



GOVERNMENT OF KERALA

# ECONOMIC REVIEW 1987

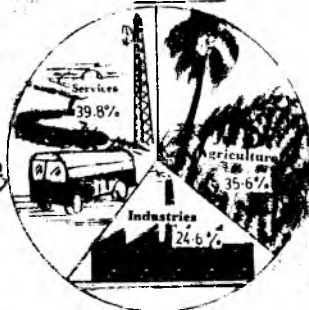
STATE INCOME  
1970-71



NATIONAL INCOME  
1970-71



1986-87



STATE PLANNING BOARD  
TRIVANDRUM

STATE INCOME  
KERALA



GOVERNMENT OF KERALA

ECONOMIC REVIEW  
1987

STATE PLANNING BOARD

TRIVANDRUM

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22/8/88

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## CHAPTER I

### GENERAL REVIEW

#### The National Scene:

The year that has gone by witnessed one of the severest droughts ever experienced in recent years with as many as 21 out of a total of 35 rainfall sub divisions in the country receiving deficient or scanty rainfall. This has caused a set-back to the momentum of economic development thereby placing the targets of the Seventh Five Year Plan in jeopardy. As against an actual growth rate of 4.9 per cent in 1985-86, and an estimated rate of growth of 4.1 per cent during 1986-87, the growth rate for 1987-88 is placed at 1 to 2 per cent. This would imply that the growth rate in percapita income would be negative in 1987-88. It is, however, arguable whether the growth rate of even 1 to 2 per cent would have materialised during the year when one takes into account the shortfall of about ten per cent in agricultural production. The basis on which a positive growth rate has been arrived at is that the industrial sector is estimated to have registered an overall growth rate of 10.2 per cent during April—November 1987, with the manufacturing sector showing a higher growth rate of 11 per cent. However, it is possible that the contractionary effects of the drought on industrial production may make themselves felt more fully in the final months of the current financial year and the first few months of the next financial year. This could imply that the actual growth rate in the industrial sector may actually turn out to be lower.

1.2 The effect of the drought, it may be noted could possibly accelerate the tendency towards large scale sickness in industry. The total number of sick industrial units increased from 24,550 to 93,282 between December 1980 and December 1984, the figure jumped to 147,740 by December 1986. Thus while industrial sickness grew at the average rate of 14,683 units per year in the first four years, in the two year period 1985 and 1986 the rate has increased to an average of 27,229 per year.

1.3 The slow down in overall economic activity has not taken place without affecting adversely employment and prices. The number of job seekers on the live registers of the employment exchanges in the country grew by 2.2% in the year prior to November 1987 to reach a figure of 304.95 lakhs. At the same time, there was a decline of 3% in employment in the private sector in the year ending June 1987. With the monthly average vacancies notified declining by 6.8% in the first 9 months of 1987-88 and average monthly placements declining at the rate of 3.4% in the same period, the prospects for employment continue to be far from bright.

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1.4 Prices came under severe pressure throughout last year as a consequence of the poor weather and resulting shortage of essential commodities, especially agro based commodities. Upto the end of January, 1988, the wholesale price index registered an increase of 9.84 per cent on a point to point basis. Considering the fact that in the corresponding period of 1985-86 and 1986-87 the increases were only 3.38 per cent and 5.43 per cent respectively, the price escalation in 1987-88 has been quite substantial. While prices of food articles showed an overall increase of 8.93 per cent, non food articles registered an overall increase of 27.39 per cent. Among food articles, cereals recorded an increase of 14.42 per cent pulses, 32.61 per cent and Chillies 95.41 per cent. Among non-food articles oil seeds recorded an increase of 33.54 per cent. The prices of edible oils increased by 17.31 per cent. The overall consumer price index showed an increase of 9.6 per cent up to the end of December 1987.

1.5 The economic situation in the country would have been more serious but for some improved performance on the infrastructure front. Although hydel power generation fell sharply because of the failure of the monsoons, this was compensated for by a 15.7 per cent growth in thermal power generation during the first nine months of the current financial year. As a result, the total power generation increased by 7.6 per cent during April-December, 1987 as compared with the corresponding period of 1986. Coal production during this period increased by 10.2 per cent and railway freight movement recorded a growth of 5.4 per cent.

1.6 On the international trade front while exports showed improvement there was also a sharp increase in imports. During the first nine months of the current financial year, exports increased by 24.6 per cent as compared with an increase of 17.3 per cent in the corresponding period of the previous year. The commodities which continued to show good export performance include readymade garments, gem and jewellery, leather and leather manufactures, cashew kernel, marine products and iron and steel. However export of coffee, oil cake, spices, tobacco, sugar and jute manufactures declined during April—December 1987. At the same time, imports during the same period increased by 13.5 per cent in sharp contrast to an increase of only 2.3 per cent in the corresponding period of the previous year. In dollar terms the picture looks more disturbing since imports grew during this period by 11.5 per cent as against a decline of 1.5 per cent last year.

1.7 The balance of payments position continued to be under strain. The country's foreign exchange reserves declined by 23.12 per cent (in

terms of SDRS) during the first ten months of the current financial year. The balance of payments position has also been adversely affected with the rising trend in debt servicing obligations due to higher repayment to the International Monetary Fund (IMF) and debt service on commercial borrowings contracted in earlier years. The debt service ratio is likely to increase by 1-2% to reach 23-24% in 1987-88. There are indications that this could deteriorate further. Approvals for external commercial borrowings, it may be noted, increased by two third in the first 9 months of 1987-88, compared to the corresponding period last year. The contractionary tendencies evident in world growth and trade will also have adverse implications for our exports in the near future. There is not much room for complacency on the external sector.

1.8 The drought situation witnessed during the year has revealed some of the inherent and

basic weaknesses of the economy. Most important, it has drawn attention to the continued sensitivity of agricultural production, specially food production to the vagaries of the weather. It has also exposed the vulnerability of the general price level to sudden shortages of agricultural supplies. Moreover the secular pressure for high levels of Government expenditure has been limiting the scope of fiscal policy to contain inflation. Continued strains on balance of payments, high cost structure in substantial segments of industry and the persistence of excess capacity and low productivity in capital intensive sectors are some of the other problem areas which would require effective tackling through an appropriate policy package.

1.9 Selected indicators relating to the growth of the national economy since the year 1950-51 are given in the following table:

TABLE 1.1  
*Selected Indicators - National Economy*

	1950-51	1960-61	1970-71	1980-81	1985-86	1986-87
1. National Income						
(a) At Current prices (Rs. Crores)	9,147	14,071	36,736	122,226	233,305	260,504
(b) At 1970-71 prices (Rs. Crores)	17,536	25,534	36,736	122,226	156,083	162,326
2. Per Capita Income						
(a) At Current prices (Rs.)	245	306	633	1557	2721	2974
(b) At 1970 71 prices (Rs.)	466	559	633	1627*	1836*	1869*
3. Output of Major Commodities						
(a) Foodgrains (Million Tonnes)	50.8	82.0	108.4	129.6	150.4	144.1
(b) Finished Steel (Million Tonnes)	1.0	2.39	4.64	6.82	9.49	9.70
(c) Cement (Million Tonnes)	2.7	8.0	14.3	18.6	32.0	34.8
(d) Coal (Including Lignite) (M.Tonnes)	32.8	55.7	76.3	119.0	162.3	173.5
(e) Crude Oil (Million Tonnes)	0.26	0.45	6.8	10.5	30.2	30.5
4. Foreign Trade—Exports (Rs. crores)	601	660	1,535	6,711	10,985	12,567
Imports (Rs. crores)	650	1140	1,634	12,549	19,658	20,084
5. Wholesale price Index (Base 1960-71)	47	55	100	257	358	377
6. Consumer Price Index (Base 1960)	83	102	186	401	620	674
7. Plan Outlay (Rs. Crores)	260	1,117	2,524	15,023	22,420	40,817

\* At 1980-81 prices.

### Developments in Kerala's Economy:

1.10 The monsoons in Kerala have been highly erratic for the past few years, exposing the state to the ravages of drought and occasional floods. The failure of the north-east monsoon of 1986 followed by an unfavourable south west monsoon resulted in a very grave drought situation during 1987, crippling

the growth of industrial and agricultural sectors of the economy. Prior to the 1980s, the State did experience floods in some years, but a typical drought situation was virtually unknown. The drought situation of 1987 has been more severe than it was in 1983 as a result of the secular decline in rainfall during recent years and the low retention of the water received during the rains.



1.11 In the agricultural sector while paddy has been affected, it forms only a small part of the damage inflicted by drought. Cash crops like coconut, pepper, cardamom and other spices, tea, coffee etc., which are all based on heavy rainfall have been badly affected. The resultant loss to the farmers, to the State Government and to the Country (due to loss of foreign exchange) would be very much greater.

1.12 The State is dependent 100 per cent on hydel power. As a result of the very poor rainfall during last year, the storage in the hydel reservoirs became very inadequate and the state was forced to impose not only stringent power cut on High Tension and Extra High Tension consumers but also resort to partial load shedding. In the industrial sector this has had a cascading effect with fall in production, resultant unemployment and loss in revenue.

1.13 Drinking water scarcity has been experienced in many parts of the State on an unprecedented scale. Special steps had to be taken to tackle this difficult situation. This entailed considerable expenditure on the part of the State Government. Sectors like Animal Husbandry, Dairy and Fisheries were also adversely affected.

1.14 Firm data on the impact of the drought on various sectors of the economy are yet to be compiled fully. On a rough estimate, it appears the State's economy would not have registered any appreciable growth rate during 1987-88.

1.15 The State Government has initiated a number of measures particularly to help the small and marginal farmers who have been given relief in the payment of their outstanding loans and interest thereon. Programmes have been undertaken to supply planting materials, fertilizers, etc., to enable the farmers to raise short-term crops. Some innovative steps have also been adopted in popularising horticulture involving large scale popular participation. Under this scheme, 10 lakh 'mini kits' were supplied. Emphasis has also been given to maximum utilisation of the ground water facilities in the State.

1.16 In its development strategy, the State Government has been giving greater emphasis on poverty alleviation programmes. Under IRDP, 53676 families who had received assistance earlier and 27,462 new families were assisted in the first 9 months of 1987-88. It is also significant to note that per family investment increased during this period from Rs. 5,713 to Rs. 6110. Among the families assisted a little over 30 per cent constituted SC/ST beneficiaries. The State Government, in spite of the financial stringency, has been able to implement such programmes for the benefit of the weaker sections so that their living conditions could be improved.

1.17 Major developments in respect of the important sectors of the economy are highlighted below:

TABLE 1.2  
Important indicators of State economy

Item	1960-61	1970-71	1980-81	1985-86	1986-87
1. State income (at current prices) Rs. crores	432	1255	3485	5917	6681
"    1970-71 prices (Rs. crores)	432*	1255	1557	1785	1802
2. Per capita income (at current prices) Rs.	259	594	1377	2140	2371
3. Output of Important Commodities					
(a) Rice      Lakh tonnes	10.68	12.98	12.72	11.73	11.34
(b) Coconut   million nut	3220	3981	3008	3149	3068
(c) Areca nut   "	7737	12738	10805	5033	NA
(d) Pepper     ,000 tonnes	27.03	25.03	28.52	29.17	31.94
(e) Rubber     "	23.04	78.73	140.33	184.70	202.13
(f) Tea        "	40.37	41.45	50.72	53.10	48.62
(g) Coffee    "	7.41	12.57	23.54	23.64	NA
4. Prices					
(a) Wholesale price Index of Agricultural Commodities @ (Base -1952-53 = 100)	126	222	513	800	933
(b) Consumer price Index number (Base- 1970 = 100)	480£	864£	229	340	368
5. Plan outlay (Rs. crores)	22.25	59.35	311.31	411.95	427.55

@ Index numbers relate to the calendar years 1961, 1971, 1981 and 1987.

