starting (in Rs.)	Rate of Assistance	Amount spent (Rs. in lakhs)					No. of persons received assistance						
				1985-86	1986-87	1987-88	1988-89	1989-90	1985-86	1986-87	1987-88	1988-89	1989-90		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
1. Old age, Destitutes, Widowed, Divorced, Destitutes	Above 65 years age. For widowed destitute no age limit. Monthly income not to exceed Rs.100	1960	55PM	1077.00	1071.00	319.37	1183.71	1178.63	45951	55588	173885	177565	58115	124355	HP
2. Special Pension Scheme for the physically handicapped	Disabled persons who have minimum 40% disability are eligible. Certificate from Medical Board necessary. Beneficiaries, monthly income RS.75 or family income not to exceed Rs.5000	1982	75PM	306.63	330.00	494.39	553.23	698.59	43145	52821	58455	66744	72835		
3. Financial assistance to widows for the marriage of their daughters	Yearly income of the family should not exceed Rs.5000/-	1978	1000PM	..	102.79	116.47	115.97	95.00	..	10558	11647	11597	9580		
4. Pension to sports men	The scheme envisages financial assistance to sportsmen in distress. The income should not exceed Rs.300pm. minimum Age 45 years	1978	100 PM (below 60 years of age) 150 PM 60-70 years of age 200 pm (70 years of age & above)	2.08	2.88	3.04	3.12	3.62	234	175	166	179	157		
5. Agricultural workers pension scheme	Eligible age is above 60. Annual family income should not exceed Rs.1500	1980	60PM	1.80	1641.63	1582.14	2164.16	2164.16	277821	261584	286733	299758	299758		
6. Tree Climbers Welfare Scheme	Financial assistance is given to workers in the event of fatal accidents and permanent total disability following the accident during the course of their occupation	1980	5000PM	3.00	2.80	6.05	8.15	8.15	285	56	121	163	163		
7. Unemployment assistance scheme	Financial assistance is given to those who wait for employment in the live register of employment exchange for more than three years	1981	60 PM	1012.08	835.08	1095.65	2353.77	1996.36	200883	255683	205556	215456	246040		
8. Self Employment Scheme	Unemployed persons	1980	600 per person	174.89	159.71	6.25	6.91	29.79	29149	26619	1042	13268	496500		



TABLE 10.10

District-wise Distribution of Agricultural Workers Pension Scheme by Sex 1989-90

Name of District	Total No. of beneficiaries	No. of women beneficiaries	% of Women to total beneficiaries
(1)	(2)	(3)	(4)
1. Thiruvananthapuram	18626	10431	56
2. Kollam	19794	9303	47
3. Pathanamthitta	11712	5992	51
4. Alappuzha	31186	16202	52
5. Kottayam	16307	8714	53
6. Idukki	5769	3352	58
7. Ernakulam	17153	10705	62
8. Thrissur	25705	14306	55
9. Palakkad	34747	23925	69
10. Malappuram	37124	21356	59
11. Kozhikode	39574	22397	56
12. Wayanad	7157	3990	56
13. Kannur	22570	16499	73
14. Kasaragod	6489	3764	58
<b>Total</b>	<b>293913</b>	<b>170936</b>	<b>58</b>

TABLE 10.11

Welfare Programme for the Handicapped

Name of Scheme	No. of beneficiaries		Expenditure (Rs. in lakhs)	
	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)
1. Home for mentally Deficient children	121	89		
2. Custodial care home	15	15		
3. Care home for disabled children	97	106	14.58	18.27
4. Home for Physically Handicapped	113	97		
5. Vocational Training Centre	132	253	2.36	2.23
6. Pre-metric Scholarship for the physically handicapped	6785	5759	27.13	23.03
7. Government of India Scholarship for disabled	1970	2424	19.06	23.88
8. State Awards to physically handicapped	42	28	0.18	0.18
9. Financial Assistance to Blind Advocates	6	6	0.254	0.248
10. Grants to persons contracting inter-caste Marriage	250	450	5.00	9.00
11. Scholarship for Mentally Retarded	228	397	1.50	2.61
12. Home for cured Mental Patients	15	15	0.62	1.00

10.21 The Government introduced three major pension schemes for the workers in traditional industries during 1988 and 1989. These were the Cashew, Coir and Handloom workers pension schemes covering over 70 per cent of the workers in the traditional industries. During 1990, three other pension schemes viz. construction khadi and abkari workers pension schemes were introduced by the Government. These schemes are yet to become fully operational. An accident insurance scheme was introduced in 1989 which covers about 57 lakh students.

#### Nutrition

10.22 The various nutrition programmes under implementation in the State are integrated Child Development Service Scheme, Special Nutrition Programme in Urban Areas, Applied Nutrition Programmes and Composite Programme for Women and pre-school children and Mid-day Meals Programme in school and World Food Programme. The Integrated Child Development Service is implemented as a package of service mainly intended for the development of children below 6 years of age and pregnant and lactating mother. Supplementary nutrition, Immunisation, periodical health check up, referral services, nutrition education, pre-school education etc. are the package of services. There were 84 Central sector ICDS Projects including 24 State Sector ICDS Projects by the end of 1990. The beneficiaries covered under the ICDS stood at 15.93 lakhs.

10.23 The other pre school nutrition programmes covered a total of 6.44 lakh beneficiaries. Of these Applied Nutrition Programmes had covered 1.04 lakhs, composite programme for women and pre school childrens 1.22 lakh and IHPP 4.18 lakhs. The number of centres and beneficiaries under the various nutrition programme from 1985 onwards is given in the Table 10.12.

#### Mid day Meal in Schools

10.24 The mid-day meal programme is being implemented in schools to cover

TABLE 10.12

## Feeding Centres - Beneficiaries under Different Feeding Programme

Name of Programme	No. of Centres					No. of beneficiaries (in lakhs)				
	1985-86	86-87	87-88	88-89	89-90	1985-86	86-87	87-88	88-89	89-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Special Nutrition Programme	472	410	470	463	459	0.31	0.40	0.39	0.40	0.37
2. Integrated Child Development Services	8100	8272	9227	10064	6450	7.8	7.82	7.75	7.69	5.16
3. Applied Nutrition Programme	2213	1985	1705	1611	1611	4.80	0.97	0.98	1.04	1.04
4. Composite Programme for Women and Pre-school children	1798	1790	1652	1652	1550	1.36	1.28	1.28	1.22	1.21
5. School Meals programme	8757	8796	13816	13816	10506	19.04	19.04	32.00	32.00	20.56

all the needy children studying in the L P and U P classes in the State. The per day per beneficiary cost worked out to 60 paise and for the 180 working days in a year Rs.108. During the year under review the programme covered 32 lakh L P and U P children who were considered to be the needy children out of the total of 43 lakh children in LP/UP schools. The Scheme benefitted 4.3 lakh Scheduled Caste students and 0.45 lakh Scheduled Tribe student during 1989-90.

10.25 The expenditure incurred under ICDS amounted to Rs.1434.9 lakhs and under mid-day-meal programme Rs.2969.65 lakhs.

*Welfare of Scheduled Castes and Scheduled Tribes and Other Backward Classes*

10.26 In the policy matrix of the State Government the development of Scheduled Castes and Scheduled Tribes has a distinct place of its own. The various schemes implemented for their benefit include special scholarships,

coaching classes, special schemes for the development of talents in sports, housing schemes, boarding and lodging facilities for students, special concessions to develop them in par with general sections etc. The Scheduled Caste Development Department, the Scheduled Tribe Development Department and the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes are the major agencies implementing schemes for the welfare of these sections.

#### Education

10.27 The enrolment of Scheduled Caste and Scheduled Tribe students in Government Colleges stood at 7,547 in 1989-90. Of these 5,933 were in pre-degree stage, 1,460 in degree courses and 150 students at post graduate level. Of the total number of students 747 belonged to Scheduled Tribes. The number of Scheduled Caste students enrolled in schools stood at 6,53,769 accounting for 11.57 percent of the total school enrolment. The enrolment of Scheduled Tribe students stood at 59,599, constituting 1.02 percent of the total. The standard-wise strength of SC/ST students is given in Table 10.13.

TABLE 10.13

#### Standard-wise Strength of SC/ST Students

Standard	Total Number of students	Of which number of SC students	% of SC students	Number of ST students	% of ST students
(1)	(2)	(3)	(4)	(5)	(6)
i	6,08,642	71,591	11.76	9,037	1.48
ii	6,55,416	77,168	11.78	8,842	1.35
iii	6,71,373	78,807	11.74	8,279	1.23
iv	6,60,587	74,761	11.32	7,304	1.11
v	6,32,190	70,533	11.16	6,283	0.99
vi	6,07,567	68,546	11.28	5,282	0.87
vii	6,08,106	67,304	11.07	5,050	0.83
viii	5,31,397	57,077	10.74	4,070	0.77
ix	4,91,918	51,210	10.41	3,234	0.66
x	3,84,775	36,772	9.56	2,218	0.58
<b>Total</b>	<b>58,51,951</b>	<b>6,53,769</b>	<b>11.17</b>	<b>59,599</b>	<b>1.02</b>

(Provisional)

10.28 As in the previous years, pre-matric and post-matric scholarships were awarded to SC students. During 1989-90, 6,03,018 students were awarded pre-matric scholarships and 93,221 students were awarded post-matric scholarships. The expenditure incurred on these schemes amounted to Rs.526.25 lakhs and Rs.1014.07 lakhs respectively.

10.29 The scheme of clothes distribution benefited 3,573 students and the expenditure amounted to Rs.2.64 lakhs. Production-cum-training centres, Industrial training centres, pre-examination training centres, book banks etc. were some of the other schemes implemented for the benefit of SC/ST students.

10.30 The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes during 1989-90 implemented five schemes viz., Agricultural Land purchase scheme, Foreign Employment Scheme, Margin money scheme for self-employment, subsidised seed money scheme and Assistance to Co-operative societies for the socio-economic uplift of the people belonging to Scheduled Caste and Scheduled Tribes. During the same year the corporation assisted 5,024 persons by disbursing Rs.309.56 lakhs as subsidy and grant utilising the grant received from State Government and loan from HUDCO. As on 31-3-1990 the Corporation assisted 85,766 persons under various schemes and incurred an expenditure of Rs.3,352.05 lakhs. Of the beneficiaries 32,858 availed of self employment assistance and 31,046 availed of house construction assistance. The scheme-wise achievement till 31-3-1990 are provided in Table 10.14.

10.31 The Scheduled Castes and Scheduled Tribes have been assisted under the two housing schemes implemented by the Board of Revenue viz., House sites to landless workers in rural areas and construction of huts/houses to rural workers. The financial and physical achievements under these schemes during the previous decade is provided in Table 10.15.

TABLE 10.14

Achievements in Kerala State Development Corporation for  
Scheduled Castes and Scheduled Tribes

Sl. No.	Name of Scheme	No. of Beneficiaries		Amount Spent (Rs. lakh)	
		Upto 31-3-89	During 1990	Upto 31-3-89	During 1990
(1)	(2)	(3)	(4)	(5)	(6)
1.	Agricultural Land purchase	7626	832	645.61	119.60
2.	Foreign Employment	2284	184	195.96	18.40
3.	Margin Money for self Employment	30147	2711	526.21	61.76
4.	Seed Money	941	11	25.12	0.54
5.	Housing	29673	1283	1327.26	99.91
6.	Assistance to Co-operative Societies	17	3	52.94	9.35
7.	Loan for the purchase of Machinery	5	--	0.42	--
8.	Margin Money for starting industry in Mini Industrial Estates	20	--	2.53	--
9.	Sewing Machine	4908	--	73.51	--
10.	Margin Money (old)	622	--	2.77	--
11.	Hire purchases of Autorikshaw	232	--	28.43	--
12.	Small business, Trade and Industry	4028	--	160.96	--
13.	Training in Autorikshaw driving	149	--	0.77	--
<b>Total</b>		<b>80742</b>	<b>5024</b>	<b>3042.49</b>	<b>309.56</b>



TABLE 10.15  
Achievements under the Housing Schemes  
for Rural Workers

(Rs. lakhs)						
Year	No. of sites allotted	of which sites allotted to SC/ST	Expdr.	No. of beneficiaries	of which SC/ST.	Expdr.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1980-81	6248	N.A.	102.72	2330	658	16.40
1981-82	6605	N.A.	90.22	4053	1408	14.42
1982-83	8024	1916	72.15	1254	503	29.75
1983-84	3144	1786	76.13	711	312	28.80
1984-85	4891	2193	200.61	1235	513	30.85
1985-86	5151	2341	111.36	888	335	27.43
1986-87	5517	2321	154.00	1043	407	11.27
1987-88	1869	883	95.86	366	139	7.55
1988-89	2903	1291	150.92	852	222	33.33
1989-90	2179	947	150.00	335	72	180.39

*SC/ST Representation in Government Service*

10.32 The reservation and special recruitment policy helped these sections to secure employment in Government service: As at the end of 1989-90, 2,507 persons belonging to Scheduled Caste and Scheduled Tribe had secured appointment in the gazetted post out of a total number of 23,070 post in the State Government service constituting 10.86 per cent. In the Non Gazetted post, other than last grade, 26,797 persons belonged to SC/ST out of a total of 2,55,273 posts which constituted 10.49 per cent of the total. Under the last grade service 13.64 per cent was from SC/ST. The relevant data are furnished in Table 10.16.

TABLE 10.16  
SC/ST Representation in Gazetted and Non Gazetted Posts

Category	Total No. of posts	SC/ST representation	Percentage of SC/ST
(1)	(2)	(3)	(4)
Gazetted	23070	2507	10.86
Nongazetted (other than last grade)	255273	26797	10.49
Last Grade	41754	5699	13.64

*SC/ST Beneficiaries under Land Reforms*

10.33 The assignment of Government land to the occupiers is a Welfare Scheme implemented by the State Government. A significant part of the beneficiaries under this scheme belonged to SC/ST. A total of 1,84,581.74 hectares of land was assigned as on 31-12-1990. Of this 27,241.90 hectares was assigned to SC/ST beneficiaries. Out of 5,35,770 beneficiaries 1,02,103 were Scheduled Castes and Scheduled Tribes, constituting about 19 per cent. The district-wise details of land assigned and number of beneficiaries is presented in Appendix 10.4. Under the surplus land distribution scheme a total of 25,244.1 hectares of land was distributed to 1,34,458 beneficiaries as on 31-12-1990: Of this 9,900.1 hectares was distributed to 57,672 Scheduled Caste beneficiaries 2,058.2 hectares was distributed to 7,107 beneficiaries belonging to Scheduled Tribes. The district-wise details of distribution of surplus land is provided in Appendix 10.5.

## CHAPTER 11

### INSTITUTIONAL FINANCE

Institutional Finance play a crucial role in economic development and more so in a State like Kerala which has been caught in a vicious circle of thwarted growth, relatively stagnant tax base, low investment, low income and lower growth. The national level financial institutions like Life Insurance Corporation of India (L.I.C), Industrial Finance Corporation (IFC), Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI), National Bank for Agriculture and Rural Development (NABARD), etc., provide finance for the development of the vital sectors of the economy.

11.2 During 1989-90, an amount of Rs.10315 crores was disbursed by the All India Financial Institutions to various States. This represents an increase of 10.43 per cent over the amount disbursed by these institutions during the previous year. Out of the total amount disbursed by the All India Financial Institutions, in 1989-90, 43.68 per cent was disbursed by IOBI; the largest share among these institutions. The contribution of NABARD in the total Institutional funds channelled to States was 16.50 per cent. The share of UFI, IFCI and ICICI was 12.41 per cent, 10.87 per cent and 8.85 per cent respectively. Assistance by GIC represented only 1.12 per cent, the lowest of the total investment finance.

11.3 An analysis of the State-wise amount disbursed to the States by All India Financial Institutions revealed that Maharashtra received largest share of institutional funds in 1989-90 with 21.84 per cent, followed by Gujarat (9.89 per cent) and Uttar Pradesh (9.67 per cent), while Kerala received only 2.60 per cent. The State-wise assistance disbursed by All India Financial

Institutions during 1989-90 is given in Appendix 11.1.

11.4 The overall share of institutional finance for Kerala upto the end of 1990 was only 2.85 per cent. Maharashtra continues to be on top of the list with 15.04 per cent. Gujarat received 10.96 per cent and the neighbouring states of Andhra Pradesh 8.86 per cent, Karnataka 6.90 per cent and Tamil Nadu 9.16 per cent. (See Appendix 11.2) The Share of NABARD, NCDC and IDBI were of the order of 3.71 per cent, 3.66 per cent and 3.16 per cent respectively. It is seen that less developed States like Kerala, Bihar, Orissa and Assam received comparatively less assistance from these institutions as compared to the advanced states such as Maharashtra, Gujarat etc.

11.5 The commercial banks have made impressive strides after nationalisation in 1969. There has been vast expansion of branch network of commercial banks mainly in the rural and semi-urban centres. The number of bank offices increased from 8262 in June 1969 to 57197 in June 1989. The population served by a bank office came down from 65000 in 1969 to 12000 in 1989. The aggregate deposits of banks shot up from Rs.3897 crores in 1979 to Rs.1,47,143 crores by June 1989. The credit deployment of commercial banks has not kept pace with the growth in deposits. The credit-deposit ratio of commercial banks for 1988, for which the latest data are available was 58.6 per cent. Wide variation was observed in credit disbursement between States. There has been a decline in the credit deposit ratio of Kerala over the years (table 11.1). The credit deposit ratio for Kerala as on 31.3.90 was 61.8 per cent.

11.6 According to available information the percentage share of priority sector

advances to total advances by public sector banks in Kerala increased from 36.4 per cent in 1969 to 54.8 per cent June 1989. Deposits, advances and credit-deposit ratio of commercial banks in Kerala over the years are furnished in Appendix 11.5. While the deposits mobilised by the banks in the State almost doubled between 1985 and 1990, the advances by the banks did not register a corresponding increase.

During the last six years the CD ratio was hovering around 60 per cent. Channelling of a higher share of bank credit for the investment activities in the State is vital for a faster rate of growth of the State's economy. With the improvement in industrial climate in the State hopefully more and more industrial ventures will be attracted to the State and the flow of institutional finance, including bank credit, too will get accelerated.

Table 11.1

Deposits and Credits of Public Sector Banks (as at end June 1988)

(Rs. Crores)

States	Deposits			Credit			Credit-deposit ratio (%)		
	1969	1987	1988	1969	1987	1988	1969	1987	1988
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	121	5596	6402	122	4296	5040	100.80	76.80	78.70
Assam	33	1156	1356	13	596	708	39.40	51.60	52.20
Bihar	169	4895	5765	52	1709	2056	30.80	34.90	35.76
Gujarat	401	6581	7620	195	3612	4101	48.60	54.90	53.80
Haryana	49	2027	2386	23	1221	1463	46.90	60.20	61.30
Karnataka	188	4626	5373	143	4195	4876	76.10	90.60	90.70
Kerala	117	3369	3844	77	2152	2338	65.80	63.90	62.10
Madhya Pradesh	107	3859	4535	63	2324	2830	58.90	60.20	62.40
Maharashtra	903	16956	19356	911	13183	13920	100.09	77.70	71.90
Orissa	29	1257	1479	15	1008	1206	51.70	82.20	81.50
Punjab	185	5758	6751	50	2437	2672	27.00	42.30	39.60
Rajasthan	74	2447	2892	38	1523	1766	51.40	62.20	61.10
Tamil Nadu	233	5821	6709	311	5615	6511	133.50	96.50	97.00
Uttar Pradesh	337	10289	12254	154	4512	5331	45.70	43.90	43.50
West Bengal	456	9549	11203	526	4557	5207	115.40	47.70	46.50
Total Major States	3402	84186	97925	2693	52940	66025	79.20	62.90	67.40
All India	3897	97663	114070	3835	59410	66856	77.90	60.80	58.60

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APPENDIX - 2.1

Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin at Current Prices (New Series)

(Rs. lakhs)

Industry of Origin	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Agriculture	129384	131163	153826	199323	214908	203536	234710	261685	304092	331460
Forestry & Logging	12382	8048	14364	8097	8448	9018	9872	7170	5694	5238
Fishing	7743	6292	7923	8938	8942	11777	12104	12410	20397	25700
Mining & Quarrying	461	640	754	690	1014	920	912	1159	1287	1430
Sub-Total-Primary	149970	146143	176867	217048	233312	225251	257598	282424	331470	363828
Manufacturing	53152	61585	71171	75013	79448	86335	90178	106083	116474	128236
Registered	29030	33461	36610	41755	45368	47610	48892	68454	78085	89072
Un-registered	24122	28124	34561	33258	34080	38725	41286	37629	38389	39164
Electricity, Gas & Water Supply	5509	3647	2797	1785	4345	2411	5981	3493	4658	6332
Electricity	5077	3111	2293	1102	3772	1363	4305	1526	2374	3693
Gas	85	95	101	109	125	510	970	1030	1151	1269
Water Supply	347	441	403	574	448	538	706	937	1133	1370
Construction	34496	38427	42657	52889	60378	77439	76657	82617	94704	108559
Sub-Total-Secondary	93157	103659	116625	129687	144171	166185	172816	192193	215836	243127
Transport, Storage & Communication	13625	14725	18781	23676	32009	37448	44678	56718	63785	76507
Railways	419	835	1010	1181	1039	1529	1898	2967	3106	3976
Transport by Other Means & Storage	10770	11482	14769	18976	26838	31446	37016	47032	51376	60624
Communication	2436	2408	3002	3519	4132	4473	5764	6719	9303	11907
Trade, Hotel & Restaurants	53228	55856	64789	75712	81980	82360	100046	108439	113444	121385
Banking & Insurance	11428	16206	19803	22873	27198	31424	38455	41146	47196	54275
Real Estate Ownership & Dwellings	12198	12359	13152	12868	13159	10463	9055	7572	6917	6142
Public Administration	15133	16873	17489	19259	25191	30806	39146	44417	48224	55940
Other Services	29491	34982	38713	45392	50808	59704	70241	77379	86643	96174
Sub-Total-Tertiary	135103	151001	172727	199780	230345	252205	301621	335671	366209	410423
Net Domestic Product	378230	400803	466219	546515	607828	643641	732035	810288	913515	1017378
Population ('000)	25312	25709	26170	26658	27157	27648	28126	28589	29041	29482
Per Capita Income (Rs.)	1494	1559	1782	2050	2238	2328	2603	2834	3146	3451

P-Provisional Estimates; Q-Quick Estimates.

Source: Department of Economics and Statistics.

## A 2

## APPENDIX - 2.2

**Net State Domestic Product and Per Capita Income of Kerala at Factor Cost by Industry of Origin at Constant Prices (New Series)**

(Rs. lakhs)

Industry of Origin	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) (P)	(10) (P)	(11) (Q)
Agriculture	129384	130483	128638	118576	131975	137924	130949	136601	163898	173732
Forestry & Logging	12382	7283	8832	5288	4749	4507	4389	3072	2067	1695
Fishing	7743	5797	6958	7691	6764	7042	5917	5325	7495	7795
Mining & Quarrying	461	590	481	345	540	496	647	525	583	648
<b>Sub-Total-Primary</b>	<b>149970</b>	<b>144153</b>	<b>144909</b>	<b>131900</b>	<b>144028</b>	<b>149969</b>	<b>141902</b>	<b>145523</b>	<b>174043</b>	<b>183870</b>
Manufacturing	53152	57178	62187	58565	56916	58480	52345	56440	59783	63790
Registered	29030	31028	32324	32388	30865	31114	25442	35072	39639	44800
Un-registered	24122	26150	29863	26177	26051	27366	26903	21368	20144	18990
Electricity, Gas & Water Supply	5509	3394	2438	1354	2928	1558	3198	1894	2455	3250
Electricity	5077	2885	2025	855	2566	891	2240	782	1205	1857
Gas	85	84	87	95	97	394	653	692	775	856
Water Supply	347	425	326	404	265	273	305	420	475	537
Construction	34496	31495	28944	31405	31509	35732	33176	31876	35692	39962
<b>Sub-Total-Secondary</b>	<b>93157</b>	<b>92067</b>	<b>93569</b>	<b>91324</b>	<b>91353</b>	<b>95770</b>	<b>88719</b>	<b>90210</b>	<b>97930</b>	<b>107002</b>
Transport, Storage & Communication	13625	14271	14832	15691	18644	21034	22219	24013	24275	25452
Railways	419	646	629	686	705	836	807	872	812	816
Transport by Other Means & Storage	10770	10841	11352	11879	14717	16967	17966	19538	19755	20743
Communication	2436	2784	2851	3126	3222	3231	3446	3603	3708	3893
Trade, Hotel & Restaurants	53228	53063	55197	52110	55804	56480	55522	57178	56017	55849
Banking & Insurance	11428	12098	13654	14914	16867	19193	21966	22630	24856	27093
Real Estate Ownership & Dwellings	12198	12166	12567	12178	11840	9011	7639	6324	5777	5026
Public Administration	15133	15375	17005	17515	19267	20208	22889	25269	27435	30453
Other Services	29491	30282	30890	31497	31980	32507	32953	33558	34095	35800
<b>Sub-Total-Tertiary</b>	<b>135103</b>	<b>137255</b>	<b>144145</b>	<b>143905</b>	<b>154402</b>	<b>158433</b>	<b>163188</b>	<b>168972</b>	<b>172455</b>	<b>179673</b>
<b>Net Domestic Product</b>	<b>378230</b>	<b>373475</b>	<b>382623</b>	<b>367129</b>	<b>389783</b>	<b>404172</b>	<b>393809</b>	<b>404705</b>	<b>444428</b>	<b>470545</b>
<b>Per Capita Income(Rs.)</b>	<b>1494</b>	<b>1453</b>	<b>1462</b>	<b>1377</b>	<b>1435</b>	<b>1462</b>	<b>1400</b>	<b>1416</b>	<b>1530</b>	<b>1594</b>

P-Provisional Estimates; Q-Quick Estimates.

Source : Department of Economics and Statistics.

APPENDIX 2.3  
Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

(Rs. lakhs)

District	Year	At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Thiruvananthapuram	1980-81	12166 (34.8)	9742 (27.8)	13072 (37.4)	34980 (100)	12166 (34.8)	9742 (27.8)	13072 (37.4)	34980 (100)
	1981-82	11817 (29.9)	9696 (24.5)	17997 (45.6)	39510 (100.0)	11598 (31.7)	8671 (23.7)	16261 (44.5)	36530 (100.0)
	1982-83	13290 (29.9)	10891 (24.5)	20260 (45.6)	44441 (100.0)	10415 (29.5)	8226 (23.3)	16695 (47.2)	35936 (100.0)
	1983-84	18922 (34.8)	11799 (21.7)	23638 (43.5)	54359 (100.0)	11166 (30.5)	8416 (23.0)	16972 (46.4)	36554 (100.0)
	1984-85	19864 (32.9)	12789 (21.2)	27721 (45.9)	60374 (100.0)	13118 (32.7)	8344 (20.8)	18677 (46.5)	40139 (100.0)
	1985-86	17054 (27.3)	14283 (22.8)	31228 (49.9)	62565 (100.0)	11813 (29.5)	8500 (21.2)	19794 (49.4)	40107 (100.0)
	1986-87	19802 (27.4)	15667 (21.6)	36921 (51.0)	72390 (100.0)	10686 (26.8)	8337 (20.9)	20796 (52.2)	39819 (100.0)
	1987-88	22156 (27.5)	17158 (21.3)	41381 (51.3)	80695 (100.0)	11533 (27.7)	8420 (20.2)	21720 (52.1)	41673 (100.0)
	1988-89	25491 (30.5)	21378 (25.5)	36839 (44.0)	83708 (100.0)	13846 (34.0)	9588 (23.6)	17220 (42.4)	40654 (100.0)
	Quilon	1980-81	19708 (46.5)	10068 (23.8)	12591 (29.7)	42367 (100.0)	19708 (46.5)	10068 (23.8)	12591 (29.7)
1981-82		17621 (41.4)	10470 (24.6)	14487 (34.0)	42578 (100.0)	16647 (42.4)	9486 (24.2)	13116 (33.4)	39249 (100.0)
1982-83		23089 (45.0)	11680 (22.8)	16545 (32.2)	51314 (100.0)	18134 (43.7)	9769 (23.5)	13629 (32.8)	41532 (100.0)
1983-84		20050 (45.1)	8901 (20.0)	15566 (34.9)	44497 (100.0)	12464 (41.5)	6463 (21.5)	11098 (37.5)	30025 (100.0)
1984-85		20501 (42.8)	9694 (20.3)	17649 (36.9)	47844 (100.0)	13207 (42.0)	6386 (20.3)	11822 (37.6)	31415 (100.0)
1985-86		22771 (42.9)	10687 (20.1)	19652 (37.0)	53110 (100.0)	15002 (44.3)	6492 (19.2)	12389 (36.6)	33883 (100.0)
1986-87		25144 (42.0)	11731 (19.6)	23507 (38.5)	59932 (100.0)	13475 (41.4)	6233 (19.1)	12844 (39.5)	32552 (100.0)
1987-88		26953 (41.2)	12813 (19.6)	25713 (39.3)	65479 (100.0)	13683 (41.0)	6349 (19.0)	13374 (40.0)	33406 (100.0)
1988-89		32843 (43.3)	16225 (21.4)	26823 (35.3)	75891 (100.0)	16368 (45.0)	7489 (20.6)	12527 (34.4)	36384 (100.0)

## APPENDIX 2.3 (continued...)

Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

(Rs. lakhs)

District	Year	At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Pathanamthitta	1983-84	8771 (41.1)	4748 (22.2)	7839 (36.7)	21358 (100.0)	6152 (40.5)	3462 (22.8)	5577 (36.7)	15191 (100.0)
	1984-85	10312 (41.6)	5153 (20.8)	9327 (37.6)	24792 (100.0)	6631 (40.6)	3421 (21.0)	6271 (38.4)	16323 (100.0)
	1985-86	11728 (42.4)	5692 (20.6)	10250 (37.0)	27670 (100.0)	7949 (44.1)	3486 (19.3)	6605 (36.6)	18039 (100.0)
	1986-87	14371 (44.0)	6239 (19.1)	12068 (36.9)	32678 (100.0)	7692 (42.9)	3358 (18.7)	6882 (38.4)	17927 (100.0)
	1987-88	15076 (42.7)	6809 (19.3)	13444 (38.1)	35329 (100.0)	7904 (42.8)	3399 (18.4)	7180 (38.8)	18483 (100.0)
	1988-89	15073 (39.20)	8481 (22.00)	14935 (38.80)	38489 (100.0)	7926 (41.56)	3932 (20.62)	7213 (37.82)	19071 (100.0)
Alappuzha	1980-81	10149 (33.1)	7675 (25.0)	12840 (41.9)	30664 (100.0)	10149 (33.1)	7675 (25.0)	12840 (41.9)	30664 (100.0)
	1981-82	11069 (33.6)	7745 (23.5)	14111 (42.9)	32925 (100.0)	12141 (38.1)	16939 (21.8)	12778 (40.1)	31858 (100.0)
	1982-83	12563 (33.4)	8818 (23.5)	16185 (45.1)	37566 (100.0)	11725 (36.4)	7179 (22.3)	13341 (41.4)	32245 (100.0)
	1983-84	13585 (36.9)	8588 (23.3)	14609 (39.8)	36682 (100.0)	8864 (34.7)	6256 (24.5)	10403 (40.8)	25523 (100.0)
	1984-85	15619 (37.7)	9229 (22.3)	16599 (40.0)	41447 (100.0)	10494 (37.7)	6183 (22.2)	11144 (40.1)	27821 (100.0)
	1985-86	13907 (32.9)	10210 (24.1)	18204 (43.0)	42321 (100.0)	10143 (36.4)	6310 (22.5)	11493 (41.1)	27996 (100.0)
	1986-87	16826 (34.2)	11176 (22.7)	21258 (43.2)	49260 (100.0)	9036 (33.6)	6080 (22.6)	11802 (43.8)	26918 (100.0)
	1987-88	218243 (33.8)	12185 (22.6)	23607 (43.7)	54035 (100.0)	9742 (36.6)	6131 (21.8)	12247 (43.6)	28120 (100.0)
	1988-89	22005 (34.5)	14923 (23.4)	26873 (42.1)	63801 (100.0)	10923 (35.9)	6953 (22.8)	12559 (41.3)	30435 (100.0)

## APPENDIX 2.3 (continued...)

Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

District	Year	(Rs. lakhs)							
		At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kottayam	1980-81	10777 (44.6)	3616 (15.0)	9763 (40.4)	24156 (100.0)	10777 (44.6)	3616 (15.0)	9763 (40.4)	24156 (100.0)
	1981-82	12270 (45.1)	3715 (13.7)	11214 (41.2)	27199 (100.0)	11344 (44.7)	3887 (15.3)	10152 (40.0)	26883 (100.0)
	1982-83	15250 (47.1)	4136 (12.8)	12971 (40.1)	32357 (100.0)	12078 (46.0)	3488 (13.3)	10702 (40.7)	26268 (100.0)
	1983-84	18813 (49.7)	4362 (11.5)	14668 (38.8)	37843 (100.0)	10775 (44.0)	3253 (13.3)	10649 (42.7)	24477 (100.0)
	1984-85	18088 (45.7)	4848 (12.2)	16667 (42.1)	39603 (100.0)	10970 (43.2)	3298 (13.0)	11152 (43.9)	25420 (100.0)
	1985-86	18347 (43.8)	5175 (12.3)	18381 (43.9)	41903 (100.0)	12256 (45.2)	3274 (12.1)	11573 (42.7)	27108 (100.0)
	1986-87	21520 (44.0)	5862 (12.0)	21517 (44.0)	48899 (100.0)	12183 (44.6)	3216 (11.8)	11937 (43.7)	27336 (100.0)
	1987-88	24013 (44.2)	6414 (11.8)	23958 (44.1)	54385 (100.0)	12594 (44.5)	3281 (11.6)	12407 (43.9)	28282 (100.0)
	1988-89	27027 (44.1)	7550 (12.3)	26715 (43.6)	61292 (100.0)	15448 (49.0)	3619 (11.5)	12467 (39.5)	31534 (100.0)
	1980-81	10506 (54.3)	5469 (28.3)	3366 (17.4)	19341 (100.0)	10506 (54.3)	5469 (28.3)	3366 (17.4)	19341 (100.0)
	1981-82	12376 (58.1)	5379 (25.3)	3537 (16.6)	21292 (100.0)	11605 (59.1)	4791 (24.4)	3224 (16.4)	19620 (100.0)
	1982-83	13419 (57.6)	5822 (25.0)	4041 (17.4)	23282 (100.0)	9940 (55.2)	4721 (26.2)	3352 (18.6)	18013 (100.0)
	1983-84	17405 (61.5)	6667 (22.6)	4714 (15.8)	28786 (100.0)	9274 (57.3)	4718 (24.9)	3369 (17.7)	17361 (100.0)
	1984-85	16908 (57.2)	7386 (25.0)	5286 (17.9)	29575 (100.0)	10928 (57.2)	4631 (24.2)	3559 (18.6)	19118 (100.0)
	1985-86	18594 (57.2)	8049 (24.7)	5886 (18.1)	32529 (100.0)	12199 (59.2)	4645 (22.6)	3747 (18.2)	20591 (100.0)
	1986-87	16826 (34.2)	11176 (22.7)	21258 (43.2)	49260 (100.0)	9036 (33.6)	6080 (22.6)	11802 (43.8)	26918 (100.0)
	1987-88	21282 (55.2)	9728 (25.2)	7576 (19.6)	38586 (100.0)	11216 (56.7)	4605 (23.3)	3954 (20.0)	19775 (100.0)
	1988-89	25098 (52.6)	13613 (28.6)	8977 (18.8)	47688 (100.0)	11998 (53.7)	6136 (27.4)	4220 (18.9)	22354 (100.0)

## APPENDIX 2.3 (continued...)

## Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

		(Rs. lakhs)							
District	Year	At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ernakulam	1980-81	12830 (26.8)	18385 (38.4)	16654 (34.8)	47869 (100.0)	12830 (26.8)	18385 (38.4)	16654 (34.8)	47869 (100.0)
	1981-82	13608 (24.7)	18804 (34.1)	22714 (41.2)	55126 (100.0)	14223 (27.5)	16836 (32.6)	20594 (39.9)	51653 (100.0)
	1982-83	16171 (25.7)	20890 (38.2)	25873 (41.1)	62934 (100.0)	14144 (26.9)	17095 (32.5)	21309 (40.6)	52548 (100.0)
	1983-84	19207 (26.9)	23577 (33.0)	28584 (40.1)	71368 (100.0)	12102 (24.4)	16923 (36.1)	20650 (41.6)	49675 (100.0)
	1984-85	28407 (28.9)	25448 (31.4)	32187 (39.7)	81042 (100.0)	14784 (27.9)	16864 (31.0)	21772 (41.2)	52878 (100.0)
	1985-86	21519 (25.6)	28308 (38.7)	34149 (40.7)	84771 (100.0)	14929 (27.6)	16782 (31.1)	22296 (41.3)	54007 (100.0)
	1986-87	25614 (26.5)	30587 (31.6)	40552 (41.9)	96753 (100.0)	13920 (26.5)	15658 (29.8)	22901 (43.6)	52479 (100.0)
	1987-88	28104 (26.3)	33333 (31.2)	45310 (42.4)	106747 (100.0)	14685 (26.8)	16133 (29.5)	23903 (43.7)	54721 (100.0)
	1988-89	35771 (28.3)	45336 (35.9)	45191 (35.8)	126298 (100.0)	17727 (29.6)	20678 (36.5)	21464 (35.9)	59869 (100.0)
Thrissur	1980-81	12263 (34.4)	9083 (25.5)	14268 (40.1)	35614 (100.0)	12263 (34.4)	9083 (25.5)	14268 (40.1)	35614 (100.0)
	1981-82	12381 (33.5)	9048 (24.5)	15561 (42.1)	36990 (100.0)	13099 (37.1)	8052 (22.8)	14112 (40.0)	35263 (100.0)
	1982-83	15144 (11.3)	101109 (75.4)	17922 (13.4)	43180 (100.0)	13241 (36.6)	8150 (22.5)	14780 (40.9)	36171 (100.0)
	1983-84	18545 (36.8)	11552 (22.3)	20650 (40.9)	50447 (100.0)	12225 (34.9)	7962 (22.8)	14802 (42.3)	34989 (100.0)
	1984-85	17490 (33.0)	12171 (23.0)	23292 (44.0)	52953 (100.0)	10773 (31.5)	7786 (22.7)	15681 (45.8)	34240 (100.0)
	1985-86	17387 (30.7)	13669 (24.2)	25523 (45.1)	56579 (100.0)	13026 (34.9)	7997 (21.5)	16258 (43.6)	37281 (100.0)
	1986-87	20228 (31.2)	14819 (22.9)	29769 (45.9)	64816 (100.0)	11561 (32.2)	7654 (21.3)	16678 (46.5)	35898 (100.0)
	1987-88	22777 (31.6)	16201 (22.5)	33084 (49.5)	72062 (100.0)	12832 (33.8)	7811 (20.6)	17314 (45.6)	37957 (100.0)
	1988-89	27006 (31.2)	21436 (24.9)	38009 (43.9)	86451 (100.0)	14696 (34.8)	9578 (22.7)	17902 (42.5)	42176 (100.0)



## APPENDIX 2.3 (continued...)

## Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

(Rs. lakhs)