\* At 1960-61 prices

£ Base — 1939 = 100

### State income:

1.18 The latest available data on State income pertain to the year 1986-87. The State income of Kerala for 1986-87 at current prices was Rs. 6,681 crores as compared with the estimated income of Rs. 5,917 crores for the year 1985-86 implying a percentage increase of 11.4 per cent. The State's per capita income which stood at Rs. 2140 in 1985-86 increased to Rs. 2371 in 1986-87 showing a growth rate of 9.7 per cent. However, if the per capita income of the State is considered at constant prices (1970-71) there was a decline of 1.1 per cent during 1986-87, which signifies that the overall increases in the price levels of commodities were higher in Kerala during 1986-87. While there was a 4.2 per cent growth in real terms in the national economy in 1986-87 the growth during the corresponding period in the State's economy was as low as 1.1 per cent. The estimate for 1987-88 is yet to be computed. However, from the observed trends in production in the important sectors during 1987-88 and in view of the many inhibiting factors of development mentioned in the earlier paragraphs, it would appear that the State income for 1987-88 is unlikely to have registered any significant increase.

### Employment Situation

1.19 The population of Kerala in 1987 is estimated at 276 lakhs. The 1981 Census figure was 254 lakhs.

1.20 At the end of December 1987 there were 29.5 lakhs of work seekers on the Live Registers of Employment Exchanges as compared to 27 lakhs at the end of December 1986. Though the State accounts for 3.7 per cent of the country's population, the number of employment seekers is more than 10 per cent of the total job seekers in the Country. The un-employment problem among the educated and professionally and technically qualified persons has become rather acute. As at the end of December 1987 the professional, technical and related work seekers numbered about 82,000, which include 1532 Doctors, 4,443 Engineers, 297 Agricultural Graduates and 25 Veterinary graduates.

1.21 The number of placements through Employment Exchanges during the first seven months of 1987 was 8,008 compared to 15,607 for the year 1986. On a monthly average, 484 employers were found to be using the services of employment exchanges in the State during 1987. The employment in the organised sector as on 31-3-1987 was 10.89 lakhs consisting of 5.77 lakhs under the Public Sector and 5.12 lakhs under the private sector.

1.22 Under the Unemployment Assistance scheme about 1.94 lakh unemployed persons have received unemployment assistance as at the end of December 1987. The total expenditure reported on this account is Rs. 6.70 crores.

Under the Self Employment scheme 1.02 lakh persons have been provided with lumpsum assistance/seed money to the tune of Rs. 6.11 crores, from 1982 to 1987. Against the seed money thus advanced the Commercial Banks would have advanced credit amounting to Rs. 7.68 crores during this period.

### Migration Abroad

1.23 According to a recent survey conducted by the Department of Economics and Statistics, of a total number of 6.82 lakhs persons who have migrated from Kerala to outside the State, 48.3 per cent is to foreign countries. Of this, the number of Gulf emigrants is estimated at 3.01 lakhs. United Arab Emirates and Saudi Arabia account for nearly 58 per cent of the Gulf emigrants. This migration, it is important to note was taking place at a time when the employment situation within the State has been becoming extremely difficult. But for this outlet the employment situation in the State could have become quite explosive.

1.24 The above-mentioned study has also brought out the fact that, on an average the Gulf emigrant worker remitted Rs. 10,455 per annum. On this basis, the annual Gulf remittances would amount to Rs. 315 crores per year a figure which, according to some, is an under-estimation. This has not only helped the country gain valuable foreign exchange, but it has also helped improve living standards of the beneficiaries of such remittances. However, a matter which is now causing concern is the return flow of the migrants. Out of an estimated 86,475 persons who have returned, as many as 42.5 per cent returned in 1986 alone. Of the returnees, nearly half is remaining unemployed. Many among them are below the age of 40 years.

### Price Situation

1.25. The country-wide inflation, that accentuated itself during 1987, has had its impact on the economy of the State. The index number of wholesale prices of agricultural commodities of Kerala increased from 800 in 1986 to 933 in 1987, representing 16.7 per cent increase. However, in respect of food crops, the increase in 1987 was only 4.3 per cent compared to 16.8 per cent during the previous year. The wholesale prices of plantation crops increased by 11.7 per cent during 1987. The prices of oil seeds went up by 34.5 per cent.

1.26. The retail prices of essential commodities also continued to show an upward trend during 1987. The increases were substantial in respect of pulses, chillies and edible oils. Almost all manufactured items exhibited a rising price trend during the year.

1.27. During the course of 1986-87 the average of the working class consumer price index rose by 28 points, representing an increase of 8.24 per cent over the preceding year. The impact of this increase on the cost of living has

to be gauged against the background of the actual increase of 8.3 per cent registered during the previous year.

1.28. Substantial quantities of rice, wheat, sugar, palm oil, and Kerosene were distributed through the public distribution outlets during the year. As against the outgo of 15.55 lakh tonnes of rice and 0.98 lakh tonnes of wheat in 1986 the outgo in 1987 was 15.98 lakh tonnes of rice and 1.04 lakh tonnes of wheat respectively. The State Civil Supplies Corporation could also play a vital role in holding the price line in check especially during seasons of the festivals like Onam, Christmas and Bakrid.

### Agriculture

1.29. Agriculture has been the sector worst affected by drought. The production of major crops like rice, coconut etc., is anticipated to be less than the previous years level. Firm data on production trends during the current year are not yet available. During 1986-87, both food crops and non food crops suffered decline in production in varying degrees as compared with the previous year. Production of rice during 1986-87 is estimated at 11.34 lakh tonnes which represents a level lower than the achievement of 11.73 lakh tonnes in 1985-86. It is somewhat disturbing to note that the area under HYV paddy has been declining in recent years in the State. An analysis of the district wise performance of rice crop during 1986-87 shows that Panchath district, with reasonable irrigation facilities, proved to be most vulnerable to drought and there was a decline in area under rice of 5,991 ha. during the year. Coconut production showed a decline of 9%, Cardamom 7%, tapioca 21% and Tea 7%. However, there has been a substantial increase in the production of cashew-nuts and rubber. The production of cashewnut in the State which stood at 80,203 tonnes in 1985-86 went upto 96,766 tonnes in 1986-87. The production of Rubber has reached an all time high of 2.02 lakh tonnes in 1986-87 as against 1.85 lakh tonnes in 1985-86.

1.30. Some of the major developments in the agricultural sector that deserve mention include reorganisation of the extension net-work, implementation of an intensive vegetable production programme and the formation of the Kera Karshaka Co-operative Federation. Panchayats will from now on be the base level units for planning and implementation of agricultural development programme with people's participation. A vegetable production-cum-marketing programme was successfully implemented during the Onam season, with the involvement of about 3,000 farmers and 80 primary agricultural co-operative societies and the active support of the State Department of Agriculture and Civil Supplies Corporation. For the integrated development of production, marketing and processing of coconut, a project with an outlay of Rs. 82 crores was approved by the European Economic Community (EEC) and the State Kera Karshaka

Co-operative Federation was formed to implement it.

### Animal Husbandry

1.31 Quality improvement of cattle showed a significant improvement during 1986-87. The cross-bred female cattle population of the State stood at 12.36 lakhs, representing 51 per cent of the total females. The number of artificial inseminations performed increased from 12.33 lakhs in 1985-86 to 13.35 lakhs in 1986-87. The milk production in the State which stood at 12.82 lakh tonnes in 1985-86 has increased to 13.34 lakh tonnes in 1986-87. As a result, the per capita availability of milk went up from 126 gm. to 131 gm. during the period.

### Fisheries

1.32. The major thrust areas in this sector are integrated Fisheries Development Project, implemented by Matsyafed and fishermen's Co-operatives. The total fish production in the State during 1986-87 was marginally higher at 3.64 lakh tonnes as against 3.61 lakh tonnes in 1985-86. The share of marine sector was 92.31 per cent. The marine fish production which reached an all time high of 4.25 lakh tonnes in 1984 has been showing a declining trend in recent years. The share of Kerala in the total fish production of the country has declined steeply from 40% in the seventies to 19% now.

1.33. The construction of fish landing centres at Munakkadavu and Kasaragod was completed during 1986-87. The fishermen population in 1986-87 is estimated at 8.94 lakhs, of which 77.5% is engaged in the marine sector. The number of fishermen households is estimated at 1.29 lakhs. Under the subsidised housing scheme for fishermen, 2,290 houses were completed during 1986-87 and 5,128 houses were in various stages of construction. The production inputs distributed during 1986-87 consist of 448 crafts, 579 outboard motors, and 8,675 kgm. of fishing gears.

### Forests

1.34. Forests extend over 11.22 lakh hectares in the State. The reserve forests represent nearly 82 per cent of the total forest area. A concerted programme of forest plantations is under implementation. The area thus planted increased from 1.57 lakh hectares in 1985-86 to 1.60 lakh hectares in 1986-87. There was significant progress in the implementation of the World Bank assisted Social Forestry Programme during the year. The net revenue from forestry sector during 1986-87 was Rs. 48.2 crores as against Rs. 42.4 crores in 1985-86.

1.35. Under the Western Ghat Development Programme, sericulture has been introduced in Pambar and Vattavada watersheds in Idukki district. During 1986-87, 100 acres had been planted with mulberry and cocoons valued at Rs. 1.5 lakh were produced.

## Industry

1.36. Because of the severe set back in power supply position during 1987-88, industrial development in the State is bound to have been affected adversely. However firm data are available only upto the year 1986-87. The manufacturing sector registered an increase of 3.4 per cent growth in real terms during 1986-87. The total number of registered working factories in the State stood, at 11489 as at the end of March 1986 employing 2.92 lakhs workers. The cashew industry alone employed 1.02 lakh workers, accounting for 35 per cent of the total workers in this sector. During 1986-87 280 joint stock companies were newly registered bringing the total number of working joint stock companies in the State to 3062.

1.37. During the year 1986-87, KSIDC obtained sanction from the Government of India for 8 new projects and signed 17 memoranda of understanding and 10 promotional agreements with private entrepreneurs for the development and execution of new projects. The corporation disbursed Rs. 13.65 crores during 1986-87 by way of assistance for setting up industrial units.

1.38. In the field of small industries the Kerala Finance Corporation (KFC) and the Kerala State Small Industries Development Corporation (KSSIDC) continued to play useful roles, the former by providing financial assistance and the latter by supplying essential raw materials, creating infrastructural facilities, providing marketing assistance etc. The KSSIDC distributed raw materials valued at Rs. 13.23 crores to 2,495 small units during 1986-87. However, the Corporation incurred a loss of Rs. one crore during the year. The KFC disbursed Rs. 29.52 crores by way of loan assistance to small and medium scale industrial units during 1986-87 as against Rs. 19.51 crores in the previous year. The Corporation earned a net profit of Rs. 72 lakhs on cash basis during 1986-87.

1.39. In the traditional sector, industries such as cashew, coir and handloom faced some intractable problems. The cashew industry had been hit by the non-availability of sufficient raw cashew nuts resulting in 22 per cent capacity utilisation during 1986-87. At the same time the export of cashew kernels during 1986-87 reached an all time high of 41,759 MT valued at Rs. 334.11 crores as against 35,153 MT valued at Rs. 215.27 crores in the previous year. The situation in the coir industry continued to be difficult due to the non-availability of adequate quantity of husk at reasonable prices, inadequacy of working capital, decline in demand for coir products in the export market etc. Seized of the problem, the State Government has taken several steps for controlling the price of husks and to ensuring the availability of husks to coir co-operatives at reasonable price. The handloom industry had been facing a crisis due to the non availability of yarn and other raw materials. The production of handloom cloth increased to 50.40million metres valued at

Rs. 31.50 crores in 1986-87 as against 42.55 million valued at Rs. 30 crores in 1985-86.

## Irrigation and Power

1.40. The total investment in major, medium and minor irrigation schemes till the end of 1986-87 adds up to Rs. 655 crores, creating an irrigation potential of 3.81 lakh ha. (net) or 5.82 lakh ha. (gross). The share of major and medium irrigation schemes is 3.57 lakh ha. (gross) achieved through the 10 completed schemes and partial commissioning of a few other schemes. However out of the estimated irrigation potential, only 23% of the area has so far been brought under irrigation.

1.41. Out of the total investment in irrigation schemes upto the end of 1986-87, the expenditure incurred on minor irrigation schemes is Rs. 75 crores. During 1986-87 48 class I schemes, 66 class II schemes, 41 lift irrigation schemes and 51 I. P. D. Yelah schemes were completed. A new scheme, community irrigation scheme, was launched in 1986-87.