District	Year	At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Palakkad	1980-81	10758 (39.5)	6179 (22.7)	10312 (37.8)	27269 (100.0)	10758 (39.5)	6179 (22.7)	10312 (37.8)	27269 (100.0)
	1981-82	12238 (42.2)	6270 (21.6)	10514 (36.2)	29022 (100.0)	11535 (43.2)	5618 (21.0)	9534 (35.7)	26691 (100.0)
	1982-83	13768 (41.8)	7159 (21.8)	11985 (36.4)	32912 (100.0)	10318 (39.7)	5835 (22.4)	9855 (37.9)	26008 (100.0)
	1983-84	15633 (41.9)	7674 (20.6)	13968 (37.5)	37275 (100.0)	9307 (37.6)	5523 (22.3)	9898 (40.0)	24728 (100.0)
	1984-85	16195 (40.3)	8237 (20.5)	15717 (39.1)	40149 (100.0)	9679 (37.7)	5460 (21.3)	10556 (41.1)	25693 (100.0)
	1985-86	16337 (38.2)	9294 (21.7)	17102 (40.0)	42733 (100.0)	9811 (37.2)	5631 (21.4)	10903 (41.4)	26345 (100.0)
	1986-87	20519 (48.5)	1082 (2.6)	20744 (49.0)	51345 (100.0)	11959 (40.9)	5490 (18.8)	11771 (40.3)	29220 (100.0)
	1987-88	21933 (39.2)	11008 (19.7)	23005 (41.5)	55946 (100.0)	11186 (38.8)	5481 (19.0)	12167 (42.2)	28834 (100.0)
	1988-89	20117 (32.8)	13409 (21.9)	27801 (45.3)	61327 (100.0)	11271 (37.0)	6081 (20.0)	13087 (43.0)	30439 (100.0)
Malappuram	1980-81	11986 (46.7)	3300 (12.9)	10382 (40.4)	25668 (100.0)	11986 (46.7)	3300 (12.9)	10382 (40.4)	25668 (100.0)
	1981-82	10938 (45.0)	3057 (12.6)	10324 (42.5)	24319 (100.0)	10141 (45.7)	2645 (11.9)	9399 (42.4)	22185 (100.0)
	1982-83	12720 (45.5)	3406 (12.2)	11827 (42.3)	27953 (100.0)	10157 (45.1)	2588 (11.5)	9767 (43.4)	22512 (100.0)
	1983-84	14149 (44.4)	3880 (12.2)	13826 (43.4)	31885 (100.0)	8968 (42.0)	2576 (12.1)	9784 (45.9)	21328 (100.0)
	1984-85	17027 (46.1)	4178 (11.3)	15729 (42.6)	36934 (100.0)	9673 (42.6)	2512 (11.1)	10535 (46.4)	22720 (100.0)
	1985-86	16109 (42.1)	4888 (12.8)	17300 (45.2)	38297 (100.0)	9945 (42.2)	2636 (11.2)	10974 (46.6)	23555 (100.0)
	1986-87	19503 (43.4)	5252 (11.7)	20158 (44.9)	44913 (100.0)	10826 (44.0)	2600 (10.6)	11179 (45.4)	24605 (100.0)
	1987-88	20992 (42.7)	5774 (11.8)	22368 (45.5)	49134 (100.0)	10611 (42.7)	2643 (10.6)	11571 (46.6)	24825 (100.0)
	1988-89	23181 (39.4)	7980 (13.6)	27641 (47.0)	58802 (100.0)	12931 (44.3)	3320 (11.4)	12943 (46.3)	29194 (100.0)

## APPENDIX 2.3 ( continued... )

Sector-Wise Distribution of Net Domestic Product of Districts at Factor Cost (New Series)

(Rs. lakhs)

District	Year	At Current Prices				At Constant (1980-81) Prices			
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kozhikode	1980-81	16048 (37.8)	10915 (25.7)	15548 (36.5)	42511 (100)	16048 (37.8)	10915 (25.7)	15548 (36.5)	42511 (100)
	1981-82	9342 (27.8)	9785 (29.1)	14534 (43.2)	33661 (100)	9410 (29.8)	8764 (27.8)	13356 (42.4)	33530 (100)
	1982-83	14886 (35.0)	11042 (26.0)	16550 (39.0)	42478 (100)	13014 (36.3)	9014 (25.2)	13800 (38.5)	35828 (100)
	1983-84	21981 (41.3)	12153 (22.8)	19110 (35.9)	53244 (100)	12011 (35.0)	8733 (25.4)	13578 (39.6)	34412 (100)
	1984-85	21719 (38.6)	13039 (23.2)	21565 (38.3)	56321 (100)	12009 (34.3)	8516 (24.3)	14525 (41.4)	35050 (100)
	1985-86	15882 (29.4)	14652 (27.1)	23490 (43.5)	54024 (100)	12205 (33.9)	8782 (24.4)	15048 (41.8)	36035 (100)
	1986-87	16946 (28.2)	15822 (26.3)	27323 (45.5)	60091 (100)	9279 (28.2)	8864 (25.4)	15309 (46.5)	32952 (100)
	1987-88	19574 (29.2)	17248 (25.6)	30320 (45.2)	67142 (100)	10925 (31.0)	8470 (24.0)	15847 (43.0)	35242 (100)
	1988-89	24073 (28.7)	22263 (26.5)	37664 (44.8)	84000 (100)	12884 (31.6)	10119 (24.8)	17784 (43.6)	40787 (100)
Wayanad	1981-82	7850 (67.3)	1784 (15.3)	2034 (17.4)	11668 (100)	8431 (71.2)	1631 (13.8)	1781 (15.0)	11343 (100)
	1982-83	6557 (60.3)	2054 (18.9)	2254 (20.7)	10865 (100)	4728 (57.3)	1743 (21.1)	1778 (21.6)	8249 (100)
	1983-84	6489 (36.9)	2180 (19.1)	2729 (23.9)	11398 (100)	3569 (49.9)	1645 (23.0)	1940 (27.1)	7154 (100)
	1984-85	9851 (64.0)	2317 (15.0)	3233 (21.0)	15401 (100)	6909 (64.7)	1606 (15.0)	2164 (20.3)	10679 (100)
	1985-86	10797 (63.3)	2570 (15.1)	3691 (21.6)	17058 (100)	6314 (61.1)	1661 (16.1)	2352 (22.8)	10327 (100)
	1986-87	17166 (63.2)	2784 (14.5)	4292 (22.3)	19242 (100)	6640 (62.6)	1572 (14.8)	2401 (22.6)	10613 (100)
	1987-88	13680 (63.7)	3013 (14.0)	4769 (22.2)	21462 (100)	6648 (62.1)	1569 (14.6)	2496 (23.3)	10713 (100)
	1988-89	14010 (60.8)	3570 (15.5)	5462 (23.7)	23042 (100)	6353 (59.5)	1736 (16.3)	2591 (24.2)	10680 (100)

## APPENDIX 2.3 ( continued... )

Sector-Wise Distribution of N D P of Districts at Factor Cost (New Series) (Rs. lakhs)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Kannur	1980-81	22779 (47.6)	8725 (18.3)	16307 (34.1)	47811 (100)	22779 (47.6)	8725 (18.3)	16307 (34.1)	47811 (100)
	1981-82	14633 (37.8)	8439 (21.8)	15595 (40.4)	38667 (100)	13979 (39.1)	7478 (20.9)	14252 (39.9)	35719 (100)
	1982-83	20006 (42.2)	9579 (20.2)	17855 (37.6)	47440 (100)	17016 (43.1)	7670 (19.4)	14786 (37.5)	39472 (100)
	1983-84	25629 (45.1)	10589 (18.6)	20628 (36.3)	56846 (100)	16106 (42.1)	7458 (19.5)	14670 (38.4)	38234 (100)
	1984-85	28497 (43.9)	11280 (17.4)	25166 (38.8)	64948 (100)	16190 (40.1)	7243 (17.9)	16945 (42.0)	40378 (100)
	1985-86	17919 (38.6)	8929 (19.2)	19590 (42.2)	46488 (100)	11749 (40.2)	5218 (17.9)	12255 (41.9)	29222 (100)
	1986-87	20458 (38.8)	9553 (18.1)	22724 (43.1)	52735 (100)	10652 (37.9)	5014 (17.9)	12407 (44.2)	28073 (100)
	1987-88	23022 (39.2)	10427 (17.8)	25280 (43.0)	58729 (100)	11502 (39.1)	5041 (17.2)	12849 (48.7)	29392 (100)
	1988-89	26645 (38.0)	13591 (19.4)	29937 (42.6)	70173 (100)	14183 (41.4)	6008 (17.6)	14037 (41.0)	34228 (100)
Kasaragod	1985-86	10565 (47.3)	4001 (17.9)	7756 (34.7)	22322 (100)	4788 (38.5)	2343 (18.8)	5302 (42.6)	12433 (100)
	1986-87	10898 (45.0)	4283 (17.7)	9059 (37.4)	24240 (100)	5881 (43.4)	2252 (16.6)	5433 (40.0)	13566 (100)
	1987-88	12942 (46.9)	4674 (16.9)	9976 (36.2)	27592 (100)	5475 (41.0)	2261 (16.9)	5620 (42.1)	13356 (100)
	1988-89	13130 (40.3)	6081 (18.7)	13342 (41.0)	32553 (100)	7489 (45.1)	2693 (16.2)	6441 (38.7)	16623 (100)
Kerala State	1980-81	149970 (39.7)	93157 (24.6)	135103 (35.7)	378230 (100)	149970 (39.7)	93157 (24.6)	135103 (35.7)	378230 (100)
	1981-82	146143 (36.5)	103659 (25.9)	151001 (37.7)	400803 (100)	144153 (38.6)	92067 (24.7)	137255 (36.8)	373475 (100)
	1982-83	176867 (37.9)	116625 (25.0)	172727 (37.0)	466219 (100)	144909 (37.9)	93569 (24.5)	144145 (37.7)	382623 (100)
	1983-84	217048 (39.7)	129687 (23.7)	199780 (36.6)	546515 (100)	131900 (35.9)	91324 (24.9)	143905 (39.2)	367129 (100)
	1984-85	233312 (38.4)	144171 (23.7)	230345 (37.9)	607828 (100)	144028 (36.9)	91353 (23.4)	154402 (39.6)	389783 (100)
	1985-86	225251 (35.0)	166185 (25.8)	252205 (39.2)	643641 (100)	149969 (37.1)	95770 (23.7)	158433 (39.2)	404172 (100)
	1986-87	257598 (35.2)	172816 (23.6)	301621 (41.2)	732035 (100)	141902 (36.0)	88719 (22.5)	163188 (41.4)	393809 (100)
	1987-88	282424 (34.9)	192193 (23.7)	335671 (41.4)	810288 (100)	145523 (36.0)	90210 (22.3)	168972 (41.8)	404705 (100)
	1988-89	331470 (36.3)	215836 (23.6)	366209 (40.1)	913515 (100)	174043 (39.2)	97930 (22.0)	172455 (38.8)	444428 (100)
	1989-90	363828 (35.8)	243127 (23.9)	410423 (40.3)	1017378 (100)	183870 (39.1)	107002 (22.7)	179673 (38.2)	470545 (100)

## APPENDIX - 2.4

District-wise Distribution of State Income at Constant (1980-81) Prices - 1980-81 and 1988-89

Si.No.	District	1980-81				1988-89				Population ('000)	Per Capita Income	
		Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total		1980-81	1988-89
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(12)	(13)
1	Thiruvananthapuram	12166 (8.11)	9742 (10.46)	13572 (9.67)	34980 (9.25)	13846 (7.96)	9586 (9.79)	17220 (9.99)	40654 (9.15)	2962	1359	1373
2	Kollam	19708 (13.14)	10068 (10.81)	12591 (9.32)	42367 (11.20)	16368 (9.40)	7489 (7.65)	12527 (7.26)	36384 (8.19)	2553	1508	1454
3	Palhnan-chitta	-	-	-	-	7926 (4.55)	3932 (4.02)	7213 (4.18)	19071 (4.29)	1263	..	1510
4	Aiappuzha	16149 (6.77)	7675 (8.24)	12840 (9.50)	30664 (8.11)	10923 (6.28)	6953 (7.10)	12559 (7.28)	30435 (6.85)	2129	1307	1430
5	Kottayam	10777 (7.19)	3616 (3.88)	9763 (7.23)	24156 (6.38)	15448 (8.88)	3619 (3.70)	12467 (7.23)	31534 (7.10)	1937	1427	1628
6	Idukki	16506 (7.0)	5469 (5.87)	3366 (2.49)	19341 (5.11)	11998 (6.89)	6136 (6.27)	4220 (2.45)	22354 (5.03)	1107	2006	2019
7	Ernakulam	12830 (8.56)	18385 (19.74)	16654 (12.33)	47869 (12.66)	17727 (10.19)	20678 (21.12)	21464 (12.45)	59869 (13.47)	2893	1897	2069
8	Thrissur	12263 (8.18)	9083 (9.75)	14268 (10.56)	35614 (9.42)	14696 (8.44)	9578 (9.78)	17902 (10.38)	42176 (9.49)	2782	1467	1516
9	Palakkad	10758 (7.17)	6179 (6.63)	10312 (7.63)	27249 (7.23)	11271 (6.48)	6081 (6.21)	13087 (7.39)	30439 (6.85)	2332	1342	1355
10	Malappuram	11986 (7.99)	3300 (3.54)	10382 (7.69)	25668 (6.79)	12931 (7.43)	3320 (3.39)	12943 (7.51)	29194 (6.57)	2742	1080	1065
11	Kozhikode	16048 (10.70)	10915 (11.72)	15548 (11.51)	42511 (11.24)	12884 (7.40)	10119 (10.33)	17784 (10.31)	40767 (9.17)	2561	1629	1593
12	Wayanad	-	-	-	-	6353 (3.65)	1736 (1.77)	2591 (1.50)	10680 (2.40)	633	..	1687
13	Kannur	22779 (15.19)	8725 (9.36)	16307 (12.07)	47811 (12.64)	14183 (8.15)	6008 (6.13)	14037 (8.14)	34228 (7.70)	2201	1617	1555
14	Kasaragod	-	-	-	-	7489 (4.30)	2693 (2.74)	6441 (3.73)	16623 (3.74)	996	..	1669
State Domestic Product		149970 (100)	93157 (100)	135103 (100)	378236 (100)	176063 (100)	97930 (100)	172455 (100)	444428 (100)	29041	1494	1530

Figures in brackets indicate percentage to state total; (P) Provisional; PCI - Per Capita Income

Source :- Department of Economics and Statistics.

**APPENDIX 2.5**  
**Distribution of Work Seekers in Kerala by Educational Levels**

Period	Total Work Seekers	Below S.S.L.C.	% to Total Work Seekers	S.S.L.C.	Pre-Degree	Graduates	Post Graduates	S.S.L.C & Above	% to Total Work Seekers
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
31-12-1980	1579164	767141	48.45	658652	79310	67841	8220	814023	51.55
31-12-1981	1903719	979830	41.47	748898	90254	77694	7043	923889	48.53
31-12-1982	2086056	1049320	50.30	842772	102644	84161	7159	1036736	49.70
31-12-1983	2262240	1128860	49.90	920622	117161	88557	7040	1133380	50.10
31-12-1984	2458206	1194453	48.60	1050073	121369	84025	8286	1263753	51.40
31-12-1985	2574074	1208724	46.95	1116495	148464	90329	10062	1365350	53.05
31-12-1986	2704874	1209462	44.70	1251798	136198	97217	10209	1495412	55.30
31-12-1987	2991022	1270764	42.50	1434413	161155	111008	13682	1720258	57.50
31-12-1988	2901051	1185145	40.80	1438051	160233	100330	17292	1715906	59.10
31-12-1989	3066899	1205484	39.30	1551843	183045	106095	20432	1861415	60.70

Source : Directorate of Employment, Thiruvananthapuram.

**APPENDIX 2.6**

**Number of Professional and Technical Work Seekers, Kerala - 1980 to 1990**

Period Ending	Medical Graduates	Engineering Graduates	Diploma holders in Engineering & Technology	ITI Certificate Holders	Agricultural Graduates	Veterinary Graduates
(1)	(2)	(3)	(4)	(5)	(6)	(7)
31-12-1980	871	1505	6833	28873	106	17
31-12-1981	681	1217	7866	33569	103	14
31-12-1982	912	1662	7824	36043	195	15
31-12-1983	829	1757	9756	41682	218	14
31-12-1984	1035	2312	11646	68452	263	42
31-12-1985	1143	2917	11257	53237	149	25
31-12-1986	1270	3805	14812	59225	209	14
31-12-1987	1728	4916	17062	63056	177	72
31-12-1988	1334	4380	16766	64629	324	49
31-03-1989	1438	5671	17652	66173	413	9

Source :- Directorate of Employment, Thiruvananthapuram.

## APPENDIX 2.7

**Employment in the Organised Sector - Kerala - 1970-1990**  
(Index Base 1979-100)

Period Ending	Public Sector		Private Sector		Total	
	No.	Index	No.	Index	No.	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)
31-01-1970	293318	61.6	409562	80.5	702880	71.4
31-12-1975	418151	87.8	462712	90.9	880863	89.5
31-12-1980	496659	104.3	526459	103.4	1023118	103.9
31-12-1981	516478	108.5	528309	103.8	1044787	106.1
31-12-1982	536864	112.8	518282	101.8	1055146	107.2
31-12-1983	550670	115.7	519512	102.1	1070182	108.7
31-12-1984	565587	118.8	513503	100.9	1079090	109.6
31-12-1985	568713	119.5	507395	99.7	1076088	109.3
31-12-1986	576784	121.2	519115	102.0	1095899	111.3
31-12-1987	585391	123.0	508917	100.0	1094308	111.2
31-12-1988	602696	126.6	501653	98.5	1104349	112.2
31-12-1989	620254	130.3	486354	95.5	1106608	112.4
31-03-1990	..	..	..	..	1102900	112.0

Source:- Directorate of Employment, Thiruvananthapuram.

## APPENDIX 2.8

**Unemployment Assistance Scheme : Kerala 1982-83 to 1989-90**  
(Rs. lakhs)

Year	Application 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	1996.36

Source: Directorate of Employment, Thiruvananthapuram.

## APPENDIX 3.1

## Wholesale Price Index of Agricultural Commodities Kerala 1990

(base 1952-53 =100)

Crops	Janu- ary	Febru- ary	March	April	May	June	July	August	Sept- ember	Oct- ober	Novem- ber	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Rice	545.2	545.2	545.2	545.2	545.2	545.2	638.1	638.1	638.1	638.1	638.1	587.4
2. Molasses	1100.0	1105.6	1055.9	1081.9	1108.1	1093.9	1071.7	1057.0	1048.6	990.8	1132.3	1076.2
3. Condiments & spices	769.2	817.4	903.1	1109.7	1237.1	1381.3	1362.2	1208.3	1898.5	1047.5	1083.4	1092.5
4. Fruits & Vegetables	1427.3	1426.6	1486.8	1467.6	1477.6	1414.6	1438.5	1438.4	1456.2	1450.4	1459.4	1449.9
5 Food crops	748.5	756.5	779.3	810.3	833.6	846.0	905.3	879.7	864.3	853.4	865.3	831.1
Oil seeds	1333.4	1462.1	1470.1	1453.4	1354.2	1397.2	1426.7	1535.7	1683.5	1748.3	1940.3	1527.7
7. Plantation crops	901.3	920.6	933.6	931.6	888.1	894.1	894.4	894.7	926.9	933.3	901.3	910.9
8. Non Food crops	1202.9	1298.6	1308.1	1295.8	1213.4	1245.3	1265.9	1342.1	1455.0	1502.2	1626.5	1341.4
All crops	914.4	954.4	972.3	987.5	972.2	991.7	1036.9	1048.5	1079.9	1090.2	1143.1	1017.4

Source: Department of Economics and Statistics.

## APPENDIX 3.2

## Average Retail Prices of Essential Commodities for the Year 1990

(Rs.)

Sl. Commodities No.	Unit	Janu- ary	Febru- ary	March	April	May	June	July	Aug- ust	Septem- ber	Octo- ber	Novem- ber	Decem- ber	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Rice	Kg.	5.21	4.95	5.10	5.03	5.23	5.60	5.41	5.43	5.07	5.16	5.44	5.41	
2. Green gram	"	10.44	10.70	11.07	11.14	11.29	10.96	10.94	9.95	9.88	9.90	10.10	10.76	
3. Blackgram (split without husk)	"	11.43	11.31	11.97	12.43	12.48	12.60	12.67	12.74	12.69	12.66	13.10	13.19	
4. Red gram	"	7.11	7.11	7.20	7.16	7.58	7.42	7.66	7.95	8.44	8.36	8.41	8.38	
5. Dhall	"	12.12	12.15	12.51	12.72	12.99	13.21	13.77	15.54	15.56	16.01	17.56	17.36	
6. Coconut oil	"	25.81	26.70	26.29	26.05	25.88	27.93	28.04	32.99	33.91	34.51	40.81	37.74	
7. Groundnut oil	"	26.65	27.29	28.30	29.39	29.59	32.23	32.98	37.28	36.23	37.41	37.58	37.71	
Refined oil (Postman)	"	43.76	43.53	44.01	44.93	46.50	47.19	48.81	49.61	49.87	49.09	51.63	48.63	
9. Gingelly oil	"	30.12	32.64	33.60	37.24	34.86	33.93	33.68	33.89	33.16	33.82	36.14	48.06	
10. Tapioca	"	2.06	2.09	2.10	2.07	2.05	1.93	1.93	1.97	2.10	2.01	2.07	2.14	
11. Chennai	"	2.10	2.06	1.99	2.15	2.36	2.74	2.89	2.49	2.36	2.34	2.46	2.45	

## APPENDIX 3.2 (continued)

(Rs.)

Sl. Commodities No.	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)	(15)
12. Banana green	"	4.70	4.73	4.24	5.20	6.47	6.27	6.13	6.61	6.12	5.82	5.46	5.24	
13. Milk (cow's)	Litre.	5.29	5.27	5.33	5.40	5.41	5.41	5.45	5.48	5.48	5.41	5.44	5.44	
14. Egg (Hen's)	Dozen	7.89	7.31	7.76	7.14	8.81	8.10	8.74	8.29	7.65	7.86	9.00	8.60	
16. Potato	"	3.30	3.28	3.16	3.42	3.86	4.45	3.96	3.25	3.00	4.31	5.16	6.21	
17. Corriander	"	11.79	12.00	12.68	13.03	13.12	12.96	13.10	12.99	12.84	12.71	12.88	13.58	
18. Chillies (dry)	"	17.29	16.50	16.18	17.08	15.79	15.72	15.47	16.43	16.11	17.82	21.43	21.57	
19. Onion	"	3.00	2.86	3.30	3.73	4.17	5.10	3.94	4.28	5.01	6.00	8.31	6.04	
20. Tamarind	"	10.36	10.54	10.82	10.88	11.04	11.39	11.60	12.18	12.25	12.36	13.54	13.68	
21. Tea (Kannan Devan)	"	29.93	29.14	29.46	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	
22. Coffee Powder(F.B)	"	16.82	17.32	17.44	17.79	18.30	18.48	18.77	19.94	20.36	21.25	22.62	22.88	
23. Sugar	"	8.38	8.30	8.58	8.40	8.39	8.35	8.35	8.61	8.30	8.29	8.18	8.25	
24. Coconut (without husk)	100 Nos.	245.71	261.43	262.50	250.84	246.43	253.93	253.21	292.50	301.07	316.43	373.87	347.14	
25. Tobacco	Kg.	24.25	23.92	23.58	22.78	22.40	23.09	22.73	22.60	24.00	23.79	24.00	23.86	
26. Firewood (Local split)	Gtl.	63.07	63.21	66.70	66.54	59.67	66.21	66.79	66.57	65.57	69.38	70.00	70.00	
27. Mundu (Mull)	each	20.99	21.58	21.55	22.59	23.80	23.68	23.73	23.78	23.99	23.97	24.07	24.15	
15. Mutton	Kg.	37.86	37.93	37.93	38.08	38.07	38.21	38.36	38.36	38.57	38.71	38.86	39.43	
28. Paper	24 sheets	3.87	3.75	3.87	3.94	3.95	4.06	4.08	4.10	4.10	4.10	4.13	4.28	
29. Washing soda	Kg.	6.93	6.98	7.00	7.14	7.10	7.18	7.18	7.19	7.19	7.21	7.31	7.25	
30. Washing soap (1/2 bar)	each	3.82	3.73	3.78	3.83	3.74	3.74	3.70	3.75	3.75	3.75	3.90	3.92	
31. Toilet soap	"	4.11	4.12	4.13	4.12	4.13	4.16	4.22	4.25	4.31	4.36	4.38	4.41	
32. Blade (Razer)	5 Nos.	2.69	2.72	3.02	3.21	3.28	3.33	3.36	3.33	3.38	3.53	3.70	3.71	
33. Tooth paste (100 gm. tube)	gm.	9.68	9.71	9.71	9.75	9.75	9.75	9.78	9.80	9.81	9.82	9.85	9.85	
34. Anacin/Crocic	each	0.48	0.48	0.48	0.49	0.49	0.50	0.51	0.51	0.51	0.52	0.52	0.52	
35. Electric bulb	"	6.40	6.38	6.46	6.62	6.53	6.70	6.70	6.85	6.87	6.89	6.97	6.98	
36. Cement (Ordinary)	bag	85.00	85.61	89.25	96.33	96.96	97.12	97.13	98.15	99.18	99.23	101.67	102.92	
37. Baby food/Amul	"	60.04	60.04	60.04	60.05	60.04	60.05	60.04	60.04	60.04	59.67	59.36	59.79	
38. Torch battery	each	4.33	4.33	4.33	4.37	4.43	4.34	4.35	4.37	4.41	4.45	4.46	4.49	
39. Onion (big)	Kg.	2.19	2.04	2.01	2.00	2.04	2.91	3.15	3.26	3.91	4.35	5.94	7.56	
40. Brinjal	"	3.65	3.07	3.68	4.04	4.25	3.79	3.46	3.96	3.36	3.75	4.71	4.75	
41. Pumpkin	"	2.21	2.35	2.34	2.43	2.59	2.48	2.39	2.40	2.36	2.39	2.04	3.14	
42. Cucumber	"	2.78	2.46	2.31	2.45	3.03	3.39	3.21	2.80	3.04	3.29	3.29	3.54	
43. Ladies finger	"	4.54	3.82	3.86	4.53	4.61	3.93	3.57	4.82	4.11	4.71	5.14	4.39	
44. Bitter gourd	"	5.61	4.93	6.04	6.67	7.36	8.08	6.96	6.39	5.86	6.82	7.39	6.50	
45. Ash gourd	"	2.31	2.25	2.21	2.25	2.30	2.25	2.41	2.32	1.93	2.21	2.68	2.61	
46. Colocassia	"	3.12	3.42	3.79	4.30	4.52	5.06	5.15	4.88	4.58	4.31	4.73	4.32	
47. Chillies (Green)	"	5.13	5.21	5.21	6.08	8.39	7.39	7.07	5.96	5.11	6.43	6.29	8.25	
48. Plantain (Green)	"	3.32	3.18	3.18	3.58	3.45	3.70	3.79	4.07	4.00	3.93	3.75	3.75	
49. Cabbage	"	3.36	3.57	3.39	3.92	4.18	3.57	3.21	3.04	2.64	2.86	2.81	3.30	
50. Snake-gourd	"	3.54	3.21	2.93	3.25	3.61	3.79	4.04	3.82	3.32	4.32	4.29	4.43	

Source: Department of Economics and Statistics.



APPENDIX 3.3  
Consumer Price Index (Cost of Living Index) Number for  
Agricultural and Industrial Workers - Kerala - 1990

(Base 1970 =100)

Centres	Janu- ary	Febru- ary	March	April	May	June	July	August	Sept- ember	Octo- ber
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Thiruvanan-										
thapuram	422	423	425	428	432	437	443	445	445	447
Kollam	441	433	446	449	454	460	466	467	466	465
Punalur	406	409	411	415	420	426	433	434	434	434
Alappuzha	412	414	416	418	421	426	432	434	434	435
Mattayam	422	424	427	431	434	440	447	447	446	445
Mundakayam	412	415	418	422	427	433	441	441	441	441
Munnar	399	402	405	408	413	418	425	427	427	428
Ernakulam	402	404	406	409	413	419	426	427	426	426
Chalakydy	417	419	421	424	427	432	440	442	442	441
Thrissur	405	407	409	411	416	421	429	430	429	428
Palakkad	410	412	415	418	423	429	436	436	435	434
Malappuram	428	431	434	438	443	450	458	459	459	459
Kozhikode	422	424	427	431	436	441	448	449	448	448
Mepadi	427	429	432	435	440	447	455	457	457	458
Kannur	419	420	422	425	430	435	442	444	444	443

Source: Department of Economics and Statistics.

APPENDIX 3.4

Index Number of Wholesale Prices by Groups and Sub Groups - All India

[Base 1981-82 =100]

Item	Weight	1989												1990													
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)							
		Sept-ber	Oct-ber	Nov-ber	Dec-ber	Jan-ary	Febru-ary	March	April	May	June	July	August	Sept-ber	Oct-ber	Nov-ber	Dec-ber	Jan-ary	Febru-ary	March	April	May	June	July	August	Sept-ber	Oct-ber
(i) All Commodities	100.00	161.6	163.6	166.7	168.3	167.5	167.3	166.3	166.7	167.8	169.7	172.2	173.8	176.1	178.3	179.1	180.2	182.7									
1. Primary Articles	32.20	160.7	163.4	167.3	167.9	166.5	165.3	163.0	162.4	163.3	166.1	169.3	173.5	178.5	182.3	182.6	184.3	186.2									
1. Food Articles	17.39	180.4	184.4	188.7	187.9	184.9	180.6	176.5	173.6	173.4	176.5	181.2	188.2	194.1	198.4	197.4	201.3	204.2									
(i) Foodgrains	7.92	166.8	168.1	171.5	172.5	169.6	168.4	165.4	162.0	159.6	159.4	162.0	165.6	168.3	174.9	175.6	175.2	177.4									
a. Cereals	6.83	160.5	162.1	164.7	164.1	161.4	161.3	159.0	156.2	153.6	152.2	153.7	157.7	160.3	166.9	167.9	167.5	169.0									
b. Pulses	1.09	206.1	205.2	214.2	224.7	220.1	212.6	205.5	198.5	197.2	204.6	213.4	215.0	218.2	225.0	223.4	222.8	230.0									
(ii) Fruits & Vegetables	4.09	180.2	190.7	199.8	180.4	175.6	166.6	156.7	153.6	157.8	163.8	175.9	189.6	203.7	210.6	206.7	216.3	220.8									
(iii) Milk & Milk Products	1.96	204.7	201.7	201.0	204.7	202.9	201.4	202.1	193.8	194.6	200.7	200.3	203.2	207.9	207.0	207.5	210.5	210.5									
(iv) Egg, Fish & Meat	1.78	173.1	181.1	182.2	182.9	180.3	182.3	183.3	182.1	177.9	181.3	180.5	180.2	182.6	187.1	189.7	194.6	197.4									
(v) Condiments & Spices	0.95	221.7	222.3	223.3	234.8	223.9	223.0	219.6	222.8	219.7	226.7	244.7	265.7	275.6	270.2	268.1	275.3	276.2									
(vi) Other Food articles	0.69	231.7	241.7	257.4	310.2	320.3	280.0	270.7	279.5	288.9	297.6	295.2	310.0	312.3	300.3	286.4	301.3	314.7									
2. Non-Food Articles	10.08	156.4	157.6	162.3	165.6	166.3	169.8	169.9	172.7	174.8	175.4	177.4	179.1	184.9	189.8	192.5	191.1	192.2									
(i) Fibres	1.79	170.0	169.2	172.9	169.5	162.1	156.6	156.9	160.8	163.3	161.4	161.7	162.1	167.5	172.7	175.9	173.9	174.1									
(ii) Oil Seeds	3.86	139.3	141.5	149.7	160.3	159.3	155.8	152.9	155.4	163.0	163.6	170.0	171.2	180.5	189.0	193.1	189.7	192.9									
(iii) Other Non-Food Articles	4.43	165.8	167.0	169.1	168.7	174.2	187.4	189.9	192.6	189.8	191.3	190.3	192.7	195.6	197.5	198.6	199.2	199.0									
3. Minerals Petroleum Crude & Natural Gas	4.83	99.0	99.8	100.4	100.5	100.5	100.5	100.5	100.5	102.9	109.2	109.1	109.3	109.3	109.1	109.0	109.0	109.0									
4.27	88.9	89.2	89.5	89.5	89.5	89.5	89.5	89.5	89.5	92.2	99.3	99.3	99.3	99.9	99.9	99.7	99.5	99.5									
II. Fuel, Power, Light and Lubricants	10.66	155.6	155.8	156.0	156.1	156.3	156.6	157.0	157.2	157.3	159.9	164.6	165.4	165.8	166.1	166.1	166.4	175.5									

APPENDIX 3.4 (continued...)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
III. Manufactured Products	57.04	163.2	165.2	168.4	170.9	170.2	170.5	169.9	170.8	172.2	173.6	175.3	175.5	176.6	178.2	179.6	180.4	182.2	
1. Manufactured Products (itemwise)																			
(i) Food Products	10.14	160.0	164.3	171.7	177.3	173.5	169.1	163.2	163.1	163.8	166.2	169.6	168.4	173.7	178.8	180.4	180.6	183.8	
(ii) Dairy Products	0.64	184.9	188.3	191.8	192.0	192.9	192.6	190.8	188.4	186.4	186.6	184.9	186.2	186.6	186.7	188.6	189.9	192.8	
(iii) Sugar, Khandsari & Gur	4.06	148.2	155.9	167.6	174.7	167.0	156.7	145.2	143.8	141.3	144.5	149.3	146.6	153.1	157.9	158.8	159.5	161.0	
2. Beverages, Tobacco, Tobacco Products	2.15	198.4	202.2	202.3	211.2	213.6	213.6	213.6	214.9	216.7	218.9	231.0	237.4	239.5	237.8	237.8	243.1	243.18	
3. Textiles	11.54	150.4	151.5	154.4	156.5	157.6	160.0	160.5	163.4	166.7	169.0	169.2	167.9	165.6	165.3	167.9	168.1	169.4	
4. Paper and Paper Products	1.99	203.3	210.7	210.8	210.8	210.4	210.4	210.4	211.4	211.8	212.1	212.2	212.2	212.9	215.8	216.1	216.2	216.2	
5. Leather and Leather Products	1.02	173.7	177.1	181.1	182.3	183.9	186.4	193.1	193.2	195.2	198.9	199.7	204.6	210.6	215.3	220.4	225.1	225.8	
6. Rubber & Plastic Products	1.59	156.5	158.5	159.1	159.3	159.5	159.6	159.6	161.0	161.4	162.1	162.7	162.8	162.8	163.3	164.7	165.4	165.6	
7. Chemical & Chemical Products	7.36	137.2	137.4	138.7	139.9	139.2	140.2	141.1	141.5	142.1	142.5	143.2	144.1	144.4	145.1	145.3	145.3	146.3	
(i) Fertilizers	1.75	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.1	
(ii) Pesticides	0.20	144.3	144.3	144.3	145.7	146.3	146.0	150.9	152.2	152.2	152.2	152.2	152.2	152.2	152.2	152.2	152.2	152.2	
(iii) Drugs & Medicines	1.06	138.4	138.4	138.4	138.4	138.4	138.4	138.4	138.5	138.5	138.5	145.2	148.5	149.0	149.0	149.0	149.0	149.3	
(iv) Edible oils	2.45	171.3	171.2	177.1	183.6	181.7	179.4	176.7	178.0	182.7	185.7	191.6	193.5	202.6	213.4	217.0	216.4	226.4	
Non-Metallic Mineral Products	2.48	163.3	161.8	161.5	165.6	162.3	166.2	169.2	170.7	171.9	173.3	179.4	177.0	176.6	179.9	182.6	184.3	185.8	
9. Basic Metals, Alloys and Metal Products	7.63	201.1	203.0	206.4	208.0	207.2	208.2	208.0	208.6	209.0	209.3	210.1	210.9	213.4	214.7	215.4	217.1	221.0	
10. Machinery and Machine Tools	6.27	160.7	163.1	166.2	167.6	167.4	167.7	168.0	168.2	170.1	170.9	171.0	172.5	172.9	174.5	175.8	176.7	177.3	
(i) Motor Vehicles, Motor Cycles, Scooters, Bicycles and Parts	2.43	159.0	159.7	162.1	163.2	163.5	163.6	163.9	164.5	167.3	168.5	169.8	171.3	172.0	172.6	173.1	174.7	175.4	
(ii) Other Miscellaneous Manufacturing Industries	0.97	116.4	116.5	117.4	117.7	117.7	117.7	117.7	117.7	117.7	117.2	117.2	117.9	117.9	117.9	117.9	117.9	118.0	118.6

Source: Centre for Monitoring Indian Economy.

## APPENDIX 3.5

Consumer Price Index for Industrial Workers - All India and Selected Centres

(Base 1982 = 100)

Centres	1989				1990								
	Sept- ember	Octo- ber	Nov- mber	Dece- mber	Janu- ary	Febr- uary	March	April	May	June	July	Aug- ust	Sept- ember
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
All India	176	176	176	175	174	175	177	180	182	185	189	190	191
Ahmedabad	175	175	174	172	172	174	176	179	183	185	192	193	195
Alwaye	162	163	163	163	165	166	165	168	169	174	175	172	173
Bangalore	169	169	168	169	168	168	168	171	173	175	176	180	180
Bombay	181	180	180	181	182	184	185	188	193	196	198	198	199
Calcutta	180	183	182	179	178	178	182	188	191	192	196	200	201
Coimbatore	171	168	167	168	166	168	171	170	173	174	174	173	175
Delhi	185	185	184	182	182	183	185	189	191	194	199	200	201
Hyderabad	169	168	169	167	167	169	170	172	173	178	179	178	179
Jamshedpur	167	168	168	165	166	167	169	172	175	177	181	183	185
Madras	175	175	175	175	174	176	177	179	179	182	185	185	185
Madurai	177	176	176	175	175	178	181	181	184	185	187	188	191
Mundakayam	170	169	170	171	171	173	170	172	173	180	181	180	181
Nagpur	181	181	180	179	179	181	184	185	188	193	198	199	199

Source: Centre for Monitoring Indian Economy.

## APPENDIX 3.6

Consumer Price Index Number for Agricultural Labourers - State Wise

(Base 1960-61 = 100)

State	1989				1990									
	Sept- ember	Octo- ber	Nov- mber	Dece- mber	Janu- ary	Febru- ary	Mar- ch	April	May	June	July	Augu- st	Sept- ember	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
All India	772	777	760	753	740	734	736	744	751	759	780	791	792	
Andhra Pradesh	631	634	615	607	598	601	601	604	609	615	625	626	632	
Assam	786	797	778	772	774	757	765	773	774	789	808	824	830	
Bihar	806	817	801	795	780	779	782	782	793	798	815	823	820	
Gujarat	668	682	662	657	654	661	662	668	677	679	703	706	702	
Jammu & Kashmir	754	753	762	761	749	748	750	767	775	777	784	811	823	
Karnataka	771	781	763	759	752	748	747	753	754	758	764	761	757	
Kerala	849	837	843	839	834	834	846	851	852	879	910	902	900	
Madhya Pradesh	824	809	800	788	779	765	770	778	776	789	814	823	821	
Maharashtra	785	788	769	759	745	722	715	715	722	724	734	739	739	
Orissa	801	801	767	761	750	742	743	763	768	768	773	789	799	
Punjab	841	856	843	846	831	807	798	812	824	837	876	891	895	
Rajasthan	790	798	787	782	772	767	772	775	780	798	835	854	854	
Tamil Nadu	726	733	726	725	704	714	719	731	745	746	747	762	762	
Uttar Pradesh	845	844	822	813	795	780	781	794	802	825	881	909	910	
West Bengal	754	764	743	724	706	706	716	737	752	753	781	806	808	

Source: Centre for Monitoring Indian Economy.

## APPENDIX 3.7

Consumer Price Index Number for Urban Non-Manual Employees - All India & Selected Centres  
(Base 1984-85 = 100)

Centre	1989					1990							
	Sept- mber	Octo- ber	Nov- mber	Dece- mber	Janu- ary	Febru- ary	March	April	May	June	July	Aug- ust	Sept- mber
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
All India	147	148	147	146	147	147	149	151	153	155	158	159	159
Bombay	140	141	141	141	141	141	143	145	146	148	150	151	151
Delhi-													
New Delhi	145	145	145	143	143	145	146	148	150	152	155	156	157
Calcutta	167	149	148	166	147	167	148	152	154	157	162	164	165
Madras	153	154	155	154	155	155	157	159	161	162	164	165	166
Hyderabad-													
Secunderabad	152	152	153	152	153	154	154	156	156	158	161	161	162
Bangalore	147	148	148	147	148	149	150	152	154	155	158	158	158
Lucknow	141	142	141	141	140	140	142	145	147	148	156	157	157
Ahmedabad	140	141	140	139	140	141	141	145	146	147	149	151	151
Jaipur	150	150	149	148	150	150	152	155	156	159	163	162	163
Patna	148	145	144	142	146	148	150	151	157	158	163	165	165
Srinagar	146	148	149	149	150	150	150	149	157	150	150	150	150
Thiruvanantha- puram	142	143	143	143	144	144	144	146	148	148	149	148	148
Cuttak-													
Bhubaneswar	141	141	141	138	138	137	141	144	146	148	149	149	149
Bhopal	153	154	153	151	152	152	154	156	157	160	164	163	163
Chandigarh	158	158	156	157	159	160	161	164	166	169	174	174	176
Shillong	157	158	159	160	162	162	163	166	168	170	175	177	179

Source: Centre for Monitoring Indian Economy.

## APPENDIX 3.8

Wholesale Price Index of Agricultural Commodities Kerala 1980 - 1990

Crop	Weight	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
A. Food Crops	63.5	388	417	413	499	597	582	679	709	696	725.1	831.1
1. Food Grains (Rice)	40.4	319	319	319	406	442	448	501	529	533	544.4	587.4
2. Molasses	2.0	629	606	412	626	629	709	689	626	881	909.1	1076.2
3. Condiments & spices	10.4	403	442	439	548	854	637	1324	1435	775	754.2	1092.5
4. Fruits & Vegetables	10.7	589	728	740	779	913	1008	758	858	1199	1342.2	1449.6
B. Non Food Crops	36.5	673	680	672	930	1477	966	1809	1324	1428	1214.6	1341.4
1. Oil seeds	25.5	822	819	796	1112	1863	1142	1227	1650	1795	1411.0	1527.7
2. Plantation Crops	11.0	331	358	386	508	585	560	509	568	578	760.5	910.9
C. All Crops	100.0	492	513	507	656	918	722	800	933	963	903.8	1017.4*

\* Provisional

Source: Department of Economics and Statistics.