1.42. Kerala has been facing acute power shortage since the second half of 1986-87. Even though the installed capacity has increased from 1271.5 MW to 1476.5 MW by 1987, generation of power was less by 716 MU. This was entirely due to failure of monsoons as the State is fully dependent on hydel power.

1.43. During 1986-87, 511.85 MU of power was imported from the neighbouring States. Even then the supply position was unsatisfactory. Per capita consumption of power has gone down from 136 units in 1985-86 to 131.26 units in 1986-87. As against this, the all-India average is 178 units. The State Government is considering seriously undertaking projects for the generation of Thermal power on its own and through the National Thermal power Corporation.

## Transport and Communication

1.44 Kerala has a multi model transport system of which road transport is the most important. The total road length which stood at 110649 km in 1986-87 increased by 1901 kms over the previous year. About 75 per cent of the total road length comes under the panchayats. The State has a motor vehicle density of 1066 per 100 sq. km. area against the all-India figure of little over 300 per 100 sq. km. area. Number of goods vehicles in the State increased by 13% during 1986-87.

1.45 The Kerala State Road Transport Corporation (KSRTC), the Public Sector agency for passenger transport has been incurring substantial loss. Recently, the KSRTC has initiated certain steps to reduce its operational loss. This included an intensive drive for better revenue collection, measures for fuel efficiency, reduction in staff—bus ratio, phased replacement of over-aged vehicles etc. As result of these measures, the loss could be reduced from Rs. 19.86 crores in 1986 to Rs. 13.79 crores in 1987.

## Tourism

With a view to developing the great potential the State has in the field of tourism a master plan has been prepared by the Tourism Department, covering the period 1985-95, aimed at providing a package of facilities to tourists. Action is being taken to set up District Tourism Promotion Councils for promoting local initiatives and mobilising local resources. The Tourism Department and the Kerala Tourism Development Corporation (KTDC) are the two official wings engaged in the development of tourism in the State. The KTDC runs a chain of 12 hotels with capacity to accommodate 685 persons per day. During 1985-86, eight lakh tourists visited the State. In order to give tourism the required thrust various steps are being taken. Tourism has already been declared as an industry by the State Government in 1986.

## Education

1.46 By the end of 1986-87, there was only a marginal addition to the total number of schools in the State. Of 12,142 schools in 1986-87, 6,828 were L. P. Schools 2,884 U. P. Schools and 2,430 High Schools. In 1986-87, total school enrolment was also only marginally higher at 57.17 lakhs against 57.16 in 1985-86. Out of this 48.97 lakhs belonged to the schools in rural areas and 8.20 lakhs in Urban areas. The teacher-pupil ratio in 1986-87 was 1:30, same as that of 1985-86. Vocational education covering 28 different vocations was offered to 3,650 students during 1986-87.

1.47 As regards higher education, there was no addition to the existing arts and science colleges. The total number of colleges remained at 168, affiliated to the Universities of Kerala, Mahatma Gandhi and Calicut. The enrolment however increased from 3.04 lakhs in 1985-86 to 3.13 lakhs in 1986-87. Girl students accounted for 51.05 percent of the total. Enrolment in Engineering Colleges has gone up from 9,568 in 1985-86 to 9,562 in 1986-87, while in polytechnics the total enrolment stood at 9768 in 1986-87 as against 9710 in 1985-86. During 1986-87, the Cochin University was upgraded into a full fledged Science and Technological University. A new engineering College was started in 1986-87 at Mangattuparamba in Cannanore District. Similarly three technical high schools were started in 1986-87, one each in Cannanore, Idukki and Trivandrum District. The Institute for Human Resource Development was started in 1986-87 which offers, among others, courses on computer maintenance, computer application, computer engineering etc.

1.48 Government expenditure on education in 1986-87 amounted to Rs. 483 crores which works out to 30 percent of the total expenditure on revenue account of the state Government. Out of this, 79.78% was incurred on school education 13.30% on University education, 4.46% on technical education and 2.46% on others and special education. The per capita expenditure

on education in Kerala was Rs. 175.55 in 1986-87 as against Rs. 103 for all States.

## Health

1.49 A reasonably good medical infrastructure has been developed in the State over the years. Allopathic health facilities in 1986-87 consisted of 159 hospitals, 444 Primary Health Centres, 397 dispensaries, 20 T. B. Centres, with a total bed strength of 36404. The bed-population ratio increased from 130 in 1985-86 to 132 in 1986-87. Medical and para medical personnel increased by about 8% during 1987 over the previous year. At the end of 1987, their number stood at 20,400.

1.50 Kerala State has also a relatively well developed network of Ayurvedic treatment. Besides the network available for general treatment, specialised institutions like Mental hospital, Vishavaidya hospitals, Panchakarma hospitals, Nature cure hospitals have also been established in the State. There were 97 hospitals, 500 dispensaries and 228 grant-in-aid vaidyasalas in the State at the end of 1986-87. The total bed strength in 1986-87 was 1769. The Homoeopathic institutions increased from 251 in 1985-86 to 279 in 1986-87. The bed strength in 1986-87 stood at 700.

1.51 Government expenditure on health including family welfare has gone up from Rs. 110.82 crores in 1985-86 to Rs. 137.89 crores in 1986-87. This represents an increase of 20 per cent in 1986-87. Per capita expenditure on health increased from Rs. 40.44 in 1985-86 to Rs. 50.13 in 1986-87.

1.52 Family Welfare Programmes in the State were being implemented through 600 rural and 60 urban family Welfare Centres spread over the State. Expenditure on Family Welfare Programmes in 1986-87 was Rs. 3853 lakhs as against Rs. 2510 lakhs in 1985-86.

## Housing

1.53 The major housing schemes such as the subsidised self-help housing scheme, Co-operative housing scheme for economically weaker sections and the rehabilitation housing scheme, are all designed to extend house construction assistance to economically weaker sections. Besides, the housing schemes implemented by the Departments of SC & ST, the Scheduled Castes Development Corporation and the Co-operative Federation for Fisheries Development have also been promoting housing activities to help the economically weaker sections. During 1986-87 financial assistance was extended for the construction of 1,01,536 houses to the people belonging to the weaker sections.

## Water Supply

1.54 Even though protected water supply is provided in all the 44 Municipalities and 3 Corporations, only 34 Cities/Municipalities have been fully covered to Urban Standards. In the case of rural water supply, 1691 schemes were under

implementation during 1986-87, out of which 80 schemes were completed. The drought situation since the latter half of 1986-87 had a particularly adverse impact on the availability of potable water supply. Government have taken a number of concrete steps to mitigate the problem of drinking water in the State.

### Nutrition

1.55 The ICDS programme operated through a network of 8272 Anganwadis covered 7.82 lakh beneficiaries during 1986-87. The mid-day meal programme benefited about 19 lakh children from L. P. Schools in 1986-87. This programme has been extended to the children belonging to the Upper Primary Classes from 1987-88. About 30 lakh children are now covered by School meal programme.

### Plan outlay

1.56 The approved outlay on the State Plan during 1987-88 was Rs. 440 crores. However, the State Government budgeted for a slightly higher outlay of Rs. 447 crores. As a result of the severe drought, the resource position of the State Government came under severe strain. In view of this, the Planning Commission had suggested a scaling down of the overall outlay for the current year. On the basis of the review by the State Government, the target for the current years' plan outlay has been brought down to Rs. 380 crores, excluding expenditure incurred on drought for which additional plan assistance has been provided by the Centre.

1.57 While scaling down the plan outlay, care has been taken to see that expenditure on schemes financed fully and partially by the Central Government as well as those supported by external agencies such as the world Bank have been as far as possible, kept intact. Also priority has been given to important ongoing schemes specially in the irrigation, power and agricultural sectors.

1.58 A major contributory factor to the resource constraint of the State Government has been a shrinkage in Central assistance consequent on the adjustments made in respect of the advance plan assistance of Rs. 175 crores drawn in the first two years of the Seventh Five Year Plan. Thus, while during 1985-86 and 1986-87, Central plan assistance amounted to Rs. 274 crores and Rs. 264 crores respectively, the Central Assistance for 1987-88 was as low as at Rs. 219 crores. Another point that would need special mention in this context is that repayment to Central Government of past loan and interest charges thereon have been mounting in recent years. There is now a net out flow of funds from the State to the Centre. During 1987-88, while Central assistance for Plan is Rs. 219 crores, the repayment of loan and interest to the Centre amounted to Rs. 260 crores. There was thus a net out flow of Rs. 41 crores from the State to the Centre.

1.59 The beginning of the current financial year saw the Government hamstrung in financial constraints. As a Study commissioned by the Planning Commission had pointed out, the laxity shown by the State Government during the Sixth Plan in mobilising revenue has had severe implication for its financial health in the seventh Plan period: the low level plan outlay has also led to slow growth of incomes and thus has impeded the expansion of the tax base.

1.60 For the next financial year, 1988-89, the Planning Commission has approved an outlay of Rs. 500 crores. In financing this outlay, Central assistance would be Rs. 253 crores. Therefore, the balance of Rs. 247 crores would have to be mobilised by the State Government.

### Share of Institutional finances and direct Central Investments

1.61 In the matter of credit dispensation by the Scheduled Commercial Banks and other financial institutions in the public sector, the share of Kerala has been very low as compared with many other States. In terms of the credit-deposit ratio, Kerala's ratio of 63.9 percent was lower than that of Andhra Pradesh (76.8 percent) Karnataka (90.6 percent) and Tamil Nadu (96.5 percent). Thus Kerala has the lowest credit-deposit ratio in the Southern region. This trend has been persisting since 1969 when the banking sector was nationalised.

1.62 In the matter of assistance given by other all-India financial Institutions also, Kerala's position has remained unfavourable with a total share of only 3.6 percent, as at the end of March 1986. Generally, the advanced States have been the main beneficiaries of institutional finance.

1.63 With regard to direct Central investments also, the share of Kerala interse has been going down over the years. Kerala which had a share of 3.27 percent of the aggregate Central investments in 1974 has now a share of only 1.62 percent. Of the total Central investments of Rs. 56,695 crores in all the States as at the end of March 1986, the investments, in Kerala amounted to only Rs. 920 crores. The other States in this region have a much larger share of such investments.

1.64 There is need on the part of the banks and other financial institutions in the country to evolve a deliberate credit allocative policy to meet the diversified requirements of different States, so as to bring about a more equitable sharing of institutional resources among them. At the same time, it is important that credit is specially made available for the promotion of productive endeavours in relatively less developed States. This would call for a better and more effective concert between the administrative machinery, the development agencies and the financial institutions.

## CHAPTER 2

### INCOME AND EMPLOYMENT

#### National Income

At current prices, the National Income (Quick Estimates) in 1986-87 is estimated at Rs. 229035 crores as against Rs. 205436 crores in 1985-86 marking an increase of 11.5 per cent over 1985-86. The growth rate in 1985-86 over 1984-85 was 12.2 per cent. At constant prices (1970-71), National Income in 1986-87 is estimated at Rs. 61769 crores. This was Rs. 59481 crores in 1985-86. Thus in real terms the National Income registered an increase of 3.8 per cent in 1986-87 as against 4.7 per cent in 1985-86.

#### State Income

2.2 The State income of Kerala for 1986-87 is estimated at Rs. 6680 crores at current prices, against Rs. 5917 crores in 1985-86. This marks an increase of 11.4 per cent over 1985-86 as against the 3.5 per cent increase in 1984-85. However, the State income at constant prices (1970-71) for 1986-87 is estimated at Rs. 1802 crores which is just one per cent higher than that of the previous year. Thus the rate of growth in real terms was only nominal. A broad comparative picture of national income and State income is given below:

TABLE 2.1

*National Income and State Income*

Item	1970-71	1980-81	Average annual growth rate 1% 1970-71 to 1980-81	1986-87	Average annual growth rate 1% 1980-81 to 1986-87
1. National Income (Rs. crores)					
at current prices	34235	105743	11.94	229035	13.75
at 1970-71 prices	34233	47414	3.31	61769	4.51
2. State Income (Rs. crores)					
at current prices	1255	3485	10.73	6681	11.46
at 1970-71 prices	1255	1557	2.16	1802	2.47
3. Per capita National Income (Rs.)					
at current prices	633	1557	9.42	2975	11.40
at 1970-71 prices	633	698	0.98	801	2.32
4. Per capita State Income (Rs.)					
at current prices	594	1377	8.73	2371	9.48
at 1970-71 prices	594	615	0.31	639	0.64

#### Trends in the Sectoral Share of Income

2.3 The sectoral distribution of State income at current and constant prices is given in Appendix 2.5. The distribution of income in current prices under the three broad categories of primary, secondary and tertiary sectors has remained more or less unchanged compared to the previous year. However, the variation in the sectoral composition of State income are more pronounced in real terms. The share of primary sector has fallen from 37.4 per cent in 1985-86 to 34 per cent in 1986-87. The share of secondary sector has marginally improved from 19.2 per cent in 1985-86 to 20 per cent in 1986-87. The tertiary sector has shown relatively higher growth as its share went up from 43.4 per cent in 1985-86 to 45.8 per cent in 1986-87. But it may be noted that such variations in the sectoral

distribution of income are not caused by any substantial growth of the secondary and tertiary sectors but due to the significant negative growth rate registered by the primary sector. Details are given in Appendix 2.3.