## APPENDIX 4.1

## Station-wise Average Monthly Rainfall (MM) - Year 1990

Sl. No.	District	January	February	March	April	May	June	July	August	September	October	November	December	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1.	Thiruvananthapuram	6	22	25	5	320	174	287	57	57	195	349	24	1521
2.	Kollam	81	0	38	74	426	256	410	148	71	259	255	0	2018
3.	Alapuzha	55	42	24	159	565	488	537	211	96	290	226	0	2693
4.	Pathanamthitta (Thiruvalla)	16	0	26	40	418	568	655	207	126	444	334	0	2834
5.	Kottayam	0	0	13	10	581	668	657	186	187	460	151	0	2913
6.	Idukki	45	0	113	161	395	1092	633	492	148	436	261	6	3782
7.	Kochi (Ernekulam)	3	0	5	57	560	413	679	167	75	303	205	0	2462
8.	Trissur	0	0	0	0	659	437	794	290	91	436	50	0	2757
9.	Palakkad	3	0	0	79	245	323	490	238	35	298	59	1	1771
10.	Kozhikode	0	0	0	0	803	620	835	256	112	226	155	0	3007
11.	Nalappuram	0	0	0	0	279	1011	587	371	56	330	88	0	2722
12.	Wayanad(Vythiri)	0	0	0	0	281	704	768	801	110	301	215	0	3180
13.	Kannur	0	0	0	0	694	649	874	536	112	281	68	0	3214
14.	Kasaragod	0	0	0	0	613	1044	950	931	206	310	24	0	4044

## APPENDIX 4.2

## Trends of Area Production &amp; productivity of Coffee in Kerala Vis-a-vis India

Year	Area (Hectare)		Percentage		Production (in tonnes)		Productivity (Kg/Hect)		Percentage	
	India	Kerala	Kerala		India	Kerala	Kerala	India		Kerala
(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)
1980	210119	57949	27.58		118646	21043	17.74	565	363	64.25
1981	216975	57905	26.69		150000	32628	21.75	691	563	81.68
1982	226848	62368	27.49		129952	15330	11.80	573	246	42.93
1983	232354	64009	27.55		105029	9412	8.96	452	147	32.52
1984	234531	65641	29.99		195110	37285	19.11	832	568	68.27
1985	240596	65628	27.28		122445	19731	16.11	509	301	59.16
1986	242484	65637	27.07		192260	33055	17.19	793	504	63.86
1987	242201	68349	28.22		123000	22590	18.37	508	331	65.16

## APPENDIX 4.3

## Trends of Area, Production &amp; Productivity of Tea - Kerala and India

Year	Area Hectares		Percent- age of Area of Kerala	Production in Tonnes		Percent- age of Production of Kerala	Productivity Kg/Hect		Percentage of Produc- tivity of Kerala
	India	Kerala		India	Kerala		India	Kerala	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1980	381086	36130	9.48	569172	53614	9.42	1494	1484	99.33
1981	383629	35589	9.28	560427	47631	8.50	1461	1338	91.58
1982	394170	35324	8.96	560562	48523	8.66	1422	1374	96.62
1983	396066	35020	8.84	581484	44582	7.67	1468	1273	86.72
1984	398453	35020	8.79	639864	58179	9.10	1606	1659	103.30
1985	399936	34711	8.68	656162	53104	8.10	1641	1528	93.11
1986	411673	34736	8.44	620803	48616	7.83	1506	1399	92.77
1987	414232	34641	8.36	665251	56276	8.46	1606	1625	101.18

## APPENDIX 4.4

## Trends of Area, Production &amp; Productivity of Cardamom in Kerala vis-a-vis - India

Year	Area ('000 Hectares)		Percentage of Area in Kerala	Production in Tonnes		Percentage of produ- ction in Kerala	Productivity		Percentage of produ- ctivity in Kerala
	India	Kerala		India	Kerala		India	Kerala	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1980	86	54	62.79	4400	3100	70.45	51.162	57.41	112.21
1981	87	55	63.22	4100	2800	68.29	47.126	50.91	106.05
1984	96	59	61.46	3900	2850	73.06	40.625	48.31	118.92
1985	100	61	61.00	4700	3340	71.06	47.000	54.75	116.49
1988	105	64	60.95	4200	2750	65.48	40.000	42.97	107.43

**APPENDIX 4.5**  
**Consumption of Fertilizers in Kerala**

in Tonnes

Year	Nitrogen	Phosphorus	Potash	Total	Percentage Changes
(1)	(2)	(3)	(4)	(5)	6
1981-82	40612	23215	30934	94761	
1982-83	45233	26555	38065	109853	+15.9
1983-84	62480	31178	35819	129477	+17.9
1984-85	57657	32642	37346	127645	- 2.6
1985-86	59263	34412	47655	141330	+10.7
1986-87	60783	35857	54723	151363	+6.8
1987-88	70730	49350	62410	182490	+20.6
1988-89	30238	50884	82805	213927	+17.0
1989-90	78638	47252	86564	212454	- 0.7

## APPENDIX 4.6

## Average Price of Important Agricultural Inputs

Inputs	Unit	1988-89	1989-90
(1)	(2)	(3)	(4)
<b>I. Fertilizers</b>			
(a) Nitrogen			
(i) Urea	Rs./Kg	2.35	2.35
(ii) Ammonium sulphate	..	1.65	1.65
(b) Phosphorus			
(i) Super phosphate	..	0.95	0.95
(c) Potash			
(i) Muriate of Potash	..	1.30	1.30
<b>II. Seeds and other Planting Materials</b>			
(a) Paddy seeds	Rs./Qtl	300.00	300.00
(b) Green manure seeds	..	500.00	500.00
(c) Coconut seedlings			
(i) MCT	Rs/seedlings	8.50	12.00
(ii) YxD	..	13.00	15.00
(ii) DxD	..	13.00	15.00
(d) Rooted pepper cuttings			
(i) Panniyoor 1	..	0.50	0.50
(ii) Other varieties	..	0.50	0.50
(e) Cashew			
(i) Layer	Rs./layer	2.00	3.00
(ii) Seedlings	Rs./seedlings	1.50	2.00
(f) Nutmeg seedlings			
(i) One year old	Rs./seedlings	3.00	3.00
(ii) Two year old	..	5.00	5.00



## APPENDIX 4.7

## Selected Indicators of the Credit Operations of the Primary Agricultural Credit Societies

Sl. No.	Indicators	As on 30-6-85	As on 30-6-86	As on 30-6-87	As on 30-6-88	As on 30-6-89	As on 30-6-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	No. of Societies	1570	1574	1570	1574	1580	1582
2.	No. of Members (lakhs)	53.82	62.68	68.18	72.91	78.09	82.17
	(a) of which SC ..	5.17	5.33	6.38	6.97	7.38	..
	(b) of which ST ..	0.42	0.47	0.45	0.54	0.54	..
3.	Paid up share Capital (Rs. lakhs)	4579	5095	5618	6333	6898	7873
4.	Reserves (Rs. lakhs)	2584	3092	3574	4962	5478	..
5.	Deposits (Rs. lakhs)	32236	40785	45474	55930	64703	78336
6.	Working Capital (Rs. lakhs)	74049	69266	79691	96366	107810	125929
	Loans issued (Rs. lakhs)	43312	52879	59807	70373	75118	74536
	(1) Short term (Rs. lakhs)	35689	44767	49627	57668	61493	60271
	(2) Medium term (Rs. lakhs)	6999	7273	9120	11025	11716	11921
	(3) Long term (Rs. lakhs)	624	840	1059	1680	1909	2344
8.	Loan outstanding (Rs. lakhs)	41519	51401	61190	72089	81432	85975
9.	Loan overdue	8775	10478	10907	13367	16391	23361
10.	S.T. loans for agri. purposes alone (Rs. lakhs)	18499	20760	23891	25378	26630	..
11.	S.T. loans for non agricultural purposes (Rs. lakhs)	17189	24006	25736	32290	34863	..
12.	N.T. loans for agri. purposes	3409	4121	4240	5625	4414	..
13.	N.T. loans for non agri. purposes	3589	3151	4880	5400	7302	..
14.	Value of Fertilizers sold	3732	4533	3752	4430	4124	..
15.	Value of agri. produce marketed through societies (Rs. lakhs)	908	1981	2539	3346	4373	..
16.	No. of dormant societies	..	..	..	..	..	20
17.	No. of viable societies	..	..	..	1423	1443	..
18.	No. of Societies on profit	892	884	807	782	777	696
19.	Profit amount (Rs. lakhs)	593	742	800	859	935	..
20.	No. of Societies on loss	659	660	728	751	773	866
21.	No. of Societies without profit or loss	19	..	35	41	30	..
22.	No. of Societies having paid secretaries	1565	1567	1534	..	1553	1561
23.	No. of Societies having godowns						
	(a) Owned	1633	1696	1742	1419	1426	..
	(b) Hired	693	782	827	530	551	..

## APPENDIX 4.8

## Scheme-Loans Advanced by Kerala State Co-operative Agricultural Development Bank at Primary Level during the Seventh Plan Period

(Rs. in lakhs)

Sl.No.	Schemes	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Minor Irrigation	350.24	525.89	559.80	509.93	508.34
2.	Agricultural Machinery	130.17	193.01	204.87	155.93	106.83
3.	Plantation	529.29	908.92	1066.54	1137.92	1235.71
4.	Dairy	36.69	48.83	69.41	119.84	94.41
5.	Poultry	28.27	52.36	52.78	79.80	37.55
6.	Fisheries	6.91	19.66	19.18	40.65	39.74
7.	Goat Development	4.82	6.19	4.35	11.65	1.78
8.	Coconut & Fish Culture	63.09	21.84	15.11	2.46	--
9.	Gobar gas/Biogas	3.02	2.53	1.27	2.58	1.44
10.	Bullock and Bullock cart	5.73	14.31	9.48	1.13	0.54
11.	Warchy land reclamation/ interspace filling	16.88	52.69	78.05	79.02	113.49
12.	SADU	712.64	234.39	80.51	13.29	--
13.	Others	20.20	38.10	80.94	55.76	76.97
Total		1907.95	2118.72	2240.29	2209.96	2216.80

## APPENDIX 4.9

## Ordinary Loans Advanced by KSCADB during the Seventh Plan Period

(Rs. in lakhs)

Sl.No.	Purpose	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	New Wells	13.28	18.02	19.32	2.66	1.59
2	New Tanks	1.30	1.45	--	--	--
3.	Pumpsets and Persion wheels	5.15	10.46	7.08	2.31	6.42
4.	Agricultural Machinery	36.56	27.95	4.50	9.56	16.49
5.	Repairs to Wells & Tanks	3.56	3.68	1.98	1.29	5.65
6.	Field channels and Pump houses	0.56	0.27	--	--	--
7.	Cattle sheds and Fara houses	527.64	366.44	465.36	343.35	425.11
8.	Fencing	435.49	327.31	275.84	232.92	305.73
9.	Levelling and Bunding	437.24	365.51	408.03	280.40	371.06
10.	Terracing	53.95	76.68	53.26	75.21	107.04
11.	Drainage channels	9.10	3.05	2.00	5.98	4.80
12.	Plantations	118.54	104.43	99.72	94.40	150.19
13.	Other major programmes	94.49	48.28	41.77	31.38	87.15
Total		1736.86	1351.53	1378.86	1079.46	1048.23

## APPENDIX 4.10

District wise Institutions under the Animal Husbandry Department: Kerala as on 31.10.1990

Sl. No.	Category	TVN	GLN	PTA	APY	KTH	IDKY	EKM	YCR	PGT	NPN	KDE	MYD	KRE	KSD	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	District Veterinary Centre	1	1	x	1	1	x	x	x	1	x	1	x	1	x	7
2	Veterinary Poly Clinic	2	2	4	6	4	3	5	6	4	4	2	3	5	1	51
3	Veterinary Hospitals	10	10	7	9	10	5	12	12	8	6	5	2	5	3	104
4	Mobile Veterinary Hospitals	1	1	x	2	1	1	1	1	1	x	1	x	1	x	11
5	Mobile Farm Aid Units	1	1	1	1	2	2	1	1	3	2	x	1	2	x	18
6	Veterinary Dispensary	50	37	24	29	35	32	51	48	34	33	33	14	34	23	677
7	Intensive Cattle Development Projects	1	1	1	x	x	x	1	x	1	x	1	x	1	x	7
8	Regional Artificial insemination centres	5	4	3	2	2	x	1	1	2	1	1	1	4	1	28
9	Vety. Sub Centres/A.I. Centres/ A.I.S. Centres/ I.C.D.P.S. Centres/A.H. Centres	128	103	105	43	65	16	45	55	55	64	58	35	77	26	877
10	District Livestock Farm.	1	x	x	x	x	x	x	x	x	x	x	x	x	x	1
11	Jersey Farm.	1	x	x	x	x	x	x	x	x	x	x	x	x	x	1
12	Jersey Farm Extension Unit	1	x	x	x	x	x	x	x	x	x	x	x	x	x	1
13	Buffaloe Breeding Farm	x	1	x	x	x	x	x	x	x	x	x	x	x	x	1
14	Goat Farm	x	x	x	x	x	x	x	x	1	x	x	x	1	x	2
15	Pig Farm	x	x	x	x	1	x	x	x	x	x	x	x	x	x	1
16	Pig Breeding Unit	1	x	x	x	1	x	1	1	x	x	x	x	1	x	5
17	Pig Development Office	x	x	x	x	x	x	1	x	x	x	x	x	x	x	1
18	Regional Poultry Farm	1	1	x	x	1	x	1	x	1	x	1	x	1	x	7
19	Intensive Poultry Development Block	1	x	x	x	x	x	1	x	x	x	x	x	x	x	2
20	District Poultry Farm	x	x	x	x	x	1	x	x	x	1	x	x	x	x	2
21	Poultry sub Centres	2	x	x	x	x	x	x	x	1	x	x	x	x	x	3
22	Broiler Unit	1	x	x	x	x	x	x	x	x	x	x	x	x	x	1
23	Duck Farm	x	x	1	x	x	x	x	x	x	x	x	x	x	x	1
24	Central Hatchery	x	x	x	1	x	x	x	x	x	x	x	x	x	x	1
25	Turkey Farm	x	1	x	x	x	x	x	x	x	x	x	x	x	x	1
26	Chick Sexing School	x	x	x	1	x	x	x	x	x	x	x	x	x	x	1
27	Poultry Training Centre	x	x	x	1	x	x	x	x	x	x	x	x	x	x	1
28	Livestock Management Training Centre	1	x	x	x	x	x	1	x	x	x	x	x	1	x	3
29	Feed Compounding Factory	x	x	x	1	x	x	x	x	x	x	x	x	x	x	1
30	Feed Mixing Unit	2	x	x	x	x	x	1	x	x	x	x	x	1	x	4

## APPENDIX 4.10 (continued ...)

District wise Institutions under the Animal Husbandry Department: Kerala as on 31.10.1990

Sl. No.	Category	TVN	OLN	PTA	APY	KTH	IDKY	EKN	TCR	PGT	MPN	KDE	MYD	KRE	KSD	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
31	Poultry Feed Testing Laboratory	X	X	X	1	X	X	X	X	X	X	X	X	X	X	1
32	Livestock & Marine Products Testing Laboratory	X	X	X	X	X	X	1	X	X	X	X	X	X	X	1
33	Rinderpest Eradication Project	X	X	X	X	X	X	X	X	1	X	X	X	X	X	1
34	Rinderpest Eradication Checkpost	1	1	X	X	X	3	X	X	7	1	X	X	1	1	15
35	Rinderpest Eradication Mobile Unit	X	X	X	X	X	X	1	1	X	X	X	X	X	X	2
36	Rinderpest Eradication Vigilance Unit	1	1	X	X	1	X	X	X	1	X	1	X	1	X	6
37	Institute of Veterinary Biologicals & Animal Health	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
38	Clinical Laboratory	1	1	X	1	1	1	1	X	1	1	1	X	1	X	10
39	Avian Disease Diagnostic Laboratory	X	X	1	X	X	X	X	X	X	X	X	X	X	X	1
40	Chief Disease Investigation Laboratory	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
41	Disease Investigation Laboratory	X	X	X	X	X	X	X	X	X	X	X	X	1	X	1
42	Calf Feed Subsidy Assistant Director's Office	X	1	X	1	1	X	X	X	1	X	1	X	1	X	6
43	Central Veterinary Stores	1	X	X	X	X	X	X	1	X	X	1	X	X	X	3
44	Disease Free Zone Project Office	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
45	Disease Free Zone Unit Office	1	1	1	X	X	X	X	X	X	X	X	X	X	X	3
46	District Animal Husbandry Offices	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
47	Special Livestock Breeding Programme Headquarters	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
48	Epidemiological Cell	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
49	Kerala State Veterinary Council	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
50	Directorate of Animal Husbandry	1	X	X	X	X	X	X	X	X	X	X	X	X	X	1
A.H. Institutions: Total:		224	169	149	101	127	65	127	128	124	116	108	57	141	56	1692

Source: Animal Husbandry Department.

## APPENDIX 4.11

## District-wise Distribution of Fishermen Population in Kerala (1989-90) Estimated

Sl. No.	District	Marine				Inland			
		Male	Female	Children	Total	Male	Female	Children	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Thiruvananthapuram	46563	45038	64664	156065	341	347	441	1129
2.	Kollam	27832	25649	34111	87592	10141	9315	12607	32063
3.	Alapuzha	32263	31551	40574	104388	19220	18225	20766	58209
4.	Pathanamthitta	--	--	--	260	247	280	787	--
5.	Kottayam	--	--	--	7719	7372	8189	23280	--
6.	Idukki	--	--	--	--	--	--	--	--
7.	Ernakulam	21813	21335	24639	67787	20731	19894	19899	60524
8.	Trissur	19945	20326	24879	65150	61661	5967	6455	18524
9.	Palakkad	--	--	--	--	116	134	248	498
10.	Malappuram	21869	22418	26273	70560	1268	1254	1460	3982
11.	Wayanad	--	--	--	--	280	268	344	892
12.	Kozhikode	28879	28018	35632	92529	3515	3352	4356	11223
13.	Kannur	15669	15253	18226	49148	319	279	281	829
14.	Kasaragod	12927	12574	15028	40529	264	230	191	685
State		227760	222162	283806	733728	70340	66862	75467	212669

## APPENDIX 4.12

## Species-wise Composition of Marine Fish Landings in Kerala from 1985-89

(Qty. in tonnes)

Sl. No.	Species	Kerala				
		1985	1986	1987	1988	1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Elasmobranches	7966	6057	6579	8115	9270
2.	Catfish	1815	5084	8562	9287	6905
3.	Chirocentrus	5045	2237	992	888	2576
4.	(a) Oil Sardine	106321	145259	109610	139835	193846
	(b) Other Sardine	31465	24245	23469	24832	25102
5.	Achoviella	19349	9500	11899	19984	28943
6.	Thrissocles & other clupeoids	4121	8049	5574	2726	5503
7.	Perches	500	6577	7225	12406	14328
8.	Redmulletts	11621	6329	316	14180	12086
9.	Sciaenids	3990	4601	4695	3253	6738
10.	Ribbon Fishes	3251	3536	4757	722	6203
11.	Carangids	3735	5152	5530	9963	5319
12.	Leiognathus	1536	3642	4341	3158	8109
13.	Lactaritus	931	1194	983	2377	4020
14.	Pomfrets	988	1892	2013	1379	4269
15.	Mackerel	24157	17294	15606	24106	57912
16.	Seerfish	2808	3005	3492	4043	4257
17.	Tunnies	6206	7042	5402	13921	15860
18.	Soles	3366	5080	6073	3028	11599
19.	(a) Prawn	35882	29817	25443	32348	31476
	(b) Lobster & Crustaceans	852	1606	1316	1228	3648
20.	Cephalopods	3102	3997	3661	3460	6274
21.	Miscellaneous	53496	34661	25616	23544	151784*
Total		332503	335856	283154	558783	614327

\* This includes 108 lakh tonnes of marine fish for which species wise details are not available

Source: Fisheries Directorate.

## APPENDIX 4.13

Species-wise Inland Fish Production in Kerala 1987-88, 1988-89 and 1989-90  
(Quantity in tonnes)

Sl. No.	Species	1987-88		1988-89		1989-90		Variation	
		Actual	Percentage	Actual	Percentage	Actual	Percentage	Actual	Percentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Prawns	5822	21.62	6658	38.37	8378	25.14	(+)1720	(+)25.83
2.	Estroplus	2786	10.34	2980	10.67	3285	9.85	305	(+)10.23
3.	Murrels	2742	10.18	2639	8.57	2932	8.94	493	(+)20.21
4.	Tilapia	4732	17.57	4982	17.50	5110	15.32	128	(+) 2.57
5.	Catfish	2864	10.63	2943	10.34	3224	9.63	281	(+) 9.57
6.	Jew Fish	1698	6.31	1496	5.25	1730	5.17	234	(+)15.64
7.	Others	6288	23.35	6977	24.50	8653	25.95	1676	(+)24.82
Total		26932	100.00	28475	100.00	33312	100.00	4837	16.99

## APPENDIX 4.14

## Export of Marine Products from Kerala/India

	Kerala		India	
	Quantity in tonnes	Value Rs. in lakhs	Quantity in tonnes	Value Rs. in lakhs
(1)	(2)	(3)	(4)	(5)
1980-81	29148	9534	75591	23484
1981-82	32006	12513	70105	28601
1982-83	32525	14149	78175	36136
1983-84	32840	14085	92691	37302
1984-85	31570	14813	86187	38429
1985-86	29580	13808	83651	39800
1986-87	33906	16457	85543	46067
1987-88	35576	18394	97179	53120
1988-89	45614	22131	99777	59785
1989-90	47194	24082	110788	63476

## APPENDIX 4.15

## Details of Fishermen Co-operatives in Kerala (1989-90)

Sl. No.	Particulars	Total No. of Societies	Total No. of Membership	Paid Share Capital
(1)	(2)	(3)	(4)	(5)
1.	Regional Fish Marketing Societies	3	N.A.	N.A.
2.	Credit Societies	39	N.A.	N.A.
3.	Matsya Utpadaka Co-operative Societies	8	N.A.	N.A.
4.	Fishermen Development Welfare Co-operative Societies			
	(a) Marine	81	50492	
	(b) Inland	..	..	
5.	District Societies	5	25	2500
6.	Matsyafed	1	5	5000
7.	Harijan/Girijan Fishermen Co-operatives Societies	50	1250	9500

## APPENDIX 4.16

## Details of Educational and Training Institutions under the Department of Fisheries

Sl. No.	Name of Institution with location	No. of students Trainees a Year	Staff Strength	Hostel facility with No. of inmates	
				Facility	No. of inmates
(1)	(2)	(3)	(4)	(5)	(6)
		1989-90			
Educational Institutions					
1.	Fisheries Technical High School, Thiruvananthapuram	106	16		106
2.	Fisheries Technical High School, Karunagappally	85	16		85
3.	Fisheries Technical High School, Ernakulam	97	16		97
4.	Fisheries Technical High School, Chouhst	78	16	120	78
5.	Fisheries Technical High School, Tanur	77	16		77
6.	Fisheries Technical High School, Beypore	46	16		46
7.	Fisheries Technical High School, Kannur	97	16		97
8.	Fisheries Technical High School, Arthungal	95	16		95



APPENDIX 4.17  
Details of Fisheries works under Harbour Engineering Department

Sl. No.	Name of Project	Total Estimated Cost		Year of starting	Year of Completion/targetted	Expenditure up to October 1990 Rs. in lakhs	Remarks, (Present State)
		Original Rs. in lakhs	Revised Rs. in lakhs				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>A. Fishing Harbours</b>							
1.	Vizhinjam Fishery Harbour I Stage	173	208	1962	1980		Completed
	II and III Stages	539.20	704	1980	1992	692.92	In Progress
2.	Keendakara Fishery Harbour	370	585.710	1980	1988	708.00	Almost completed
3.	Thangassery Fishery Harbour	1411	--	1989	1993	63.77	Will be issued shortly
4.	Nunambam Fishery Harbour	710	Nil	1989	1993	6.39	Investigation works are progressing. Land acquisition proposal submitted to District Collector. Works will be started shortly.
5.	Puthiyappa	527	Nil	1988	1992	161.12	Works is in good progress
6.	Ponnani	--	--	--	--	(-)0.019	The project report will be forwarded to Govt. immediately. (-)ve expenditure is due to write back from preparation of Master Plan
<b>B. Landing Centre for Mechanised Boats</b>							
1.	New Mahe	28.43	--	1988	1989	38.36	Completed
2.	Thottappally	25.27	--	1984	1990	37.04	Completed
3.	Palacode	15.00	--	1986	1988	3.56	Only 35% of work completed; Delay due to difficulty in getting land.

APPENDIX 4.17 (continued ...)  
 Details of Fisheries works under Harbour Engineering Department

Sl. No.	Name of Project	Total Estimated Cost		Year of start-ting	Year of Comple-tion/ tar-getted	Expendi-ture up October 1990 Rs. in lakhs	Remarks (Present State)
		Original Rs. in lakhs	Revised Rs. in lakhs				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4.	Cheruvathur	18.43	--	1982	1990	29.12	Completed
5.	Dharamadon	20.95	--	1986	1989	23.77	Completed
6.	South Paravoor	24.94	--			3.46	The scheme deferred in view of Thangassery Fishery Harbour
7.	Chettuvai	19.50	--	1990	1992	1.54	Works started
<b>C. Landing Centres for Traditional Fishermen</b>							
1.	Vizhinjam North	18.70	Nil	1986		5.19	Terminated due to resistance from local people
2.	Vizhinjam South	19.10	Nil	1988	1990	8.01	Work is nearing completion
3.	Vallikkunnu	17.90	Nil	1985	1989	19.33	Completed
4.	Vellayil beach	22.00	--	1987	1990	32.98	Completed
5.	Chalil Gopalspettah	25.00	Nil	1985	1991	0.059	Delay due to getting land
6.	Oullon Port	22.00	Nil	--	--	--	Scheme deferred
<b>D. Brackish Water Fish Farms</b>							
1.	Poyys	23.62	81.00	1984	1989	96.00	Work almost completed
2.	Njarackai - Malippuran	19.60	60.00	1984	1989	53.86	95% of work completed
3.	Ayiran thengu	6.37	13.00	1984	1988	10.20	Completed
4.	Paleikkari	21.98	..	1984	1988	24.83	Completed
<b>E. National Seed Farms</b>							
1.	Maianpuzha	39.00	..	1982	1989	59.44	Completed
2.	Poiachira	39.00	..	1982	1989	35.11	Completed

Source: Harbour Engineering Department

**APPENDIX 4.18**  
**Details of Selected Physical and Financial Achievement of**  
**Kerala Fishermen's Welfare Fund Board since its Inception**

(Rs. in lakhs) -

Sl. No.	Name of Welfare Schemes	1986-87		1987-88		1988-89		1989-90	
		No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Group Accident Insurance Scheme								
	(a) Death Cases	45	6.75	95	14.25	92	13.80	96	14.40
	(b) Permanent total disability	--	--	2	0.30	2	0.30	3	0.45
	(c) Permanent partial disability	--	--	7	0.53	4	0.30	10	0.75
2.	Death while fishing or immediately thereafter not due to accident	3	0.45	16	2.40	43	6.45	37	5.55
	Special cases sanctioned by Board for death or disability	--	--	5	0.25	25	1.24	24	1.13
4.	Financial Assistance for Marriage of daughters of fishermen								
	(a) Loan	128	1.54	328	3.94	1	0.01	212	2.54
	(b) Grant Rs.300/-	133	0.27	324	0.67	1	0.002	213	0.64
5.	Financial assistance for expenses for death of dependants of fishermen	44	0.11	220	0.55	250	0.63	281	0.70
6.	Financial assistance to dependents of expenses for natural death of fishermen	--	--	1	0.02	30	0.08	67	0.17
7.	Financial assistance for temporary disability of fishermen due to accidents	114	0.17	100	0.08	328	0.88	354	0.94
8.	Hut Insurance								
	50% subsidy	--	--	410	0.02	832	0.04	323	0.01
	50% for renewal of policy	--	--	--	--	196	0.009	89	0.004
	Compensation paid for loss/damages	--	--	29	0.39	10	0.05	40	0.62
9.	Insurance of Cettamaren/ Country canoe (No Subsidy for insurance)	--	--	42	No subsidy	10	No subsidy	86	No subsidy
10.	Fishermen Pension	3549	2.54	15926	38.24	18108	22.44	20079	80.62
11.	Free ration for fishermen & Workers affected by ban on bottom trawling in 1989	--	--	--	--			17905	2.91

Source: KFWFB

## APPENDIX 4.19

## Average Beach Price of Selected Marine Fishes in Kerala

Sl. No.	Species	Average Beach Price ( Kg)				
		1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Elasmobranches	2.85	3.60	4.40	5.90	7.00
2.	Catfish	2.65	3.35	3.70	5.50	6.75
3.	Chirocentrus	2.85	3.40	4.20	4.95	5.00
4.	Oil Sardine	1.45	1.85	2.25	3.00	4.00
	(b) Other Sardines	1.75	2.10	2.45	3.25	4.15
5.	Sciaenids	2.60	3.00	3.10	3.25	4.00
6.	Carangids	3.45	4.95	5.00	5.25	6.15
7.	Lelognethus	1.75	2.15	2.60	3.20	3.20
8.	Lactaritus	3.50	4.50	5.20	6.20	8.00
9.	Pomfrets	6.50	8.00	9.60	11.00	16.00
10.	Maojerel	3.35	4.00	5.20	6.50	7.30
11.	Seerfish	7.10	9.30	12.00	13.50	17.00
12.	Tunnies	5.00	5.60	6.20	7.00	10.50
13.	Soles	1.50	1.95	2.40	3.25	3.30
14.	Oepheleopods	5.00	5.80	5.80	6.00	7.80
15.	Praun	16.50	20.00	21.40	23.00	28.50
16.	Miscellaneous	2.25	2.45	2.85	3.00	3.20

APPENDIX 4.20  
Division-wise Area of Forests in Kerala

Area in Ha. as on 31-3-1990					
Sl No.	Districts	Reserve Forests	Proposed for Reserve Forests	Vested Forests	Total
(1)	(2)	(3)	(4)	(5)	(6)
<b>A. General Division</b>					
1.	Thiruvananthapuram	38375.90	774.63	397.50	39548.03
2.	Thenmala	46729.73	..	794.40	47524.13
3.	Punalur	28005.07	..	16.90	28021.97
4.	Konni	32064.30	1102.10	8.42	33174.82
5.	Ranni	105028.94	716.70	161.10	105906.74
6.	Kottayam	65548.60	525.70	3140.90	69215.20
7.	Munnar	66275.02	4725.60	629.45	71630.07
8.	Kothamangalam	31686.50	..	14.13	31700.63
9.	Malayattoor	61724.11	52.48	5.60	61782.19
10.	Vazhachal	41394.38	..	..	41394.38
11.	Chalakkudy	27970.98	..	..	27970.98
12.	Trissur	33101.81	..	634.30	33736.11
13.	Nenmara	20993.10	..	..	20993.10
14.	Palakkad	28227.79	111.63	..	28339.42
15.	Nilambur North	5791.96	1.71	33627.50	39421.17
16.	Nilambur South	26751.10	..	9872.72	36623.82
17.	Kozhikode	6759.78	8613.88	..	15373.66
18.	Wayanad	36277.16	1506.44	..	37783.60
Sub Total (A)		36277.16	1506.44	..	37783.60
<b>B. Special Division</b>					
1.	Tellicherry	..	..	16122.72	16122.72
2.	Palakkad	..	..	75114.30	75114.30
3.	Kozhikode	..	358.95	46080.65	46439.60
4.	Nilambur	..	..	..	..
Sub Total (B)		..	358.95	137317.67	137676.62
<b>C. Wild Life Division</b>					
1.	Thiruvananthapuram	27682.00	..	450.00	28132.00
2.	Idukki	28960.20	..	..	28960.20
3.	Thekkady	77700.00	54.38	..	77754.38
4.	Parambikulam	34914.08	..	..	34914.08
5.	Wayanad	34686.41	..	..	34686.91
6.	Silentvalley	34686.41	..	1782.50	36468.91
Sub Total (C)		212894.34	54.38	2232.50	215181.22
Total (A+B+C)		915600.57	18544.20	188853.09	1122997.86

**APPENDIX 4.21**  
**Species-wise Area under Forest Plantation**

Sl. No.	Name of Species	Area in Hectares						Percentage to total as on 31-3-1990
		31-3-85	31-3-86	31-3-87	31-3-88	31-3-89	31-3-90	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Teak	78452	79596	79416	78583	78799	76502	50.00
2.	Eucalyptus	31634	34809	36728	33987	32095	3109	20.66
3.	Softwood	22796	23133	23101	10695	5907	1239	0.81
4.	Mixed Plantations	2812	4532	5955	17832	23480	30660	20.04
5.	Cashev	4898	4658	4658	4157	4138	3784	2.47
6.	Bamboo	839	1056	3010	280	444	404	0.26
7.	Wattle	2687	2866	2006	3085	3183	3247	2.12
8.	Hardwood	2565	1162	1162	588	718	349	0.23
9.	Fuelwood	2697	1059	1072	1468	385	86	0.06
10.	Pepper	533	543	543	508	508	314	0.20
11.	Pine	389	449	449	449	449	449	0.29
12.	Mahagony	225	173	173	80	89	170	0.11
13.	Rosewood	172	159	159	183	193	149	0.10
14.	Balsa	118	117	117	81	77	97	-0.06
15.	Cardamom	21	27	27	..	..	..	..
16.	Sandalwood	15	15	15	14	14	12	0.01
17.	Kongu	20	17	14	14	..	..	..
18.	Zylonicum	..	..	4	..	..	..	..
19.	Others	2319	2845	2763	3353	3622	3941	2.58
<b>Total</b>		<b>153192</b>	<b>157216</b>	<b>160372</b>	<b>155337</b>	<b>154101</b>	<b>153012</b>	<b>100.00</b>

**APPENDIX 4.22**

**Production of Major Forest Produce**

Sl. No.	Item	Unit	Period		Actual increase or decrease over the year
			1988-89	1989-90	
(1)	(2)	(3)	(4)	(5)	(6)
1.	Timber	'000 cum	19.633	35.539	+ 18.906
2.	Timber (Round Poles)	'000 nos	515.000	636.00	+ 121.000
3.	Timber (Suan & Squard)	cum	39.590	37.927	- 1.663
4.	Firewood	'000 M.T.	19.164	11.111	- 8.063
5.	Charcoal	Tonnes	8.750	4.860	- 3.890
6.	Cardamom	Kg	..	6.375	+ 6.375
7.	Honey	Tonnes	27.459	50.214	+ 22.755
8.	Reeds	Lakh Nos.	347	765	+ 418
9.	Bamboo	'000 Nos.	374	1283	+ 909
10.	Jungle wood poles	Nos.	517	76947	+76430
11.	Sandalwood	Tonnes	34.176	77.398	+43.223

## APPENDIX 4.23

## Forest Revenue in Kerala

Sl. No.	Item	Sale Proceeds (Rs.Lakhs)				Increase or Decrease	
		1985-86	1986-87	1987-88	1988-89	1989-90	Actual (Rs.lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>A. Revenue from Forests</b>							
	1. Timber	3463.24	3775.30	3356.93	2738.33	2309.67	- 428.66
	2. Firewood & Charcoal	82.99	90.35	98.23	72.15	44.64	- 27.51
	3. Livestock	0.99	0.35				
	4. Others	361.38	812.30	365.05	384.95	478.54	+ 93.57
	Sub Total (A)	3908.60	4678.30	3820.21	3195.45	2832.85	- 362.60
	<b>B. Other Receipts</b>	<b>361.58</b>	<b>176.89</b>	<b>189.31</b>	<b>183.54</b>	<b>392.86</b>	<b>+ 209.32</b>
	<b>Total (A+B)</b>	<b>4270.18</b>	<b>4855.19</b>	<b>4009.52</b>	<b>3378.99</b>	<b>3225.71</b>	<b>- 153.28</b>
	<b>D. Refunds</b>	<b>25.67</b>	<b>36.99</b>	<b>9.79</b>	<b>4.56</b>	<b>6.83</b>	<b>+ 2.29</b>
	<b>E. Net Revenue (C-D)</b>	<b>4244.51</b>	<b>4818.2</b>	<b>3999.73</b>	<b>3374.43</b>	<b>3218.66</b>	<b>- 155.77</b>

## APPENDIX 4.24

## Physical Targets and Achievements under World Bank Aided Kerala Social Forestry Project

Year	Govt. Plantation		Target		Farm Forestry	
	Target	Achievement (Ha)	Area (Ha)	Seedlings (in lakhs)	Area (Ha)	Seedlings (in lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1984-85	805.00	405.00	5100.00	250.00	4795.00	235.00
1985-86	1610.00	1693.45	8100.00	400.00	10032.28	491.50
1986-87	2465.00	2727.31	10200.00	500.00	21404.38	1050.40
1987-88	3220.00	3249.35	12000.00	600.00	17339.33	780.27
1988-89	3880.00	3665.63	15400.00	827.00	17802.00	870.85
1989-90	4120.00	3760.04	1837.00	90.00	1714.00	84.00
		72.73 Km				
<b>Sub Total</b>	<b>15295.00</b>	<b>15095.78</b>	<b>47557.00</b>	<b>2667.00</b>	<b>68292.67</b>	<b>3277.02</b>
		72.73 Km				
<b>1990-91 (upto 31-10-90)</b>	<b>5516.00</b>	<b>4252.25</b>	<b>2857.00</b>	<b>140.00</b>	<b>2416.20</b>	<b>118.40</b>
1991-92	10810.00	..	3061.23	150.00	..	..
1992-93	7810.00	..	3061.23	150.00	..	..
<b>Sub Total</b>	<b>24136.00</b>	<b>4252.25</b>	<b>8979.46</b>	<b>440.00</b>	<b>2416.20</b>	<b>118.40</b>
<b>Grand Total</b>	<b>40236.00</b>	<b>19753.03</b>	<b>61616.46</b>	<b>3357.00</b>	<b>75503.69</b>	<b>3630.42</b>
		72.73				

Note: For Farm forestry sector area is computed using the conversion factor 4900 seedlings per hectare except for 1987-88. For that year the conversion factor is 4500 seedlings per hectare.

## APPENDIX 4.25

Financial Targets and Achievements under World Bank Aided Kerala Social Forestry Project  
(Rs. in million)

	1984-85	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)
Project Estimate	88.750	82.420	88.890	102.180	108.330	118.570	107.60	134.26	183.39
Budget Estimate	20.870	71.200	95.000	95.000	102.000	89.550	107.60	136.26	183.39
Actual Expenditure	19.500	62.940	95.060	98.889	99.650	79.820	47.97 (11/90)	-	-

## APPENDIX 4.26

Statement Showing Selected Physical Achievement (Civil Works)  
under Kerala Social Forestry Project as on March 1990

Sl. No.	Name of the work	Target	Achievement	Percentage of work Completed
(1)	(2)	(3)	(4)	(5)
A.	Office Buildings			
	1. Headquarters and Circle Headquarters	3	2	66.67
	2. Division Offices	14	6	42.86
	3. Range Offices	47	22	46.81
	4. Others	327	141	43.12
B.	Quarters			
	1. CCF and CFs	5	3	60.00
	2. DCFs	19	-	-
	3. ACFs	17	12	66.67
	4. Range Officers	54	30	55.56
	5. Others	36	17	47.22
C.	Roads (Km)	-	-	-
D.	Vehicles (Nos)	327	219	66.67
E.	Others (specify)	-	-	-



## APPENDIX 4.27

Details of Physical Achievements under Selected Programmes - Wildlife Sanctuaries &amp; National Parks 1989-1990

Sl. No.	Name of Sanctuary/ National Park	Bound-ary Survey (Km)	Cairns errec- ted (Nos)	Roads and Paths (Km)	Const- ruction of wall (Km)	Mat- ch Tower (Nos)	Wire less station ion (Nos)	Fire prote- ction lines (Km)	Power Fenc- ing (Km)	Check Dam (Nos)	Build- ings/ quart- rs/shed (Nos)	Affore- station area (Ha)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.	Parambikulam Wildlife Sanctuary	..	..	137.75	..	1	..	175.00	7	1	2	..
2.	Neyyar Wildlife Sanctuary	..	..	..	1.00	1	..	102.00	45	..	1	..
3.	Wayanad Sanctuary	..	..	..	..	1	1	223.77	19.50	5	3	..
4.	Eravikulam National Park	..	..	32	1.00	..	1	58.00	..	..	4	..
5.	Periyar Tiger Reserve	..	..	41.00	..	..	..	211.00	..	1	38	..
6.	Silent Valley National Park	..	..	..	..	..	1	95.697	..	..	3	..
7.	Idukky Wildlife Sanctuary	..	..	36.9	0.50	..	..	150.00	..	5	3	..
8.	Peechi Vazhani Sanctuary	..	..	..	..	..	..	127.09	..	..	1	..
9.	Peppara Wildlife Sanctuary	..	..	..	0.631	..	..	84.75	..	..	..	..
10.	Shendurney	..	..	..	0.900	..	..	66.60	..	..	..	..
11.	Chinnoney	..	..	..	..	..	..	52.80	..	..	..	..
12.	Aralam	..	..	10.0	..	..	..	22.735	..	..	..	..
13.	Chinnar	..	..	15.0	1.25	..	..	66.00	..	..	..	..
14.	Thattekkad Bird Sanctuary	..	..	..	0.50	..	..	53.00	..	..	..	..

## APPENDIX 5.1

## Major and Medium Irrigation Projects in Kerala

Sl. No.	Name of Scheme year of starting year of completion	Original	Latest	Total	Expected		Cumulative		% increase over the original estimate
		Estimated Cost (Rs.in lakhs)	Estimated Cost (Rs.in lakhs)	Expend- iture up to 3/89 (Rs.lakhs)	area to be irri- gated (Ha Net	Gross	Achievement till the end of 6/89 (Ha.) Net	Gross	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>A. Completed Schemes</b>									
1.	Chalakydy (1949-66)	188	188.25	188.25	26680	39380	13530	27258	..
2.	Peech (1947-59)	235	235.00	235.00	17555	28080	15262	23718	..
3.	Malampuzha (1949-66)	388	580.00	580.00	29463	42090	19802	40208	49.5
4.	Neyyar (1951-73)	248	461.00	461.00	16042	17952	8300	16716	85.9
5.	Pothundy (1958-71)	234	234.25	234.25	8792	10930	4685	10046	..
6.	Gayathri (1956-70)	220	220.00	220.00	7651	10930	4880	10114	..
7.	Malayar (1953-64)	92	131.66	131.66	4536	6470	3752	6503	43.1
8.	Vazhani (1951-62)	108	108.00	108.00	3565	7130	2113	4226	..
9.	Nangalam (1953-66)	45	106.00	106.00	4816	6880	3313	6608	135
10.	Cheerakuzhy (1957-73)	91	90.76	90.76	2268	2828	952	1746	..
<b>Total</b>		<b>1869</b>	<b>2354.92</b>	<b>2354.92</b>	<b>121368</b>	<b>172670</b>	<b>76589</b>	<b>147143</b>	<b>313.5</b>
<b>B. Ongoing Schemes</b>									
11.	Kallada (1961- )	1328	37383	29585.00	61630	92800	13224	20063	2714.9
12.	Pampa (1964- )	383	6341	5575.00	21135	49456	20718	48480	1555.6
13.	Muvattu- puzha (1976- )	2086	8925	3855.00	18616	52200	..	..	327
14.	Periyar- Valley (1956- )	348	6304	6452.00	32800	85600	30414	76492	1711
15.	Chimoni- Mupli (1975- )	633	3615	2466.00	13000	26200	..	..	561
16.	Chittur- puzha (1961- )	106	2080	1940.00	15700	29202	13901	25856	1862
17.	Kanhira- puzha (1961- )	365	5978	4974.00	9713	21853	16883	15487	1537
18.	Kuttiady (1962- )	496	5500	5150.00	14570	35850	14108	34710	1008
19.	Pazhassi (1964- )	442	7736	7112.00	11525	23050	7821	15642	1650
20.	Vanana- puzha (1981- )	1982	3640	299.00	8803	18014	..	..	83
21.	Idamalayar (1981- )	1785	6740	2205.00	14394	43190	..	..	277
22.	Kuriarkutty- Karappara (1978- )	1036	4881	158.00	11736	23472	..	..	371
23.	Chaliyar (Bey- porepuzha) (1981- )	37800	37800	90.00	73235	108035	..	..	0
24.	Kakkadavu (1979- )	1335	5100	199.00	13986	41760	..	..	282
25.	Attappady (1975- )	476	5000	709.00	4500	8378	..	..	950
26.	Karapuzha (1975- )	760	4066	1889.00	4650	9300	..	..	435
27.	Beenachil (1980- )	3300	4956	105.00	9960	14510	..	..	50
28.	Banasura- asagar (1979- )	800	1798	147.00	2800	4800	..	..	124
<b>Total</b>		<b>57310</b>	<b>157843</b>	<b>72910.00</b>	<b>464121</b>	<b>860340</b>	<b>107069</b>	<b>236730</b>	<b>15497</b>

## APPENDIX 5.2

## Major and Medium Irrigation Projects

(Rs. in lakhs, Area in ha.)

Name of Project	Command Area		Latest estimated cost	Physical-achievement during '89-90		Cumulative Achievement till the end of 1989-90		Expen. during 1989-90	Cumulative Expen. till the end of 89-90
	Net	Gross		Net	Gross	Net	Gross		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Kallada	61630	92800	37383	747	1124	13324	20063	2000	29585
2. Pampa	21135	49456	6341	..	..	20718	48480	160	5575
3. Periyar Valley	32800	85600	6304	..	..	30414	76492	400	6452
4. Chimoni-nupli	13000	26200	3615	..	..	..	..	450	2466
5. Chitturpuzha	15700	29202	2080	..	..	13901	25856	150	1940
6. Kanhirapuzha	9713	21853	5978	..	..	6883	15487	300	4974
7. Kuttiady	14570	35850	5500	..	..	14108	34710	100	5150
8. Pazhassi	11525	23050	7736	..	..	7821	15642	390	7112
9. Muvattupuzha	18616	39046	8925	..	..	..	..	300	3855
10. Vamanapuram	8803	18014	3640	..	..	..	..	20	299
11. Idamalayar	14394	43190	6740	..	..	..	..	150	2205
12. Kuriarkutty-Karappara	11736	23472	4881	..	..	..	..	..	158
13. Chaliyar (Beyporepuzha)	77235	108035	37800	..	..	..	..	..	90
14. Kakkadavu	13986	41760	5100	..	..	..	..	..	199
15. Attappady	4500	8378	5000	..	..	..	..	30	709
16. Karapuzha	4650	9300	4066	..	..	..	..	150	1889
17. Meenachil	9960	14510	4956	..	..	..	..	10	105
18. Banasuragar	2800	4800	1789	..	..	..	..	5	147
<b>Total</b>	<b>346753</b>	<b>674516</b>	<b>157834</b>	<b>747</b>	<b>1124</b>	<b>107169</b>	<b>236730</b>	<b>4615</b>	<b>72910</b>

## APPENDIX 5.3

## Physical and Financial Achievement under Minor Irrigation Programme

Sl. No.	Item	Cumulative achievement till the end of 1988-89		Actual Expenditure during 1989-90 (Rs. in lakhs)	Achievement during 1989-90 (Ha.)		Cumulative area brought under Irrigation through M.I schemes till the end of 1989-90 (Ha.)	
		Net (Ha.)	Gross (Ha.)		Net	Gross	Net	Gross
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Minor Irrigation class I	19922	19880	196.018	1867	2800	21798	32680
2.	Minor Irrigation class II P.W.D	53090	53090	162.489	1548	1548	54636	54636
3.	Lift Irrigation	26598	39896	265.803	2531	3797	29129	43692
4.	I.P.D Yelah programme	12825	12825	59.032	562	562	13387	13387
5.	Repairs & damages to M.I structure and others	3525	3525	287.189	3843	3843	7367	7367

## APPENDIX 5.4

## No. of Minor Irrigation works Proposed and Completed during 1989-90

Sl. No.	Item	No. of workers pending completion	No. of workers proposed during the year	No. of works completed
(1)	(2)	(3)	(4)	(5)
1.	Minor Irrigation Class I	78	59	64
2.	Minor Irrigation Class II P.W.D	74	61	72
3.	Lift Irrigation	77	51	64
4.	I.P.D. Velah schemes	11	Nil	11
5.	Repairs to M.I structures and others	394	100	121
6.	Flood Control works	25	64	9
7.	Anti Sea Erosion Works	60	62	9

## APPENDIX 5.5

## Physical and Financial Achievement under Flood Control &amp; Anti-Sea Erosion Programme-1989-90

Item	Achievement during 1989-90	Amount spent (Rs. in lakhs)
(1)	(2)	(3)
Flood Control	3555 Ha.	297.59
Anti- Sea Erosion	2.70 Km. New Sea wall 1.51 Km. Reformation of old sea wall	305.16

## APPENDIX 5.6

## Power Projects and Power Generation as on 31-3-1990

Name of Project	Installed capacity (MW)	Energy Potential (Mkwh)	Units generated during 1989-90 (Kwh)	
(1)	(2)	(3)	(4)	
1.	Pallivasal	3x5= 3x7.5	284	240.984
2.	Sengulam	4x12	182	169.012
3.	Meriamangalam	3x15	237	265.68
4.	Panniar	2x15	148	121.5963
5.	Poringalakuthu	4x8	170	204.2344
6.	Sabarigiri	6x50	1393	1372.14
7.	Sholayar	3x18	233	214.7117
8.	Kuttiady	3x25	248	258.2140
9.	Idukki	6x130	2015	1898.49
10.	Idamalayar	2x37.5	360	340.0826
Total			5270	5075.1453

## APPENDIX 5.7

## Growth of Kerala Power System at a Glance

Particulars	Position as on .	
	31-3-1989	31-3-1990
(1)	(2)	(3)
1. Installed capacity - MW	1476.5	1475.5
2. Maximum demand - MW		
(a) System	1090.2	1171.2
(b) Internal	1184.8	1270.2
3. Generation per annum - MU	4548.0	5075.0
4. Import per annum - MU	1227.2	1159.7
5. Export per annum - MU	10.7	103.6
6. Energy sales per annum - MU	4387.0	4794.*
7. Energy losses as percentage of energy available for sale	24.18	22.1
8. Per capita consumption - KWH	142.49	160.04*
9. 220 K V lines - CT.km.	981	1064
10. 110 K V lines - CT.km.	2182.5	2191
11. 66 K V lines - CT.km.	2527.4	2527.4
12. 11 K V lines - CT.km.	18859	19716
13. L T lines - CT.km.	89072	95938
14. Step up transformer capacity - MVA	1726	1726
15. No. of the E.H.T sub station	125	129
16. Step down transformer capacity - MVA	1570	4674
17. Distribution transformer		
(a) Numbers	15177	16394
(b) Capacity - KVA	1680610	1829680
18. No. of villages electrified	1268	1268
19. No. of consumers (in lakhs)	29.3	31.9
20. Connected load - MW	3757.578	3942
21. No. of street lights	483020	498493
22. No. of irrigation pumps	182858	199504
23. Total revenue per annum (Rs. in lakhs)	25566	26165*

\* Provisional.

## APPENDIX 5.8

## Particulars of on going Power Projects

Sl. No.	Division	Commissioning programme	Present State
(1)	(2)	(3)	(4)
1.	Azhutha Diversion(57 MU)	92 - 93	Works commenced and gaining momentum. Out of 4000 m. tunnel driving required, 905 m has been completed.
2.	Kakkad (50 MW - 262 MU)	92 - 93	Dams completed. Power tunnel driving 7252 m. completed out of the total 7707 m. IC tunnel driving 2960 m. completed out of the total 3160 m. Power house structure almost over. Erection of ECT crane completed. Erection of generating machinery in progress.
3.	Kallada dam toe Power station (15MW-53 MU)	92 - 93	Construction of the dam toe power house building in progress ECT crane erected and erection of generating machines in progress.
4.	Lower Periyar (180 MW-193 MU)	92 - 93	Power tunnel driving over and lining in progress. Excavation for dam pressure shaft, surge and power house in progress.
5.	Malampuzha dam toe power station (2.5 MW - 5.6 MW)	91 - 92	Orders placed for generating equipment. Contract also awarded for the construction of power house building and works started.
6.	Madupetty Dam toe power station (2 MW - 6.4 MU)	91 - 92	Orders placed for the generating equipment. Excavation for power house building almost over.
7.	Malankara dam toe power station (7 MW - 36 MU)	92 - 93	First stage excavation for power house completed. Tenders for PH building being invited. Tenders received for supply and erection of generating equipment are being processed.

**APPENDIX 5.8 (continued ...)**  
**Particulars of on going Power Projects**

Sl. No.	Division	Commissioning programme	Present State
(1)	(2)	(3)	(4)
8.	Chimoni dam toe power station (2.5 MW - 6.5 MU)		First stage excavation for PH nearing completion. Orders have been placed for the supply and erection of generating equipments.
9.	Peppara dam toe power station (3 MW - 11.5 MU)	91 - 92	Contract awarded for construction of power house building. Orders also placed for supply and erection of generating equipment. Sanction from forest department received for commencing works and PH Civil works have been commenced
10.	Puyankutty stage I (240 MW - 645 MU)		Project sanctioned in 8/86 sanction from Government of India for the forest clearance required for the project is expected soon.
11.	Kuttiar Diversion (37 MU) to Idukki	92 - 93	Preliminary and enabling work and Land acquisition works are in progress.
12.	Vadakkepuzha Diversion (12 MU) to Idukki Reservoir	92 - 93	-do-
13.	Vazhikkadavu Diversion (24 MU) to Idukki Reservoir	92 - 93	Preliminary and enabling works land acquisition works are in progress
14.	Peringalkuth L.B. Extension (16 MW - 38 MU)	92 - 93	Preliminary and enabling works and land acquisition works are in progress
15.	Kuttiyadi Tail Race ( 2.5 MW - 15 MU)	92 - 93	-do-
16.	Peechi Dam toe power Station ( 1.5 MW - 5 MU)	92 - 93	Scheme sanctioned by State Government. Preliminary works commenced during the current year.
17.	Chembukkadavu Stage I Mini Scheme (2.25 MW - 4 MU)	92 - 93	

## APPENDIX 5.9

## Pattern of Power Consumption and Revenue Collected during 1989-90 (Provisional)

Sl. No.	Category	No. of consumers as on 31-3-1990 (Nos.)	Connected load as on 31-3-1990 (MW)	Energy (MU) sold	Consumption as percentage to total	Revenue collected (Rs.lakhs)	Revenue as % to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Domestic lights, heat and small power	2390822	1779.2	1264.212	26.37	6565.74	25.09
2.	Commercial lights, fans heat, and power	538500	440.4	428.816	8.94	4019.32	15.36
3.	Industrial (Low and Medium voltage)	59937	655.5	295.016	6.15	2200.69	8.41
4.	Industrial (High and Extra high voltage)	1021	703.5	2406.26	50.20	11202.20	42.81
5.	Irrigation	199504	492.8	239.4	2.91	446.63	1.71
6.	Public lighting	1398	30.3	89.396	1.86	782.37	3.00
7.	Water works and sewerage pumping	952	40.6	70.798	1.48	457.98	1.75
8.	Bulk supply to licencies	5	23.4	100.11	2.09	490.34	1.87
<b>Total</b>		<b>3192139</b>	<b>4165.7</b>	<b>4794.008</b>	<b>100%</b>	<b>26165.27</b>	<b>100%</b>



## APPENDIX 6.1

District-Wise Distribution of Working Factories and Employment for the year ending 31-12-1988

Name of Industry	Thiruvananthapuram		Kollam		Pathanamthitta		Alappuzha		Kottayam		Idukki		Eranakulam		Thrisur	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Oil	13	201	15	132	2	10	37	379	8	29	10	41	40	331	97	496
2. Tea	4	94	3	91	..	..	..	..	8	115	69	4564	1	55	1	89
3. Cashew	19	7676	186	76828	..	..	6	5326	..	..	..	..	1	19	3	1828
4. Cotton Textiles.	14	1488	8	1635	4	36	3	831	2	338	1	18	17	1659	16	3464
5. Coir	2	32	7	173	..	..	174	2345	3	71	1	12	26	277	4	21
6. Plywood, Splints- & Veneers	25	301	58	1340	5	147	24	417	37	951	9	93	47	757	28	391
7. Saw Mill	74	324	105	539	29	94	63	216	112	557	11	47	277	1623	91	969
8. Printing & Publishing	66	2066	46	263	45	173	48	232	114	1287	23	98	164	2201	93	1841
9. Rubber & Rubber Products	46	1477	52	440	87	645	35	350	324	5695	53	371	104	1787	116	1154
10. Chemical & Chemical Products	17	978	15	92	2	14	32	803	24	793	4	66	80	8174	36	718
11. Soap	1	7	4	55	..	..	4	26	3	17	..	..	9	1236	3	64
12. Matches	10	90	22	281	1	8	13	106	7	73	2	25	8	94	26	288
13. Tiles	2	102	52	1567	2	11	4	141	20	195	..	..	35	660	176	4443
14. General Engineer- ing	79	2081	107	2013	23	176	92	2065	99	643	34	224	442	10891	244	2280
15. Automobiles.	43	3019	30	511	28	132	37	846	73	777	18	94	-124	1588	81	788
16. Others	102	2077	281	3791	40	858	199	2514	190	3616	30	543	575	12073	401	6352
<b>Total</b>	<b>518</b>	<b>22013</b>	<b>991</b>	<b>90583</b>	<b>268</b>	<b>2304</b>	<b>771</b>	<b>16597</b>	<b>1024</b>	<b>13157</b>	<b>265</b>	<b>6176</b>	<b>1950</b>	<b>43425</b>	<b>1416</b>	<b>24278</b>

A: No. of Working factories

B: Employment.

## APPENDIX 6.1 (contd..)

District-Wise Distribution of Working Factories and Employment For The Year Ending 31.12.1988.

Industries	Palakkad		Malappuram		Kozhikode		Wayanad		Kannur		Kasaragod		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
(1)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
1. Oil	15	114	9	39	42	354	2	17	23	120	..	..	313	2263
2. Tea	3	159	..	..	..	..	17	957	..	..	..	..	106	6104
3. Cashew	..	..	..	..	1	380	..	..	3	889	1	6	220	92952
4. Cotton Textiles.	16	1516	6	869	45	1827	1	5	374	7639	3	219	510	21544
5. Coir	..	..	11	93	24	359	..	..	13	131	1	12	266	3526
6. Plywood, Splints- & Veneers.	91	1244	26	368	97	1130	..	..	52	1887	..	..	499	9026
7. Saw Mills.	198	756	175	798	191	1285	14	72	146	1088	3	32	1489	8380
8. Printing & Publishing	47	801	30	205	85	1288	10	240	78	451	1	6	850	10532
9. Rubber & Rubber Products.	49	288	68	452	89	554	7	67	95	419	..	..	1125	11699
10. Chemical & Chemical Products.	38	589	16	915	40	436	2	12	27	224	..	..	333	14646
11. Soap.	2	12	3	13	25	183	..	..	8	87	..	..	62	1700
12. Matches	25	310	9	71	15	687	..	..	1	4	..	..	139	2029
13. Tiles	14	470	10	543	32	2909	1	30	10	656	..	..	358	11727
14. General Engineer- ing	240	4133	57	658	203	1993	10	46	164	1512	1	14	1795	28729
15. Automobiles	53	292	44	513	146	1522	9	29	114	688	2	9	802	10728
16. Others	463	4356	144	984	438	5224	11	198	273	2577	13	170	3161	45333
<b>Total</b>	<b>1254</b>	<b>15040</b>	<b>608</b>	<b>6521</b>	<b>1473</b>	<b>20131</b>	<b>84</b>	<b>1673</b>	<b>1381</b>	<b>18372</b>	<b>25</b>	<b>468</b>	<b>12028</b>	<b>280738</b>

## APPENDIX 6.2

District-Wise Distribution of Working Factories and Employment  
For The Year Ending 31-12-1989 (Provisional)

Name of Industry	Thiruvananthapuram		Kollam		Pathanamthitta		Alappuzha		Kottayam		Idukki		Eranakulam		Thrissur	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Oil	14	227	21	253	2	10	34	341	8	29	10	41	46	394	99	496
2. Tea	4	94	3	91	..	..	..	..	8	115	69	4544	1	55	1	89
3. Cashew	19	7676	186	76828	..	..	6	5326	..	..	..	..	1	19	3	1828
4. Cotton Textiles.	18	1534	9	1685	4	36	4	840	2	338	1	18	17	1654	16	3464
5. Coir	2	32	7	173	..	..	166	2441	3	71	1	12	26	277	3	12
6. Plywood, Splints- & Veneers	25	301	62	1393	5	147	28	473	37	951	9	93	50	835	31	451
7. Saw Mills	77	310	112	559	32	121	61	198	109	529	12	56	289	1704	92	947
8. Printing & Publishing	65	2313	49	278	44	164	46	214	110	1251	23	98	152	2093	89	1005
9. Rubber & Rubber Products	47	1486	61	480	90	659	40	386	332	3776	56	363	116	2059	125	1235
10. Chemical & Chemical Products	19	996	15	924	2	14	33	818	24	782	4	66	83	8051	38	747
11. Soap	1	7	4	55	..	..	5	76	3	17	..	..	9	1236	4	73
12. Matches	9	81	22	271	1	8	13	106	7	73	2	15	6	36	25	271
13. Tiles	2	102	57	1651	2	11	5	144	20	195	..	..	35	660	180	4567
14. General Engineer- ing	80	2052	112	2047	30	701	98	2131	100	646	32	297	457	10728	250	2357
15. Automobiles.	47	3229	33	527	31	153	36	878	72	770	21	121	134	1731	83	745
16. Others	110	2151	319	3915	48	924	222	2738	195	3720	33	581	606	12036	430	6714
<b>Total</b>	<b>539</b>	<b>22591</b>	<b>1072</b>	<b>91130</b>	<b>291</b>	<b>2948</b>	<b>797</b>	<b>17110</b>	<b>1030</b>	<b>13263</b>	<b>273</b>	<b>6305</b>	<b>2028</b>	<b>43568</b>	<b>1449</b>	<b>25001</b>

A: No. of Working factories; B: Employment.

## APPENDIX 6.2 (contd.)

**District-Wise Distribution of Working Factories and Employment  
For The Year Ending 31.12.1989.**

Industries	Palakkad		Maleppuram		Kozhikode		Wayanad		Kannur		Kasaragod		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
(1)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
1. Oil	18	157	10	70	48	456	2	17	26	149	..	..	338	2640
2. Tea	3	159	..	..	..	..	17	957	..	..	..	..	106	6104
3. Cashew	..	..	..	..	1	380	..	..	3	889	1	6	220	92952
4. Cotton Textiles.	16	1516	6	869	45	1868	2	14	375	7715	3	219	118	21770
5. Coir	..	..	10	84	23	339	..	..	13	131	1	12	255	3584
6. Plywood, Splints- & Veneers.	90	1224	30	404	95	1040	..	..	51	1873	..	..	513	9191
7. Saw Mills.	200	762	175	798	204	1374	17	90	155	1183	5	50	1540	8681
8. Printing & Publishing	46	788	29	192	86	1242	11	248	79	502	1	6	830	10394
9. Rubber & Rubber Products.	48	279	75	496	95	597	14	112	101	463	..	..	1200	12391
10. Chemical & Chemical Products.	42	710	14	897	44	474	2	12	26	211	3	26	349	14728
11. Soap.	1	10	3	13	25	183	..	..	8	87	..	..	63	1757
12. Matches	26	317	9	71	14	678	..	..	1	4	..	..	135	1931
13. Tiles	14	470	7	516	32	2909	1	30	11	660	..	..	366	11915
14. General Engineer- ing	237	4101	62	658	211	2059	15	76	169	1588	5	50	1858	29491
15. Automobiles	52	185	46	525	146	1521	13	60	124	766	2	9	840	11220
16. Others	477	4533	152	1007	453	5230	19	266	293	2788	21	211	3378	46814
<b>Total</b>	<b>1270</b>	<b>15211</b>	<b>628</b>	<b>6600</b>	<b>1522</b>	<b>20350</b>	<b>113</b>	<b>1882</b>	<b>1435</b>	<b>19015</b>	<b>42</b>	<b>589</b>	<b>12509</b>	<b>285563</b>

## APPENDIX 6.3

**Capital Invested and Employment in respect of  
Government Owned Companies in Kerala**

Name of Company	Capital Invested (Rs. in lakh)		Employment (in Nos)	
	As on 31-3-1989	As on 31-3-1990	As on 31-3-1989	As on 31-3-1990
(1)	(2)	(3)	(4)	(5)
1. Kerala Ceramics Limited	1210.02	1551.26	590	562
2. Kerala Soaps and Oils Limited	1134.00	1277.00	640	620
3. Travancore Plywood Industries Ltd.	309.58	272.84	599	591
4. Kerala State Drugs and Pharmaceuticals Limited	1875.43	1837.08	584	579
5. Kerala State Detergents and Chemicals Limited	826.18	912.01	246	276
6. Kerala State Salicylates and Chemicals Limited	1271.00	1361.00	129	155
7. Kerala Electrical and Allied Engineering Company Limited	1324.75	2313.10	966	989
8. Steel Industrials Kerala Limited	1712.91	2009.37	378	358
9. Autokast Limited	2330.00	2588.00	451	494
10. Steel and Industrial Forgings Limited	1126.00	1241.00	156	185
11. Kerala Minerals and Metals Limited	13550.06	14321.99	1124	1138
12. Malabar Cements Limited	6411.74	6427.44	1051	1041
13. Sitaram Textiles Limited	1267.84	1406.07	694	634
14. Trivandrum Spinning Mills Limited	438.38	495.20	519	500
15. Kerala Agro Machinery Corporation Limited	161.46	168.20	367	399
16. Scooters Kerala Limited	242.86	229.99	96	101
17. Kerala Automobiles Limited	1104.99	1129.00	331	383
18. Kerala Premopipe Factory Limited	173.53	174.64	280	265
19. Kerala Clays and Ceramic Products Limited	34.90	44.53	403	391
<b>Total</b>	<b>36595.63</b>	<b>39759.74</b>	<b>9604</b>	<b>9661</b>

## APPENDIX 6.4

Performance of Government owned Companies in respect of Value of  
Production and Sales Turnover : 1988-89 and 1989-90  
(Rs. in lakhs)

Name of Company	Value of Production		Sales Turnover	
	As on 1988-89	As on 1989-90	As on 1988-89	As on 1989-90
(1)	(2)	(3)	(4)	(5)
<b>KSIE Group</b>				
1.Kerala Ceramics Limited	251.90	285.67	220.81	285.67
2.Kerala Soaps and Oils Limited	607.88	652.00	627.55	622.92
3.Kerala State Drugs and Pharmaceutics Limited	1111.00	1100.37	824.31	1095.28
4.Kerala State Detergents and Chemicals Limited	54.00	29.17	55.00	26.17
5.Travancore Plywood Industries Limited	315.06	268.24	331.98	297.66
6.Kerala State Salicylates and Chemicals Limited	..	43.07	..	20.00
<b>Electrical</b>				
7.Kerala Electrical and Allied Engineering Co. Limited	1967.35	3078.80	1931.22	3007.03
<b>Steel</b>				
8.Steel Industrials Kerala Limited	1063.71	763.54	926.72	1389.32
9.Autokast Limited	582.97	668.76	539.75	683.55
10.Steel and Industrial Forgings Limited	446.82	605.80	388.44	610.70
<b>Chemical</b>				
11.Kerala Minerals and Metals Limited	5525.69	3922.81	5501.14	3829.10
12.Malabar Cements Limited	4599.94	3900.24	4627.71	3905.20
<b>Textiles</b>				
13.Sitaram Textiles Limited	351.08	738.00	240.40	529.61
14.Trivandrum Spinning Mills Limited	354.34	426.74	346.39	399.31
<b>Engineering</b>				
15.Kerala Agro Machinery Corporation Limited	929.08	1128.99	1140.39	1337.26
16.Scooters Kerala Limited	74.00	77.00	65.89	80.26
17.Kerala Automobiles Limited	337.87	533.00	303.16	465.81
<b>Ceramics and Refractories</b>				
18.Kerala Clays and Ceramic Products Limited	73.04	81.58	78.50	90.02
19.Kerala Premopipe Factory Limited	126.15	142.63	118.77	159.67
<b>Total</b>	<b>18771.88</b>	<b>18446.41</b>	<b>18268.13</b>	<b>18834.54</b>

## APPENDIX 6.5

**Installed Capacity and Capacity Utilisation in Government  
Owned Companies during 1988-89 and 1989-90**

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation (in percentage)	
			1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Kerala Ceramics Ltd.	(i) Kaolin	MT	18000	18000	5944	9102	33.02	50.57
	(ii) Porcelain	"	595	595	478	412	80.34	69.23
	(iii) China Clay	"	5000	5000	..	2012	..	..
	(iv) Sanitary Wares	"	1200	1200	467	669	38.92	55.75
2. Kerala Soaps and Oils Limited	(i) Soaps	"	9000	9000	3041	3510	33.79	39.00
	(ii) Glycerine	"	260	260	28	28	10.77	10.77
	(iii) Shark Liver Oil Products	"	300	300	41	25	13.67	8.33
	(iv) Vanaspathi	"	3000	3000	..	..	..	..
3. Travancore Plywood Industries Ltd	Plywood	Lakh Sq.Mtrs (4 mm basis)	27.38	27.38	6.93	6.15	25.31	22.43
4. Kerala State Drugs & Pharmaceuticals Ltd.	(i) Vitamin 'A'	MMU	30.00	30.00	7.75	12.71	25.83	42.37
	(ii) Tablets	Lakh Nos.	2514	2514	3000	2782	119.33	110.66
	(iii) Granules	Kg.	20000	20000	5074	..	25.37	..
	(iv) Powders	"	..	..	381038	19643	..	..
	(v) Liquids	Lakh Ltrs.	2.25	2.25	1.89	4.43	84.00	196.09
	(vi) Injectibles	"	"	"	"	"	"	"
	(a) Bottles	Lakh Nos.	4.50	4.50	7.61	8.49	169.11	188.67
	(b) Vials	"	15.00	15.00	10.19	7.60	67.93	50.67
(c) Ampoules	"	60.00	60.00	29.44	20.68	49.07	34.67	
(vii) Capsules	"	..	149	..	104.50	..	..	
5. Kerala State Detergents and Chemicals Limited	Synthetic Detergents							
	(i) Cake/Bar	MT	NA	7200	NA	2002	..	27.81
	(ii) Spray Dried Powder	"	"	10800	"	5144	..	47.63
(iii) High Density Powder	"	"	4000	"	194	..	4.85	
6. Kerala State Salicylates and Chemicals Limited	(i) Salicylic Acid	"	"	1000	"	21	..	2.10
	(ii) Aspirin	"	"	1000	"	38	..	3.80
7. Kerala Electrical and Allied Engineering Co. Ltd	(i) Distribution Transformers	KVA	1,20,000	1,20,000	2,98,205	5,55,233	248.50	462.69
	(ii) C.I. Specials	MT	1,500	1,500	330	353	22.00	23.53
	(iii) Steel structures	MT	1,200	1,200	600	479	50.00	39.92
	(iv) Galvanised structures	"	6,000	..	..	..	..	..
	(v) Brushless Alternators	Nos	1500	1500	1487	1503	99.13	100.20
	(vi) HRC Fuses	"	..	..	..	..	..	..
	(vii) Electrical wiring Accessories	"	1,33,000	1,33,000	2,58,158	4,35,244	194.10	327.25

## APPENDIX 6.5 (continued ...)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. Steel Industrials Kerala Limited	(i) Fabricated steel structurals	MT	3000	3000	1599	1510	53.30	50.33
	(ii) Ferrrous Scrap	"	10,000	10,000	2140	6296	21.40	62.96
	(iii) Castings	"	1200	..	367	..	28.92	..
9. Autokast Limited	Heavy Ferrous and Non-ferrous Castings	"	18000	18000	11013	6977	61.18	38.76
10. Steel and Industrial Forgings Limited	Automobile and Industrial Steel Forgings	"	4250	7500	1544	2328	36.33	31.04
11. Kerala Minerals and Metals Limited	(i) Titanium Dioxide	MT	22000	22000	9250	5150	42.05	23.41
	(ii) Ilmenite	"						
	(iii) Rutile	"	29740	29740	14192	8026	47.72	26.99
	(iv) Zircon	"						
	(v) Leucoxene	"						
	(iv) Monazite	"						
12. Malabar Cements Limited	Portland Cement	Lakh Tonnes	4.20	4.20	3.56	2.66	84.76	63.33
13. Sitaram Textiles Limited	(i) Cotton Yarn	Lakh Kg.	12064	12064	6.12	8.06	..	..
	(ii) Cotton Fabrics	Lakh Mtrs	336 Looms	336 Looms	..	..	..	..
	(iii) Processing	Mtrs/day	40000	40000	15.98	36.83	(Lakh Mtrs)	(Lakh Mtrs.)
14. Trivandrum Spinning Mills Limited	Cotton Yarn	Lakh Kg.	25200	25200	6.26	5.96	..	..
			spindles and 800 double spindles	spindles and 800 double spindles				
15. Kerala Agro Machinery Corporation Limited	(i) Power Tillers/ Agricultural Tractors	Nos.	3000	3000	2525	2710	84.17	90.33
	(ii) High Speed Diesel Engines		..	..	..	..	..	..
16. Scooters Kerala Limited	(i) Scooters	Nos.	..	..	..	..	..	..
	(ii) Sheet Metal Items	..	..	..	..	..	..	..
17. Kerala Automobiles Limited	Three Wheelers	Nos.	6000	6000	1378	2075	23.12	34.58
18. Kerala Preconcrete Factory Limited	Concrete Cement Pipes	Nos.	..	..	11130	11426	..	..
19. Kerala Clays and Ceramic Products Limited	China Clay	MT.	..	..	11140	10920	..	..
20. Kerala State Wood Industries Limited	(i) Veneers	Lakh Sq.Mtrs.	30	..	0.40	NA	1.38	..
	(ii) Joinery Items	Nos.	80000	..	15767	..	19.71	..
	(iii) Sawn Sizes	Cu. Mtrs.	..	..	1266	..	..	..



## APPENDIX 6.6

**Capital Invested and Employment in respect of  
Government Majority Companies in Kerala**

Name of Company	Capital Invested (in Rs.lakhs)		Employment (Nos)	
	As on 31-3-1989	As on 31-3-1990	As on 31-3-1989	As on 31-3-1990
(1)	(2)	(3)	(4)	(5)
1. Keltron Counters Limited	596.76	629.95	306	306
2. Keltron Electro Ceramics Limited	351.94	221.28	109	103
3. Keltron Crystals Limited	313.04	223.11	124	126
4. Keltron Magnetics Limited	60.14	48.35	33	34
5. Keltron Power Devices Limited	853.73	592.86	156	156
6. Keltron Resistors Limited	247.52	252.99	50	50
7. Keltron Rectifiers Limited	636.89	744.80	107	107
8. Keltron Component Complex Limited	692.50	744.27	358	369
9. SIDKEL Televisions Limited	36.00	36.00	80	78
10. Steel Complex Limited	591.49	297.90	645	638
11. Metal Industries Limited	62.30	38.23	132	128
12. Travancore Titanium Products Limited	176.75	176.75	1629	1614
13. Travancore Cochin Chemicals Limited	945.93	738.19	1175	1179
14. Travancore Cements Limited	50.00	65.00	590	580
15. Metropolitan Engineering Co. Limited	136.34	192.33	149	147
16. Traco Cable Company Limited	2554.87	2980.38	240	252
17. United Electrical Industries Limited	385.39	401.85	512	522
18. Transformers & Electricals Kerala Limited	4393.76	3887.42	1572	1614
19. Chalakudy Refractories Limited	386.32	452.48	133	127
20. Travancore Sugars & Chemicals Limited	52.04	51.00	565	543
21. Forest Industries (Travancore) Limited	52.31	44.15	131	130
<b>Total</b>	<b>13576.02</b>	<b>12819.29</b>	<b>8596</b>	<b>8603</b>

## APPENDIX 6.7

Performance of Government Majority Companies in terms of Value of  
Production and Sales Turnover: 1988-89 and 1989-90

Name of Company	Value of Production		Sales Turnover	
	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)
<b>Electronics</b>				
1. Keltron Counters Ltd.	243.00	233.00	276.00	251.97
2. Keltron Electro Ceramics Ltd.	141.93	120.03	163.00	96.73
3. Keltron Crystals Ltd.	127.27	129.40	148.80	156.67
4. Keltron Magnetics Ltd.	45.03	84.15	77.65	84.15
5. Keltron Resistors Ltd.	54.37	54.25	60.17	82.35
6. Keltron Power Devices Ltd.	242.16	136.00	224.34	139.91
7. Keltron Rectifiers Ltd.	95.98	102.29	107.06	103.62
8. Keltron Component Complex Ltd.	809.55	1190.59	1122.29	1256.68
9. SIDKEL Televisions Ltd.	160.12	68.88	201.52	68.88
<b>Iron and Steel</b>				
10. Steel Complex Ltd.	2683.20	3251.31	2900.22	3424.10
11. Metal Industries Ltd.	72.00	98.55	117.26	90.05
<b>Chemical</b>				
12. Travancore Titanium Products Ltd.	2140.30	2479.52	3817.49	3462.79
13. Travancore Cochin Chemicals Ltd.	2321.00	3508.21	2663.37	3264.26
14. Travancore Cements Ltd.	567.97	1255.71	561.89	1249.24
<b>Electricals and Cables</b>				
15. Metropolitan Engineering Co. Ltd.	103.49	171.00	99.67	160.90
16. Traco Cable Company Ltd.	502.74	781.60	486.79	758.00
17. United Electrical Industries Ltd.	348.42	588.90	343.98	604.26
18. Transformers and Electricals Kerala Ltd.	2935.82	3970.54	2965.08	3770.49
<b>Ceramics and Refractories</b>				
19. Chalakudy Refractories Ltd.	0.10	2.75	1.61	2.40
<b>Agrobased Industries</b>				
20. Travancore Sugars and Chemicals Ltd.	416.39	516.60	488.66	535.55
<b>Wood Based Industries</b>				
21. Forest Industries (Travancore) Ltd.	107.26	93.98	109.04	154.39
<b>Total</b>	<b>14118.10</b>	<b>18837.26</b>	<b>16935.89</b>	<b>19717.39</b>

## APPENDIX 6.8

Installed Capacity and Capacity Utilisation in Government Majority Companies - 1988-89 and 1989-90

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation (in percentage)	
			1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
			(4)	(5)	(6)	(7)	(8)	(9)
1. Keltron Counters Ltd.	Counting Devices, Registering Mechanism and Defence Equipment	Lakh Nos.	Not fixed	Not fixed	2.66	2.18	..	..
2. Keltron Electro-Ceramics Ltd.	(i) Ceramic Capacitors	Million pieces	50	80	46.50	32.90	93.00	41.13
	(ii) Thermistors	"	"	"	0.07	..	..	..
3. Keltron Crystals Limited	(i) Communication Crystals and Watch Crystals	Lakh Nos.	20.84	20.54	14.19	11.82	71.93	57.55
	(ii) Digital Electronic Watches	"	0.45	0.45	0.32	0.08	71.11	17.78
4. Keltron Magnetics Ltd.	(i) Colour TV Delay lines	"	27.50	..	0.27	..	0.98	..
	(ii) Servo controlled Voltage Stabilizers	Nos.	5000	5000	868	1348	17.36	26.96
5. Keltron Power Devices Ltd.	Power Transistors	Lakh Nos.	10	10	14.0	7.24	140.00	72.40
6. Keltron Resistors Ltd.	Carbon and Metal Film Resistors	Million Nos.	142	142	83.45	75.70	58.77	53.31
7. Keltron Rectifiers Ltd.	(i) Silicon Diodes	Lakh Nos.	3.20	3.20	2.00	2.10	62.50	65.63
	(ii) Electronic Equipment	Nos.	50	50	19.00	8.00	38.00	16.00
8. Keltron Component Complex Ltd.	Aluminium Electrolytic Capacitors	Million Nos.	60	72	53.00	55.01	88.33	76.40
9. SIDKEL Televisions Ltd.	Television Sets	Nos.	20000	20000	7075	2387	35.38	11.94
10. Steel Complex Ltd.	Steel Billets	Tonnes	55000	55000	45159	40837	82.11	74.25
11. Metal Industries Ltd.	Agricultural Implements	MT	250	250	547	450	218.80	180.00
12. Travancore Titanium Products Ltd.	Titanium Dioxide	"	24500	24500	10702	9050	43.68	36.94
13. Travancore Cochin Chemicals Ltd.	(i) Caustic Soda	"	52800	52800	33869	36719	64.14	69.54
	(ii) Chlorine Products	"	46464	46464	29805	32313	64.15	96.54
14. Travancore Cements Ltd.	(i) White Cement	Tonnes	30000	30000	23349	30108	77.83	100.36
	(ii) Cement Paint	"	600	600	1038	1251	173.00	208.50

## APPENDIX 6.8 (continued ...)

Installed Capacity and Capacity Utilisation in Government Majority Companies - 1988-89 and 1989-90

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation (in percentage)	
			1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. Metropolitan Engineering Company Ltd.	Switch and Fuses	Nos.	10000	10000	2400	8550	24.00	85.50
16. Traco Cable Company Ltd.	(i) A.A.C. & A.C.S.R. MT		1500	1500	410	1307	27.33	87.13
	(ii) PVC Covered Conductors and Bare Copper conductors	MCM	39.92	39.92	3.23	24.24	9.82	73.63
	(iii) Telephone Cable	CKM	100000	100000	..	..	..	..
17. United Electrical Industries Ltd.	(i) KWH Meters	Nos.	250000	250000	173649	266717	69.46	106.69
	(ii) Motor Control Gears	"	4500	4500	1750	1696	38.89	37.69
	(iii) L.T. Switch-gears	"	600	..	1	..	0.17	..
	(iv) 11 K.V. Switch-gears	"	..	..	..	..	..	..
	(v) Plastic Film Capacitors	Million Nos.	15	15	1.46	0.95	9.73	6.33
	(vi) Carbon Film Resistors	"	25	..	2.23	..	8.92	..
	(vii) Other Products	Nos.	Not fixed	Not fixed	933	..	..	..
18. Transformers & Electricals Kerala Ltd	(i) Power Transformers	MVA	4500	4500	3020	3127	67.11	69.49
	(ii) Current and Potential Transformers	Nos.	1000	1000	500	646	50.00	64.60
	(iii) Gas Circuit Breakers	"	100	100	13	26	13.00	26.00
19. Kerala Construction Components Ltd.	Sandlime Bricks	Lakh Nos.	120	..	51.56	..	42.97	..
20. Chalakudy Refractories Ltd.	Refractory Items	MT	..	2400	24	180	..	7.50
21. Travancore Sugars & Chemicals Ltd	(i) Sugar	Tonnes	900	900	1619	1209	..	..
	(ii) Spirit	Lakh proof litres	46.53	46.53	15.87	14.58	34.11	31.33
	(iii) I.M.F.L.	"	..	..	0.24	..	..	..
	(iv) Arrack	"	..	..	58.09	54.30	..	..
	(v) Molasses	Tonnes	..	..	957	683	..	..
22. Forest Industries (Travancore) Ltd.	Wood Furniture & Joinery items	Cu.M.	1500	1500	964	1486	64.27	99.07

## APPENDIX 6.9

Group Working Results of State Public Sector Industrial Undertakings in Kerala

(Amount in Rs. lakhs)

Group	Number of Companies Details of which are Available	Paid up Capital		Total Borrowings		Gross Block		Net Profit Earned during 1989-90		Net Loss Incurred during 1989-90		Accumulated Loss as on 31-3-1990	
		As on 31-3-1989	As on 31-3-1990	As on 31-3-1989	As on 31-3-1990	As on 31-3-1989	As on 31-3-1990	As on 31-3-1989	As on 31-3-1990	No. of Companies	Amount	No. of Companies	Amount
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Modern Manufacturing and Development Industries													
(1) Electronics	10	5541.82	7202.00	10086.52	11054.26	4933.45	5590.09	3	127.10	7	353.44	8	4317.88
(11) KSIE Group	7	4449.42	4725.92	6995.86	7761.62	3764.23	4143.62	2	5.13	5*	688.30	5	5554.85
(111) Chemicals	5	5371.86	6449.03	17486.73	15759.96	21536.52	22150.20	3	577.43	2	1631.02	2	9397.54
(IV) Textiles	3	1292.86	1460.86	2085.17	2384.43	1684.79	1924.68	1	22.35	2	107.18	3	2626.00
(V) Electricals and Cables	5	2228.60	2966.79	8572.27	9866.28	4679.93	6531.82	3	123.45	2	42.39	3	5217.26
(VI) Engineering	8	3318.49	3605.18	5226.08	6025.46	5442.52	5695.21	2	132.25	6	1220.57	7	3592.74
(VII) Ceramics and Refractories	3	170.78	342.95	471.67	373.55	176.01	177.97	1	1.18	2	53.05	2	377.58
2. Agrobased	1	51.00	51.00	24.28	29.40	169.77	175.75	..	..	1	12.86	..	..
3. Wood based	1	17.71	17.71	34.60	51.35	19.78	20.01	1	2.25	..	..	1	33.39
4. Trading Companies	1	11.30	22.60	..	..	..	..	1	13.62	..	..	..	..
<b>Total</b>	<b>44</b>	<b>22453.84</b>	<b>26844.04</b>	<b>50983.18</b>	<b>53306.31</b>	<b>42407.00</b>	<b>46411.35</b>	<b>17</b>	<b>1004.76</b>	<b>27</b>	<b>4108.81</b>	<b>31</b>	<b>31117.24</b>

Note: \* One of these companies was in the implementation stage.