#### Per Capita Income

2.4 In 1985-86, the country's per capita income at 1970-71 prices is estimated at Rs. 798 as against Rs. 775 in 1984-85, registering an increase of 3.9 per cent. At current prices the per capita national income works out to Rs. 2975 in 1986-87 against Rs. 2721 in 1985-86, the growth rate being 9.3 per cent.

2.5 The per capita State income at current prices went up by 9.7 per cent from Rs. 2,140 in

1985-86 to Rs. 2371 in 1986-87. The rate of growth of per capita income 1985-86 over the previous year was only 1.6 per cent. Eventhough there is an increase of 9.7 per cent in per capita income at current prices, at constant prices it declined by one per cent. From Rs. 646 in 1985-86, it has come down to Rs. 639 in 1986-87.

#### District Income

2.6 District income estimates at current and constant prices during the years 1970-71 and 1980-81 to 1985-86 are presented in Appendix 2.4. As in 1984-85, in 1985-86 also Ernakulam District had the highest share (13.4%) in the total net State domestic product followed by Trivandrum (10.3%) and Trichur (9.1%). Wayanad continued to have the lowest share (3.4%). The District-wise distribution of State income has not shown any appreciable change during 1985-86.

2.7 The sectoral composition of district income presented in Appendix 2.5 shows the importance and contribution of different sectors to the economy of each district for the period from 1980-81 to 1985-86. During 1985-86, at current prices the share of primary sector varied from Rs. 57.6 per cent in Idukki District to 27.6 per cent in Kasargod District, while the share of secondary sector varied from 35.2 per cent in Kasargod District to 9.2 per cent in Malappuram District. Like in the previous years Trivandrum District had the largest share of the tertiary sector (50.2%).

2.8 Appendix 2.6 gives the estimates of per capita income of the districts with their ranks at current and constant prices for the years 1980-81 to 1985-86. In 1980-81 Ernakulam District had the highest per capita income at constant prices and Idukki District had the second place. But during the same period at current prices there was an inter-change of these districts in their ranks. It is noticed that at current and constant prices Malappuram had the lowest rank (11th rank). But coming to 1985-86 the picture had changed. At current prices, Wayanad had the first rank, followed by Idukki, and at constant prices also Wayanad retained its position followed by Ernakulam. As in the previous years Malappuram had the lowest rank at current and constant prices.

#### Population

2.9 The total population of Kerala as per the 1981 census was 254 lakhs out of which 125 lakhs were males and 129 lakhs females. Kerala accounts for 3.7 per cent of India's population and ranks 12th among the 22 States in India. The estimated population in 1987 was 276 lakhs. Population details for Kerala and India are given in Appendix 2.7 to 2.11.

#### Employment Situation

2.10 The total number of employment seekers on the live register of various Employment Exchanges in the State increased from 27 lakhs in 1986 to 29.5 lakhs in 1987. However, the number of persons really unemployed may be less than the live register figures as it includes: (i) employed

persons who have registered for better jobs and (ii) employed persons who have not canceled their registration. This in no way reduces the magnitude of unemployment situation in the State.

2.11 The proportion of applicants who are matriculates or above among the job seekers on the live register showed an increase from 53% in 1985 to 57% in 1987. Among them, 83.7% were S.S.L.C/S.S.C holders, 9.3% Pre-degree, 6.3% graduates and the category of S.S.L.C. and above, continues to show an increasing trend. Details are given in Appendix 2.12.

#### Occupational Analysis

2.12 An analysis of occupation-wise classification of registrants shows that 76.9% of the job seekers who remained in the live register in 1986 were persons without any professionals/technical qualifications, vocational training or significant work experience. The share of registrants classified under the category of clerical and related workers was 7.5%, production and related workers 6.0%, unskilled workers 3.0% and professional, technical and related workers 3.3%. Category-wise details are given in Table 2.1 below:

TABLE 2.1

*Occupational Analysis of the Employment Seekers on the Live Register of the Employment Exchange in Kerala as on 31st March, 1986.*

Description of Occupation	Employment seekers on Live Register as on 31-3-1986	
	No.	% of Total
Professional, Technical and related workers excluding Primary and Middle School Teachers	83193	3.3
Primary & Middle School Teachers	23001	0.9
Administrative, Executive and Managerial workers	3461	0.1
Clerical and related workers	189788	7.5
Sales workers	850	0.0
Other Service Workers	13218	0.5
Farmers, Fishermen, Hunters, Loggers excluding Agricultural and Plantation Labourers	24257	1.0
Production and related workers transport equipment operators and unloaders and Labourers etc.	152713	6.0
Unskilled office workers	18918	0.7
Other unskilled workers	75735	3.0
Workers not classified by occupations	1947188	76.9
All Occupations	25,32,322	100.0

Source: Kerala Annual Employment Review.



### Professional and Technical Work Seekers

2.13 Details of work seekers with professional and technical qualification are given in Appendix 2.13. Unlike in previous year, the number of registrants indicated an upward trend in all the categories in 1987. The number of registrants under the category of medical graduates has shown an increase of 21% over 1986 followed by engineering graduates (17%); diploma holders (6%), agricultural graduates (42%) and veterinary graduates (64%).

### Placement Through Employment Exchanges

2.14 The number of placings effected through Employment Exchanges in the State is presented in Appendix 2.14. As on July 1987, 8008 placings were made by the Exchanges. During this period, a monthly average, 484 employers used the services of Employment Exchange in Kerala.

### Placement Through Overseas Development and Employment Promotion Consultants Limited (ODEPC)

2.15 The ODEPC is a Government of Kerala Undertaking engaged in promoting deployment of manpower to foreign countries. So far, the company was able to provide employment opportunities to 1894 persons in various countries in about 53 categories, details of which are given in Appendix 2.15 and 2.16. As on December 1987 as many as 9450 persons have registered with the ODEPC seeking employment in foreign countries. Category-wise details as given in Table 2.2 below.

TABLE 2.2

Category-wise Distribution of Candidates Registered with the ODEPC as on 31-12-1987

Sl. No.	Category	No.
1.	Doctors	2401
2.	Nurses	1287
3.	Para Medicals	831
4.	Engineers	304
5.	Technicians	272
6.	Skilled workers	2429
7.	Catering staff	62
8.	Administration/Ministerial/ sales etc.	84
9.	Teaching staff	101
10.	Unskilled workers	1091
11.	Others	588
Total		9450

Source: ODEPC

2.16 Even though, the prospects of deploying manpower to foreign countries are bright, financial constraints and stiff competition from within and outside the country hampers the achievements of the company. The company proposes to diversify its activities to profitable channels. Housing schemes and channelisation of savings of the non-resident Indians in productive investment in Kerala are its ventures in this regard.

### Employment in the Organised Sector

2.17 Appendix 2.17 gives details of employment in public sector and organised private sector in the State during the period 1985 to 1987. The overall increase of employment in 1986 over 1985 is 19811 which is only 1.84%. The percentage increase in 1986 over 1985 in public and private sectors are 1.42 and 2.30 respectively. The achievement in the first quarter of 1987 is encouraging. The employment in the organised sector is 10,88,705 the private and public sector break-up being 5,12,169 and 576,536 respectively. It is observed that in all the cases, public sector dominates over private sector in generating employment. District-wise, Quilon (-4.2%), Alleppey (-2.1%) and Trichur (0.8%) showed a decline in the level of employment while in all other districts there was a rise. Pathanamthitta recorded the largest increase of 8% followed by Malappuram (4.7%) and Trivandrum (4.2%). District-wise details are given in Appendix 2.18. The vacancies notified to the Employment Exchanges in the State went down from 22,564 in 1984-85 to 21,430 (5.02%) in 1985-86.

2.18 As regards employment situation of women out of the 571,197 public sector employees as on 31-3-1986, 155,884 are women which forms 27.29 per cent and this marks a marginal improvement over the previous year.

### Unemployment Assistance and Self Employment Scheme.

2.19 In spite of all the efforts being made to provide employment opportunities to the unemployed in the State, the number of unemployed persons in the live register is on the increase. Government have considered the problem of registrants having to wait for long period for employment. So some relief measures were taken up. Accordingly, Government have introduced the "Unemployment Relief Scheme" (1978-79), the "Employment Generation Scheme" (1979-80), "Unemployment Assistance" (1980-81) and the "Unemployment Assistance & Self Employment Scheme" (1982), for the benefit of unemployed persons registered with the Employment Exchange in the State. As per the available figures, about Rs. 40.16 crores have been disbursed for the benefit of 865,920 unemployed persons from 1982 to 1987, details of which are given in table 2.3.

TABLE 2.3<sup>1</sup>

Details of Expenditure towards Unemployment

Year	No. of beneficiaries	Amount (Rs. lakhs)
1982	40,011	80.23
1983	98,261	649.80
1984	1,36,479	768.53
1985	1,79,146	1012.08
1986	2,18,446	835.08
1987	1,93,577	670.00
(upto 11/87)		
Total	8,65,920	4015.72

Source: Directorate of Employment.

2.20 Besides, an amount of Rs. 6.11 crores was paid as lump-sum assistance/seed money to 101,874 beneficiaries under the self employment scheme during 1982 to 1987. Against this seed money, the commercial banks also have advanced credit amounting to Rs. 7.68 crores during the same period.

#### Migration

2.21 Historically, Keralities have evinced a high degree of propensity of migration in search of employment. The acute employment problem in Kerala and the comparatively high wage rates offered in Gulf Countries are the most important reasons for the large scale emigration in recent years. But of late a large number of these emigrants started returning from the Gulf countries, which has great economic significance in many ways particularly from the point of view of providing employment.

2.22 According to a survey conducted by the Department of Economics and Statistics, the total outmigrants as at the beginning of 1987 are estimated at 6.82 lakhs. Out of this, 48.3 per cent is to Foreign Countries. The number of Gulf emigrants is estimated at 3.01 lakhs. United Arab Emirates and Saudi Arabia account for nearly 58 per cent of the emigrants. The estimated number of migrants is given in Table 2.4.

TABLE 2.4

*Estimated Number of Migrants from Kerala—1987*

Sl. No.	Designation	1987	Percentage to total
(1)	(2)	(3)	(4)
1.	Gulf Countries	300929	44.1
2.	Other foreign countries	28727	4.2
3.	Other states and Union territories in India	352404	51.7
Total		682060	100.0

According to the survey, the average annual remittance to home per migrant was worked out at Rs. 10,455 and on this basis the annual remittance from 3.01 lakh emigrants is estimated at Rs. 315 crores. However, according to some other estimates, remittance would be between Rs. 500 to Rs. 800 crore per annum.