## APPENDIX 6.11

Capital Invested and Employment in respect of Government of India Companies Working in Kerala

Sl. No.	Name of the Company	Capital Invested (Rs. in lakhs)		Employment (in Nos.)	
		As on 31.3.1989	As on 31.3.1990	As on 31.3.1989	As on 31.3.1990
(1)	(2)	(3)	(4)	(5)	(6)
1.	Cochin Refineries Limited, Kochi	19436.00	18888.00	1116	1149
2.	Cochin Shipyard Limited, Kochi	21927.34	17104.48	2684	2706
3.	Fertilisers and Chemicals Travancore Limited, Ernakulam	41580.10	43395.30	8483	8610
4.	Hindustan Latex Limited, Thiruvananthapuram	2285.32	2394.14	1615	1681
5.	Hindustan Newsprint Limited, Kottayam	12971.64	10026.12	1692	1687
6.	Indian Rare Earths Limited:				
	(a) Rare Earths Division, Aluva	NA	737.66	..	615
	(b) Minerals Division, Chavara	NA	NA	NA	NA
7.	Indian Telephone Industries Limited, Palakkad	NA	NA	NA	830
8.	Hindustan Insecticides Limited, Aluva	NA	NA	NA	867
9.	Instrumentation Limited, Palakkad	NA	NA	469	492
10.	Modern Food Industries (India) Limited, Kochi	NA	NA	206	216
11.	HMT Limited, Kalamassery, Aluva	NA	NA	2997	2940
12.	Balmer Lawrie & Co. Limited, Aroor	NA	NA	291	289
13.	Hindustan Organic Chemicals Limited, Kochi	5138.60	5638.60	374	400
14.	Cannanore Spinning & Weaving Mills, Kannur	369.45	358.61	495	609
15.	Parvathy Mills, Kollam	511.01	807.54	1313	1326
16.	Vijayamohini Mills, Thiruvananthapuram	415.58	365.96	613	584
17.	Alagappa Textiles (Cochin) Mills, Thrissur	NA	NA	NA	NA
18.	Kerala Lakshmi Mills, Thrissur	358.33	405.46	723	769

## APPENDIX 6.12

Performance of Government of India Companies in Kerala in terms  
of Value of Production and Sales Turnover: 1988-89 and 1989-90

(Amount in Rs. lakhs)

Sl. No.	Name of Company	Value of Production		Sales of Turnover		Export	
		1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Cochin Refineries Limited	116902.00	134009.00	116414.00	103459.00	..	..
2.	Cochin Shipyard Limited	3877.16	7451.00	4924.84	2204.00	..	..
3.	Fertilisers & Chemicals Travancore Limited	25461.40	19024.87	27613.70	20901.26	..	..
4.	Hindustan Latex Limited	2102.00	2441.00	2140.02	2482.00	15.65	152.00
5.	Hindustan Newsprint Limited	7983.07	11285.51	8368.12	11262.36	..	..
6.	Indian Rare Earths Limited (a) Rare Earths Division (b) Minerals Division	NA NA	NA NA	1185.15 NA	696.95 NA	NA ..	205.00 NA
7.	Indian Telephone Industries Limited	5111.70	9107.35	5074.26	10209.22	..	..
8.	Hindustan Insecticides Ltd.	NA	2367.96	NA	1603.64	..	109.67
9.	Instrumentation Limited	1485.65	1956.77	1830.98	2376.26	..	84.35
10.	Modern Food Industries (India) Limited	584.16	600.40	583.00	640.70	..	..
11.	H.M.T. Limited	4302.59	4660.46	4515.00	5043.13	238.10	374.00
12.	Balmer Laurie & Co., Ltd.	1058.29	1058.35	1036.04	1101.47	349.10	686.79
13.	Hindustan Organic Chemicals Limited	7913.98	6152.49	6900.00	9073.00	700.00	32.85
14.	Cannanore Spinning and Weaving Mills	617.29	666.85	626.70	769.93	..	..
15.	Parvathy Mills	766.82	895.08	678.96	934.21	56.18	75.97
16.	Vijayashahini Mills	636.46	830.97	636.46	822.71	..	..
17.	Alagappa Textiles (Cochin) Mills	NA	NA	NA	NA	..	..
18.	Kerala Lakshmi Mills	822.65	1080.26	866.30	1075.82	..	..

## APPENDIX 6.13

## Government of India Companies functioning in Kerala—Main features

(Amount in Rs.lakhs)

Sl. No.	Name of Company	Paid up Capital as on		Share of Government and Public Sector Financing Institutions in the paid up capital as on 31-3-1990	Total Loan Outstanding and Interest accrued as on 31-3-1990	Loan Availed in 1989-90		Gross Block		Net fixed Assets as on 31-3-1990	Value of Major raw Materials consumed during 1989-90	Net profit(+)/ Net Loss(-)	
		31-3-1989	31-3-1990			From Government of India	From Others	As on 31-3-1989	As on 31-3-1990			1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Cochin Refineries Limited	6848.00	6891.00	5825.00	14256.00	-	1488.00	32390.00	36356.35	24657.75	119733.00	(+)6156.00	(+)6876.00
2.	Cochin Shipyard Limited	7121.00	7436.00	7436.00	10479.94	571.00	Nil	11776.25	NA	8327.97	1103.01	(-)2637.51	(-)2771.45
3.	Fertilisers and Chemicals Travancore Ltd	32277.20	34277.20	34277.20	11888.45	-	-	23025.69	25055.78	8006.09	16811.32	(+) 597.00	(+) 25.91
4.	Hindustan Latex Limited	1257.50	1257.50	1257.50	1195.32	94.00	60.00	2858.91	3146.04	1949.79	683.05	(+) 227.18	(+) 296.86
5.	Hindustan Newsprint Limited	8157.99	8157.99	8157.99	1868.13	-	-	16128.01	16275.56	7063.93	2822.18	(+) 199.83	(-)2036.02
6.	Indian Rare Earths Limited												
	a) Rare Earths Division	Separate figures not available			N.A.	N.A.	N.A.	N.A.	1031.79	818.79	328.22	(+) 366.81	(-) 59.72
	b) Minerals Division	Separate figures not available			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7.	Indian Telephone Industries Limited, Palakkad	Separate figures not available			N.A.	N.A.	N.A.	N.A.	4493.63	3858.00	5055.44	(+) 225.000	(+)1108.000
8.	Hindustan Insecticides Limited Alwaye	Separate figures not available			N.A.	N.A.	N.A.	N.A.	3110.34	2625.97	779.40	(+) 96.60	(+) 37.46
9.	Instrumentation Limited Palakkad	Separate figures not available			N.A.	N.A.	N.A.	N.A.	856.47	441.60	966.55	(+) 576.140	(+) 343.670
10.	Modern Food Industries (India) Ltd.	Separate figures not available			N.A.	N.A.	N.A.	199.94	198.50	94.10	374.40	(+) 33.970	(+) 39.900
11.	H M T Limited	Separate figures not available			2000.07	-	6.20	2439.92	2500.74	894.04	344.50	(+) 29.880	(-) 280.38
12.	Balmer Lawrie & Co. Limited	Separate figures not available			969.87	-	-	287.49	N.A.	117.81	852.29	(+) 7.64	(-) 107.77
13.	Hindustan Organic Chemicals Limited	3342.00	3342.00	3342.00	2296.60	-	-	10483.72	10991.32	7635.19	3388.98	(+) 204.65	(+)1239.81
14.	Cannanore Spinning and Weaving Mills	112.08	120.08	120.08	309.18	-	43.45	141.06	150.00	51.65	398.77	(-) 9.18	(+) 101.25
15.	Parvatni Mills	368.76	494.26	494.26	1390.28	-	236.67	367.18	403.60	177.23	401.45	(-) 147.11	(-) 152.96
16.	Vijayamohini Mills	188.70	143.43	134.62	222.53	-	-	267.36	N.A.	151.72	611.46	(-) 20.97	(+) 104.64
17.	Alagappa Textile (Cochin) Mills	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18.	Marala Lakshmi Mills	79.46	114.46	114.46	325.94	-	68.00	479.57	507.81	251.35	524.76	(+) 8.17	(+) 167.96

\* Gross Profit.



## APPENDIX 6.14

## Production and Capacity Utilisation in Government of India Companies Working in Kerala: 1988-89 and 1989-90

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation in percentage	
			1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Cochin Refineries Ltd.	Petroleum Products	Million MT	4.50	4.50	4.55	4.62	101.02	102.67
2. Cochin Shipyard Ltd.	i) Ship Building	DWT	1,50,000	150000	38430	43700	25.60	29.13
	ii) Ship Repair	Lakh GRT	10	10	4.18	3.98	41.80	39.80
3. Fertilisers and Chemicals Travancore Ltd.								
a) Udyogamandal Division	i) Ammonium Sulphate	MT	198000	198000	152112	124366	76.82	62.81
	ii) Ammonium Phosphate 20:20	"	148500	148500	139314	120934	93.81	81.44
	iii) Ammonium Chloride	"	24750	24750	3885	310	15.70	1.25
	iv) Super Phosphate	"	44500	49500	17174	12122	38.59	24.49
	v) Ammonia	"	112200	112200	86794	67865	77.36	60.49
	vi) Sulphuric Acid	"	250800	308550	210976	212300	84.12	68.81
	vii) Phosphoric Acid	"	33000	33000	9820	13434	29.76	40.70
	viii) Cryolite	"	1650	..	..	..	..	..
b) Kochi Division	i) Ammonia	"	198000	198000	138130	111430	69.76	56.28
	ii) Sulphuric Acid	"	330000	330000	313580	253935	95.02	76.95
	iii) Phosphoric Acid	"	115000	115000	41610	479550	36.18	417.00
	iv) Urea	"	330000	330000	264240	164991	80.07	49.99
	v) NPK Fertilisers	"	485000	485000	476005	362998	98.15	74.84
4. Hindustan Latex Limited	Contraceptive Condoms	Million Pieces	572	572	523	589	91.43	102.97
5. Hindustan Newsprint Ltd.	Newsprint	MT	80000	80000	78660	86844	98.33	108.56
6. Indian Rare Earths Ltd.								
a) Rare Earths Division,								
Aluva	i) Rare-Earths Chloride	"	NA	5000	NA	3307	..	66.14
	ii) Trisodium Phosphate	"	NA	5600	NA	4287	..	76.55
	iii) Rare Earths Flouride	"	NA	180	NA	157	..	87.22
	iv) Rare Earths Oxide	"	NA	60	NA	43	..	71.67
b) Minerals Division	i) Ilmenite	"	NA	NA	NA	NA	NA	NA
	ii) Monazite	"	"	"	"	"	"	"
	iii) Zircon	"	"	"	"	"	"	"
	iv) Rutile	"	"	"	"	"	"	"
	v) Sillimanite	"	"	"	"	"	"	"
	vi) Zirrfloor	"	"	"	"	"	"	"
7. Indian Telephone Industries Ltd.	Electronic Switching Equipment	Lines	"	"	"	153918	..	..
8. Hindustan Insecticides Limited	i) Technical DDT	Tonnes	1344	1344	"	1109	..	82.51
	ii) Formulated DDT	"	2688	2688	"	1530	..	56.92
	iii) Technical BHC	"	3000	3000	"	2064	..	68.80
	iv) Formulated BHC	"	3000	3000	"	2806	..	93.53
	v) Endosulfan	"	800	800	"	563	..	70.38
	vi) Hildan 35 EC, Hildit 35 EC etc.	Kilo Ltrs	1910	1910	"	621	..	32.51

## APPENDIX 6.14 (continued ...)

Production and Capacity Utilisation in Government of India Companies  
Working in Kerala: 1988-89 and 1989-90

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation in percentage	
			1988-89	1989-90	1988-89	1989-90	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. Instrumentation Ltd.	i) Process Control Valves	Nos.	..	4000	2679	3737	..	93.43
	ii) Safety Relief Valves and Pressure-Reduc- ing valves	"	..	400	41	239	..	59.75
	iii) Miscellaneous Items and accessories	Nos	..	not fixed	3075	2192	..	..
	iv) Orifice Plate/ Flow Measuring Devices	"	..	500	163	79	..	15.80
Modern Food Industries (India) Limited	i) Modern Bread	Lakh Nos.) of 400 gms)						
	ii) Modern Bun	Lakh Nos.) of 50 gms)	218.32	218.32	231.33	227.30	105.96	104.11
11. HMT Limited	i) Machine Tools	Nos.	445*	394*	437	420	98.20	106.60
	ii) Printing Machines	"	96*	116*	96	71	100.00	61.21
12. Balmer Laurie and Co. Limited	Marine freight and Special Containers	"	3600	3600	2030	2582	56.39	71.72
13. Hindustan Organic Chemicals Limited	i) Phenol	MT	40000	40000	23490	27974	58.73	69.94
	ii) Acetone	"	24000	24640	14582	17385	60.76	70.56
14. Cannanore Spinning and Weaving Mills	Cotton Yarn	Lakh Kg.	24800	24800	12.17	13.10	..	..
			spindles	spindles				
15. Parvathi Mills	i) Cotton Yarn	"	24244	24244	4.39	4.91	..	..
			spindles	spindles				
	ii) Cloth	Lakh Mr.	324	324	64.03	65.72	..	..
			looms	looms				
16. Vijayamohini Mills	Cotton Yarn	Lakh Kg.	30476	30476	10.79	11.93	..	..
			spindles	spindles				
17. Alagappa Textile (Cochin) Mills	Cotton Yarn	"	NA	NA	NA	NA	NA	NA
Kerala Lakshmi Mills	Cotton/Viscos Yarn	"	41520	41328	13.35	14.12	..	..

\* Target for the year

## APPENDIX 6.15

**Khadi and Village Industries Production, Sales, Employment  
and Wages during 1989-90**

Sl. No.	Name of Industry	Value of Production (Rs.lakhs)	Value of Sales (Rs.lakhs)	Employment (Nos.)			Wages Paid (Rs. in lakhs)	
				Full Time	Part Time	Casual Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I.	Khadi	441.79	541.58	18482	..	..	18482	420.28
II.	Village Industries							
1.	Processing of Cereals and Pulses	331.41	380.90	4103	3810	..	7913	192.46
2.	Village Oil	903.33	1033.81	903	902	..	1805	54.14
3.	Village Leather	432.33	443.43	1825	956	..	2781	100.14
4.	Cottage Match	355.75	360.97	2409	3717	..	6126	77.48
5.	Gurkhandasari	122.07	123.32	577	333	168	1078	23.17
6.	Palmgur	192.81	216.40	493	26790	..	27283	89.10
7.	NEO and soap	123.68	152.29	151	251	..	402	11.60
8.	Hand Made Paper	20.30	20.40	244	..	..	244	5.19
9.	Bee keeping	907.72	873.99	5161	25100	..	30261	538.81
10.	Village Pottery	729.97	761.15	15495	3520	..	19015	393.77
11.	Fibre and Screwpine	504.93	521.19	55976	2525	..	58501	356.11
12.	Carpentry and Blacksmithy	538.40	531.40	4102	449	..	4551	195.24
13.	Lime Manufacturing	334.15	384.33	2469	1331	..	3800	111.30
14.	Collection of forest plants	..	..	..	..	..	..	..
15.	Fruits and Vegetable Preservation	137.31	227.47	558	833	..	1391	30.30
16.	Cane and Bamboo	127.60	119.97	1324	2338	..	3662	106.10
17.	Aluminium	77.53	83.29	215	122	..	337	17.66
18.	Agarbathy	38.98	34.40	377	97	..	474	5.86
19.	Rubber goods	19.37	18.19	122	68	..	190	1.13
20.	New Village Industries	16.93	17.35	398	..	..	398	13.59
21.	Polyvstra	26.86	31.49	496	..	..	496	12.04
Total of II		6001.43	6335.74	97398	73310	168	170708	2335.19
Grand Total (I + II)		6443.22	6877.32	115880	73310	..	189190	2755.47

**APPENDIX 6.16**  
**Coir Co-operative Societies in Kerala**

No.	Type of Society	Number of Societies as on	
		31-3-1989	31-3-1990
(1)	(2)	(3)	(4)
1.	Primary Coir Co-operative Societies		
	a. Working	419	423
	b. New Societies which have not started working	92	100
	c. Dormant societies	66	60
	d. Societies under Liquidation	190	187
	<b>Total</b>	<b>767</b>	<b>770</b>
2.	Manufacturing Societies		
	a. Working	17	18
	b. New Societies which have not started working	28	28
	c. Dormant societies	4	4
	d. Societies under Liquidation	1	3
	<b>Total</b>	<b>50</b>	<b>53</b>
3.	Small Scale Producers Co-operative Societies		
	a. Working	7	7
	b. New societies which have not started working	-	-
	c. Dormant societies	-	-
	d. Societies under Liquidation	-	-
	<b>Total</b>	<b>7</b>	<b>7</b>
4.	Husk Procurement and Distribution Societies		
	a. Working	2	2
	b. New Societies which have not started working	-	-
	c. Dormant societies	3	3
	d. Societies under Liquidation	7	7
	<b>Total</b>	<b>12</b>	<b>12</b>
5.	Fibre Societies		
	a. Working	-	-
	b. New Societies which have not started working	-	-
	c. Dormant societies	-	-
	d. Societies under Liquidation	1	1
	<b>Total</b>	<b>1</b>	<b>1</b>
6.	Co-operative Coir Marketing Federation	1	1
7.	Total Number of Co-operative Societies		
	a. Working	446	451
	b. New Societies which have not started working	120	128
	c. Dormant societies	73	67
	d. Societies under Liquidation	199	198
	<b>Grand Total</b>	<b>838</b>	<b>844</b>

## APPENDIX 6.17

## Activities of Coir Co-operative Societies

Year	No. of working Societies	No. of Members ('000)	Husk Purchased		Yarn Produced		No. of workers ('000)	Wages paid (Rs.lakhs)
			No. (in lakhs)	Value (Rs.lakhs)	Qty. (tonnes)	Value (Rs.lakhs)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>(a) Primary Coir Co-operative Societies</b>								
1987-88	421	229	1338	247.00	10298	738.00	73	421
1988-89	419	232	1341	273.00	11647	793.00	77	409
1989-90	423	227	1181	271.00	11106	782.00	77	431

**(b) Manufacturing Societies**

Year	No. of working Societies	No. of Members ('000)	Value of production (Rs. lakhs)	No. of workers	Wages paid (Rs. lakhs)	Value of Export (Rs. lakhs)
1987-88	24	3552	456.00	2163	62.50	N.A.
1988-89	24	3549	376.00	1998	64.00	N.A.
1989-90	25	3662	410.18	2045	65.90	N.A.

## APPENDIX 6.18

## Export of Coir and Coir Products from India During 1988-89 and 1989-90

Sl. No.	Item	1988-89		1989-90	
		Quantity (tonnes)	Value (Rs. lakhs)	Quantity (tonnes)	Value (Rs. lakhs)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Coir Fibre	7	0.74	49	3.70
2.	Coir Yarn	12598	1123.50	13770	1369.67
3.	Coir Mats	7612	1325.81	8273	1571.68
4.	Coir Mattings	2974	579.89	3580	744.92
5.	Coir Rugs and Carpets	1714	289.07	1573	289.10
6.	Coir and other Sorts	28	3.87	46	7.70
7.	Coir Rope	39	4.52	74	8.85
8.	Rubberised Coir Goods	7	4.13	26	18.10
9.	Curled Coir	..	..	67	4.03
<b>Total</b>		<b>24979</b>	<b>3331.52</b>	<b>27458</b>	<b>4017.77</b>

## APPENDIX 6.19

## Production and Productivity- Handloom Industry

		(1987 Census)	
Sl.No	Item	1988-89	1989-90
(1)	(2)	(3)	(4)
1.	Estimated Total Number of Handlooms in the State		51,629 (1987 Census)
2.	Number of looms in Co-operative Sector		48,241
3.	Percentage of (2) to (1)		77.94
4.	Co-operative Sector		
	(i) Production of Handloom Cloth (Million Metres)	59.91	43.00
	(ii) Value of Production (Rs.Crores)	61.90	51.00
	(iii) Productivity (Metre/loom)	10.20	1068.00
5.	Corporate Sector		
	(i) Number of looms under the Handloom Development Corporation	6984	6134
	(ii) Production of Handloom Cloth (Million Metres)	2.95	2.15
	(iii) Value of Production (Rs.crores)	2.42	2.46
	(iv) Productivity (Metre/loom)	422	350
6.	Unorganised Sector		
	(i) Number of looms in the Unorganised (Private) Sector	29,316	5254
	(ii) Production of Handloom Cloth (Million Metres)	42.00	10.00
	(iii) Value of Production (Rs.Crores)	25.58	8.00
	(iv) Productivity (Metre/loom)	1433	1903
7.	Total (Co-operative, Corporate and Unorganised Sectors)		
	(i) Production of Handloom Cloth (Million Metre)	104.86	55.15
	(ii) Value of Production (Rs.Crores)	69.83	61.46
	(iii) Productivity (Metre/loom)	1104	1068

## APPENDIX 6.19 (continued ...)

## Production and Productivity- Handloom Industry

(1987 Census)

Sl.No	Item	1988-89	1989-90
(1)	(2)	(3)	(4)
8 (a)	Assistance extended by way of loan and subsidy for the Development of Handloom (Rs. in lakhs)		
(i)	Loan		
	State Government	68.46	70.18
	Central Government	53.61	60.76
	N.C.D.C	15.54	18.34
	Total	137.61	149.28
(ii)	Subsidy and Grant:		
	State Government	117.41	206.66
	Central Government	94.90	130.83
	N.C.D.C	2.70	15.92
	Total	215.01	353.41
(b)	Amount spent as Rebate on the sale of Handloom Cloth (Rs. in lakhs)		
	State Government	343.00	595.50
	Central Government	120.00	
	Total	463.00	595.50
9.	Value of unsold stock- (Rs. Core's)		
(a)	in the Co-operative Sector	28.00	16.83
(b)	in the Corporate Sector	2.00	2.00
	Total (a+b)	30.00	18.83
10.	Number of Co-operative Societies		
(a)	Factory Type Societies		
(i)	Working Societies	104	106
(ii)	Dormant	2	2
(iii)	Under liquidation	2	2
	Total	108	110
(b)	Cottage Type Societies		
(i)	Working Societies	361	361
(ii)	Dormant	39	39
(iii)	Under liquidation	82	82
	Total	482	482
	Grand Total (a+b)	590	592

## APPENDIX 6.20

## Working Results of Handloom Apex Society (Hantex)

Sl.No.	Particulars	For the year	
		1988-89	1989-90
(1)	(2)	(3)	(4)
1.	Sales Turnover (Rs.Crores)	8.35	10.34
2.	Procurement of Cloth (Rs.Crores)	6.18	8.65
3.	Purchase of yarn (Rs.Crores)	0.87	2.42
4.	Distribution of yarn (Rs.crores)	0.94	2.48
5.	Garments sold (Rs.lakhs)	4.31	-
6.	Janatha Production (Rs.lakhs)	13.87	5.30
	(Qty. in lakh/metre)	2.72	0.80
7.	Polyster Shirting, Double Veshty, Single Veshty-Production (Rs.lakhs)	57.41	60.20
8.	Processed goods		
	(a) Production (Metres)	-	-
	(b) Value (Rs.lakhs)	-	-
9.	Number of Exhibitions conducted	34.00	54.00

## APPENDIX 6.21

Working Results of Kerala State Handloom Development Corporation Ltd, Kannur  
(Rs.in lakhs)

Sl.No.	Particulars	1988-89	1989-90
(1)	(2)	(3)	(4)
1.	Paid up Capital	202.14	222.14
2.	Borrowings	541.85	603.70
3.	Gross Block	88.14	90.09
4.	Value of Production	242.45	245.85
5.	Income through Revenue Receipts	63.76	34.92
6.	Income through sale of production (G/P)	61.65	84.04
7.	Total expenditure (Total Administrative expenses)	102.14	129.19
8.	Expenditure for Raw materials consumed	78.00	40.20
9.	Expenditure for Personnel Payments	48.34	56.45
10.	Expenditure for Depreciation	6.00	6.00
11.	Expenditure for Interest and Bank charges	23.90	21.40
12.	Net profit (+)/Net loss (-)	-6.63	-10.23
13.	Accumulated Loss	-51.95	-62.18



## APPENDIX 6.22

## Production and Productivity -Powerloom Industry

Sl.No	Items	1988-89	1989-90
1	2	3	4
1.	Estimated Number of Powerlooms in the State	4875	4859
2.	Number of looms in the Co-operative Sector	880	880
3.	Percentage of (2) to (1)	18.05	18.11
4.	Number of Powerloom Co-operative Societies	20	20
5.	Number of Members in these Societies	780	780
6.	Co-operative Sector		
	(i) Production of Cloth (lakh Metres)	45	41
	(ii) Value of Production (Rs.lakhs)	315	320
	(iii) Productivity (Metre/loom)	5114	4659
7.	Unorganised Sector		
	(i) Production of cloth (lakh metres)	155	60
	(ii) Value of Production (Rs.lakhs)	1085	650
	(iii) Productivity (Metre/loom)	3880	1508
8.	Total (Co-operative & Unorganised Sectors)		
	(i) Production (lakh metres)	200	101
	(ii) Value of Production (Rs.lakhs)	1400	970
	(iii) Productivity (Metre/loom)	4102	2079

## APPENDIX-6.23

## Foreign Exchange Earnings of India from Cashew Industry

(Value Rs.Crores)

Year	Export Value			Import Value of rawnuts	Net Foreign Exchange Earned
	Cashew Kernels	Cashew shell Liquid	Total		
(1)	(2)	(3)	(4)	(5)	(6)
1976-77	105.99	1.08	107.07	18.33	88.74
1977-78	149.54	1.07	150.61	17.98	132.63
1978-79	80.37	4.80	85.17	9.16	76.01
1979-80	118.26	14.59	132.85	11.60	121.25
1980-81	141.09	6.84	147.93	19.57	128.36
1981-82	181.50	2.35	183.85	18.37	165.48
1982-83	135.36	1.80	137.16	1.41	135.75
1983-84	150.87	1.36	152.23	22.12	130.11
1984-85	179.67	2.03	181.70	38.84	142.86
1985-86	225.11	1.35	226.46	24.37	202.09
1986-87	327.55	1.48	329.03	71.16	257.87
1987-88	311.29	5.03	316.32	64.38	251.94
1988-89 (P)	276.48	2.49	278.97	51.89	227.08
1989-90 (P)	360.34	2.53	362.87	72.44	290.43

(P) Provisional

Source: The Cashew Export Promotion Council, Cochin.

## APPENDIX-6.24

## Imports of Raw Cashewnuts into India

(Rs. in crores)

Year	Quantity (M.T)	Index	Value	Index
(1)	(2)	(3)	(4)	(5)
1976-77	75122	100.00	18.33	100.00
1977-78	56299	74.90	17.98	98.07
1978-79	20496	27.28	9.16	49.97
1979-80	24222	32.24	11.60	63.28
1980-81	25715	34.23	19.57	106.76
1981-82	16057	21.37	18.37	100.22
1982-83	1485	1.98	1.41	7.69
1983-84	26877	35.78	22.12	120.68
1984-85	56161	74.76	38.84	211.89
1985-86	21945	29.21	24.37	132.95
1986-87	49149	65.43	71.16	388.22
1987-88	42609	56.72	64.38	351.23
1988-89 (P)	37078	49.36	51.89	283.09
1989-90 (P)	52475	69.85	72.44	395.20

(P) Provisional

Source:- The Cashew Export Promotion Council, Cochin.

## APPENDIX 6.25

## Revenue Collection from the Mining Sector: 1985-86 to 1989-90

(Rs. in lakhs)

Sl. No.	Year	Minor Minerals	Major Minerals	Total
(1)	(2)	(3)	(4)	(5)
1.	1985-86	5.28	52.34	57.62
2.	1986-87	6.11	44.02	50.13
3.	1987-88	8.79	103.13	111.92
4.	1988-89	15.02	110.55	125.57
5.	1989-90	..	..	145.56

Source: Department of Mining and Geology.

## APPENDIX 6.26

## Mineral Production in Kerala: 1985-86 to 1989-90

(Quantity in M.Ts.)

Sl.No.	Mineral	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	China Clay	93304	65301	12127	86490	148321
2.	Ball Clay	266	455	402	Nil	62
3.	Limestone	288993	153048	189592	228883	280342
4.	Mineral Sands	105353	87102	151982	90881	93440
5.	Silica Sand	74969	40435	27724	24926	44170
6.	Limeshell	150596	104798	103446	98536	109174
7.	Fire Clay	100	..	..	..	..

Source: Department of Mining and Geology

## APPENDIX 7.1

Distribution of Public Works Department Roads Improved/Developed/Taken over during 1989-90

Sl. No.	Name of District	Developed/Improved	Taken over (Village Road)	
		Total	No.	Kms.
(1)	(2)	(3)	(4)	(5)
1.	Thiruvananthapuram	14.92	4	11.06
2.	Kollam	19.80	3	8.47
3.	Pathanamthitta	6.54	..	..
4.	Alappuzha	29.99	1	4.85
5.	Kottayam	44.12	2	10.20
6.	Idukki	18.40	..	..
7.	Ernakulam	19.91	4	14.47
8.	Thrissur	23.58	2	6.44
9.	Palakkad	7.17	1	4.75
10.	Melappuram	32.08	3	13.37
11.	Kozhikode	30.39	1	1.50
12.	Wayanad <sup>a</sup>	..	1	13.00
13.	Kannur	41.50	4	27.09
14.	Kasaragod	9.40	5	21.57
Total		297.80	31	136.77

Note : <sup>a</sup> Seven culverts only  
Source: Public Works Department.

## APPENDIX 7.2

Division-wise and Surface-wise Length of Roads Maintained by P W D as on 1-4-1990 (in Km.)

Sl. No.	Name of Division	Cement concrete	Black topped	Water Bound Macadam	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	..	1576.362	54.901	77.772	1709.035
2.	Kollam	..	1438.750	97.743	115.274	1651.767
3.	Pathanamthitta	0.800	1252.958	50.535	169.255	1473.548
4.	Alappuzha	..	857.123	16.479	94.233	967.835
5.	Kottayam	16.000	1836.361	26.100	106.205	1984.666
6.	Idukki	..	958.223	61.298	482.755	1502.276
7.	Muvattupuzha	..	962.184	73.455	75.563	1111.202
8.	Ernakulam	0.572	739.387	7.200	15.865	763.024
9.	Thrissur	3.391	1445.036	53.906	25.611	1527.944
10.	Palakkad	..	1222.518	62.649	186.134	1471.301
11.	Ranjeri	..	1346.173	50.620	169.230	1566.023
12.	Kozhikode	..	1088.607	20.423	98.472	1207.442
13.	Wayanad	..	498.626	13.550	83.955	596.131
14.	Kannur	4.112	1096.242	8.000	339.919	1448.273
15.	Kasaragod	..	615.909	14.960	224.528	855.397
Total		24.875	16934.459	611.819	2263.286	19835.864

Source: Public Works Department.

## APPENDIX 7.3

Distribution of Public Works Department Roads (Division-wise) as on 1-4-1990

Sl. No.	Division	State Highways	Major District Roads	Other District Roads	Village Roads	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	117.300	292.766	1214.347	84.622	1709.035
2.	Kollam	167.576	446.992	1027.586	9.615	1651.767
3.	Pathanamthitta	174.012	457.772	678.171	163.583	1473.548
4.	Alappuzha	112.525	122.920	653.714	78.676	967.835
5.	Kottayam	256.911	677.317	918.242	132.196	1984.666
6.	Idukki	238.119	513.160	372.693	378.304	1502.276
7.	Muvattupuzha	88.989	485.058	501.405	35.750	1111.202
8.	Ernakulam	55.251	291.006	416.767	..	763.024
9.	Thrissur	205.108	511.774	763.681	47.381	1527.944
10.	Palakkad	154.804	713.577	426.091	176.829	1671.301
11.	Manjeri	164.438	407.746	552.851	440.988	1566.023
12.	Kozhikode	67.759	313.034	280.063	546.586	1207.442
13.	Wayanad	40.070	327.631	148.456	79.974	596.131
14.	Kannur	55.127	290.019	768.708	334.419	1448.273
15.	Kasaragod	28.969	84.593	375.497	366.338	855.397
Total		1926.968	5935.365	9098.270	2875.261	19835.864

## APPENDIX 7.4

Surface-wise Length of Roads Under Public Works Department - Roads by Category

(in km.)

Item	State Highways	Major District	Other District	Village Roads	Total
(1)	(2)	(3)	(4)	(5)	(6)
<b>Cement Concrete</b>					
Length as on 1-4-1989	16.612	8.263	..	..	24.875
Length added in 1989-90	..	..	..	..	..
Length as on 31-3-1990	16.612	8.263	..	..	24.875
<b>Black Topped</b>					
Length as on 1-4-1989	2018.343	5890.020	7873.738	857.207	16639.308
Length added in 1989-90	(-)117.257	(-)46.550	(+)238.772	(+)220.186	(+)295.151
Length as on 31-3-1990	1901.086	5843.470	8112.510	1077.393	16934.459
<b>Water Bound Meccadam</b>					
Length as on 1-4-1989	13.150	59.551	406.162	187.071	665.934
Length added in 1989-90	(-) 4.800	(+) 3.500	(-) 48.978	(-) 3.837	(-) 54.115
Length as on 31-3-1990	8.350	63.051	357.184	183.234	611.819
<b>Others</b>					
Length as on 1-4-1989	1.400	23.881	649.487	1810.204	2484.972
Length added in 1989-90	(-)0.480	(-) 3.300	(-)20.911	(-)195.570	(-)220.261
Length as on 31-3-1990	0.920	20.581	628.576	1614.634	2264.711
<b>Total</b>					
Length as on 1-4-1989	2069.505	5981.715	8929.387	2854.482	19815.089
Length added in 1989-90	(-) 122.537	(-) 46.350	(+)168.883	(+)20.779	(+)20.775
Length as on 31-3-1990	1926.968	5935.365	9098.270	2875.261	19835.864
Total No. of bridges	..	..	..	..	1764
No. of major bridges	..	..	..	..	237
No. of culverts	..	..	..	..	42337
No. of unsafe bridges	..	..	..	..	197
No. of unsafe culverts	..	..	..	..	2664

M:B : The Public Works Department handed over 169 kms of road to M.H from Idukki, Muvattupuzha and Ernakulam Divisions and 16 kms of road to Kerala State Electricity Board from Idukki Division.

## APPENDIX 7.5

## Type-wise Length of Roads under Panchayats

(in kms.)

Sl. No. District	Black Topped and Metalled		Gravelled		Earthen		Total	
	As on 1-4-1989	As on 1-4-1990	As on 1-4-1989	As on 1-4-1990	As on 1-4-1989	As on 1-4-1990	As on 1-4-1989	As on 1-4-1990
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Thiruvananthapuram	642	680	2478	1961	6192	6993	9312	9634
2. Kollam	339	580	4923	4385	7920	8366	13182	13331
3. Pathanamthitta	79	83	2394	2194	4300	4083	6773	6360
4. Alappuzha	125	188	2983	3156	2001	2319	5109	5663
5. Kottayam	480	611	1340	1333	3734	4197	5554	6141
6. Idukki	77	100	517	365	4477	4634	5071	5099
7. Ernakulam	1335	1087	2113	2416	3669	3779	7117	7282
8. Thrissur	998	1187	4413	4240	4637	5723	10048	11150
9. Palakkad	861	1198	1146	874	3663	3414	5670	5486
10. Malappuram	440	522	1722	1722	5090	5091	7252	7335
11. Kozhikode	356	471	1698	2100	3430	3151	5484	5722
12. Wayanad	717	658	446	150	1727	1915	2890	2723
13. Kannur	387	381	2349	2510	4144	3945	6880	6836
14. Kasaragod	274	290	1934	1955	1937	1944	4145	4189
<b>Total</b>	<b>7110</b>	<b>8036</b>	<b>30456</b>	<b>29361</b>	<b>56921</b>	<b>59554</b>	<b>94487</b>	<b>96951</b>

Source: Directorate of Panchayats.