2.23 A matter which is now causing concern is the return flow of the migrants. The total number of Gulf returnees, until the end of February 1987 is estimated at 86,475. Over 70 per cent of the returnees came during the three year period 1984-86, 42.5% returned in 1986 alone. Year-wise estimated number of returnees is given in the table 2.5

TABLE 2.5

*Estimated Number of Returned Migrants*

Year	Number	Percentage
From 1970 to 1975	432	0.5
1976	173	0.2
1977	778	0.9
1978	1038	1.2
1979	778	0.9
1980	1989	2.3
1981	1384	1.6
1982	4151	4.8
1983	8215	9.5
1984	10809	12.5
1985	15220	17.6
1986	36752	42.5
1987	4756*	5.5
Total	86475	100.00

\* First two months only

2.24 Loss of employment is the most important reason for the return of emigrants. Nearly two third returned due to this reason. Reasons for the return of emigrants from Gulf countries are given in Table 2.6

TABLE 2.6

*Reason for return from Gulf Countries*

Sl.No.	Reasons	Percentage
1.	Loss of employment due to termination or cancellation of contract	63.7
2.	Illness	11.8
3.	Family Problem	4.6
4.	Low salary	4.6
5.	Saved enough money	1.0
6.	Not Specified	14.3
Total		100.00

2.25 The distribution of the Gulf returned according to their educational qualification show that, nearly 60% belong to the categories of below S.S.L.C. or illiterate. Regarding those on the technical side, nearly 2/3 do not possess any technical qualification. Percentage-wise distribution is given in Table 2.7. This shows that majority of them were working in Gulf countries as unskilled or semi-skilled workers.

TABLE 2.7

*Educational Status (General and Technical Education)*

Sl.No.	General Education	Percentage	Sl.No.	Technical Education	Percentage
(1)	(2)	(3)	(1)	(2)	(3)
1.	Illiterate	15.0	1.	Without technical qualification	63.5
2.	Below S.S.L.C.	44.1	2.	Technical skill without technical qualification	20.1
3.	S.S.L.C.	25.2	3.	Technical Certificate	5.5
4.	Graduate & above	15.7	4.	Technical diploma	10.4
			5.	Technical degree and above	0.5
	Total	100.0		Total	100.0

2.26 The survey reveals that nearly two thirds of the returned persons were either employee or self-employed persons prior to their migration. Only 27 per cent were unemployed before their migration. A good number of those who were already employed, might have rejoined their old organisations after their return from Gulf countries.

2.27 The present activity status of the returnees shows that nearly 50 per cent of them have no job. On a comparison of the activity status prior to migration, it is seen that the proportion of employees declined from 41 per cent to 19 per cent. At the same time the proportion of unemployed increased from 27 per cent to 49 per cent. This implies that many of them lost their old job or have not rejoined their old job. It could be that after working in Gulf countries for wages much higher than the local wage rates, most of the returned migrants are reluctant to work as agricultural or other rural labourers. Instead they prefer to remain unemployed or self-employed or at best engage in some household work. The proportion of employees has increased from the pre-migration level of 0.5% to 1.6%. This increase can be attributed to the fact that a proportion of the returned persons have started some enterprises like operation of taxi cars, autorikshaws,

cinema houses, shops, servicing centres, restaurants etc. It is also important to note that the proportion of the self-employed before the migration and after the return was almost the same. This was 23.1% before migration and 24.2% after the return migration.

2.28 Considering the fact that a good number of the migrants/returnees belong to the lower economic strata of the society and that large expenditures have been incurred on purchase of land or construction of buildings or other conspicuous consumption, they would be left with very little savings for support in future. This is borne by the fact that 30 per cent of the returned were able to remit annually only less than Rs. 5000 per annum and 75 per cent could remit only less than Rs. 15000 per annum. About 64 per cent of the migrants could stay in Gulf countries only for a period upto 6 years. The survey reveals that 70% of the returnees are of age less than 40 years, out of which those below 30 years constitute 20 per cent. The bulk of the returnees thus have long economically active life and their rehabilitation would be a major problem for the State to tackle. This matter would require special attention as otherwise the problem of unemployment, which is already acute, would become more complicated.

## PRICES, COST OF LIVING AND WAGES

*Wholesale Prices*

The wholesale price index of agricultural commodities of Kerala showed a rising trend during 1987 compared to the previous year. The average index of wholesale prices for the year 1987 was 933 points compared to 799.5 points for the previous year showing an increase of 16.7%. The major item of increase was oil seeds whose price went up by 34.5%. As far as food crops are concerned, all items except condiments and spices showed a rising trend. Price Index of rice which occupies 40.4% of the weight rose by 5.5% compared to the previous year. The percentage variation recorded by various commodities annually is given in Table 3.1. A month-wise examination reveals that the price index of rice maintained a steady level i.e. 529.1 point throughout the year (See Appendix 3.1). The Price Index of condiments and spices showed increasing trend till the end of June 1987 and thereafter started declining. The increase registered by plantation crops was only 11.7 per cent. The commodity groups 'fruits and vegetables', and 'molasses' rose by 8.4 per cent and 13.2 per cent respectively. But their monthly variation shows that price of plantation crops attained its highest point at 591.4 by May and with respect to fruits and vegetables it was some what consistent after March 1987. Price index of molasses which stood at 805 during January 1987 showed a declining trend during February and March and then started rising and reached the peak level of 1007 during November 1987. During December again declining trend has been observed.

*Retail Price*

3.2 The Retail Prices of essential commodities showed an upward trend during the year 1987 as in the previous years. Although the wholesale price index of rice was steady through out the year, its retail price presented a mixed trend till April and thereafter went up. Over the year the price rise was 8.7 per cent. Table 3.2 provides the prices of some selected items during December 1986 and 1987 and the percentage variation over the one year period. The month end retail prices for the year 1987 are presented in Appendix 3.2 Among the item pulses which showed a negative trend during 1986, showed reverse

trend during the year under review. While the prices of refined oil and groundnut oil rose by 15.9 and 15.7 per cent respectively, a hike in the price of coconut oil can be observed. It went up by 53 percent. This may mainly be attributed to the price of cocount which registered a rising tendency during the last few years. There was a substantial increase in the price of chillies by 98 per cent. During the beginning of the year, its price which was Rs. 11.95/kg. went up to Rs. 22.71/kg. at the end of the year. Tapioca, an important food item and the main substitute for rice among the poorer section of the people maintained a more or less stable price level. The item which showed declining trend were banana and potato. The price of coriander which had been already on the higher side remained stable. The increase in the price of sugar was 8.6 per cent. A sharp rise in price was visible in the case of toilet soap and washing soap. Almost all manufactured items showed a rising trend throughout the year. Cement price which was Rs. 77.25/bag during January rose to Rs. 81.74/bag by December 1987. Rising tendency in price was also seen with regard to mutton, milk and egg. Vegetable items as a whole reflected an uptrend in price by the close of the year.

*Consumer Prices*

3.3 Consumer Price, which can be taken as broad indicator of inflationary trend in the economy, registered an upward trend during 1987. Retail prices of most of the essential commodities showed increases and this had got reflected in the consumer price index too. A comparison of the indices of 15 centres shows that the rate of variation in the cost of living index was highest at Quilon (9.86%) and lowest at Munda-kkayam (6.23%). At the same time variations in the indices during the twelve months of the year ranged from 18 to 30 points. The average monthly cost of living index of various centres which was 357 during January 1986 rose to 369 in July and 380 in December. This would indicate that inflationary trend became more pronounced by the middle of the year and this trend persisted even by the close of the year. The monthly consumer price indices computed for fifteen centres are given in Appendix-3.3 and average annual indices in Table 3.3.

TABLE 3.1

*Wholesale Price Index of Agricultural Commodities 1985, 1986 and 1987. Base 1952-53 = 100*

Crops	Weight	Wholesale Price Index			Percentage change over Previous year	
		1985	1986	1987	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)
A. Food Crops	63.5	581.5	679.3	708.5	16.8	4.3
Rice	40.4	447.7	501.6	529.1	12.0	5.5
Condiments and Spices	10.4	636.9	689.4	625.6	8.2	(-)-9.3
Fruits and Vegetables	10.7	1007.7	1323.7	1435.3	31.3	8.4
Molasses	2.0	709.1	758.3	858.2	6.9	13.2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
B . Non Food Crops		36.5	966.1	1008.5	1323.5	4.3	31.2
Oil Seeds		25.5	1141.9	1227.0	1650.2	7.4	34.5
Plantation Crops		11.0	559.6	508.8	568.4	(- )9.1	11.7
C. All Crops		100.00	721.9	799.5	933.0	10.8	16.7

Source : Directorate of Economics & Statistics.

TABLE 3.2  
Average Retail Price of Essential Commodities

Commodity	Unit	Price at the end of December			Percentage of variation	
		1985	1986	1987	1986 over 1985	1987 over 1986
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rice	Kg.	4.13	4.24	4.61	2.6	8.7
Greengram	"	6.75	6.28	7.15	(- )6.9	13.9
Blackgram	"	6.76	6.68	7.41	(- )1.1	10.9
Redgram	"	6.66	6.07	7.33	(- )8.8	20.8
Dhall	"	7.91	9.37	14.34	18.4	53.0
Coconut Oil	"	17.06	31.01	33.58	81.7	8.3
Groundnut oil	"	17.81	23.90	27.66	34.1	15.7
Refined oil	"	27.49	37.13	43.05	35.0	15.9
Tapioca	"	1.38	1.55	1.53	12.3	(- )1.3
Banana-green	"	3.95	4.72	4.36	19.4	(- )7.6
Milk-cow	Litre	4.25	4.46	4.88	9.9	9.4
Egg-Hen	Doz.	7.26	8.17	8.76	12.5	7.2
Potato	Kg.	2.75	4.09	3.84	48.7	(- )6.1
Coriander	Kg.	11.83	19.83	19.86	67.6	0.2
Chillies	"	17.65	11.45	22.71	(- )35.1	98.3
Onion	"	2.07	3.38	3.64	63.2	7.7
Sugar	"	5.90	6.18	6.71	12.2	8.6
Coconut (without husk)	100	140.00	284.00	311.79	94.5	9.8
Firewood (local split)	Qtl.	60.00	64.38	67.18	7.3	4.3
Washing Soap (Sunlight)	each	3.70	3.76	4.23	1.6	12.5
Electric Bulb (Osram 40w)	"	4.70	4.89	5.05	4.0	3.3
Aluminium Cooking pot	Kg.	50.80	48.22	53.93	(- )5.0	11.8
Baby food (Amul)	"	45.52	44.19	49.14	(- )3.1	11.2

Source: Directorate of Economics and statistics

TABLE 3.3

*Annual average consumer price index numbers in selected centres of Kerala (Base 1970=100)*

Sl. No.	Centre	Average Annual Index Number			Percentage variation	
		1985	1986	1987	1986 over 1985	1987 over 1986
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Trivandrum	321	350	378	9.03	8.00
2.	Quilon	329	355	390	7.90	9.86
3.	Punalur	308	334	358	8.44	7.19
4.	Alleppey	311	336	365	8.04	8.63
5.	Kottayam	322	347	371	7.76	6.92
6.	Mundakayam	298	321	352	7.72	9.66
7.	Munnar	307	337	358	9.77	6.23
8.	Ernakulam	303	325	354	7.26	8.92
9.	Chalakydy	314	345	373	9.87	8.12
10.	Trichur	317	342	364	7.89	6.43
11.	Palghat	309	328	360	6.15	9.76
12.	Malappuram	317	345	378	8.83	9.57
13.	Kozhikode	317	343	374	8.20	9.04
14.	Meppady	322	347	369	7.76	6.34
15.	Cannanore	311	341	373	9.65	9.38
	State Average	314	340	368	8.28	8.24

#### *Parity Index*

3.4 Parity Index provides a measurement of the relative gains and losses of the farmers as a result of price changes in the market. The Parity Index for 1987 (based on 10 months average) was 100 where as in the previous year it was 93 which represents an increase of 7 points. The prices received and those paid by farmers rose by 142 points and 76 points respectively. The rise in those two components would

represent the general upward trend in prices. At the same time farm cultivation cost and domestic expenditure which constitute the price paid by farmers also escalated during this year. From 1985 onwards the parity index has been reflecting a rising trend. But this does not imply that the conditions of farmers have improved. Eventhough the parity index has been becoming favourable, cost of cultivation has also been increasing simulataneously.

TABLE 3.4

*Index number of prices received and prices paid by the farmers*

Year	Price received by farmers	Farm cultivation cost	Domestic expenditure	Price paid by farmers	Parity as 2 to 5
(1)	(2)	(3)	(4)	(5)	(6)
1984	883	1086	666	850	104
1985	783	1167	688	896	87
1986	921	1299	745	984	93
1987(*)	1063	1405	799	1060	100

(\*) Average upto 10/87.

Source:-- Directorate of Economics and Statistics.