## APPENDIX 7.6

Number of Road Accidents in which Motor Vehicles were involved in Kerala - 1988-89 and 1989-90

Sl. No. Name of District	Number of Road Accidents		Number of Persons Injured		Number of Persons Killed		
	1988-89	1989-90	1988-89	1989-90	1988-89	1989-90	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Thiruvananthapuram City	813	985	835	868	68	77	
2. Thiruvananthapuram Rural	859	865	917	1052	105	115	
3. Kollam	1179	1403	1395	2126	113	132	
4. Pathanamthitta	559	633	671	1004	62	59	
5. Alappuzha	1161	1201	1338	1596	105	135	
6. Kottayam	1196	1199	1272	1543	129	136	
7. Idukki	327	352	795	844	57	47	
8. Ernakulam City	1046	1443	1009	1494	88	100	
9. Ernakulam Rural	979	1123	1392	1406	120	139	
10. Thrissur	1150	1260	1417	1972	217	224	
11. Palakkad	1265	1476	1789	2264	135	161	
12. Malappuram	1425	1788	2232	3273	106	169	
13. Kozhikode City	970	1307	1269	1666	62	74	
14. Kozhikode Rural	788	947	1124	1825	69	66	
15. Wayanad	424	450	648	597	35	30	
16. Kannur	520	970	1638	1709	95	96	
17. Kasaragod	272	327	357	519	38	54	
<b>Total</b>	<b>14933</b>	<b>17729</b>	<b>28098</b>	<b>25758</b>	<b>1604</b>	<b>1814</b>	

**APPENDIX 7.7**  
**Motor Vehicle Accidents in Kerala by Primary Cause of Accidents 1989-90**

Sl. No.	District	Fault of driver of motor vehicle	Fault of driver of vehicle other than motor vehicle	Fault of Cycl-ist	Fault of Ped-estrian	Fault of Passeng-ers	Defect in mechanical condition of motor vehicle	Defec- tive Road Sur- face	Bad Weath- er con- dition	Other causes not known	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Thiruvananthapuram City	740	..	4	..	1	11	..	..	229	985
2.	Thiruvananthapuram Rural	745	..	6	10	16	22	2	2	62	865
3.	Kollam	1350	..	37	16	..	..	..	..	..	1403
4.	Pathanamthitta	602	..	..	3	..	12	1	..	15	633
5.	Alappuzha	1180	..	1	4	3	2	1	..	10	1201
6.	Kottayam	1177	..	6	5	..	8	..	..	3	1199
7.	Idukki	311	..	..	..	..	35	2	..	4	352
8.	Ernakulam City	824	..	47	68	215	5	..	..	284	1443
9.	Ernakulam Rural	1082	..	1	12	4	3	..	..	21	1123
10.	Thrissur	1216	..	3	4	1	3	..	..	33	1260
11.	Palakkad	1456	..	..	10	3	..	..	..	7	1476
12.	Malappuram	1765	..	..	3	2	13	..	..	5	1788
13.	Kozhikode City	1158	..	39	60	..	6	..	..	844	1307
14.	Kozhikode Rural	920	..	..	8	7	8	2	..	2	947
15.	Wayanad	433	..	9	2	3	2	..	..	1	450
16.	Kannur	955	..	2	7	2	1	..	1	2	970
17.	Kasaragod	319	..	..	7	..	..	..	..	1	327
Total		16233	..	155	219	257	131	8	3	723	17729

**APPENDIX 7.8**

Number of Vehicles involved in the Road Accidents during 1989-90

Sl. No.	District	K.S. R.T.C	Other buses	Taxi Car	Motor Car	Autori- ckshaw	Jeep	Two wheel- ers	Miscella- neous ve- hicles	Class not known	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Thiruvananthapuram City	..	185	180	38	226	34	298	112	..	1073
2.	Thiruvananthapuram Rural	..	255	137	99	87	77	259	195	28	1137
3.	Kollam	..	244	272	70	163	43	292	357	1	1442
4.	Pathanamthitta	..	111	86	46	88	68	120	117	4	640
5.	Alappuzha	..	178	165	46	152	34	324	314	12	1225
6.	Kottayam	..	274	148	..	152	..	330	295	..	1199
7.	Idukki	..	70	42	..	53	57	49	151	..	422
8.	Cochin City	..	290	5	202	213	46	463	279	34	1532
9.	Ernakulam Rural	..	203	46	64	163	123	201	324	4	1128
10.	Thrissur	..	330	106	84	194	75	215	401	9	1414
11.	Palakkad	..	306	135	82	160	115	312	387	34	1531
12.	Malappuram	..	427	90	86	344	376	192	472	13	2000
13.	Kozhikode City	..	382	24	121	195	86	321	267	10	1406
14.	Kozhikode Rural	..	274	76	31	166	174	120	116	1	958
15.	Wayanad	..	69	14	10	62	168	73	69	1	466
16.	Kannur	..	222	82	20	206	95	98	260	7	970
17.	Kasaragod	..	59	52	8	81	21	35	77	2	335
Total		..	3879	1660	1007	2705	1592	3702	4173	140	18878

## APPENDIX 7.9

## Growth of Motor Vehicles in Kerala since 1975

Sl. No.	Type of Vehicles	1975	1980	1985	1986	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>1. Good Vehicles</b>									
	(i) Four Wheelers & above	15875	20128	36699	40398	45144	49779	50027	51530
	(ii) Three Wheeler including Tempos	..	993	4170	4927	6140	7609	8501	9576
<b>2. Buses</b>									
	(i) Stage carriages	7828	8705	12910	13497	13102	13741	14432	15056
	(ii) Contract carriages/Omni buses	..	842	2324	2652	3602	4380	4602	5234
<b>3. Cars and Station Wagons</b>									
	(i) Cars	44497	54381	75731	82222	89023	101731	109814	116676
	(ii) Station Wagons	..	196	507	664	682	777	855	849
	(iii) Taxi Car	11525	17780	28189	30201	32458	33856	36200	37638
	(iv) Jeep	5859	7023	12972	14721	17012	19893	22225	24351
<b>4. Three Wheelers</b>									
	(i) Autorickshaw	3125	7397	24383	30537	35838	44116	49396	58165
	(ii) Motorised Cycle rickshaw	..	38	54	55	58	59	59	62
<b>5. Two Wheelers</b>									
	(i) Motorised Cycles	..	58	73	73	73	75	72	70
	(ii) Scooters/Motor Cycles	25769	50943	111629	130992	159863	185349	213849	248374
<b>6. Tractor, Trailer Articulated</b>									
		2735	1864	2104	2236	2409	2509	2565	2661
<b>7. Tractors</b>									
		..	1892	3089	3268	3457	3657	3968	4115
<b>8. Tillers</b>									
		..	469	1118	1214	1379	1640	1788	1927
<b>9. Trailers</b>									
		..	260	416	441	498	541	559	580
<b>10. Others</b>									
		2507	1735	2891	3219	3572	4077	4431	4190
<b>Total</b>		<b>119720</b>	<b>174704</b>	<b>319259</b>	<b>361317</b>	<b>414310</b>	<b>473789</b>	<b>523343</b>	<b>581054</b>
<b>Percentage increase over the previous year</b>		<b>..</b>	<b>13.01</b>	<b>15.26</b>	<b>13.27</b>	<b>14.57</b>	<b>14.36</b>	<b>10.46</b>	<b>11.03</b>

## APPENDIX 7.10

Number of Motor Vehicles having Valid Registration as on 31-3-1990

Sl. No.	District	Goods Vehicles		Buses		Cars and Station Wagons				Three Wheelers	
		Four Wheelers & Above	Three Wheelers including Tempos	Stage Carriages	Contract carriages/ Omni bus	Cars	Station Wagons	Taxi-Cars	Jeeps	Auto-rickshaws	Motorised Cycle Rikshaw
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Thiruvananthapuram	3877	1539	222	1604	20487	107	2981	3143	7096	6
2.	Kollam	6211	173	731	438	12556	39	5669	1258	3081	9
3.	Pathanamthitta	4021	360	414	109	6428	50	2357	871	2921	3
4.	Alappuzha	2318	1040	533	403	7416	9	3180	401	3329	2
5.	Kottayam	4065	654	930	324	6133	..	2472	1893	3892	5
6.	Idukki	1938	34	356	93	2508	12	1958	1625	580	1
7.	Ernakulam	9078	3017	1555	540	18814	57	3670	2256	6229	17
8.	Thrissur	5224	454	1685	603	8676	21	5560	684	8249	18
9.	Palakkad	2661	53	853	340	5144	15	1751	885	2669	..
10.	Malappuram	3119	306	907	107	4767	6	2950	3329	4591	..
11.	Kozhikode	3719	1042	1201	280	15257	204	1761	3738	4476	..
12.	Wayanad	917	129	99	21	587	24	749	1453	764	..
13.	Kannur	3351	580	1313	274	5996	300	1955	1710	6611	1
14.	Kasaragod	1025	195	345	97	1899	3	625	1072	3677	..
15.	KSRTC (RTO Nos.)	6	..	3912	1	8	2	..	33	..	..
Total		51530	9576	15056	5234	116676	849	37638	24351	58165	62

## APPENDIX 7.10 (Continued ...)

Sl. No.	District	Two wheelers		Tractors Trailers Articulated	Trac-tors	Till-ers	Trail-ers	Oth-ers	Total	No. of Vehicles per 1 km. length of Public Works Roads (surfaced Roads)	No. of Vehicles per 1 km. length of Road including Panchayat Roads
		Moto-rised Cycles	Scooters/ Motor Cycles								
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1.	Thiruvananthapuram	..	45789	171	116	53	29	883	88103	54	38
2.	Kollam	9	23539	211	75	99	77	204	54379	35	26
3.	Pathanamthitta	..	10555	20	51	33	6	22	28221	22	20
4.	Alappuzha	3	17016	19	199	73	55	61	36057	41	34
5.	Kottayam	..	14575	102	272	255	44	177	35793	19	14
6.	Idukki	9	2269	150	146	46	24	122	11871	12	11
7.	Ernakulam	10	46553	513	396	493	132	875	94205	53	33
8.	Thrissur	33	30172	368	607	343	21	308	63026	42	23
9.	Palakkad	5	16113	399	1804	373	67	93	33225	26	13
10.	Malappuram	..	6034	96	281	36	45	150	26724	19	14
11.	Kozhikode	1	17874	55	101	50	48	776	50583	46	32
12.	Wayanad	..	2419	421	23	23	13	33	7675	15	7
13.	Kannur	..	11215	135	4	11	6	478	33940	31	23
14.	Kasaragod	..	4247	1	40	39	13	8	13286	21	14
15.	KSRTC (RTO Nos.)	..	4	..	..	..	..	..	3966	..	..
Total		70	248374	2661	4115	1927	580	4190	581054	..	..



## APPENDIX 7.11

District-wise and Category-wise distribution of Motor Vehicles in Kerala during 1989-90

Sl. No.	District	Goods Vehicles	Buses	Cars & Station Wagons including Taxis & Jeeps	Three Wheelers	Two Wheelers	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Thiruvananthapuram	5416 (8.86)	1826 (9.00)	26718 (14.88)	7102 (12.20)	45789 (18.43)	1252 (9.29)	88103 (15.16)
2.	Kollam	6384 (10.45)	1169 (5.76)	19522 (10.88)	3090 (5.31)	23548 (9.48)	666 (4.94)	54379 (9.36)
3.	Pathanamthitta	4381 (7.17)	523 (2.58)	9706 (5.41)	2924 (5.02)	10555 (4.25)	132 (0.98)	28221 (4.86)
4.	Alappuzha	3358 (5.50)	936 (4.61)	11006 (6.13)	3331 (5.72)	17019 (6.85)	407 (3.02)	36057 (6.21)
5.	Kottayam	4719 (7.72)	1254 (6.18)	10498 (5.85)	3897 (6.69)	14575 (5.87)	850 (6.31)	35793 (6.16)
6.	Idukki	1972 (3.23)	449 (2.21)	6103 (3.40)	581 (1.00)	2278 (0.92)	488 (3.62)	11871 (2.04)
7.	Ernakulam	12095 (19.79)	2095 (10.32)	24797 (13.81)	6246 (10.73)	46563 (18.74)	2409 (17.88)	94205 (16.21)
8.	Thrissur	5678 (9.29)	2288 (11.28)	14941 (8.32)	8267 (14.20)	30205 (12.16)	1647 (12.22)	63026 (10.85)
9.	Palakkad	2714 (4.44)	1193 (5.88)	7795 (4.34)	2669 (4.58)	16118 (6.49)	2736 (20.31)	33225 (5.72)
10.	Meleppuram	3425 (5.61)	1014 (5.00)	11052 (6.16)	4591 (7.89)	6034 (2.43)	608 (4.51)	26724 (4.60)
11.	Kozhikode	4761 (7.79)	1481 (7.30)	20960 (11.68)	4476 (7.69)	17875 (7.19)	1030 (7.65)	50583 (8.70)
12.	Wayanad	1046 (1.71)	120 (0.59)	2813 (1.57)	764 (1.31)	2419 (0.97)	513 (3.81)	7675 (1.32)
13.	Kannur	3931 (6.43)	1587 (7.82)	9961 (5.55)	6612 (11.35)	11215 (4.51)	634 (4.71)	33940 (5.84)
14.	Kasargod	1220 (2.00)	442 (2.18)	3599 (2.00)	3677 (6.31)	4247 (1.71)	101 (0.75)	13286 (2.29)
15.	KSRTC (RTO Nos.)	6 (0.01)	3913 (19.23)	43 (0.02)	..	4	..	3996 (0.68)
<b>Total</b>		<b>61106</b> <b>(100)</b>	<b>20290</b> <b>(100)</b>	<b>179514</b> <b>(100)</b>	<b>58227</b> <b>(100)</b>	<b>248444</b> <b>(100)</b>	<b>13473</b> <b>(100)</b>	<b>581054</b> <b>(100)</b>

## APPENDIX 7.12

Number of Vehicles newly registered in the State during the year 1989-90 (District-wise)

Sl. No.	District	Goods Vehicles		Buses		Cars and Station Wagons			Three Wheelers	Two Wheelers			
		Four wheelers & above	Three wheelers including Tempos	Stationer cars	Contractor cabs	Cars	Station Wagons	Taxis	Jeeps	Auto-rickshaws	Motorised Cycle rickshaws	Motorised Cycles	Scoter/Motor Cycles
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Thiruvananthapuram	197	190	14	175	1650	13	156	334	675	..	..	7149
2.	Kollam	204	23	10	23	459	..	..	91	615	..	..	2078
3.	Pathanamthitta	188	93	10	21	572	..	99	37	823	..	..	1980
4.	Alappuzha	157	61	2	44	475	..	72	28	720	..	..	3125
5.	Kottayam	153	21	34	9	440	..	68	95	227	..	..	2284
6.	Idukki	50	..	30	6	93	1	25	74	60	..	..	316
7.	Ernakulam	513	362	56	2	1161	..	280	203	1052	..	..	6148
8.	Thrissur	169	288	98	22	583	..	311	33	1641	..	..	3943
9.	Palakkad	124	..	36	18	255	..	2	42	304	..	..	1818
10.	Malappuram	188	146	57	6	330	..	..	310	1124	..	..	754
11.	Kozhikode	335	158	49	12	559	18	..	130	682	..	1	2643
12.	Wayanad	26	8	3	1	54	..	4	67	145	..	..	152
13.	Kannur	92	46	56	14	162	..	100	38	524	..	..	897
14.	Kasaragod	80	8	8	11	83	..	15	30	349	..	..	510
15.	KSRTC (RTO Nos.)	..	..	278	..	..	..	..	..	..	..	..	..
Total		2476	1404	741	364	6876	32	1132	1512	8941	..	1	33797

## APPENDIX 7.12 (continued ...)

Sl. No.	District	Tractor Articulated	Tractor Trailer	Tractors	Tillers	Trailors	Others	Total
(1)	(2)	(15)	(16)	(17)	(18)	(19)	(20)	(20)
1.	Thiruvananthapuram	13	..	3	..	31	10600	
2.	Kollam	2	1	33	..	6	3545	
3.	Pathanamthitta	4	2	2	2	2	3835	
4.	Alappuzha	2	4	10	19	6	4725	
5.	Kottayam	..	2	5	..	3	3341	
6.	Idukki	3	7	8	..	4	677	
7.	Ernakulam	20	49	73	..	85	10004	
8.	Thrissur	30	31	19	7	1	7176	
9.	Palakkad	8	68	17	3	1	2696	
10.	Malappuram	11	21	..	..	1	2948	
11.	Kozhikode	4	3	1	..	29	4624	
12.	Wayanad	3	3	10	2	2	480	
13.	Kannur	12	1	..	..	18	1960	
14.	Kasaragod	..	3	1	..	5	1103	
15.	KSRTC (RTO Nos.)	..	..	..	..	..	278	
Total		112	195	182	33	194	57992	

## APPENDIX 7.13

Kerala State Road Transport Corporation - Operational Statistics - 1989-90 .

Sl. No.	Name of Transport Unit	No. of Buses held as on 31-3-90	No. of schedules as on 31-3-90	No. of routes as on 31-3-90	Route distance (km.)	Gross Km. operated (lakhs)	Effective Km. operated (lakhs)	Passengers carried (lakhs)	Average carrying capacity per bus
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Parassia	59	54	155	6753	59.69	59.30	153.1	54.1
2.	Meyyattinkara	110	99	252	7589	94.74	94.52	323.2	84.6
3.	Poover	52	48	47	1340	44.99	42.91	182.2	54.0
4.	Vizhinjam	59	55	110	4135	50.21	49.82	165.8	54.9
5.	Kattakada	64	60	160	4467	44.50	44.31	188.2	52.9
6.	Thiruvananthapuram								
	Central	146	129	171	15863	142.18	142.14	227.2	53.0
7.	Pappanamcode	124	114	219	3659	69.01	68.66	436.5	49.6
8.	Thiruvananthapuram								
	City	176	160	580	4850	87.76	87.39	651.8	50.5
9.	Vikas Bhavan	82	78	274	4144	52.49	51.75	295.6	49.7
10.	Peroorkada	60	55	219	3416	34.17	33.99	249.0	49.5
11.	Nedumangad & Palode	114	100	265	9391	87.28	85.85	307.2	53.1
12.	Kilimanoor	45	41	207	6305	38.68	38.46	110.7	54.0
13.	Attingal	67	64	157	5101	63.55	62.91	189.7	55.7
14.	Kollam	97	97	153	6841	93.73	93.00	251.8	55.1
15.	Kotterakara	77	72	187	6317	65.49	64.97	246.4	54.2
16.	Punalur	48	42	139	4790	38.15	38.03	152.2	53.4
17.	Pathanamthitta	55	50	107	5988	52.06	51.63	113.1	54.2
18.	Adoor & Pandalam	40	36	125	5507	32.36	32.18	107.2	54.3
19.	Karunagappally	42	40	107	3462	39.44	39.33	153.0	54.4
20.	Kayankulam	60	57	96	4113	54.25	54.14	149.6	55.1
21.	Haripad	27	24	40	2255	25.54	25.08	71.3	55.9
22.	Mavelikara	25	22	58	3211	23.82	23.76	58.8	56.6
23.	Alappuzha	79	74	102	3721	74.74	74.29	217.0	54.9
24.	Sherthalei	68	64	148	6273	63.25	62.92	205.2	55.3
25.	Chengannur	60	54	158	5621	48.09	47.72	172.3	54.0
26.	Thiruvalla	54	50	132	4855	43.01	42.54	176.4	55.2
27.	Changanassery	55	52	91	4461	46.94	46.91	138.8	54.2
28.	Kottayam	89	84	170	10821	83.35	83.02	278.4	54.6
29.	Ponkunnam	28	24	22	3511	25.31	24.97	37.1	54.5
30.	Palai	49	47	77	5056	46.31	46.17	133.4	54.6
31.	Erattupetta	34	30	70	4153	29.12	28.70	78.3	54.7

**APPENDIX 7.13 (continued ...)**  
**Kerala State Road Transport Corporation - Operational Statistics - 1989-90**

Name of Transport Unit	No. of Buses held as on 31-3-90	No. of schedules as on 31-3-90	No. of routes as on 31-3-90	Route distance (km.)	Gross Km. operated (lakhs)	Effective Km. operated (lakhs)	Passengers carried (lakhs)	Average carrying capacity per bus	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
32. Vaikom	32	29	34	2014	30.97	30.68	68.8	55.0	
33. Moovattupuzha	48	43	62	3186	42.83	42.41	121.1	54.3	
34. Thodupuzha & Moolamattom	24+							55.1+	
	10	30	61	5744	35.69	35.55	68.1	56.3	
35. Kothamangalam & Moonnar	35	32	52	4844	35.30	34.96	57.3	54.2	
36. Ernakulam	56	55	101	6209	62.61	62.46	92.8	55.0	
37. Aluva & Angamali	80	68	116	3534	60.57	60.50	208.8	53.5	
38. North Parur	30	28	58	2287	26.23	26.08	81.0	54.8	
39. Perumbavoor	48	44	65	4253	45.42	45.36	132.9	55.1	
40. Chalakkudy & Irinjilakkuda	37+							54.6+	
	7	39	73	4530	39.91	39.60	98.2	53.7	
41. Mala	30	25	45	1184	29.60	29.35	86.4	54.7	
42. Thrissur & Amballoor	42+							54.9+	
	14	51	54	7317	71.47	71.23	125.0	54.6	
43. Puthukkad	13	12	16	538	12.12	12.10	35.3	54.9	
44. Guruvayur	49	43	37	5893	64.84	64.70	57.3	56.3	
45. Ponnani	24	22	18	2931	27.73	27.71	24.1	57.8	
46. Perinthalmanna	27	23	17	3543	26.54	26.37	31.6	55.6	
47. Palakkad, Chittoor & Vadakkancherry	66+							54.7+	
	15+							55.0+	
	15	80	69	9734	101.36	101.36	95.8	54.4	
48. Malappuram	35	31	21	3098	36.25	36.17	42.7	55.2	
49. Kozhikode	95	87	95	6691	84.20	84.14	166.1	55.1	
50. Thamarassery	26	24	68	2788	21.11	21.01	62.7	54.0	
51. Sultan Bathery & Kalpatta	88+	81+	145+	6333+			219.0+	57.4+	
	35	31	66	2260	94.17	93.78	21.1	53.5	
52. Kannur	83	74	80	7475	80.61	80.17	152.3	54.3	
53. Payyannur	40	35	43	2951	33.70	33.54	68.5	55.2	
54. Kasargod	26	22	21	2538	28.32	28.15	32.6	55.2	
55. Mananthavady	38	33	43	1607	26.99	26.98	59.0	53.9	
<b>Total</b>	<b>3313</b>	<b>3018</b>	<b>3878</b>	<b>173698</b>	<b>2872.95</b>	<b>2855.74</b>	<b>8405.7</b>	<b>54.8</b>	

**APPENDIX 7.14**  
**Kerala State Road Transport Corporation - Operational Ratios - 1989-90**

S1. No.	Name of Transport Unit	Average No. of buses held daily	Average km. run per day per bus	Percentage Vehicular utilisation	Average route length (kms)	Average distance travelled by a passenger (kms)	Average Earnings per passenger (paise)	Earnings per km. of buses operated (paise)	Earnings per Vehicle on road per day (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Perassala	58.9	311.4	88.5	37.0	16.2	183.4	474	1475
2.	Neyyattinkara	106.4	272.9	89.2	26.8	13.9	144.0	455	1241
3.	Poovar	51.5	283.6	80.5	25.7	10.0	104.8	445	1262
4.	Vizhinjam	58.2	292.0	80.5	58.8	12.8	140.1	466	1361
5.	Kattakkada	61.4	246.7	80.2	35.6	12.2	127.8	543	1339
6.	Thiruvananthapuram (Central)	133.5	368.6	79.1	84.4	28.3	355.7	568	2095
7.	Pappanaacode	117.8	173.6	91.9	12.1	8.0	79.0	502	872
8.	Thiruvananthapuram (City)	169.4	167.9	84.2	14.4	8.3	70.8	474	887
9.	Vikas Bhavan	81.6	206.8	84.0	15.1	8.2	78.1	446	922
10.	Peroorkada	59.2	186.4	84.5	15.6	7.0	65.3	478	891
11.	Nedumangad	109.0	251.6	85.8	32.4	13.5	136.6	473	1190
12.	Kilimanoor	44.3	292.0	81.4	33.7	16.0	177.6	471	1377
13.	Attingal	64.9	303.8	87.4	35.9	15.4	169.8	512	1556
14.	Kollam	99.2	307.7	83.5	35.7	17.8	214.0	580	1785
15.	Kotterakkara	78.2	268.5	84.8	29.0	12.9	141.1	535	1437
16.	Punalur	47.2	268.8	82.3	37.6	11.9	132.7	578	1554
17.	Pathanaathitta	56.4	312.7	78.8	48.1	21.1	255.2	559	1748
18.	Adoor	42.0	263.3	79.7	37.5	16.2	178.9	596	1561
19.	Karunagappally	42.8	298.7	84.3	48.6	14.6	147.5	574	1714
20.	Kayankulam	59.7	297.8	83.6	41.5	18.6	211.5	584	1737
21.	Marippad	24.4	326.4	86.3	28.6	19.6	220.4	627	2046
22.	Mavelikkara	22.9	343.1	82.9	47.9	20.9	253.6	593	2034
23.	Alappuzha	76.8	301.6	87.8	34.0	17.7	197.7	577	1741
24.	Sherthala	68.3	310.4	81.4	72.0	14.8	164.3	536	1664
25.	Chengannur	59.8	274.1	79.9	36.3	12.7	142.0	513	1405
26.	Thiruvalla	52.8	260.2	85.1	37.9	12.0	135.1	560	1458
27.	Changanassery	55.3	275.2	84.1	36.6	17.1	192.2	568	1565

**APPENDIX 7.14 (continued ...)**  
**Kerala State Road Transport Corporation - Operational Ratios - 1989-90**

S1. No.	Name of Transport Unit	Average No. of buses held daily	Average km. run per day per bus	Percentage Vehicular utilisation	Average route length (kms)	Average distance travelled by a passenger (kms)	Average Earnings per passenger (paise)	Earnings per km. of buses operated (paise)	Earnings per Vehicle on road per day (Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
28.	Kottayam	90.5	294.3	85.4	63.7	13.7	162.7	546	1600
29.	Ponkunnam	26.2	328.2	79.8	85.3	30.4	375.0	558	1830
30.	Palai	48.4	309.5	84.4	35.9	16.9	200.4	579	1793
31.	Erethupetta	31.6	281.9	88.3	49.4	20.9	247.4	675	1902
32.	Vaikom	31.6	308.2	86.3	77.7	21.5	247.9	556	1709
33.	Moovattupuzha	47.4	293.7	83.5	48.3	17.5	206.3	589	1730
34.	Thodupuzha	33.0	361.1	81.7	109.0	33.3	425.8	576	2080
35.	Kothamangalam	34.2	328.3	85.3	34.0	27.3	343.2	562	1845
	Eranakulam	56.5	370.9	81.7	74.9	32.4	408.5	607	2252
37.	Aluva	74.0	270.5	82.8	32.9	13.1	138.6	478	1294
38.	North Paravur	31.2	269.9	84.7	36.4	14.5	160.4	498	1344
39.	Perumbavoor	48.6	300.9	85.0	31.3	15.4	179.9	527	1586
40.	Chalakkudy	39.2	317.4	87.5	38.2	19.1	218.1	541	1717
41.	Mala	27.7	345.1	84.0	26.3	14.7	175.4	517	1783
42.	Thrissur	55.8	394.1	88.7	72.2	26.0	313.0	549	2163
43.	Puthukkad	13.2	285.8	87.9	35.3	17.6	200.1	584	1669
44.	Guruvayur	49.6	444.2	80.5	143.1	47.2	619.4	549	2439
45.	Ponnani	23.9	389.7	81.5	158.5	49.7	659.9	573	2233
46.	Perinthalmanna	25.4	334.4	85.2	178.8	34.6	443.1	531	1775
47.	Palakkad	84.5	375.2	85.3	167.2	44.2	572.8	542	2086
	Malappuram	34.3	325.2	88.9	113.5	33.7	427.0	504	1638
49.	Kozhikode	94.5	296.5	82.3	71.4	21.3	278.0	549	1627
50.	Thamarassery	25.3	278.8	81.5	25.0	15.1	167.0	498	1389
51.	Sulthan Bathery	85.2+	..	81.6+	53.7	16.9+	187.5+	438+	1619+
	& Kalpetta	32.2	..	72.8	..	15.5	157.3	433	388
52.	Kannur	79.2	300.0	92.4	82.0	20.5	247.7	470	1411
53.	Payyannur	36.7	294.2	85.1	63.8	19.7	232.3	475	1396
54.	Kasaragode	24.9	360.4	85.9	89.8	32.9	412.9	478	1721
55.	Nananthavady	36.3	260.9	78.1	22.7	17.5	202.9	444	1159
Total		3223.0	288.4	84.2	44.8	15.8	181.0	529	1531

## APPENDIX 7.15

Air Traffic (Indian Airlines) from Thiruvananthapuram-Kochi- 1988-89 and 1989-90

Sector	Originating Traffic				Terminating Traffic			
	1988-89		1989-90		1988-89		1989-90	
	Passe- nger (Nos.)	Freight (Tonnes)	Passe- nger (Nos.)	Freight (Tonnes)	Passe- nger (Nos.)	Freight (Tonnes)	Passe- nger (Nos.)	Freight (Tonnes)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cochin-Madras	18082	40.42	21017	48.51	18981	218.84	22804	190.83
Cochin-Bangalore	22198	34.99	28513	168.68	21642	53.74	24210	74.71
Cochin-Thiruvana- nthapuram	9591	218.55	6219	318.94	7303	449.27	4788	377.67
Cochin-Bombay	111594	602.58	92649	506.10	123204	352.29	103697	324.36
Cochin-Delhi	12234	28.05	10225	29.38	13266	135.35	11942	137.60
Cochin-Goa	6201	7.12	5342	5.31	5254	17.70	4169	22.47
<b>Sub-Total</b>	<b>179900</b>	<b>931.71</b>	<b>163965</b>	<b>1076.92</b>	<b>189650</b>	<b>1227.19</b>	<b>171610</b>	<b>1127.64</b>
Thiruvananthapuram- Hyderabad	1366	0.78	596	2.16	1864	1.35	970	1.27
Thiruvananthapuram- Goa	3209	0.78	1693	0.83	3042	10.52	1920	5.26
Thiruvananthapuram- Madras	22101	88.71	22158	80.93	24625	314.05	24301	243.96
Thiruvananthapuram- Bangalore	15111	10.99	13950	10.37	16408	67.27	14200	44.78
Thiruvananthapuram- Madurai	Nil	2.27	Nil	Nil	Nil	Nil	Nil	Nil
Thiruvananthapuram- Colombo	9224	1.61	6489	20.14	10018	11.40	9108	1.08
Thiruvananthapuram- Kale	15025	507.76	14369	526.52	13572	5.58	13816	7.68
Thiruvananthapuram- Bombay	73161	522.94	75531	700.09	79286	1407.88	82668	1365.92
Thiruvananthapuram- Delhi	9455	3.07	8023	14.12	8884	81.80	8109	61.26
<b>Sub-Total</b>	<b>148652</b>	<b>1138.91</b>	<b>142809</b>	<b>1355.16</b>	<b>157699</b>	<b>1899.85</b>	<b>155092</b>	<b>1731.21</b>
Calicut-Bombay	22182	8.21	34644	85.82	23241	43.23	39454	40.64
<b>Grand-Total</b>	<b>350734</b>	<b>2078.83</b>	<b>341418</b>	<b>2517.90</b>	<b>370590</b>	<b>3170.27</b>	<b>366156</b>	<b>2899.49</b>

## APPENDIX 7.16

## Number of Passports Issued by the Passport and Emigration Offices of Cochin and Calicut during 1989-90

Year & Month	No. of fresh Applications received			No. of Passports issued			No. of Emigration clearances granted	
	Cochin	Calicut	Total	Cochin	Calicut	Total	Cochin	Calicut
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989								
April	10506	6196	16702	10587	12550	23137	N.A	489
May	12003	6744	18747	15749	15002	30751	,,	516
June	10947	8880	19827	16050	18000	34050	,,	512
July	11907	10115	22022	19412	17471	36883	,,	672
August	13121	13135	26256	11538	10007	21545	,,	447
September	11577	11870	23447	10749	9091	19840	,,	593
October	16122	12336	28458	11091	10010	21101	,,	678
November	14024	10532	24556	11329	13175	24504	,,	614
December	10215	12850	23065	12388	12935	25323	,,	712
1990								
January	13021	13030	26051	14000	13206	27206	,,	893
February	14008	12450	26458	15006	8001	23007	,,	734
March	15936	14680	30616	15050	15001	30051	,,	614
Total	153387	132818	286205	162949	154449	317398	,,	7474

## APPENDIX 7.17

## Number of Ships that called at Cochin Port during 1988-89 &amp; 1989-90 and Net Registered Tonnage

Sl. No.	Type of Vessels	No. of Ships		% variation increase (+)/ decrease (-)	Net Registered Tonnage	
		1988-89	1989-90		1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Tankers	225	202	(-) 10.2	3609496	3173001
2.	Colliers	..	..	..	..	..
3.	Foodgrain Vessels	11	2	(-) 81.8	109166	12018
4.	Fertilisers	70	61	(-) 12.9	585847	511493
5.	Containers	195	258	(+) 32.3	781000	909810
6.	Others	279	293	(+) 0.5	976824	1161265
Total		780	816	(+) 4.6	6062333	5747587

Source: Administration Report of Cochin Port Trust 1989-90.



## APPENDIX 7.18.

Commodity-wise Cargo handled at the Intermediate and Minor Ports of Kerala during 1989-90  
(in Tonnes)

Sl. No.	Name of Port	Commodity	Imports			Exports			Grand Total
			Coastal	Foreign	Total	Coastal	Foreign	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Alappuzha	Rice	..	13602	13602	..	..	..	13602
		Timber	1	..	1	5133	63	5196	5197
		Cement	..	..	..	1598	..	1598	1598
2.	Kozhikode	Rice	..	16347	16347	1946	..	1946	18293
		Tiles & Bricks	..	..	..	9254	..	9254	9254
		Miscellaneous	3878	6379	10257	7865	891	8756	19013
	Total Kozhikode		3879	22726	26605	25796	954	26750	53355
3.	Neendakara	Ilmenite	..	..	..	..	83210	83210	83210
4.	Azhikkal	Timber	..	..	..	7699	..	7699	7699
5.	Other Ports		..	..	..	..	..	..	..
	Total		3879	36328	40207	33495	84164	117659	157866

Source: Directorate of Ports

## APPENDIX 7.19

Number and Tonnage of Steamers and Sailing Vessels which called at the Intermediate and Minor Ports of Kerala during 1989-90

Sl. No.	Name of Port	Coastal/ Foreign	Steamers		Sailing Vessels		Total No. of Vessels	Total Tonnage
			Number	Tonnage	Number	Tonnage		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Alleppey	C	..	..	..	..	..	..
		F	1	6500	..	..	1	6500
2.	Kozhikode	C	39	13630	235	29981	274	43611
		F	1	8302	1	200	2	8502
3.	Neendakara	C	..	..	..	..	..	..
		F	4	34839	..	..	4	34839
4.	Azhikkal	C	..	..	118	10442	118	10442
		F	..	..	..	..	..	..
5.	Kovalam/ Vizhinjam	C	17*	3129	..	..	17	3129
		F	..	..	..	..	..	..
6.	Other Ports	C	..	..	..	..	..	..
		F	..	..	..	..	..	..
	Total	C	56	16759	353	40423	409	57182
		F	6	49641	1	200	7	49841
	Grand Total		62	66400	354	40623	416	107023

\* Fishing Trawlers

Source: Directorate of Ports

## APPENDIX 7.20

Details of dredging operations conducted at the Intermediate and Minor Ports of Kerala - 1989-90

Sl. No.	Name of dredger	Capacity of dredger	Ports dredged	Quantity dredged		Dredging done for others		
				Time in hours	Quantity dredged (m <sup>3</sup> )	Agency	Quantity dredged (m <sup>3</sup> )	Amount valued (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	CSD Meena Kerala	600 m <sup>3</sup> /h	Cochin shipyard	169.00	No detailed measurement of dredging quantities have been made in most cases	Private dredging	..	In the absence of measured quantities, the value cannot be correctly assessed
			Beypore Port	153.00				
2.	CSD Neendakara	300 m <sup>3</sup> /h	Cochin Udyogamandal canal for Irrigation Department	75.00	The output of CSD Meena Kerala varies from 300 m <sup>3</sup> /h to 200 m <sup>3</sup> /h	Private dredging	..	The value of dredging one cubic metre with CSD Meena Kerala will be Rs.20/- and by CSD Neendakara will be Rs. 11/-
			Cochin Marine Corporation Ernakulam	151.00				
			Neendakara Cargo harbour	395.00				
			Ponnani Port	544.00				
3.	Grab Dredger	..	Cochin Udygamandal canal for Agriculture Department	79.00	..	Private dredging	..	..
			Cochin Shipyard	3.00				..
			Cochin Port Trust	36.00				..
			Neendakara Cargo harbour	108.00				..
			Ponnani Port	406.00				..
				632.00				
Total				2119.00				

Source: Directorate of Ports

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## APPENDIX 7.21

Number of Harbour Crafts registered at the Intermediate and Minor Ports of Kerala - 1989-90

Sl. No.	Name of Port	Cargo boats including barges	Canoes including boats	Mechanised fishing vessels	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Alappuzha	..	..	126	..	126
2.	Kozhikode	4	9	28	2	43
3.	Neendakara	..	..	24	..	24
4.	Azhikkal	5	..	..	..	5
5.	Badakara	..	..	..	..	..
6.	Kannur	..	..	19	..	19
7.	Kasaragode	..	51	10	..	61
8.	Kodungallur	..	..	221	..	221
9.	Kovalam/Vizhinjam	..	..	..	..	..
10.	Ponnani	..	..	18	..	18
11.	Thalassery	..	..	3	..	3
12.	Thiruvananthapuram	..	..	..	..	..
Total		9	60	449	2	520

Source: Directorate of Ports

## APPENDIX 7.22

Category-wise break-up of Revenue Collected at the Intermediate and Minor Ports at Kerala - 1989-90

Sl. No.	Name of Port	Port dues	Export/Import dues	Tug hire charges	Pilotage fees	Miscellaneous Ground rent, wharfed rent etc.	Registration and other fees	Private dredging charges	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Alappuzha	4241	27206	17224	..	285403	26815	..	360889
2.	Kozhikode	15177	109111	185308	4596	428888	14073	..	757157
3.	Neendakara	14817	166780	1049104	..	721376	97507	..	2049584
4.	Azhikkal	10578	43274	..	..	36846	369	..	91067
5.	Badagara	..	..	..	..	27916	..	..	27916
6.	Kannur	..	..	..	..	4800	5615	..	10415
7.	Kasaragode	..	..	..	..	24152	5850	..	30002
8.	Kodungalore	..	..	..	..	..	50533	..	50533
9.	Kovalam/Vizhinjam	3965	..	..	..	264	..	..	4229
10.	Ponnani	..	..	..	..	13565	1105	..	14670
11.	Thalassery	..	..	..	..	11320	1160	..	12480
12.	Thiruvananthapuram	..	..	..	..	22617	..	..	22617
13.	Kollam (Included under Neendakara Port)	..	..	..	..	..	..	..	..
14.	Directorate of Ports	..	..	..	..	57635	..	1593503	1651138
Total		48778	346371	1251636	4596	1634782	203027	1593503	5082693

Directorate of Ports

## APPENDIX 7.23

## Name of Speed Post Centres

Inland				International	
Sl.No.	Name	Sl.No.	Name		
(1)	(2)	(3)	(4)	(5)	(6)
1.	Agarthala	39.	Patna	1.	Australia
2.	Agra	40.	Poncicherry	2.	Austria
3.	Ahmedabad	41.	Pune	3.	Bahrain
4.	Aluva	42.	Kollam	4.	Bangladesh
5.	Allahabad	43.	Raipur	5.	Belgium
6.	Bangalore	44.	Ranchi	6.	Egypt
7.	Bhopal	45.	Salem	7.	France
8.	Bhuvaneswar	46.	Shillong	8.	Germany
9.	Bombay	47.	Shimla	9.	Greece
10.	Calcutta	48.	Silchar	10.	Hongkong
11.	Chandigarh	49.	Srinagar	11.	Iraq
12.	Cochin	50.	Surat	12.	Ireland
13.	Coimbatore	51.	Tirupati	13.	Japan
14.	Cuttack	52.	Trichi	14.	Luksumburg
15.	Dhanbad	53.	Thiruvananthapuram	15.	Macau
16.	Delhi	54.	Vadodara	16.	Mali
17.	Gauhati	55.	Varanasi	17.	Netherlands
18.	Goa	56.	Vijayawada	18.	Norway
19.	Gorakpur	57.	Visakhapatnam	19.	Oman
20.	Gwalior			20.	Pakistan
21.	Hyderabad			21.	Portugal
22.	Imphal			22.	China
23.	Indore			23.	Quatar
24.	Jaipur			24.	Republic of Korea
25.	Jammu			25.	Ruwanda
26.	Jamshedpur			26.	Senigal
27.	Jallundhar			27.	Singapur
28.	Kanchipuram			28.	Spain
29.	Kanpur			29.	Sreelanka
30.	Ludhiana			30.	Sweedan
31.	Lucknow			31.	Switzerland
32.	Madras			32.	Thailand
33.	Madurai			33.	Tunessia
34.	Mangalore			34.	Turkey
35.	Meerut			35.	U.A.E.
36.	Moradabad			36.	U.K.
37.	Mysore			37.	U.S.A.
38.	Nagpur			38.	U.S.S.R.