### Farm Commodity Prices

3.5 The average farm price of principal commodities with the exception of sugarcane and arecanut registered increase in 1987 (See table 3.5). The average farm price of paddy was Rs. 248.24 per quintal representing an increase of 2.47 per cent over 1986. Tapioca, the major subsidiary food crop also followed this trend, the average farm price being Rs. 105.33 per quintal, an increase of 6.89 per cent over 1986. The average farm price of coconut in 1987 was 33 per cent more than that of 1986. The supply shortages due to the drought contributed to this trend. Pepper prices

declined by 7 per cent in October 1987. The fall in price has been attributed to the arrival of new crop and slump in export demand. The average farm price of ginger in 1987 was Rs. 1366 per quintal-60 per cent higher than last year. Ginger prices are likely to stay firm in the future in view of the anticipated fall in production. The average farm price of Cashewnut (Rs. 1364 per quintal) showed an upward trend (27 per cent) during 1987. The rising trend in banana prices continued and the average farm price was Rs. 69.76 per 100 in 1987, an increase of 7.3 per cent over 1986. (See Appendix 3.10 and Table 3.5)

TABLE 3.5

Average farm price of principal crops

(in rupees)

Commodity	Unit	1983	1984	1985	1986	1987	Changes in average price between 1986 & 1987	
							Actual	Percent
1. Paddy	Quintal	253.87	230.78	225.18	242.25	248.24	+5.99	+2.47
2. Tapioca	"	74.59	66.32	70.71	98.54	105.33	+6.79	+6.89
3. Coconut	100 Nos.	176.80	304.50	174.21	193.85	259.11	+65.26	+33.66
4. Pepper	Quintal	1300.62	2103.08	3606.06	4749.75	5323.17	+573.43	+12.07
5. Ginger	"	2207.32	2864.23	1498.78	857.56	1306.01	+508.45	+59.29
6. Cashewnut	"	509.98	834.44	793.82	1074.47	1364.35	+289.88	+26.98
7. Sugarcane	Tonne	183.65	164.48	199.15	244.51	235.17	-9.34	-3.82
8. Arecanut	100 Nos.	7.83	13.59	10.35	12.04	10.33	-1.71	-14.20
9. Banana	"	53.74	56.33	60.24	65.02	69.76	+4.74	+7.29

Figures for 1987 are provisional

Source: — Directorate of Economics and Statistics, Trivandrum.

### Public Distribution System

3.6 Kerala has a well organised public distribution system which is one among the best in the country. The fair price shops are evenly distributed throughout the State. Generally 350 to 370 households are attached to a Fair Price shop and no consumer has to travel more than two kilometre to reach the ration

shop even in the remotest and far flung areas. There were 4730975 ration cards attached to a network of 12783 ARDs through which rice, wheat, kerosene and sugar are issued on the basis of the number of members of family. The average monthly offtake of rice and wheat through ration shops in 1987 was higher from previous year. (See Table 3.6)

TABLE 3.6

Distribution of Rice and Wheat Through the Public Distribution System

Month	Rice distributed (in tonnes)		Wheat distributed (in tonnes)	
	1986	1987	1986	1987
1	2	3	4	5
January	120163	113135	8372	7702
February	108808	116899	6706	6996
March	123349	148120	6394	7380

(1)	(2)	(3)	(4)	(5)
April	120503	113566	5562	6260
May	128386	124647	6993	6091
June	129456	138085	8771	8373
July	147088	158587	10690	10533
August	145580	172356	10043	10294
September	153149	143894	8475	8243
October	130111	108629	8666	9566
November	114861	128839	8861	10459
December	133529	131205	8908	12311
<b>Total :</b>	<b>1554983</b>	<b>1597962</b>	<b>98441</b>	<b>104208</b>
<b>Average Monthly off-take</b>	<b>129582</b>	<b>133164</b>	<b>8203</b>	<b>8684</b>

\*Quantity actually drawn by ration card holders.

Source: Directorate of Civil Supplies.

TABLE 3.7

*Public Distribution System of Essential Commodities in Kerala*

Particulars	Unit	1986	1987
1. No. of Ration Cards and Permits as on 1st April			
(a) Ration Cards for families	No.	4447714	4730975
(b) Ration Permits for Institutions	No.	7987	5961
2. No. of FCI—Sub Depots (as on 1st April)	"	22	22
3. No. of Wholesale Shops (as on 1st April)			
(a) Co-operatives	No.	46	43
(b) Others	No.	245	250
(c) Total Wholesale shops	No.	291	293
4. No. of Retail shops (as on 1st April)			
(a) Co-operatives	No.	1400	1302
(b) Others	No.	11228	11481
(c) Total Retail shops	No.	12628	12783
5. Quality of Coarse Cloth (Std. Bales allotted)	"	6713.75	2518.02
6. Wheat Products Distributed*	MT	NA	NA
7. Sugar (Allotted)	MT	134565	141351
8. Palm Oil (")	MT	9500	51500
9. Kerosene (")	K. Litre	237060	291017

\*Wheat products are distributed through the outlets of the Civil Supplies Corporation.

Source: Directorate of Civil Supplies.



3.7 The Kerala State Civil Supplies Corporation established in 1974 for distribution of essential commodities to the consuming public, distributes commodities such as rice, wheat products, edible oils, condiments and spices, sugar, jaggery, tea, coffee, textiles, vegetables etc. at reasonable prices through the retail outlets located in different parts of the State. It has 63 Taluk Depots and 171 Retail outlets. The Retail outlets include 155 Maveli Stores, 10 Super Maveli Stores, 3 Mobile Maveli Stores and 3 Super Markets. The

Corporation presently runs 5 petrol/diesel bunks, on Cooking gas outlet, 21 vegetable outlets, 6 wholesale kerosene depots, 1363 Sahakarana Maveli Stores, 150 Kerala Stores, 67 three wheelers. It also extends special assistance to the public by organising festival markets during seasons like Onam, Christmas and Bakrid. The main commodities dealt with by the Corporation and their turnover in 1986-'87 are given in table 3.8. The turnover, profit/loss etc. from the inception of the Corporation are given in Appendix 3.9.

TABLE 3.8

**Essential Commodities Distributed by Kerala State Civil Supplies Corporation.**

Sl. No.	Items	1985-86		1986-87	
		4/85 to Quantity in Tonnes	3/86 Values in Rs. lakhs	4/86 to Quantity in Tonnes	3/87 Value in Rs. lakhs
(1)	(2)	(3)	(4)	(5)	(6)
1	Wheat	..	..	..	..
2	Wheat Products	418.829	10.23	206.892	5.86
3	Rice	45524.200	1334.78	87159.723	2082.13
4	Pulses	2853.383	170.61	6674.599	450.96
5	Coconut oil	5039.147	739.19	8000.697	1402.49
6	(a) Palm oil	Nil.	..	..	..
	(b) Palmolein	35964.360	4300.89	16258.015	2402.44
7	Provision and other items	..	148.95	..	177.74
8	Vegetables	..	41.73	..	41.28
9	Sugar	10823.804	612.72	9476.410	537.63
10	Tea	724.292	208.54	555.086	144.18
11	Paper and note books	..	7.63	..	42.26
12	Uniform clothes to School Children	..	..	..	..
13	Textiles	..	1.37	..	2.35
14	(a) Motor Spirits	}	515.21	..	451.44
	(b) High Speed Diesel				
	(c) Fabricants				
15	Cement (Free Sale)	19390.400	296.56	5338.150	73.44
16	Confiscated goods	..	7.48	..	1.78
17	Sugar (levy)	133307.297	5956.10	156582.892	7363.51
18	Cement (levy)	119224.000	1426.04	108110.800	1293.77
19	Others	..	87.14	..	118.27

Source: Kerala State Civil Supplies Corporation.

**Availability of Food**

3.8 The food situation was comfortable. Despite a decline of 3.3 per cent in the rice production in the State from 11.73 lakh tonnes in 1986 to 11.34 lakh tonnes in 1987, the per capita availability of cereals

(rice and wheat) decreased only very marginally in 1987—a decrease of 0.3 per cent from 335 grams per day to 334 grams per day. This was thanks to the issue of rice from the central pool—15.60 lakh tonnes in 1987 against 16.50 lakh tonnes in 1986, an increase of 0.7 per cent (See table 3.10)

TABLE 3.9  
Availability of Food in the State

Particulars	Unit	1984	1985	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)
1. Production of Rice in the State	Lakh Tonnes	12.08	12.56	11.73	11.34
2. Availability of Rice for consumption from production within the State*	"	10.87	11.30	10.56	10.21
3. Import of Rice on State Account**	"	13.60@	14.60	16.50	16.60
4. Import of wheat in State Account	"	4.20@	4.20	4.20	4.20
5. Production of Raw Tapioca	"	39.04	36.94	32.76	25.76

\* Ten per cent of production is accounted by seed, feed and wastage and the rest alone is accounted for consumption.

\*\* Firm data on the import of rice into the State by private trade is not available. Hence availability through this source is not reckoned.

@ Quantity of rice and wheat drawn from F.C.I.

TABLE 3.10  
Import of Foodgrains on State Account

Month	In '000 tonnes			
	1986		1987	
	Rice	Wheat	Rice	Wheat
January	125	35	125	35
February	125	35	125	35
March	125	35	125	35
April	125	35	125	35
May	125	35	125	35
June	145	35	145	35
July	150	35	145	35
August	150	35	145	35
September	165	35	165	35
October	150	35	145	35
November	125	35	145	35
December	140	35	145	35
Total	1650	420	1660	420

Source: Directorate of Civil Supplies

TABLE 3.11  
Per capita Availability of Food in Kerala (gm.)

Particulars	1984	1985	1986	1987
1. Rice from internal production in the State	111	113	113	110
2. Rice from Imports	139	146	177	179
3. Total Rice Available (1+2)	250	259	290	289
4. Wheat from Imports	43	42	45	45
5. Total cereals (3+4)	293	301	335	334

## Wages

3.9 Wage rate and price level has some direct nexus. When prices rise wage rates in the organised and unorganised sectors also tend to rise. During the year 1986-87, average daily wage rates of skilled and unskilled workers in the agricultural sector had increased

to about 7 per cent and 8 per cent respectively. This is shown in Table 3.12 and 3.13. Wage rates for rural and urban workers in the construction sector remained more or less the same both for skilled and unskilled workers. A rural urban classification of wage rates in the construction sector is given in Table 3.14 and 3.15.

TABLE 3.12

## Average daily wage rates of skilled works in the Agricultural sector

Year	Average daily wage rates.		% of variation over the previous year	
	Carpenter	Mason	Carpenter	Mason
(1)	(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	48.13	47.56
1985-86	42.84	42.80	10.58	10.62
1986-87	45.93	45.93	7.21	7.31

Source: Directorate of Economics and Statistics.

TABLE 3.13

## Average Daily Wage Rates of unskilled Workers in the Agricultural Sector

Year	Average daily wage rates of paddy field worker		% of variation over the previous year	
	Male	Female	Male	Female
(1)	(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	10.57	27.00
1986-87	28.36	16.39	8.74	8.54

Source: Directorate of Economics and Statistics.

TABLE 3.14

## Average daily wages of skilled workers in the construction sector

Year	Daily wages of skilled workers			
	Carpenter		Mason	
	Rural	Urban	Rural	Urban
(1)	(2)	(3)	(4)	(5)
1980-81	18.66	19.33	18.75	19.36
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	39.97	36.65	38.03
1985-86	40.91	40.67	41.10	42.01

Source: Directorate of Economics and Statistics.

TABLE 3.15

## Average Daily wages of unskilled workers in the Construction sector

Year	<i>Wages of unskilled workers</i>			
	<i>Men</i>		<i>Women</i>	
	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>
(1)	(2)	(3)	(4)	(5)
1980-81	12.30	13.07	9.62	10.22
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	NA	NA	NA	NA

Source : Directorate of Economics and Statistics.

## AGRICULTURE

A significant development in the agricultural sector during 1987 was the recognition of Panchayat as the base-level unit for planning and implementation of agricultural schemes and programmes. Accordingly Agricultural Development Units were established in all the Panchayats/Municipalities in the State. The major thrust is on location-specific credit-linked programmes formulated and implemented with people's participation. The drought condition caused by the failure of rains seriously affected the performance of almost all crops. An encouraging experiment has been the success of a vegetable production-cum-marketing programme implemented under the aegis of the Department of Agriculture and Civil Supplies Corporation.