## APPENDIX 7.24

## Category-wise Offices in Postal and Other Postal Services

Category of Offices	As on 1st April	
	1989	1990
(1)	(2)	(3)
<b>(a) Postal Services</b>		
1. Head Post Office	50	50
2. Sub Post Offices		
(i) Departmental	1417	1416
(ii) Extra Departmental	554	555
3. Branch Offices	2761	2840
<b>Total (a)</b>	<b>4782<sup>a</sup></b>	<b>4861<sup>a</sup></b>
<b>(b) Speed Post Centres</b>		
	4	4
<b>(c) Other Postal Services</b>		
1. Railway Mail Service Offices		
(i) Head record office	3	3
(ii) Sub record office	23	23
(iii) Sorting Mail Office	31	29
(iv) Transit Mail Office	11	9
(v) R.M.S. sections	18	18
(vi) Press sorting office	3	2
(vii) Parcel sorting office	3	3
<b>Total (b)</b>	<b>92</b>	<b>87</b>
2. Mail Motor Service		
Division Unit	5	1
3. Central Stamp Depot		
	1	1
<b>Total (c)</b>	<b>98</b>	<b>89</b>

Note : <sup>a</sup>Including the 14 Post Offices in Mahe & Lakshadweep  
Chief Post Master General, Kerala Circle

## APPENDIX 7.25

## Growth of Postal System in Kerala During the Last Ten Years

Category	As on 1st April									
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Postal Services</i>										
1. Head Post Offices	51	51	51	51	51	50	50	50	50	50
2. Sub Offices (Departmental and Extra-Departmental)	2085	2110	2126	2187	2026	2027	1971	1971	1971	1971
3. Branch Offices together with Speed Post Centres	2440	2486	2501	2511	2674	2671	2727	2761	2761	2840
<b>Total</b>	<b>4576</b>	<b>4667</b>	<b>4678</b>	<b>4769</b>	<b>4751</b>	<b>4748</b>	<b>4748</b>	<b>4782</b>	<b>4782</b>	<b>4861</b>

Source: Chief Post Master General, Kerala Circle

## APPENDIX 7.26

## District-wise details of Area and Population served by One post office during 1989-90

Sl. No.	Name of District/ Island	Number of post offices	Area (sq.kms.)	Area served by each post office (sq. kms.)	Population* (in 1000s)	Population served by each post office
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	406	2192	5.399	3048	7507
2.	Kollam	332	2579	7.768	2575	7756
3.	Pathanamthitta	278	2731	9.824	1301	4680
4.	Alappuzha	292	1256	4.301	2191	7503
5.	Kottayam	418	2204	5.273	1993	4768
6.	Idukki	286	4998	17.476	1138	3979
7.	Ernakulam	378	2408	6.370	2977	7876
8.	Thrissur	486	3032	6.239	2864	5893
9.	Palakkad	440	4680	10.182	2400	5455
10.	Malappuram	403	3548	8.804	2821	7000
11.	Kozhikode	403	2345	5.819	2636	6441
12.	Wayanad	150	2132	14.213	651	4340
13.	Kasaragode	212	1961	9.250	1025	4835
14.	Lakshadweep	10	30	3.000	51	5100
15.	Mahe	4	9	2.250	34	8500
Kerala - Including Lakshadweep & Mahe		4861	38902	8.003	29972	6166
Kerala - Excluding Lakshadweep & Mahe		4847	38863	8.018	29887	6166

Note : \*Projected population for the year 1990 as per Statistics for Planning 1988, Department of Economics and Statistics

Source: Chief Post Master General, Kerala Circle

## APPENDIX 7.27

Division-wise Post Offices in Different Categories as on 1-4-1990

Sl. No.	Name of Division	Head Offices	Sub Offices		Branch Offices	Mobile Post Offices	Total
			Depart- mental	Extra Deptl.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Thiruvananthapuram South	2	65	16	129	..	212
2.	Thiruvananthapuram North	2	74	8	110	..	194
3.	Kollam	3	83	33	109	..	228
4.	Pathanamthitta	3	69	55	159	..	286
5.	Kovelikkara	2	49	24	43	..	118
6.	Alappuzha	2	66	31	65	..	124
7.	Thiruvalla	2	62	32	59	..	155
8.	Changanachery	2	48	12	102	..	164
9.	Kottayam	3	78	44	129	..	254
10.	Idukki	2	52	13	219	..	286
11.	Ernakulam	2	77 <sup>a</sup>	8	58	..	145
12.	Aluva	3	67	34	139	..	243
13.	Irinjalakuda	2	62	23	103	..	190
14.	Thrissur	3	103	33	157	..	296
15.	Palakkad	3	86	21	116	..	226
16.	Ottappalam	1	52	23	138	..	226
17.	Manjeri	2	44	21	167	..	214
18.	Tirur	2	51	23	93	..	169
19.	Kozhikode	2	74	14	202	..	292
20.	Badagara	2	41	37	132	..	212
21.	Thalassery	1	43	8	140	..	192
22.	Kannur	2	61	25	127	..	215
23.	Kasaragode	2	29	17	164	..	212
Total		50	1416	555	2840	..	4861 <sup>b</sup>

Note : <sup>a</sup>Including Cochin Foreign Post

<sup>b</sup>The total includes 10 post offices in Lakshadweep and 4 post offices in Mahe as Lakshadweep comes under Ernakulam division and Mahe comes under Badagara division.

Source : Chief Post Master General, Kerala Circle

## APPENDIX 7.28

Statistics relating to Telephone system in Kerala - 1989 and 1990 (on 31st March)

Sl. No.	Secondary Switching Area (SSA)	No. of exchanges		Total equipped capacity		Total working connections		Total applications in the wait list		Public Call Offices	
		1989	1990	1989	1990	1989	1990	1989	1990	1989	1990
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Alappuzha	41	39	12465	13479	11893	13057	9339	6976	237	254
2.	Kozhikode	98	101	33220	36691	28699	32986	19081	24438	465	495
3.	Kannur	90	91	24570	29464	23013	27122	15329	20083	322	376
4.	Ernakulam	118	121	48348	53927	45277	50684	20917	24881	469	649
5.	Kottayam	56	58	21125	22310	20119	21397	12189	15785	292	400
6.	Palakkad	61	61	11725	13570	11186	12894	4411	4458	304	330
7.	Pathanamthitta	40	36	7720	8470	7341	8229	6028	7549	167	189
8.	Kollam	50	50	14870	15370	13884	14710	6441	8101	223	286
9.	Thrissur	45	46	23550	24871	22088	23761	11892	15001	284	379
10.	Thiruvananthapuram	33	33	26784	28038	25384	26602	12396	17578	344	436
Total		632	636	224377	246190	208884	231442	114023	144850	3107	3794
			(0.63)		(9.72)		(10.78)		(7.04)		(22.11)*

Note : \*The figures in brackets indicate percentage of increase over the previous year.  
Source: Directory of Telecom Services 1989 and 1990

## APPENDIX 7.29

Income and Expenditure of the Kerala Tourism Development Corporation  
and Accommodation details in the Hotels of KTDC - 1989-90

Sl. No.	Name of Hotel Units	No. of beds available	Total no. of visitors		Occupancy Ratio	Annual income (Rs. in lakhs)	Annual Expenditure (Rs. in lakhs)		
			Domestic	Foreigners			Adminis- tration	Opera- tion	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Mascot Hotel	84	3173	1543	31.57	52.34	32.53	22.91	55.44
2.	Hotel Chaithram	172	20745	889	62.79	73.07	27.33	27.30	54.63
3.	Hotel Samudra	100	5401	3416	25.60	21.85	13.00	3.61	16.61
4.	Aranya Nivas	64	4521	6701	69.48	49.26	21.88	16.48	36.36
5.	Periyar House	77	12805	3104	62.56	15.21	8.81	3.92	12.73
6.	Bolgatty Palace Hotel	24	925	1446	55.92	16.68	9.77	6.51	16.28
7.	Guruvayoor Tourist Bungalow	90	15030	..	46.38	8.58	7.31	3.53	10.84
8.	Mangalya, Guruvayoor	40	..	..	44.15	25.38	5.17	17.63	22.80
9.	Garden House	34	4706	18	36.21	6.71	4.18	1.56	5.74
10.	Kumarakon Tourist Complex	6	882	47	25.60	3.14	2.46	0.96	3.42
Total		691	68188	17164	..	272.92	132.44	102.41	234.85



## APPENDIX 8.1

Exports through the Port of Kochi: Commodity - wise 1989 -90

Commodity	Unit	Quantity	Value in Rs.
(1)	(2)	(3)	(4)
Coir Fibre	Qtls	1183	727764
" Yarn	"	112337	117389884
" Ropes	"	575	715077
" Mats & Mattings	"	134965	262343646
" Brands & Fenders	"	492	815287
" Other Products	"	126	140542
" Peat	"	175	21954
Coir/Rubber/Foam Mattress	"	263	1813845
Aloe Fibre	Kgs	49	240
" Yarn	"	26050	810421
" Mats & Mattings	"	6626	187771
Jute Yarn	"	730	63939
" Floor covering	"	6	504
" Sack Bander	"	200	39289
" Mats & Mattings	"	14655	703041
" Bags	"	203	38319
Foam/Spunch Shoulder Pads	"	50	15931
Sisal Floor Coverings	"	22670	1255871
Vine Baskets	"	87649	2039601
Grass Mats & Mattings	"	10463	179643
Black Pepper	Qtls	319222	1451149975
Green Pepper	"	7398	29334751
Pepper Pinheads etc.	"	3646	3666719
Ginger	"	41014	91485506
Ginger Spent etc.	"	2278	1134486
Turmeric	"	25684	31461500
Turmeric spent etc.	"	588	134011
Red Chillies	"	6502	16931330
Tamarind	"	721	1080799
Ottupuli/Kudampuli	"	15	48150
Kappurkatchli	"	70	165447
Kolinjan/Galingal	"	1084	794405
Cardamoms	"	334	9139081
Cashew Kernals (Plain)	"	313104	3316961651
Cashew Kernals (Roasted & Salted)	"	311	4592447
Coffee	"	537847	1284328824
Coffee Husk etc.	"	21	5004
Tea	"	113977	392343480
Tea Aroma	"	10	77930
Cocoa Beans	"	7799	14703967
Cocoa Butter	"	770	3331757
Cocoa Powder	"	10000	1625000
Frozen Shrimps	"	271239	1704715946
" Squid & Cuttle Fish	"	136866	421649784
" Lobster	"	7025	114258428
Other Sea Foods	"	25835	53286157
Beef & Buffalo Meat	"	21216	28373674

## APPENDIX 8.1 (continued ...)

(1)	(2)	(3)	(4)
*Shrimp Powder	Kgs	5	1938
Canned Shrimps	"	21672	1811899
Dried Shrimps	"	27954	10400695
" Sharkfins	"	27954	1273530
" Bombay Duck	"	4108	134826
" Other Sea Foods	"	10000	4652778
Pickles & Curry Powders	Qtls	189562	18598312
Pappadams	"	777	1675470
Curry Leaves	"	3	20926
Food Stuffs	"	2300	5798971
Fruits & Products	"	6113	5931327
Vegetables	"	177	52834
Onions	"	2000	330000
Almond Syrup	Kgs	26909	746308
Reseins	"	2000	400000
Annatto Seeds	"	4950	77561
*Fenugreek Seeds	"	8000	103000
*Dill Seeds (Gingelly)	"	2250	28260
Fennel Seeds	"	12500	261454
Corriander Seeds	"	28584	304412
Celery Seeds	"	24900	298157
Cover Crop Seeds	"	128265	2529261
Cummin Seeds	"	18150	294361
Ragi	"	500	4300
Sabudan (Sago)	"	7550	71018
Eggs	"	2835	47960
Toys & Sports Goods	"	10	8378
Musical Instruments	"	30	1500
Rice	M.T.	1113	8319625
" Flaks	"	2	30567
" Husks	"	38	87524
" Husk Ash	"	20	26065
Dicalcium Phosphate	"	4262	16386163
Compound Glue	"	**	4373
Ossein	"	3544	72424515
Cotton Piece Goods	Sq.Mts	13325520	233680974
Cotton/Polyster Yarn/Thread	Kgs	4019852	315814993
Cotton Made ups	"	8321347	938005819
Cotton Dhurries/Floor Coverings	"	501751	27752890
Cotton Napkins	"	58971	4745262
Cotton Waste	Qtls	5025	8510469
Raw Cotton	"	99	1124240
Cotton Comber	"	380	657715
Silk/Polyster Sarees	Kgs	1838	555319
Silk Fabrics	"	5318	2182574
Polyster/Spun Dhoties	"	38283	6884294
Cotton Carded Ring Spun	"	83048	3589078
*Rayon Fabrics	"	1492	140490
Nylon Fabrics	"	3282	258700
Nylon Fishing Net	"	46468	4601100
Polythylene Grannels	"	10	400

## APPENDIX 8.1 (continued ...)

(1)	(2)	(3)	(4)
Poly propalane Bags/Sacks	"	51095	1233985
Human Hair	"	2000	906978
Buffalo Hair	Qtls	226	143102
Goat Hair	"	7506	4981650
Wollen Druggets	Kgs	1509	236071
Wollen Shawls/Muflers.	"	699	82222
Wool Green Clean Cloth	"	270	40950
Absorbant/Surgical Cotton	"	39260	1329699
Cotton Bandages	"	528	43000
Cotton Fancy Rugs	"	75	2471
" Rug Dolls	"	267	164092
" Hand Woven Crocht	"	602	142446
" Laces	"	27	228162
Khadi Yarn	"	100	20400
Rubber (Raw & Mfd.)	Qtls	625	951061
Tyre Tubes & Flaps	"	46701	139218144
Tyre Retreading Raw Materials	"	2467	2750937
Rubber Car Mats	Kgs	20393	441263
" Battery Containers	"	38853	378285
" Mound	"	1943	139933
" Glouces (Latex)	"	1501	87378
Envelope Fully made of Rubber	"	700	33656
Rubberised Canvas Block Pickers	"	24	9226
Rubber Stamp Mound (PVC)	"	168	20470
Plastic & Allied Products	"	8645	363294
Plastic Injection Moulding Machine	"	78000	6885000
Fire Works	"	12484	1083701
Incense Sticks etc.	"	13607	524291
Toilet Soap	"	233702	9189461
Beedies	"	19239	1666496
Beedi Leaves	"	11921	661373
Oleoresin of Goods	"	451957	151300389
L.G.Oil	"	133151	24279314
Chaulmoogra Oil	"	440	24065
Berry Berry Oil	"	25	32697
Clove Oil	"	6507	681480
Sandalwood Oil	"	14133	44938836
Eucaliptus Oil	"	64480	5327235
Fish Oil	"	36360	463708
Vettivert Oil	"	200	134451
Palamaroosa Oil	"	1620	543318
Other Oil	"	31146	19477501
Aromatic Chemical	"	1800	113587
Perfumary Compund	"	11982	8562758
Peppermint	"	5034	1141269
Asafoetida	"	176	12119
Spices Concentrate	"	3	6096
Mimossa Concentrate	"	2	3673
Olibanam Resindid	"	738	200156
Propronocol Hydro Chloride	"	100	70796
Ammonium Per Chloride	"	3000	298384
Sulphate	"	1420	1813307

## APPENDIX 8.1 (continued ...)

(1)	(2)	(3)	(4)
Chloropropamide	"	11750	2026764
Tobultomide	"	5500	753141
Struchimine Alkaloids	"	852	416710
Samarium Concentrate	"	3050	5302021
Cerrium Hydrate	"	20000	650686
Cerrium Oxide	"	25	200
Arrowroot Powder	"	3004	129359
Annatto (Bixim) Powder	"	243	28563
Red sandal Powder/Extract	"	5920	1455304
Capsicum Powder/Extract	"	660	66648
Centronellol Powder/Extract	"	650	98139
Myrabalam Powder/Extract	"	129100	1995494
Dry Flowers	"	33112	1137552
Granite	"	911	17274
Polished Marbles	"	184	2335
Rare Earth Products	M.T.	569	15582635
Dune Sand	"	2	450
China Clay	"	127	431575
Mineral Ore	"	800	8284393
Monozite	"	900	5542596
Titanium Dioxide	"	72	3503025
Ilminite/Silminite Sand	M.T.	145	431677
Dry Batteries	"	407	12046808
Insecticides	"	98	10815517
Welding Electrodes	"	10	110896
Electroast Refractories	"	8	338190
Petroleum Products (Naphtha)	"	34059	72056795
Cashew Shell liquid	"	1888	14129680
Standard Aluminium	"	**	54000
Aluminium Products	"	43	2109208
Abrasive Products	"	427	3738609
Steel Wire Ropes	"	1034	11880165
Stainless Steel Castings	"	36	2636528
Steel Forgings	"	10	326976
Carbon Steel Flanges	"	279	3549801
Steel Leaf Springs	"	142	1774798
Steel Empty Drums	"	12	24000
Metal Mfrs.	Qtls	7819	22050938
Bimetal Products	"	85	1023182
Machinery	"	10881	148814244
Piston with Rings	Kgs	52303	7703181
Cashew nuts Processors	"	7618	603107
Dye Cutting Knives	"	89	8077
Wall Clock & Parts	"	11964	858424
Sewing Needles/Pins etc.	"	7405	2123026
Plate Freezer with Accessories	"	6210	551950
Brake Linings	"	4645	185601
Jewellery Mfg. Machine	"	1000	68458
Weavingloom Accessories	"	8673	1387965
Coffee Seed Roaster	"	250	29185
Facsimile Equipments	"	10	64994
Table Instrumental X-Ray Equipments	"	100	258634

## APPENDIX 8.1 (continued ...)

(1)	(2)	(3)	(4)
Sanitary Equipments	"	42332	2156522 1/2
Deckle Slides (HPC Products)	"	40	66125
Spart Plug Tester/Cleaner	"	12	24000
Analysar of Air Pre-heater	"	2	87801
Radiator Core	"	270	25843
Industrial Valves	"	11247	365000
Motor Vehicles	Nos	2	148000
Motor Cycle (Complete Set)	Kgs	779	105178
Two Wheaeer Tipped Trailors	"	21210	663220
Motor Cycle Pump	"	1469	464509
Watthour Meter	"	2	48573
Laboratory Equipments	"	2723	928677
Steel Valve Disces (Airless)	"	2120	169777
Top Press Felt (Machine Clothing)	"	239	239034
Metal Gate(Frong/Rear etc.)	"	800	65188
Steel Articles of I.D.E.A.S.	"	57	1775
Stainless Steel Socket/Thread etc.	"	695	134059
Garcen Yang Lacer (Ophthalmic)	Nos	1	468569
Precision Tools	Kgs	160	435853
Forged Iron Nails	"	3000	90000
Stone & Metal Tools	"	6	16500
Stone Toilet Drains	"	535	41500
Brass/Copper/Bell Metal Artware	"	1805	244358
Electrical Goods etc.	"	12604	1025231
Transformers	"	6800	306600
Electronic Goods etc.	"	45150	4774899
Colour Television Receivers	"	1050	182298
Telescopic Antenna	"	922	209961
Helicopter Parts etc.	Kgs	4	850132
Fire Works	"	12484	1083701
Copper Cable Conductors	M.T.	460	29247168
Transpersion Tank with Sludge	"	105	524729
Marrine Containers	"	1312	19810623
Wood Veeneers	Kgs	700879	49416382
Sandalwood	"	16100	1775057
Rosewood Products	M.T.	501	14388579
Other wood Products	"	33	1134298
Hand carved Book Marks	Kgs	184	925000
Wooden Musical Instrumental Parts	"	623748	36070514

## APPENDIX 8.1 (continued ...)

(1)	(2)	(3)	(4)
Handicrafts & Curios etc.	"	188639	12925040
Hookas	"	2326	332916
Wooden Mouldings	"	24768	363888
Wooden/Cane Walking Sticks	"	4509	409828
" Furniture & Building Materials	"	9618	658986
Bamboo Woven Lamp Shades	"	156	45900
Palmyra	Qtls	1035	2159266
Plywood etc.	"	956	2925944
Hardboard etc.	"	13144	9815464
Hides & Skins	Kgs	17655	3028193
Foot Wears	"	450	33567
Other Leather Products	"	1089	313699
Christmas Stars	Dozs	1300	151843
Corrugated Cartons	Kgs	1045	141686
Books & Stationery	"	15288	2464244
Consumer Pack	"	16000	320983
Insulation Paper Board	"	2150	46727
Photo Colour Film	Mtrs	154	1933
Silcon Diffused chips	Nos	100000	47731
Ayurvedic Medicines	Kgs	12533	569923
Country Drugs	Qtls	10182	4265792
Sandal wood Spent/Dust	"	4213	2520201
House hold Utensils	Kgs	5100	24822
Kitchen Knife with Handles	"	329	23265
Mineral Water	"	1800	633
Clay Jars	"	210	19900
Ceramic Jars	"	5035	44850
Clay Pots (Kalam & Chetty)	"	11711	121740
Tiles & Bricks	"	54631	61855
Procelien Vessels	"	475	22483
Sundry Items	--	--	272
Total (Rs.)			121,14,50,9219

Source: Indian Chamber of Commerce and Industry, Cochin.

## APPENDIX 8.2

## Abstract of Imports in to the Port of Kochi: Commodity - wise 1989-90

Commodity	Units	Quantity	Value in Rs.
(1)	(2)	(3)	(4)
Books & Printed Matter	-	-	927742
Chemical & Chemical Preparations	-	-	72445554
Cotton, Raw	Qtls	16074	40482626
Drugs & Medicines	-	-	1709946
Electronic appliances, Equipments & Components	-	-	31227896
Fruits & Vegetables-Raw Cashew nuts	T	8253	230412666
Glass & Glassware	-	-	1882212
Grains & Rice,	T	25265	93847530
Wheat	"	17841	110354229
Gums & Resins	Qtls	1006	2588119
Hardware & Cutlery	-	-	3142366
Instruments, Apparatus appliances	-	-	87393494
Leathers dried	Qtls	15	666391
Liquors	Ltrs	15746	470405
Liquid Ammonia in Bulk	T	85848	163124281
Machinery & Parts	-	-	448947238
Manure, unenumerated	T	122529	292826338
Metals, Mineral & Ores, Unenumerated	Qtls	318573	413607644
Nylon Tyre Yarn	"	3636	21150450
Oil:			
Cinnamon Oil	Kgs	3261	415065
Palm Oil	Qtls	4100	3449403
Pauchouli Oil	Kgs	259	49709
Soyabean Oil	Qtls	1949	2786080
Other Vegetable Oil	"	19554	31579193
Paints & Coloures	-	-	12868992
Paper & Paste board	Qtls	197802	229190474
Paper & Waste paper	T	4537	16255222
Phosphate in bulk	"	238463	303436822
Phosphoric acid in bulk	"	101984	401909028
Poly Thylene/Plastic materials & mfrs	-	-	9555753
Provisions & Oilmanstores	Qtls	410574	188724757
Refractory materials	-	-	203653
Rubber Manufactures	-	-	3111048
Rubber, Raw - Natural	Kgs	3334816	528156267
Rubber Rubber latex, synthetic	Qtls	336522	83341417
Seeds, unenumerated	"	778	3746783
Spices	Qtls	312	1170700
Sulphur in bulk	T	213238	476758319
Sulphur in packages	Qtls	494	963234
Textile fibers	"	1666	5534794
Textile Manufactured	-	-	364806
Textile yarn & Threads	Kgs	260701	17990482
Wood pulp	T	5805	41972916
Wood Manufactures	-	-	96425
Zinc callots, ingots, etc	Qtls	4905	12832067
Zinc concentrate in bulk	T	11289	126061888
Sundries	-	-	382480859
(Rs.)			442,68,72,642

Indian Chamber of Commerce and Industry, Cochin.

## APPENDIX 8.3

Commodity-wise Distribution of Imports during the past 10 years

(In tonnes)

Sl. No.	Commodities	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Rice & Paddy	..	..	..	58958	48804	5265	11	4000	66630	25221
2	Other Grains Including pulses & flour	14702	105250	91274	46951	..	..	329	1494	117036	17660
3	Cashewnuts	6976	16135	886	17736	9813	6959	26529	30499	21847	21060
4	Machinery	8506	5933	4283	6879	11842	4369	3616	8490	7688	5813
5	Iron & Steel	16935	19966	57257	50401	8438	3511	5369	17059	6490	14959
6	Tin Plate	1001	1393	980	959	773	182	524	767	391	245
7	Motor Vehicles & Parts	111	178	200	470	875	745	710	445	170	85
8	Chemical & Chemical preparations	909	2854	1187	10734	17315	1671	1409	6789	7796	2656
9.	Oil Seeds Including Copra & Ground nuts	56	111	111	3	381	..	..	6011	319	1400
10	Drugs & Medicine	639	49	26	56	5	..	..	..	..	189
11	Paper, Old Newspaper & stationary	31500	44684	1359	16217	32126	29438	21445	5807	21957	18155
12	Cotton Raw & Waste	..	1222	..	..	..	517	..	289	5094	700
13	Oilman Stores, Provision	517	..	..	..	..	334	..	88	0	228
14	Sulphur	121262	158230	146381	114245	178646	175830	190570	191164	221184	209258
15	Rock Phosphate	328735	223979	263682	206833	232376	193249	223030	294597	163956	270363
16	Fertilizers	154515	101475	74768	81842	146675	221328	151916	110567	138766	209005
17	Liquid Ammonia	56701	47026	59269	100285	110406	92355	147705	141497	136635	97574
18	Phosphoric Acid	..	..	..	..	115861	86263	172381	128751	163919	103229
19	Salt	1	..	..	..	..	..	..	..	..	..
20	Zinc Concentrate	11114	10999	24753	16468	17001	23066	38605	21940	35231	11313
21	Soda	..	2	..	..	..	3	..	..	231	..
22	Calcined Bauxite	9129	13166	13554	7000	13710	5895	6091	12809	2103	9726
23	Candles, Paraffin wax & tallow	..	10906	14754	9523	..	1030	500	..	..	..
24	Cement	156908	28580	197766	118664	22182	27561	26412	..	..	..
25	Sugar	..	..	..	..	24685	100072	23635	..	..	41016
26	Miscellaneous	3191466	3311397	3506777	3237928	2684871	3579363	4559302	4601844	5443715	4993306
Total Imports		4112383	4203535	4471447	4102152	3676785	4559013	5600089	5584907	6541158	6053159

Source: Cochin Port Trust, Administration Report 1989-90



## APPENDIX 8.4

### Commodity-wise Distribution of Exports during the past 10 years

(In tonnes)<sup>1</sup>

Sl. No.	Commodities	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Coir Products	29387	31361	30070	28474	27083	25795	24677	25393	24116	26117
2	Tea	61242	48165	41138	37067	57585	26178	22307	15371	22884	12347
3	Rubber & Rubber Products	784	382	455	634	1514	1246	774	1727	2159	4576
4	Coffee	20839	38544	34365	29216	33477	46456	31056	47058	41248	57852
5	Cashew Kernels	29365	25930	32455	38501	35776	36391	42685	37323	33932	46095
6	Chemicals	6077	4589	7513	6478	5701	6923	6565	7216	9901	6992
7	Cotton, raw & waste	4266	4293	4106	12431	3183	90	520	486	..	847
8	Cotton piece goods	10384	7713	10502	10571	17130	13020	8401	11296	9885	11647
9	Rice & other foodgrains	3303	4074	4282	2105	1648	150	949	959	1405	1935
10	Pepper	25138	20417	22714	25389	25023	36388	36547	42077	35281	34664
11	Ginger	4671	3774	3063	3463	4741	5458	2335	1924	3882	4414
12	Cardamom	565	804	450	198	710	817	320	79	120	66
13	Turmeric	2469	2068	1877	1301	2151	1827	2189	1690	2034	2124
14	Coconut Oil	..	1	3	3	..	..	..	..	..	..
15	Cashew shell liquid	8629	5244	4579	2233	3493	1633	1888	5372	915	1919
16	Lemongrass Oil	342	142	205	39	227	12	13	34	44	162
17	Timber	5854	3939	4283	3505	2440	2304	2492	3930	4170	3913
18	Marine Products	35507	42546	42422	36780	37413	34947	40235	42516	52810	53123
19	Machinery	2843	3430	3403	2856	3079	1899	1909	2188	1587	3297
20	Iron & Steel	1342	1665	2746	2115	1372	1389	608	971	1184	2054
21	Mineral sand including granite	8099	4744	3988	4488	6306	5569	1477	4719	1747	1086
22	Cement	2105	1058	1907	2729	4150	1635	2040	240	975	..
23	Miscellaneous	857931	1042985	982198	651518	123507	469071	1053216	964068	1032691	796238
<b>Total Exports</b>		<b>1121142</b>	<b>1297868</b>	<b>1238724</b>	<b>902094</b>	<b>397709</b>	<b>719198</b>	<b>1283203</b>	<b>1216637</b>	<b>1282970</b>	<b>1071468</b>
<b>Total Traffic (Imports &amp; Exports)</b>		<b>5233525</b>	<b>5501403</b>	<b>5710171</b>	<b>5004244</b>	<b>4074494</b>	<b>5278211</b>	<b>6883292</b>	<b>6801544</b>	<b>7824128</b>	<b>7124627</b>

Source: Cochin Port Trust, Administration Report 1989-90.

**APPENDIX 9.1**

**Educational Institutions - District Wise 1989-90**

Name of District	L.P. Schools			U.P. Schools			High Schools			Total						
	Govt.		Private	Govt.	Private		Govt.	Private		Govt.	Private					
	PA	PUA	Total	PA	PUA	Total	PA	PUA	Total	PA	PUA	Total				
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Thiruvananthapuram	306	182	16	504	101	104	8	213	115	94	17	226	522	380	41	963
Kollam	282	191	10	483	59	143	8	210	73	125	6	204	411	459	24	897
Pathanamthitta	172	243	13	428	42	84	8	134	47	113	5	165	261	440	26	727
Alappuzha	201	199	14	414	68	78	2	148	56	125	4	185	325	402	20	747
Kottayam	177	280	23	480	66	130	3	299	58	166	12	236	301	576	38	915
Idukki	73	141	3	217	46	63	4	113	53	70	6	129	172	274	13	459
Ernakulam	197	280	18	495	88	100	15	203	85	172	23	280	370	552	56	978
Trissur	127	397	9	533	53	166	7	226	75	148	13	236	255	711	29	995
Palakkad	196	351	10	557	55	159	6	220	57	73	8	138	308	583	24	915
Malappuram	345	478	4	827	108	225	4	337	81	73	5	159	534	776	13	1323
Kozhikode	188	538	2	728	77	241	7	325	64	94	7	165	329	873	16	1218
Wayanad	70	52	5	127	33	40	1	74	33	22	2	57	136	114	8	258
Kannur	129	623	5	757	68	279	-	347	80	71	1	152	277	973	6	1256
Kasaragode	145	114	3	265	70	73	-	143	64	33	1	98	279	220	4	503
<b>Total</b>	<b>2608</b>	<b>4069</b>	<b>135</b>	<b>6812</b>	<b>934</b>	<b>1885</b>	<b>73</b>	<b>2892</b>	<b>941</b>	<b>1379</b>	<b>110</b>	<b>2430</b>	<b>4483</b>	<b>7333</b>	<b>318</b>	<b>12134</b>

PA - Private Aided; PUA - Private Unaided

Show separately Urban and Rural

Note: Besides there are 7 Anglo Indian H.S. and 1 Anglo Indian U.P.S

Source: Directorate of Public Instruction.

## APPENDIX 9.2

List of Un-economic Schools - Educational Sub District-wise (Government and Aided) - 1989-90

Sl. No.	Name of Educational District	Uneconomic Schools		
		Government	Aided	Total
(1)	(2)	(3)	(4)	(5)
1.	Kottayam	19	21	40
2.	Moovattupuzha	12	12	24
3.	Kattappana	26	2	28
4.	Kothamangalam	4	10	14
5.	Malappuram	7	6	13
6.	Cannanore	17	43	60
7.	Irinjalakkude	4	12	16
8.	Palghat	5	3	8
9.	Alwaye	6	10	16
10.	Kanjirappally	13	34	47
11.	Mavelikkara	1	55	56
12.	Badagara	13	48	61
13.	Kozhikode	3	22	25
14.	Ernakulam	8	15	23
15.	Quilon	4	2	6
16.	Attingal	6	14	20
17.	Thiruvananthapuram	13	1	14
18.	Pathanamthitta	7	39	46
19.	Thodupuzha	19	15	34
20.	Tellicherry	24	105	129
21.	Thiruvalla	14	75	89
22.	Ottappalam	2	14	16
23.	Trichur	5	6	11
24.	Kasaragode	16	22	38
25.	Palai	11	21	32
26.	Wynad	5	Nil	5
27.	Neyyattinkara	6	4	10
28.	Alleppey	7	3	10
29.	Thirur	Nil	Nil	Nil
Total		277	614	891

Source : Directorate of Public Instruction.

## APPENDIX 9.3

Number of Students - Rural/Urban Areas School-wise During 1989-90

Category of Schools	Rural			Urban			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
L.P. Schools	732490	698751	1431241	91569	91511	183080	824059	790262	1614321
U.P. Schools	753416	704843	1458259	88863	77965	166828	842279	782808	1625087
Mad. Schools	1076574	1028015	2104589	248874	270214	519088	1325448	1298229	2623677
	5678	5664	17142	4447	4042	8489	9925	9706	19631
Total	2567658	2437273	5005231	433756	443732	877485	3001711	2881005	5882716

Directorate of Public Instruction.

## APPENDIX 9.4

## Standard-Wise Strength of Students - 1989-90

	Govt. Schools		Pvt. Aided Schools		Pvt. Unaided Schools		Total		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I	123573	116670	170198	165330	9916	9061	303687	290861	594548
II	132129	124718	181159	173689	9443	8537	322731	306944	629675
III	138935	130142	182514	173659	8948	8230	330397	312031	642428
IV	139002	131352	191312	182671	8223	7857	338537	321880	660417
V	122620	114968	206047	196863	7998	6476	336665	318307	654972
VI	115838	107890	196564	188664	7612	6164	320014	302718	622732
VII	113560	106284	196400	188855	6882	5564	316842	300703	617545
VIII	117597	110480	167445	162317	6150	5129	291192	277926	569118
IX	99710	97169	143623	147060	6071	4999	249404	249228	498632
X	75805	76824	111310	119080	5127	4503	192242	200407	392649
Total	1178769	1116297	1746572	1698188	76370	66520	3001711	2881005	5882716

Shows Separately Urban and Rural

Source: Directorate of Public Instruction.

## APPENDIX 9.5

## Number of Arts and Science Colleges in Kerala (1989-90)

Sl.No.	District	Government	Private	Total
(1)	(2)	(3)	(4)	(5)
1.	Thiruvananthapuram	8	11	19
2.	Kollam	1	12	13
3.	Pathanamthitta	-	8	8
4.	Alleppuzha	-	11	11
5.	Ernakulam	5	19	24
6.	Kottayam	1	20	21
7.	Idukki	1	4	5
8.	Thrissur	4	16	20
9.	Malappuram	3	7	10
10.	Palghat	3	7	10
11.	Kozhikode	7	7	14
12.	Wayand	2	2	4
13.	Kannur	2	7	9
14.	Kasaragode	3	1	4
	Total	48	132	172

Source: Directorate of Collegiate Education.

## APPENDIX 9.6

**In take and Out-turn under Various Courses in, Colleges of  
Kerala, Calicut and Mahatma Gandhi Universities**

Courses	Intake											
	1988-89						1989-90					
	Government			Private			Government			Private		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
PDC	9583	7559	17142	39064	42008	81072	8924	7759	16683	42090	46192	88282
B.A	2048	1792	3840	5907	8267	14174	2059	1846	3905	5861	8438	14299
B.Sc	895	812	1707	6994	10146	17140	881	826	1707	7106	9036	16140
B.Com	500	248	748	2930	2063	4993	508	247	755	2718	2104	4822
M.A	304	454	758	645	810	1455	308	418	726	705	929	1634
M.Sc	88	161	249	537	1134	1671	109	242	351	552	1157	1709
M.Com	47	27	74	391	236	627	49	33	82	411	281	692
LLB												
LLM												
Others												
(Specify)	Not Available											

	Out turn											
	1988-89						1989-90					
	Government			Private			Government			Private		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	
	9212	7486	16698	37557	41103	78660	9344	7469	16813	41535	45253	86788
	1917	1608	3525	5152	6853	12005	1947	1654	3601	5407	7708	13114
	827	710	1537	7405	8682	16087	820	766	1586	5818	8985	14803
	490	214	704	2661	1969	4630	452	194	646	2528	2022	4550
	335	409	744	736	799	1435	285	413	698	670	821	1491
	97	229	326	526	1108	1634	104	249	353	544	1130	1674
	45	32	77	403	226	629	47	26	73	407	274	681

Source: Directorate of Collegiate Education.

## APPENDIX 9.7

## Year-wise Break up of Private Registration

Year	Kerala University						Calicut University							
	Pre-degree	B.A.	M.A.	B.Com	M.Com	Total	Pre-degree	B.A	B.Sc	B.Com	M.A	M.Sc.	N.Com	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1986	32250	3900	3925	6900	1850	51825	33792	6081	489	4500	1204	527	370	46963
1987	38000	2900	3800	7200	1500	53400	38206	5500	650	4079	1282	5415	421	50682
1988	26841	4697	5120	8734	1575	46967	39960	7650	852	6086	1464	607	669	57288
1989	26440	3250	5325	6170	2000	43185	48967	11700	1137	8066	2022	738	665	73295

## APPENDIX 9.8

## Number of Polytechnics and Technical High Schools in Kerala

Districts	Number of Polytechnics						Number of Technical High Schools		
	1988-89			1989-90			1988-89	1989-90	
	Government	Private	Total	Government	Private	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1.Thiruvananthapuram	2	..	2	2	..	2	4	4	
2.Kollam	..	1	1	..	1	1	2	2	
3.Pathanamthitta	1	1	2	1	1	2	1	1	
4.Alappuzha	1	1	2	1	1	2	1	1	
5.Kottayam	2	2	2	2	..	2	7	7	
6.Idukki	1	..	1	1	..	1	2	2	
7.Ernakulam	3	..	3	3	..	3	5	5	
8.Thrissur	2	2	4	3	1	4	4	4	
9.Palakkad	2	..	2	2	..	2	3	3	
10.Malappuram	1	..	1	1	1	2	4	4	
11.Kozhikode	4	..	4	3	..	3	3	3	
12.Wayanad	1	..	1	1	..	1	2	2	
13.Kannur	1	..	1	1	..	1	4	4	
14.Kasaragode	1	1	2	1	1	2	2	2	
Total		22	8	28	22	6	28	44	44

Source: Directorate of Technical Education.

## APPENDIX 9.9

## Students and Staff Strength in Polytechnics

Type of Institutions	Students										Teachers					
	1988-89					1989-90					1988-89			1989-90		
	Boys	Girls	Total	SC	ST	Boys	Girls	Total	SC	ST	Men	Women	Total	Men	Women	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Government	7789	2632	10421	..	..	7658	2768	10426	826	151	720	185	905	722	189	911
Private	3265	539	3804	..	..	3056	752	3808	291	53	350	52	402	352	55	407
<b>Total</b>	<b>11054</b>	<b>3171</b>	<b>14225</b>	<b>..</b>	<b>..</b>	<b>10714</b>	<b>3520</b>	<b>14234</b>	<b>1117</b>	<b>204</b>	<b>1070</b>	<b>237</b>	<b>1307</b>	<b>1074</b>	<b>244</b>	<b>1318</b>

Source: Directorate of Technical Education.

## APPENDIX 9.10

## Students and Staff Strength in Technical High Schools : 1988-89 to 1989-90

Year	Students			Teachers		
	Boys	Girls	Total	Men	Women	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1988-89	6813	1020	7833	625	170	795
1989-90	4706	3132	7838	627	170	797

Source: Directorate of Technical Education.

## APPENDIX 9.11

## Course-wise Intake and Out turn in Engineering Colleges at Degree Level 1988-89 to 1989-90

Sl. No.	Name of Course	1988-89		1989-90	
		Intake	Out-turn	Intake	Out-turn
(1)	(2)	(3)	(4)	(5)	(6)
1.	Civil Engineering	602		602	465
2.	Mechanical Engineering	581		581	469
3.	Electrical	550		550	437
4.	Electronic	360		360	323
5.	Chemical Engineering	80		80	64
6.	Product Cum Plant Engineering	30		30	23
7.	Instrumentation and Central system	32		32	25
8.	Production Engineering	30		30	24
9.	Applied Electronics and Instrumentation	45		45	30
10.	Architechure	80		80	60
11.	Industrial Engineering	21		21	18
12.	Bio-Mechanical	40		40	-
13.	Computer Service	175		175	155
14.	Production and Management	30		30	25
<b>Total</b>		<b>2656</b>		<b>2656</b>	<b>2127</b>

Source: Directorate of Technical Education.

A III

APPENDIX 9.12  
Course-wise Intake and Out-turn in Engineering Colleges at  
.Post Graduate Level 1988-89 & 1989-90

Sl. No.	Name of Course	1988-1989		1989-1990	
		Intake	Out-turn	Intake	Out-turn
(1)	(2)	(3)	(4)	(5)	(6)
1.	Civil	55	-	55	-
2.	Mechanical	62	-	62	-
3.	Electrical	51	-	51	-
4.	Electronics and Communi- cation	10	-	10	-
5.	Chemical Engineering	6	-	6	-
Total		184	-	184	-

Source: Directorate of Technical Education.

APPENDIX 9.13

Total and Percapita State Government Expenditure on Education (a) 1980-81 to 1988-89  
(Revenue and Capital Accounts Combined)

Major States	Total Expenditure (Rs.Crores)						Percapita (Rs.)					
	1980-81	1984-85	1985-86	1986-87	1987-88	1988-89	1980-81	1984-85	1985-86	1986-87	1987-88	1988-89
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Major States</b>												
Punjab	139	217	241	256	337	457	83	129	144	153	201	272
Kerala	217	354	425	489	518	561	85	139	167	192	203	220
Gujarat	181	418	476	471	579	711	53	123	140	138	170	208
Maharashtra	382	679	795	965	1090	1298	61	108	127	154	174	207
Haryana	73	135	155	177	233	261	57	105	120	138	180	202
Karnataka	173	331	382	436	574	650	47	89	103	117	155	175
Tamil Nadu	242	451	564	612	699	784	50	93	117	126	144	162
West Bengal	247	449	539	683	723	874	45	82	99	125	132	160
Assam	97	187	221	306	305	317	49	94	111	154	153	159
Rajasthan	146	292	328	377	475	540	43	85	96	110	139	157
Andhra Pradesh	231	478	539	571	695	805	43	89	101	107	130	150
Orissa	108	184	208	266	295	394	41	70	79	101	112	149
Madhya Pradesh	172	341	388	438	541	667	33	65	84	89	104	128
Uttar Pradesh	351	384	787	877	974	1213	32	62	71	79	88	109
Bihar	236	434	538	503	524	740	34	62	77	72	75	106
<b>Other States</b>												
Sikkim	4	10	13	15	18	23	133	324	433	504	595	759
Arunachal Pradesh	..	..	..	30	40	45	..	..	..	499	669	756
Mizoram	..	..	21	6	35	36	..	..	420	115	693	715
Nagaland	13	23	32	34	41	49	163	288	400	424	513	607
Manipur	20	33	41	45	54	79	143	234	293	321	385	567
Goa	..	..	..	43	43	62	..	..	..	392	392	561
Tripura	17	33	41	54	66	94	81	159	195	257	316	447
Mizoram	45	71	80	94	127	160	105	164	186	210	296	373
Meghalaya	10	19	23	27	32	46	77	133	164	153	243	355
Jammu & Kashmir	44	81	93	99	121	168	73	137	158	168	201	279
<b>All States</b>	<b>3,148</b>	<b>5,902</b>	<b>6,928</b>	<b>7,876</b>	<b>9,139</b>	<b>11,003</b>	<b>47</b>	<b>87</b>	<b>102</b>	<b>116</b>	<b>135</b>	<b>163</b>



## APPENDIX 9.14

## Medical Institutions and Beds in Kerala - Categorywise 1989-90

Sl. No.	District	Hospitals		PH Centres including MCH Units		Dispensaries		T.B Centres/clinics		Leprosy control Units	
		No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	Thiruvananthapuram	18	5714	74	300	7	30	1	28	1	..
2.	Kollam	9	1423	61	266	1	15	3	79	3	..
3.	Alappuzha	11	3282	62	249	1	..	2	76	1	..
4.	Pathanamthitta	5	491	45	263	1	..	1	..	..	..
5.	Kottayam	13	2295	56	381	..	..	2	48	..	..
6.	Idukki	3	222	53	277	..	..	..	..	..	..
7.	Ernakulam	21	2582	75	505	3	68	4	40	..	..
8.	Thrissur	19	3249	79	373	6	..	1	..	2	..
9.	Palakkad	8	1054	79	735	8	..	1	54	1	..
10.	Malappuram	7	974	89	546	5	..	2	52	3	..
11.	Kozhikode	10	3943	64	168	2	..	1	..	2	..
12.	Wayanad	3	367	30	100	4	..	..	..	..	..
13.	Kannur	10	1558	69	206	10	46	1	..	..	..
14.	Kasargode	3	257	47	111	3	..	1	..	2	..
Total		140	27411	883	4480	51	159	20	377	15	..

Source: Directorate of Health Services.

## APPENDIX 9.14 (Continued)

Sl. No.	District	Community health centres		Subsidiary Health Centres		Grant-in-aid Institutions		Total	
		No.	Beds	No.	Beds	No.	Beds	No.	Beds
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1.	Thiruvananthapuram	6	251	..	..	4	233	111	6556
2.	Kollam	4	70	..	..	4	215	85	2068
3.	Alappuzha	3	178	..	..	6	590	86	4375
4.	Pathanamthitta	3	175	..	..	5	250	60	1179
5.	Kottayam	3	282	..	..	6	750	80	3756
6.	Idukki	2	110	..	..	..	..	58	609
7.	Ernakulam	6	264	..	..	4	456	113	1831
8.	Thrissur	3	149	..	..	2	170	112	3941
9.	Palakkad	3	238	..	..	3	..	103	2081
10.	Malappuram	5	254	..	..	2	5	113	3915
11.	Kozhikode	6	128	..	..	..	..	85	4239
12.	Wayanad	3	123	..	..	..	..	40	590
13.	Kannur	4	625	..	..	..	..	94	2435
14.	Kasargode	3	280	..	..	..	..	59	648
Total		54	3127	..	..	36	2669	1199	38223

## APPENDIX 9.15

District-wise Availability of Vehicles under Directorate of Health Services

S.No.	District	Vehicles in running condition	Vehicles in workshop	Total
(1)	(2)	(3)	(4)	(5)
1.	Thiruvananthapuram	125	6	131
2.	Kollam	41	6	47
3.	Alappuzha	55	5	60
4.	Pathanamthitta	23	3	26
5.	Kottayam	42	2	44
6.	Idukki	30	7	37
7.	Ernakulam	52	..	52
8.	Thrissur	49	3	52
9.	Palakkad	81	4	85
10.	Malappuram	68	10	78
11.	Kozhikode	46	3	49
12.	Wayanad	31	4	35
13.	Kannur	55	5	60
14.	Kasaragod	22	2	24
Total		720	60	780
Motor cycles				128
Motor Boats at Alappuzha				2
Grand Total				910

Source: Directorate of Health Services.

## APPENDIX 9.16

Statement showing number of Attacks and Deaths  
due to Principal Diseases during 1989-90

Sl. No.	Name of Disease	Patients treated during			
		1988-89		1989-90	
		Attack	Death	Attack	Death
(1)	(2)	(3)	(4)	(5)	(6)
1.	Diphtheria	59	1	97	5
2.	Dysentery	88450	278	786632	164
3.	Whooping Cough	9430	3	8575	9
4.	Gastroenteritis	..	..	..	..
5.	Tetanus	176	19	92	16
6.	Meningococcal Infection	..	..	109	9
7.	Measles	33307	5	23156	3
8.	Syphillis	1074	1	638	..
9.	Poliomyelitis	139	3	96	5
10.	Gonoceocal Infection	5049	..	1874	..
11.	Tuberculosis	84910	354	55362	300
12.	Rabies	42	26	256	25
13.	Enteric fever	8459	8	5687	7
14.	Infective Hepatitis	9001	28	9056	17
15.	Acute Respiratory Infection	1207887	100	1736353	126
16.	All other diseases	11303733	345	13022270	3697

Source: Directorate of Health Services.

## APPENDIX 9.17

## District wise Distribution of Institutions, Beds and Patients Treated under Ayurveda during 1988-89 and 1989-90

District	Number of Hospitals		Number of Beds		Number of Dispensaries		Total Number of Institutions		No. of patients treated		
									Inpa- tients	Outpa- tients	Total
	88-89	89-90	88-89	89-90	88-89	89-90	88-89	89-90	89-90	89-90	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Thiruvananthapuram	12	12	225	225	47	48	59	60	3335	2238976	2242311
2. Kollam	9	9	170	190	35	35	44	44	2032	1114165	1116197
3. Alappuzha	10	10	180	180	34	35	44	45	2709	1839316	1842025
4. Pathanamthitta	4	4	80	80	22	23	26	27	910	691373	692283
5. Kottayam	8	8	150	150	24	24	32	32	1164	891477	892641
6. Idukki	3	3	90	90	21	21	24	24	1620	713811	715431
7. Ernakulam	11	11	180	180	45	46	56	67	2056	1691414	1693470
8. Thrissur	14	14	223	223	63	63	77	77	2144	1789455	1791599
9. Palakkad	5	5	120	120	45	46	50	51	1967	1045422	1047389
10. Malappuram	10	10	200	200	50	50	60	60	1726	1243736	1245462
11. Kozhikode	5	5	100	100	32	33	37	38	1890	875193	877083
12. Wayanad	1	1	50	50	15	16	16	17	493	351773	352266
13. Kannur	5	5	111	111	37	38	42	43	1461	942023	943484
14. Kasargode	4	4	50	80	28	28	32	32	513	570962	571475
<b>Total</b>	<b>181</b>	<b>181</b>	<b>1929</b>	<b>1979</b>	<b>498</b>	<b>506</b>	<b>599</b>	<b>617</b>	<b>24020</b>	<b>15999096</b>	<b>16023116</b>

Source: I.S.M. Directorate.

## APPENDIX 9.18

## District wise Distribution of Institutions, Beds and Patients Treated under Homeopathy during 1988-89 and 1989-90

District	Number of Hospitals		Number of Beds		Number of Dispensaries		Total Number of Institutions		No. of patients treated		
									Inpa- tients	Outpa- tients	Total
	88-89	89-90	88-89	89-90	88-89	89-90	88-89	89-90	89-90	89-90	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Thiruvananthapuram	4	4	150	150	26	27	30	31	4808	1028414	1033227
2. Kollam	1	2	25	50	19	20	20	22	260	8157040	8157300
3. Alappuzha	3	3	75	75	21	22	24	25	814	1978726	1979540
4. Pathanamthitta	-	1	-	25	9	10	9	11	-	127419	127419
5. Kottayam	3	3	140	155	21	21	24	24	1665	691213	692878
6. Idukki	2	2	50	50	17	17	19	19	7089	408966	416055
7. Ernakulam	2	2	50	50	32	33	34	35	1340	1000312	1001652
8. Thrissur	1	1	25	25	20	20	21	21	3174	335789	338963
9. Palakkad	1	1	25	25	16	17	17	18	250	388121	388371
10. Malappuram	2	2	50	50	26	27	28	29	512	539681	540193
11. Kozhikode	1	1	25	25	22	24	23	25	528	692311	692839
12. Wayanad	1	1	25	25	6	7	7	8	-	96383	96383
13. Kannur	1	1	25	25	18	19	19	20	457	393776	394233
14. Kasargode	2	2	50	50	9	10	11	12	-	107028	107028
<b>Total</b>	<b>24</b>	<b>26</b>	<b>715</b>	<b>780</b>	<b>262</b>	<b>274</b>	<b>286</b>	<b>300</b>	<b>20897</b>	<b>15945179</b>	<b>15066076</b>

Source: Directorate of Homeopathy.

## APPENDIX 9.19

## District-wise details on Family Welfare Programme 1989-90

District	Vasectomy	PPS	Mini-lap	Laproscopic	Total (3+4+5)	L.L.	Cu. 'T'	Total (7+8)	Mirod supplied CC	Oral pills	Induced abortion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Thiruvananthapuram	315	16860	4785	2253	23898	..	10829	19829	1853552	42271	
2. Kollam	217	11757	1818	3290	16865	..	10479	10479	2095963	45995	
3. Alappuzha	1397	5356	3678	806	9840	..	9063	9063	1265609	34779	
4. Pathanamthitta	130	5530	815	2467	8812	..	5936	5936	755107	24074	
5. Kottayam	608	12920	870	4857	18647	..	13844	13844	2415813	48178	
6. Idukki	208	4178	913	2078	7169	..	4487	4487	797003	25922	
7. Ernakulam	424	11600	627	2922	15149	100	9819	9919	1669965	32673	
8. Thrissur	705	12428	2138	3581	18147	..	11374	11374	1547011	48853	
9. Palakkad	196	8055	1026	7009	16090	..	8498	8498	1429330	36438	
10. Malappuram	125	10660	2684	3195	16539	..	10135	10135	1747251	61974	
11. Kozhikode	2456	18292	3916	2903	25111	..	15240	15240	1925708	63360	
12. Wayanad	216	3263	374	1556	4993	..	3529	3529	763639	13373	
13. Kannur	430	10074	891	3321	14286	..	9003	9003	1822215	49405	
14. Kasargode	114	3628	87	1735	5450	..	2988	2988	1036339	37277	
<b>Total</b>	<b>7541</b>	<b>134601</b>	<b>24622</b>	<b>41773</b>	<b>200996</b>	<b>100</b>	<b>125224</b>	<b>125324</b>	<b>21124485</b>	<b>564552</b>	

Source: Directorate of Health Services.

## APPENDIX 9.20

## Target and Achievement of Family Welfare Programme

Item	Unit	1988-89		1989-90	
		Target	Achievement	Target	Achievement
(1)	(2)	(3)	(4)	(5)	(6)
<b>1. Family Welfare Programme</b>					
a. Sterilisation (vasectomy, Tubectomy)	Nos	200000	207457	180000	208537
b. I.U.D Insertion	..	115000	115535	115000	125324
c. C.C Users	..	271000	238830	271000	292139
d. O.P Users	..	34500	37556	34500	43427
e. P.H. Centres	..	163	163	241	164
f. Sub Centres	..	500	500	720	720
<b>2. National T.B control Programme</b>					
a. No. of T.B cases detected	Persons	45000	36131	45000	34829
b. No. of sputum examined	..	107400	83936	105400	55771
<b>3. National Leprosy Eradication Programme</b>					
a. No. of new cases recorded	..	10000	8836	6000	6797
b. No. of cases brought under treatment	..	10000	7270	6000	6147
c. No. of cases deleted	..	7000	8750	7000	9569
<b>4. National Programme for control of blindness</b>					
a. No. of contract operators performed	..	50000	17845	20000	19083
b. No. of other operators	..	Nil	75000	Nil	80000
<b>5. H.C.H programmes:</b>					
<b>a. Immunisation Programme</b>					
1. D.P.I.*	Performed	603000	563388	603000	584499
2. D.T.	..	400000	279279	400000	281165
3. T.T. (pergnant women)	..	621000	657321	621000	638582
<b>b. Prophylaxis against Nutritional Anaemia</b>					
i. Women	..	680000	715995	680000	819616
ii. Children	..	691000	756481	691000	947160
<b>c. Blindness due to vitamin 'A' deficiency</b>					
	..	1600000	1350369	1600000	1145125

\* Target and Achievement of Children below one year

Source: Directorate of Health Services.

## APPENDIX 9.21

Plan and Non-Plan Expenditure during 1989-90 Under D.H.S.  
(Rs. in lakhs)

Category (1)	Expenditure During 1989-90		
	Plan (2)	Non-Plan (3)	Total (4)
1. Staff Salary	939.24	4982.00	5921.24
2. Machinery and Equipment	21.81	8.68	30.49
3. Land Acquisition and Construction	..	..	..
4. Patient's Care (Medicine, Diet etc)	16.68	2102.26	2118.94

Source: Directorate of Health Services.

## APPENDIX 9.22

Total and Per Capita State Government Expenditure on Health,  
1980-81 to 1988-89 (Revenue and Capital Accounts Combined)

States (1)	Total expenditure (Rs. Crores)						Per capita Expenditure (Rs)					
	1980-81 (2)	1984-85 (3)	1985-86 (4)	1986-87 (5)	1987-88 (6)	1988-89 (7)	1980-81 (8)	1984-85 (9)	1985-86 (10)	1986-87 (11)	1987-88 (12)	1988-89 (13)
<b>Major States</b>												
Rajasthan	114	249	109	311	392	420	33	73	32	90	114	122
Punjab	53	93	90	127	147	201	32	56	54	76	88	120
Gujarat	88	185	120	268	308	342	26	54	35	78	90	100
Maharashtra	171	380	478	531	541	584	27	61	76	85	86	93
Kerala	82	147	127	184	201	234	32	58	50	72	79	92
Haryana	39	94	58	94	112	112	31	73	45	73	87	87
Karnataka	71	149	150	235	260	291	19	40	40	63	70	78
Madhya Pradesh	120	210	150	300	383	391	23	40	29	58	73	75
Tamil Nadu	111	236	275	296	354	345	23	49	57	61	73	71
Assam	40	104	71	100	167	141	20	52	36	50	84	71
Andhra Pradesh	123	227	189	293	365	373	23	43	35	55	68	70
Orissa	59	106	75	134	154	182	22	40	29	51	58	69
West Bengal	141	225	209	283	317	361	26	41	38	52	58	66
Uttar Pradesh	157	372	316	446	531	587	14	34	28	40	48	53
Bihar	98	164	149	272	260	279	14	24	21	39	37	40
<b>Other States</b>												
Nagaland	16	22	32	39	49	49	197	276	400	489	617	614
Mizoram	..	..	9	3	29	30	..	..	180	66	583	594
Sikkim	2	4	4	7	15	18	81	135	133	249	495	584
Arunachal Pradesh	..	..	..	19	25	26	..	..	..	323	411	433
Goa	..	..	..	31	31	42	..	..	..	281	285	385
Meghalaya	16	23	15	27	32	45	120	166	107	195	246	343
Jammu & Kashmir	51	98	114	126	134	155	84	165	193	214	223	259
Manipur	14	19	12	35	30	35	98	135	86	249	211	249
Chhattisgarh Pradesh	36	59	36	75	97	105	84	139	84	175	225	244
Tripura	6	14	13	23	29	37	31	64	62	109	160	177
<b>All India</b>	<b>1608</b>	<b>3180</b>	<b>2800</b>	<b>4259</b>	<b>4963</b>	<b>5385</b>	<b>24</b>	<b>47</b>	<b>41</b>	<b>63</b>	<b>73</b>	<b>79</b>

Source: Basic statistics relating to Indian Economy - September 1990 - CMIE.

## APPENDIX 9.23

Urban Population Covered Under Water Supply and Sanitation as on March 1987

States	Urban Population as on March 1987 ( '000)	Water Supply		Sanitation	
		Population ( '000)	Perce- ntage	Population ( '000)	Perce- ntage
(1)	(2)	(3)	(4)	(5)	(6)
<b>Major States</b>					
Andhra Pradesh	14900	9301	62.4	2376	15.9
Assam	2367	881	37.5	369	15.7
Bihar	9669	6148	63.6	3712	38.4
Gujarat	13146	12272	93.4	10415	79.2
Haryana	3211	3211	100.0	1135	35.3
Karnataka	2742	12579	98.7	7628	59.9
Kerala	5495	3606	65.6	1627	29.6
Madhya Pradesh	12478	10043	80.5	1214	9.7
Maharashtra	26027	25951	99.7	16196	62.2
Orissa	3573	1326	37.1	959	26.8
Punjab	5308	3778	71.2	2709	51.0
Rajasthan	7667	4181	54.5	695	9.1
Tamil Nadu	17664	15534	88.2	8344	47.4
Uttar Pradesh	21682	15029	69.3	3034	13.9
West Bengal	16221	11078	68.3	6424	39.6
<b>Other States</b>					
Arunachal Pradesh	120	120	100.0	120	100.0
Goa	480	391	81.5	136	28.3
Himachal Pradesh	393	365	92.9	73	18.6
Jammu & Kashmir	1615	1534	95.0	111	6.9
Manipur	530	400	75.5	50	9.4
Meghalaya	287	142	49.5	60	20.0
Mizoram	140	26	18.6	2	1.4
Nagaland	161	32	19.9	10	6.2
Sikkim	146	98	67.1	38	26.0
Tripura	3344	183	53.2	39	11.3
<b>Union Territories</b>					
Andaman	69	69	100.0	69	100.0
Chandigarh	613	613	100.0	613	100.0
Dadra & Nagar Haveli	19	14	73.7	7	36.8
Daman & Diu	..	..	..	..	..
Delhi	1166	6950	97.0	6995	86.4
Lakshadweep	..	..	..	..	..
Pondicherry	373	373	100.0	144	38.3
<b>All India</b>	<b>184531</b>	<b>146228</b>	<b>79.2</b>	<b>74505</b>	<b>40.4</b>

Source: Basic Statistics relating to Indian Economy Volume 2, states September 1989.

## APPENDIX 10.1

## Disposal of Cases Relating to Tenancy and Kudikidappu

Sl. No.	Item	Tenancy		Kudikidappu	
		As on 30-11-89	As on 30-11-90	As on 30-11-89	As on 30-11-90
1	2	3	4	5	6
1.	Total number of applications filed	3911524	3927573	469779	471149
2.	Disposal of cases				
	(i) Allowed	2604923	2612565	286023	286998
	(ii) Rejected	810103	816235	159249	160120
	(iii) Other disposals	484537	485182	20815	20897
	Total- (i)+(ii)+(iii)	3899563	3913982	466087	468015
3.	Balance of Applications to be disposed of	11961	13591	3692	3134
4.	Number of certificates of purchase issued	2569273	2603610	272110	278712

Source: Land Board, Kerala.

## APPENDIX 10.2

## Distribution of Surplus Land

Sl. No.	Item	Unit	As on	
			30-11-89	30-11-90
(1)	(2)	3	4	5
1.	Total Ceiling returns filed	No	70815	71241
2.	Total Ceiling returns decided	"	69962	70178
3.	Balance to be decided	"	853	1063
4.	Area ordered to be surrendered	Acres	163837	164962
5.	Area reduced on orders of High court	"	31496	32241
6.	Net extent of land ordered for surrender	"	132341	132721
7.	Extent of Land taken over	"	92338	92817
8.	Area reconveyed on order of High court	"	..	..
9.	Net extent taken over	"	92338	92817
10.	Balance extent to be taken over	"	40003	39904
	(i) Covered by stay against taking possession	"	19694	20152
	(ii) Net to be taken over by gift, dispute, vested forest etc.	"	19264	19031
	(iii) Extent available for taking over	"	1040	721
11.	Surplus land distributed	"	62231	62673
12.	Balance extent taken over pending distribution	Acres	30107	30136
	(i) Covered by stay against assignment	"	3916	4032
	(ii) Not distributed due to gift, vested Forest etc.	"	5239	5067
	(iii) Reserved for public purposes	"	20139	20202
	(iv) Available for distribution	"	853	835

Source: Land Board, Kerala.



## APPENDIX 10.3

Beneficiaries of Surplus Land and Extent Distributed (as on 30-11-1990) (Acres)

District	Scheduled Castes		Scheduled Tribes		Others		Total	
	Number	Extent	Number	Extent	Number	Extent	Number	Ext.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Thiruvananthapuram	3025	330	..	..	2328	269	5353	599
2. Kollam	3419	775	..	..	3208	821	6627	1596
3. Pathanamthitta	330	86	..	..	394	68	724	154
4. Alappuzha	3748	2092	32	5	3986	2249	7766	4346
5. Kottayam	2381	1239	75	60	2805	1228	5261	2527
6. Idukki	2186	2026	353	312	2317	2112	4856	4450
7. Ernakulam	3672	725	39	5	2166	399	5877	1129
8. Thrissur	7132	1388	51	50	11794	2194	18977	3632
9. Palakkadu	11822	5679	1191	939	12134	6148	25147	12566
10. Malappuram	7440	3250	34	12	6890	3851	14364	7113
11. Kozhikode	3810	1177	240	101	4945	1216	8995	2494
12. Wayanadu	1316	473	2596	1516	2824	1322	6736	3311
13. Kannoor	3465	2331	1771	1441	7597	5579	12833	9351
14. Kasaragod	3524	3137	720	645	6491	5623	10735	9405
<b>Total</b>	<b>57270</b>	<b>24508</b>	<b>7102</b>	<b>5086</b>	<b>69879</b>	<b>33079</b>	<b>134251</b>	<b>62673</b>

Source: Land Board, Kerala

## APPENDIX 10.4

District Wise Distribution of Beneficiaries and Area of Puramboke Land Assigned up to 31-12-1990 Under Land Assignment Rules (in ha.)

S1. No.	Name of District	Total area assigned in (ha)	Of which area (ha) assigned to SC/ST	No. of families benefited	Of which SC/ST	Percentage of SC/ST beneficiaries
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Thiruvananthapuram	9569.39	1075.82	47209	8007	17
2.	Kollam	16440.77	2364.16	82676	14062	17
3.	Pathanamthitta	9508.87	935.66	37994	6765	18
4.	Kottayam	3350.79	884.32	16164	4967	29
5.	Alappuzha	1845.80	182.20	20924	3969	19
6.	Idukki	63643.33	7809.37	86513	21313	25
7.	Ernakulam	10102.37	1317.91	59680	8235	14
8.	Thrissur	10278.85	1389.62	37498	4527	12
9.	Palakkad	331.97	98.85	1058	748	71
10.	Malappuram	919.30	328.71	5963	500	8
11.	Kozhikode	161.74	26.43	2827	178	6
12.	Wayanad	13404.54	1784.56	28626	2963	10
13.	Kannur	358.87	57.20	2348	369	16
14.	Kasaragod	44665.15	8987.09	106290	25770	24
<b>Total</b>		<b>184581.74</b>	<b>27241.90</b>	<b>535770</b>	<b>102103</b>	<b>19</b>

## APPENDIX 10.5

## District-wise Distribution of Surplus Land up to 31-12-1990

District	No. of Beneficiaries				Land Distribution in hectares			
	Scheduled Castes	Scheduled Tribes	Others	Total	Scheduled Castes	Scheduled Tribes	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Thiruvananthapuram	3848	--	2349	5397	134.3	--	109.6	243.9
2. Kollam	3419	--	3208	6627	313.6	--	332.2	645.8
3. Alappuzha	3748	--	3986	7766	821.1	2.0	910.1	1733.2
4. Pathanamthitta	330	--	394	724	34.8	--	27.5	62.3
5. Kottayam	2381	75	2805	5261	501.4	24.2	496.9	1022.5
6. Idukki	2186	353	2317	4856	819.8	126.2	854.6	1800.6
7. Ernakulam	3672	39	2166	5877	293.3	2.0	161.4	456.7
8. Thrissur	7132	51	11794	18977	561.7	20.2	887.8	1469.7
9. Palakkad	11822	1191	12134	25167	2217.2	380.0	2488.0	5085.2
10. Malappuram	7740	34	6890	14664	1315.2	4.8	1449.1	2769.1
11. Kozhikode	3841	240	4967	9048	476.7	40.8	482.9	1010.4
12. Wayanad	1316	2596	2824	6736	191.4	613.5	534.9	1339.8
13. Kannur	3498	1771	7629	12898	947.7	583.1	2261.7	3792.5
14. Kasaragod	3539	725	6516	10780	1271.9	261.4	2279.1	3812.4
Total	57672	7107	69979	134758	9900.1	2058.2	13285.8	25244.1

APPENDIX 11.1

State-wise Financial Assistance Disbursed by All India Financial Institutions During 1989-90

(Rs. Crores)

Sl. No.	District	(1)	(2)	IDBI		ICICI		UTI		GIC		LIC		NABARD		MCDC		Grand total	
				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)		(17)
1.	Andhra Pradesh	415.91	9.23	113.36	10.11	84.11	9.21	28.30	2.21	5.04	4.37	16.52	3.63	180.81	10.62	7.90	3.56	851.95	8.26
2.	Assam	40.49	0.90	9.12	0.81	7.96	0.87	0.69	0.03	-	0.84	0.18	30.12	1.77	5.41	2.44	96.43	0.92	
3.	Bihar	82.52	1.83	11.70	1.04	7.88	0.86	50.49	3.94	0.18	0.16	43.25	9.50	73.77	4.33	2.62	1.18	272.41	2.64
4.	Gujarat	537.88	11.94	121.41	10.83	127.92	14.01	69.35	5.42	29.19	25.30	56.06	12.32	74.00	4.35	4.14	1.87	1019.95	9.89
5.	Haryana	178.38	3.96	54.46	4.86	26.13	2.86	8.68	0.68	0.16	0.16	3.95	0.87	77.21	4.53	10.46	4.72	359.43	3.68
6.	Karnataka	287.76	6.37	57.38	5.12	47.61	5.21	6.86	0.54	2.94	2.55	5.46	1.20	139.46	8.19	8.79	3.97	556.26	5.39
7.	Kerala	140.42	3.12	17.07	1.52	8.49	9.30	1.82	0.14	1.71	1.48	4.33	0.95	80.05	4.70	14.60	6.59	268.49	2.60
8.	Madhya Pradesh	280.18	6.22	52.28	4.66	40.58	4.44	23.32	1.82	4.58	3.97	29.59	6.50	118.89	6.98	20.66	9.32	570.08	5.53
9.	Maharashtra	627.88	13.93	210.16	18.74	244.63	26.79	723.86	56.53	40.74	35.31	174.21	38.27	192.81	11.33	38.31	17.28	2252.60	21.84
10.	Orissa	117.40	2.61	19.57	1.75	21.72	2.32	12.92	1.01	1.03	0.89	2.18	0.48	47.63	2.80	2.76	1.25	224.71	2.18
11.	Punjab	185.42	4.12	102.96	9.17	36.54	4.00	20.21	1.58	3.72	3.22	9.74	2.14	100.29	5.89	13.87	6.26	472.65	4.58
12.	Rajasthan	174.23	3.87	42.83	3.91	34.78	3.81	33.96	2.65	0.85	0.74	13.46	2.96	87.86	5.16	23.28	10.50	412.25	4.00
13.	Tamil Nadu	522.22	11.59	90.67	8.07	94.30	10.33	70.77	5.54	5.91	5.12	39.44	8.66	115.09	6.76	20.08	9.06	958.68	9.29
14.	Uttar Pradesh	415.02	9.21	116.65	10.40	76.50	8.38	65.32	5.10	7.61	6.60	14.83	3.26	273.29	16.06	28.09	12.67	997.31	9.67
15.	West Bengal	288.19	6.40	37.89	3.38	23.83	2.61	61.34	4.79	6.11	5.30	34.72	7.63	75.89	4.46	10.54	4.75	538.51	5.22
<b>Total</b>		<b>4293.90</b>	<b>95.29</b>	<b>1058.41</b>	<b>94.39</b>	<b>882.48</b>	<b>96.63</b>	<b>1177.89</b>	<b>91.98</b>	<b>109.77</b>	<b>95.14</b>	<b>448.58</b>	<b>98.54</b>	<b>1667.17</b>	<b>97.95</b>	<b>211.51</b>	<b>95.42</b>	<b>9849.71</b>	<b>95.48</b>

All India Total 4505.95 100.00 1121.27 100.00 913.29 100.00 1280.55 100.00 115.38 100.00 455.22 100.00 1702.13 100.00 221.67 100.00 10315.46 100.00

Sources: 1. IDBI - Report on Development Banking in India 1989-90  
 2. MCDC - Annual Report 1989-90  
 3. NABARD - Annual Report 1989-90

## APPENDIX 11.2

State-wise Financial Assistance Disbursed by All India Financial Institution as at the end of March 1990 (Cumulative)  
(Rs. Crores)

Sl. No.	States	IDBI	% to total	IFCI	% to total	ICICI	% to total	NABARD	% to total	NCDC	% to total	LIC	% to total	Grand total	% to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1.	Andhra Pradesh	2347.98	8.30	508.10	9.41	487.47	7.07	1339.43	10.80	109.69	6.58	305.65	10.65	5098.32	8.86
2.	Assam	260.91	0.92	43.24	0.80	29.72	0.43	162.12	1.31	49.04	2.94	15.27	0.53	560.30	0.97
3.	Bihar	598.79	2.12	98.54	1.83	191.62	2.78	753.11	6.07	49.34	2.96	179.10	6.24	1870.50	3.25
4.	Gujarat	3548.35	12.55	619.16	11.47	1029.03	14.92	615.65	4.96	53.89	3.23	435.34	15.17	6301.32	10.96
5.	Haryana	863.13	3.05	198.28	3.67	179.68	2.61	757.94	6.11	42.81	2.57	13.33	0.46	2055.17	3.57
6.	Karnataka	2027.01	7.17	300.83	5.57	426.91	6.19	952.01	7.67	101.83	6.11	160.61	5.60	3969.20	6.90
7.	Kerala	894.33	3.16	107.04	1.98	84.50	1.22	459.82	3.71	61.01	3.66	31.08	1.08	1637.78	2.85
8.	Madhya Pradesh	1466.12	5.18	279.86	5.19	340.72	4.94	893.21	7.20	184.28	11.06	96.70	3.37	3260.89	5.67
9.	Maharashtra	3979.97	14.07	838.01	15.53	1759.49	25.52	1189.49	9.59	210.75	12.64	674.09	23.50	8652.50	15.04
10.	Orissa	935.26	3.31	150.19	2.78	156.45	2.27	409.80	3.30	65.03	3.90	51.10	1.78	1767.83	3.07
11.	Punjab	975.56	3.45	346.44	6.42	201.66	2.92	1098.10	8.85	122.66	7.36	38.00	1.32	2782.42	4.84
12.	Rajasthan	1165.94	4.12	267.97	4.96	274.60	3.98	607.07	4.89	118.83	7.13	73.98	2.58	2508.39	4.36
13.	Tamil Nadu	3047.03	10.77	425.47	7.88	689.24	10.00	753.94	6.08	102.38	6.14	247.94	8.64	5266.00	9.16
14.	Uttar Pradesh	2953.44	10.44	732.05	13.56	531.77	7.71	1826.64	14.72	266.79	16.00	145.02	5.06	6455.71	11.22
15.	West Bengal	1470.97	5.20	212.87	3.94	276.36	4.00	399.39	3.22	68.03	4.08	238.04	8.30	2665.66	4.63
Total		26534.79	93.81	5128.05	95.00	6659.22	96.57	12217.72	98.48	1606.36	96.38	2705.25	94.30	54851.99	95.37
All India		28282.02	100.00	5397.34	100.00	6895.62	100.00	12407.47	100.00	1666.67	100.00	2868.82	100.00	57517.94	100.00

(Including assistance of Rs.29 lakh disbursed to Bhutan)

Source: 1. IDBI Report 1989-90  
2. NCDC Report 1989-90

## APPENDIX 11.3

## State-wise Growth of Bank Offices in India

Sl. No.	Major States	Bank Offices 1969, 1988 & 1989 (Including Private Scheduled Commercial Banks)										
		Number of Offices			Annual Rate of Income		Percentage of total Number of Offices			No. of Offices per lakh of population		
		June 1969	June 1988	June 1989	Between 1969 and 1988	Between 1969 and 1989	June 1969	June 1988	June 1989	June 1969	June 1988	June 1989
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.	Andhra Pradesh	567	4308	4432	11.3	10.8	6.9	7.8	7.8	1.4	8.3	8.3
2.	Assam	74	1031	1083	14.9	14.4	0.9	1.9	1.9	0.5	5.3	5.6
3.	Bihar	273	4317	4466	15.6	15.0	3.3	7.8	7.8	0.5	6.3	6.7
4.	Gujarat	752	3163	3257	7.9	7.6	9.1	5.7	5.7	3.0	9.1	10.0
5.	Haryana	172	1220	1239	10.7	10.4	2.1	2.2	2.2	1.8	9.1	10.0
6.	Karnataka	756	4026	4147	9.2	8.9	9.1	7.3	7.3	2.7	11.1	12.5
7.	Kerala	601	2775	2799	8.4	8.0	7.3	5.0	4.9	2.9	11.1	11.1
8.	Madhya Pradesh	343	3919	4112	13.7	13.2	4.2	7.1	7.2	0.9	7.7	7.7
9.	Maharashtra	1118	5117	5327	8.3	8.1	13.5	9.2	9.3	2.3	8.3	8.3
10.	Orissa	100	1812	1868	16.5	15.8	1.2	3.3	3.3	0.5	7.1	7.1
11.	Punjab	346	2058	2073	9.8	9.4	4.2	3.7	3.6	2.4	12.5	12.5
12.	Rajasthan	364	2796	2868	11.3	10.9	4.4	5.0	5.0	1.5	8.3	8.3
13.	Tamil Nadu	1060	4039	4162	7.3	7.1	12.8	7.3	7.3	2.7	8.3	8.3
14.	Uttar Pradesh	747	7758	7988	13.1	12.6	9.0	14.0	14.0	0.9	7.1	7.1
15.	West Bengal	504	3656	3833	11.0	10.7	6.1	6.5	6.7	1.2	6.7	7.1
	Total	7777	51995	53654	10.5	10.1	94.1	93.8	93.8	-	-	-
	All India	2262	55414	57197	10.5	10.2	100.0	100.0	100.0	1.6	-	-

## APPENDIX 11.4

## Public Sector Banks Advance to Priority Sectors

(Rs. Crores)

Sl. No.	Major States	June 1969			June 1987		
		Aggregate Advances	Priority Sector Advances	Percentage share of Priority Sector Advances to Aggregate Advances	Aggregate Advances	Priority Sector Advances	Percentage share of Priority Sector Advances to Aggregate Advances
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Andhra Pradesh	122	34	27.9	4296	2374	55.3
2.	Assam	13	2	15.4	596	313	52.5
3.	Bihar	52	5	9.6	1709	1116	65.4
4.	Gujarat	195	34	17.4	3612	1604	44.4
5.	Haryana	23	7	30.4	1221	872	71.4
6.	Karnataka	143	36	25.2	4195	2064	49.2
7.	Kerala	77	28	36.4	2152	1179	54.8
8.	Madhya Pradesh	63	14	22.2	2324	1340	57.8
9.	Maharashtra	912	105	11.5	13183	3215	24.4
10.	Orissa	15	2	13.3	1008	602	59.7
11.	Punjab	50	14	28.0	2437	1590	65.4
12.	Rajasthan	38	6	15.8	1523	928	60.9
13.	Tamil Nadu	311	82	26.4	5615	2418	43.1
14.	Uttar Pradesh	154	32	20.8	4512	2564	56.9
15.	West Bengal	526	24	4.6	4557	1420	31.2

## APPENDIX 11.5

## Banking Statistics for Kerala State during 1985-90

(Rs. crores)

Year (ending Dec.)	State Bank Group				Other Nationalised Banks			
	Total Deposits	Of which NRE Deposits	Total Advance	C.D. Ratio	Total Deposits	Of which NRE Deposits	Total Advance	C.D. Rati
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1985	1202.65	354.41	774.71	64.42	1430.61	410.57	849.47	59.2
1986	1477.71	463.29	914.04	61.80	1708.48	516.40	988.91	57.0
1987	1734.68	563.78	1091.89	62.90	1980.22	593.95	1157.30	58.8
1988	1981.33	643.30	1279.73	64.59	2231.51	684.25	1316.21	58.1
1989	Not available							
1990	2406.71	800.30	1551.12	64.44	2718.06	832.34	1595.29	58.9

Up to  
31-3-90

## APPENDIX 11.5 (continued ...)

(Rs. crores)

Year (ending Dec.)	Total Public Sector Banks				Private Bank				Grand Total			
	Total Deposits	Of which NRE Deposits	Total Advance	C.D. Ratio	Total Deposits	Of which NRE Deposits	Total Advance	C.D. Ratio	Total Deposits	Of which NRE Deposits	Total Advance	C.D. Ratio
(1)	(2)	(3)	(4)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1985	2633.26	764.98	1624.18	61.68	800.53	79.16	478.09	59.72	3433.79	844.14	2102.27	61.2
1986	3186.19	979.69	1902.95	59.72	946.01	176.71	543.43	57.44	4132.20	1156.40	2446.38	59.2
1987	3716.90	1157.73	2249.19	60.54	1037.65	201.09	648.97	62.54	4752.55	1358.82	2898.16	60.9
1988	4212.84	1327.55	2595.94	61.62	1217.46	234.56	717.13	58.90	5430.30	1562.11	3313.07	61.0
1989												
1990	5124.77	1632.64	3146.41	61.40	1407.58	286.09	791.92	56.26	6532.35	1918.73	3938.33	60.2

Up to  
31-3-90

Source: Agenda Papers of the State Level Bankers' Committee.