*Rainfall*

4.2 Climatic conditions, of which rain is the most important factor, generally influence the performance of the agricultural sector in the State. Kerala normally receives about 3000 m.m. of rain per annum with a reasonably good distribution. It has the benefit of both South West and North East Monsoons. But the behaviour of the monsoons had been erratic from 1982 and during past five years from 1982 to 1987 the quantum of rainfall received by the State was deficient (see Tables 4.1 & 4.2). During 1986 both monsoons were highly deficient thus creating a severe drought situation, the worst of its kind in the history of Kerala (Details of month-wise, station-wise rainfall during 1986 are given in Appendix 4.1). The drought of 1986-87 was, therefore, the continuum of a series of droughts experienced in succession during the last five years and it persisted till the end of September 1987. Its effect was naturally disastrous inflicting heavy losses in the crop production sector. According to the Department of Agriculture it had affected crops in 9.25 lakh ha. with an estimated total crop loss of Rs. 761.72 crores.

*Land Use Pattern*

4.3 Data on land use pattern in the State for the year 1986-87 are yet to be finalised. Latest estimates available for the year 1985-86 are presented in Table 4.3 along with a comparison of the overall trend with that of 1984-85. During 1985-86 the cropping intensity recorded a marginal decline from 1.316 to 1.308 largely due to the reduction in area sown more than once to the extent of 14,653 ha. On the other hand the net area sown increased by 6562 ha. duly explained by the reduction in area under 3 categories namely cultivable waste land (4539 ha), land under miscellaneous tree crops and land put to non-agricultural uses. This means that it is the seasonal crops which are relatively more vulnerable to natural calamities, compelling the farmers either to leave the land completely fallow or to limit the number of additional crops. Consequently areas coming under the categories of fallow land as well as fallows other than current fallows have increased by 817 and 1489 ha. respectively.

*Agricultural Production*

4.4 The performance of the crop sector in general during the year 1986-87 indicates that Kerala agriculture is yet to acquire adequate resilience to absorb the shocks caused by bad weather, particularly drought situations. Area under almost all crops with the exception of pepper, rubber and groundnut, recorded negative growth rates during the year. Reduction in area under rice has been substantial (14478 ha) which is more than 2% of the total cropped area in the previous year. It was the Mundakan and Punja crops which were hard hit. In spite of an increase in area under Virippu crop to the extent of 6870 ha. the gross cropped area under rice came down due to a reduction of 16355 ha. in Mundakan season and 4993 ha. during Punja season. This is attributable to the failure of North-East Monsoon. The largest fall in area was under tapioca (55961 ha), followed by coconut (20861 ha), rice (14478 ha), and cashewnut (4230 ha). In respect of other crops like pulses, sugarcane, ginger, turmeric, banana & plantain, sesamum and cotton, the decrease in area is only marginal. Pepper and rubber are the only crops that registered considerable increase in area during the year—11518 ha. and 7385 ha. respectively.

4.5 The adverse effect of drought on productivity of crops has been substantial. While a general decline in productivity is noticed for almost all the crops, that of rice fell by 1.21%, pulses by 3.47%, pepper by 11.76%, cardamom by 7.27%, coconut by 6.38%, banana & plantain by 8.53%, sesamum by 4.63% and cotton by 5.02%. In respect of crops like sugarcane, ginger, sweet potato, groundnut etc. the decline in productivity was, however, only marginal. Cashewnut, tapioca and rubber are the only crops that registered considerable improvement in productivity levels. Increase in productivity of cashewnut works out to 24.57% while those of tapioca and rubber are 8.55% and 6.98% respectively.

4.6 As a result of the negative growth recorded both under area and productivity, the total production of many crops came down during the year. The crops include rice (-39265 tonnes), pulses (-884 tonnes), sugarcane (-1381 tonnes), pepper (-1177 tonnes), cardamom (-247 tonnes), coconut (-309 million nuts), banana and plantain (-32299 tonnes), tapioca (700811 tonnes), sesamum (-363 tonnes) cotton (-666 tonnes) and tea (-4012 tonnes). Estimates of production of cashew and rubber, however, present a very encouraging picture with growth rates of 20.65% and 9.44% respectively. Comparative data on area, production and productivity of important crops in Kerala for the years 1985-86 and 1986-87 are presented in Table 4.4

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

4.7 The indices of area, production and productivity of major categories of crops for the last 10 years are given in Table 4.5. The overall trend of the

crop sector as a whole during the last 10 years is negative as revealed by the steep fall in the over-all index of crop production from 100.17 to 73.89. It is the downward trend in productivity of crops which has contributed largely to this phenomenon rather than the decrease in cropped area. While the index number of productivity shows the maximum drop from 98.71 to 77.25 that of area declined from 101.48 to 95.67 only

4.8 Both foodgrains and non-foodgrain crops suffered fall in production in varying degrees. The performance of foodgrains is comparatively better as the decline was only from 98.67 to 88.45 while the situation with regard to non-food crops is grave with a steep decline in the index of production from 100.52 to 70.46. The reduction in area under food crops as revealed by the fall of index from 102.55 to 81.76 has been compensated to a large extent by the commendable improvement in productivity. Index for productivity of food crops has increased from 96.22 to 108.21 during the last 10 years. Both cereals & pulses present the same trend. But in the non-foodgrain category the picture is different. Though there is marginal improvement in area from 101 to 101.75, its effect has been nullified by the steep fall in productivity as revealed by the drop of index number from 99.52 to 69.03. Among the non-foodgrain crops it is the plantation crops which have recorded substantial area expansion during the period, as revealed by the positive trend of index from 95.04 to 143. Area under fruits and vegetables on the otherhand shows a negative trend, the index numbers declining from 103.20 to 78.28. This shows a definite shift in cropping pattern from food crops, including fruits and vegetables to cash crops. Though this indicates a trend towards commercialisation, the declining trend in productivity of these crops prevents attainment of higher levels of production. Condiments and spices group is the only exception to this trend, with the productivity index rising from 88.82 to 111.26.

#### *Performance of Major Crops*

##### *(a) Rice*

4.9 Production of rice during 1986-87 declined from 11.73 to 11.34 lakh tonnes mainly due to the decrease in area under the crop from 6.78 lakh ha to 6.64 lakh ha. The decline was entirely during Mundakan and Punja seasons. Productivity also dropped in all the 3 seasons. While the decline in productivity during Virippu and Mundakan was more or less marginal, Punja crop suffered severe set back in productivity. Season-wise data on area, production and productivity of rice is given in Table 4.6.

4.10 Expansion of area under high yielding varieties is the major means through which increase in productivity of rice is sought to be achieved. The performance of the State in this area in the recent past is not very encouraging. From 1984-85 onwards the coverage shows a declining trend from 2.20 lakh to 1.65 lakh ha. In 1985-86 and 1986-87 it was more or less stagnant. Inter seasonal variations in percentage of coverage is also considerable. Maximum coverage is during Punja season (51.46% of rice area) followed by Virippu season (27.94%). Mundakan season accounting for the largest share in the total area under paddy in the State (45%) is lagging behind the other

seasons in high yielding variety coverage (15%). This is mainly due to the susceptibility of the rice crop in this season to high incidence of pests and diseases coupled with inadequate facilities for scientific water management. Though the high yielding varieties have outyielded the general average productivity of rice during all the three seasons, the trend of productivity of high yielding varieties is on the decline. This applies to both Virippu and Punja seasons with a negative growth rate of 4.9% and 6.48% respectively. Relevant data on season-wise performance of high yielding varieties of rice during 1985-86 and 1986-87 is given in Table 4.7.

4.11 An analysis of the district-wise performance of rice crop during 1986-87 compared to 1985-86 is given in Table 4.8. Except in Alleppey district, area under the crop registered negative growth during the year. In Alleppey, area increased by 11,793 ha. (21.04%) presumably due to the additional cropping possibilities in Kuttanad Area as a result of reduced waterlogging and better water management rendered possible by drought conditions. Normally in a district like Alleppey flood is the constraint for additional cropping. It is a paradox that Palghat district enjoying the maximum irrigation facilities in the State proved to be most vulnerable to drought with the maximum decline in area under rice (5991 ha.) in absolute terms. Percentage-wise, Idukki district recorded the maximum decline in area (14.13%) followed by Trivandrum (13.45%) and Pathanamthitta (9.43%). On the productivity side Kottayam, Malappuram and Wayanad districts recorded substantial increases (10.92%, 8.02% and 8.03% respectively). Though Alleppey district had a higher cropped area, it could not succeed in optimising the output as revealed by the decline of 13.11% in productivity. The districts of Trivandrum, Quilon, Pathanamthitta, Ernakulam, Palghat, Kozhikode, Cannanore and Kasaragod also recorded negative growth in productivity of rice. Inter-regional disparity in productivity levels of rice is also considerable in the State, the variation being in the range of 1103 kg./ha. recorded by Kozhikode to 2112 kg./ha. in Kottayam district.

##### *Pulses*

4.12 Area and production of pulses are more or less stagnant at around 28000 ha. and 20000 tonnes respectively. The average productivity during 1986-87 was 696 kgs./ha. which is marginally less than that of the previous year. Pulses are cultivated in all the districts, the largest share being that of Palghat, Cannanore, Trivandrum and Trichur districts. The average productivity of the crop in all the districts is comparable to the State average of around 700 kg./ha. excepting Trivandrum where it is as low as 229 kg./ha.

##### *Coconut*

4.13 Area, production and productivity of coconut declined during 1986-87. The estimated area for 1986-87 was 6.83 lakh ha. against 7.04 lakh ha. for 1985-86. Production declined from 3377 to 3068 million nuts and productivity from 4792 to 4486 nuts per ha. Nearly 70% of the area is accounted by the 6 districts of Trivandrum, Quilon, Trichur, Malappuram, Kozhikode and Cannanore. Among

These major producing districts, productivity is relatively low and below the State average in Malappuram, Kozhikode and Cannanore districts.

#### Pepper

4.14 Thanks to the comfortable price situation that prevailed during 1986-87, area under pepper increased from 1.21 lakh ha. to 1.33 lakh ha. However consequent to decline in productivity from 272 to 242 kg per ha. the total production dropped to 31944 tonnes. Nearly 80% of the pepper area lies in the districts of Kottayam, Idukki, Kozhikode, Wayanad, Cannanore and Kasaragod. The productivity is very low in Kottayam, Idukki and Kozhikode districts.

#### Tapioca

4.15 Tapioca recorded the maximum decline in area during 1986-87 from 2.02 lakh ha. to 1.47 lakh ha. Consequently the production also declined from 32.76 lakh tonnes to 25.76 lakh tonnes. Largest share in area under tapioca is in Quilon district (51614 ha.), but the productivity of the crop in this district is below the State average.

4.16 Data on district-wise area, production and productivity of important crops are given in Appendix 4.2.

#### Plantation Crops

4.17 Production of natural rubber in Kerala during 1986-87 was 202129 tonnes which shows an increase of 9.5 per cent over the production in the previous year. The increased production was the result of the increase in tapped area as well as increase in productivity. The all India production during the year was 219520 tonnes, of which 92 per cent was contributed by Kerala (see Table 4.9). Consumption of natural rubber in Kerala during 1986-87 increased to 31,415 tonnes from 26341 tonnes in 1985-86 and all India figure for 1986-87 was 257,305 tonnes which represents an increase of 9.3 per cent over the consumption in 1985-86. The increase was contributed mainly by the non-tyre sector which showed an increase of 14.1% against 4.6% in the tyre sector. The share of Kerala in total consumption works out only to 12 per cent. As the domestic production of rubber was not sufficient to meet the demand about 45,000 tonnes had to be imported during 1986-87 (see Appendix 4.2). Under the Buffer Stocking Scheme operated through STC, the price of RMA-4 graded rubber was raised upward to 1700 per quintal in May 1987. The upper and lower price band were revised to Rs. 1650 and Rs. 1750 respectively. The average price of RMA-4 grade rubber during the year 1986-87 was Rs. 1660 per quintal as against Rs. 1732 during 1985-86 and Rs. 1655 during 1984-85 (see Table 4.10).

4.18 Cardamom production in the country decreased to 3800 MT and that of Kerala to 2500 MT in 1986-87 due to the drought situation which prevailed in the cardamom growing tracts. In 1985-86, the climate was so favourable that the all India production touched 4700MT, Kerala contributing 3340 MT (71%).

4.19 In Kerala which accounts for 60 per cent of the cardamom area, the productivity decreased to 66 kg./ha. in 1986-87 from 101 kg./ha. in 1985-86. World prices not being influenced by the fall or rise in output in India, cardamom growers had to absorb a decline in prices as well as the quantity sold. Between August 1986 and April 1987, 2735 tonnes were sold in auction within the country at an average price of Rs. 117.28 a kg. compared to 3518 tonnes at an average price of Rs. 134.68 in the corresponding period a year earlier. This decline in price was largely the result of world market trends. Kerala, which accounts for the bulk of the country's exports, was the worst affected. The quantity auctioned between August and April 1987 was 22.6 per cent lower than that of the same period of the previous year. Despite such a sharp decline in the quantity sold in auctions, the average price for the period fell from Rs. 142.46 a kg. to Rs. 116.82. The slump in oil price and the consequent decline in the purchasing power of consumers had affected the demand in the west Asian markets which traditionally accounted for 78 percent of our exports (see Table 4.11).

4.20 The distribution of registered cardamom estates based on the size of holdings as on 31-3-1987 is presented in Appendix 4.4. It is seen that nearly 70 per cent of the units in Kerala are less than 2 ha. in size.

4.21 In keeping with the biennial nature of the coffee crop, the production during 1986-87 coffee year, which began in October last and which will extend well into the first three quarters of 1987, is estimated at 170000 tonnes—48000 tonnes more than the production of last season. India ranked 9th among 16 countries in the world having a total production of 4857720 tonnes. The percentage share of Kerala in the total estimated production of the country is 16.6 per cent. During 1986-87, India exported 86249 tonnes of coffee worth Rs. 367 crores. This was lower than the 1985-86 fiscal year exports of 99298 tonnes worth Rs. 275 crores. The higher value realised during 1986-87 is principally because of the higher unit value of Rs. 42.77 per kg, realised, as against Rs. 27.69 per kg. in 1985-86. However, growers had contended that much of this increase had been taken away by a higher incidence of export duty. Coffee productivity, measured as yield per unit area increases in alternate years in keeping with the biennial nature of the crop. Thus, the yield which was 835 kg. per ha. in 1984-85 slid to 583 kg. per year and rose to a record level of 922 kg. in 1986-87. The area under cultivation has been more or less static in the recent years and hence the yield level was affected more by the variation 4.22 in production. The coffee minimum release price (MRP) was raised twice during 1986. In October, it was raised to Rs. 7.42 per point and in December to Rs. 7.55 per point (see Table 4.12).

4.23 Tea being an agro-based industry is subjected to wide cyclical fluctuations. India is not only the largest producer of tea but also the largest exporter of the brew that cheers, with its respective shares in global tea production and trade ruling around 32 per cent and 25 per cent respectively. The weather at home and trends in the international markets, therefore play important and decisive roles in shaping the fortunes of the industry. It was really an irony of fate that while during the 1983-85 period both tea prices and production were moving upwards in unison multiplying the profits of tea

companies in geometrical proportion the situation got abruptly reversed during 1986 when both production and prices of tea started moving down. But the tides have again been turning in favour of tea. Prices of this most popular beverage have started looking up in the wake of a fall in production (see Table 4.13).

#### *Supplies and Services*

##### *a. Seeds.*

4.24 Multiplication and distribution of quality paddy seeds is the major strategy followed for a rapid coverage of high yielding varieties. During 1986-87 2691 tonnes of paddy seeds were distributed by the Department of Agriculture. This is in addition to 30794 numbers of minikits of new strains distributed under the minikit programme.

##### *b. Fertilizers*

4.25 Despite the unfavourable weather conditions the fertilizer consumption in the State increased by more than 7% during 1986-87 when the consumption touched its peak level of 151363 tonnes in terms of nutrients. Relevant data on consumption of fertilizers during the last 16 years is given in Appendix 4.5. Among the nutrients potash registered maximum increase of 17%. Increased use of fertilizers for crops like coconut which requires higher doses of potash could perhaps be the reason for this welcome trend. It is estimated that fertilizers worth Rs. 67 crores were distributed during 1986-87 in the State. Nearly half of the total fertilizer off take was in the form of straight fertilizers.

##### *c. Plant Protection Chemicals.*

4.26 The consumption of plant protection chemicals increased from 984.00 tonnes of technical grade material to 1039.45 tonnes. The increase was mainly in fungicides (8%) compared to insecticides. However, the total area covered under plant protection decreased from 8.678 lakh ha. in 1985-86 to 6.158 lakh ha. in 1986-87. In addition, 242.23 lakh parasites were released from the nine Parasite Breeding Stations maintained by the Department for the control of coconut caterpillar "Nephantis". Spraying with fungicides were also organised covering 33.92 lakh trees in the disease affected tract to control the coconut leaf disease. Plant protection measures were organised in 20375 ha. of paddy lands for the control of brown plant hopper, by providing subsidy on P.P. Chemicals and operational charges.

##### *d. Soil Testing Service*

4.27 Soil testing services were rendered from the existing 12 soil testing laboratories. About 1.93 lakh soil samples were collected from private holdings for analysis.

##### *e. Information Communication Support.*

4.28 As in the previous years Farm Information Bureau rendered information communication support to the farm front through farm news service over radio, print medium, exhibitions, campaigns, farm feature service through daily news papers, farm book corners

in rural libraries, farm and home programmes of AIR stations in Kerala, wall news papers, slide stories, farm advisory service and farm features through Doordarshan. Besides the farm news, "Karshika Mekhala Varthakal" was broadcast from the AIR stations in the State regularly and 1260 farm news bulletins were issued. During the year 24 issues of 'Kerala Karshakan' the farm fortnightly were published. It has a circulation of 164800 copies. Farm guide was also brought out with 9577 copies and about 5.5 lakh copies of various leaflets, pamphlets, posters etc. were published during the year. Three major exhibitions, 47 rural exhibitions, 28 kissan melas, 112 seminars, 2 maramadi races and 160 film shows were also organised by the Bureau. Under the farm feature service, 12 prominent dailies were associated, publishing 1904 farm feature items and 696 special press releases. The Farm Information Bureau organised a 3 day workshop-cum-media seminar at Trivandrum with the active participation of different media like All India Radio, Doordarshan, newspapers and other agencies in the farm sector. As part of the field publicity programme 24500 copies of the wall news paper 'Keralam Munnottu' were printed and distributed and two slide stories on coconut and vegetable cultivation prepared. Under the Farm Advisory Service 2935 questions were answered. During 1986-87 the Bureau gave active support for telecasting 48 programmes through Doordarshan.

#### *Prices of Farm Inputs*

4.29 Excepting coconut and spices seedling the prices of most of the farm inputs remained more or less steady during 1986-87. (See Appendix 4.6) This applies to all fertilizers in common use, paddy seeds, and planting materials of cashew. The price of green manure seeds increased marginally, while the increase is substantial in the case of coconut seedlings (17.7%) and spices seedlings (50 to 100%).

4.30 Selected Indicators of Agricultural Development are given in Table 4.14.

#### *Agricultural Credit.*

4.31 The National Bank for Agriculture & Rural Development (NABARD) provided refinance support to various financial institutions in the State to support a broad spectrum of productive activities in the rural sector. The refinance assistance increased from Rs. 44.79 crores in 1985-86 to Rs. 53.31 crores in 1986-87 recording a growth of 19.02%. Out of the refinance of Rs. 53.31 crores, the scheduled commercial banks account for the major share of Rs. 20.65 crores (38.74%) followed by the Kerala State Co-operative Agricultural Development Bank with Rs. 19.86 crores (37.25%), Kerala State Co-operative Bank with Rs. 8.35 crores (15.66%) and the two Regional Rural Banks together Rs. 4.45 crores (8.35%).

4.32 A purpose-wise analysis of the aggregate refinance shows that plantation/horticulture crops like coconut, rubber, cardamom, pepper, coffee etc. accounted for Rs. 18.17 crores (34.08%) followed by minor irrigation and land development works—Rs. 14.94 crores (28.02%) and IRDP with Rs. 12.75 crores (23.92%).



4.33 During the year under review, the short term credit limit sanctioned to Kerala State Co-operative Bank was raised from Rs. 46.50 crores to Rs. 50.50 crores registering an increase of 8.6 per cent. In the case of M.T. loan disbursement, the limit sanctioned was Rs. 79 lakhs, as in the previous year. Under the facility for conversion of loans of borrowers affected by natural calamities, NABARD allowed conversion of ST loans aggregating Rs. 875.37 lakhs into medium term loans. For contributing to the share capital of agricultural credit societies and thereby strengthening the credit system, NABARD sanctioned Rs. 175 lakhs as loan to State Government (LTO Fund Scheme) against a sum of Rs. 21.01 lakhs during the previous year.

4.34 The commercial banks in Kerala showed an impressive performance in achieving the credit disbursement targets fixed under Annual Action Plan. Against a target of Rs. 569.09 crores the lending was for Rs. 831.41 crores. Out of this, the disbursement under 'Agriculture and allied sectors' amounted to Rs. 45.86 crores (5.52%) against a target of Rs. 30.79 crores. As a drought relief measure, 7900 short term loans amounting to Rs. 462.43 lakhs were converted into medium term loans. Rescheduling was also done in 3704 loans amounting to Rs. 295.80 lakhs.

4.35 Co-operatives are the main channel for disbursement of agricultural credit and supply of other inputs to the agriculturists in the State. The amount advanced for seasonal agricultural operations, during the year under review aggregates to Rs. 6625 lakhs and the outstanding under the above item at the close of the year was Rs. 5159 lakhs. The corresponding figures under the above items for the previous year were Rs. 5640 lakhs and Rs. 3180 lakhs respectively. The outstanding under medium term agricultural loans as on 30-6-1987 stood at Rs. 131.69 lakhs where as the maximum amount outstanding under this item was Rs. 142.41 lakhs. Under conversion of loan, ST loans for Rs. 596.40 lakhs were converted into medium term loans.

4.36 During the co-operative year 1985-86, 1574 Primary Agricultural Credit Societies with a membership of 63 lakhs were engaged in the disbursement of credit. The average membership per society increased from 3428 to 3982, average share capital and deposit per society increased from Rs. 2.92 lakhs and Rs. 20.53 lakhs in 1984-85 to Rs. 3.24 lakhs and Rs. 25.91 lakhs respectively in 1985-86, registering an increase of 10.9% in share capital & 26.2% in deposit. The average loan amount per borrowing member rose from Rs. 1978 to Rs. 2065 during 1985-86. The average deposit per member also increased to Rs. 651 from Rs. 598. The average working capital per society decreased from Rs. 47.17 lakhs to Rs. 44.01 lakhs registering a decrease of 7.1%. The average loan advanced per advancing society increased from Rs. 29.21 lakhs to Rs. 35.37 lakhs recording an increase of 21.08 per cent over the previous year.

4.37 The loans advanced (ST, MT & LT) during 1985-86 amounted to Rs. 52879 lakhs against Rs. 43312 lakhs in the previous year, the percentage of increase being 22.1. Out of the total loan advanced, the amount disbursed for agricultural purpose alone comes to Rs. 25,721 lakhs against Rs. 22,534 lakhs during the previous year. The loan overdue during 1985-86

amounted to Rs. 10478 lakhs whereas the corresponding amount for the previous year was Rs. 8730 lakhs. The percentage of overdue to outstanding during 1985-86 was 20.4%. Eventhough the number of societies that worked on profit declined from 892 to 884, the profit earned by these societies increased from Rs. 593 lakhs to Rs. 742 lakhs. During 1985-86, 30 societies worked without loss or profit.

4.38 The selected indicators of the performance and credit operations of Primary Agricultural Credit Societies during the year 1984-85 and 1985-86 are given in appendix. 4.7 & 4.8.

4.39 The deposit mobilisation campaign conducted by the co-operative credit structure yielded very good results. Against a target of Rs. 60.00 crores, the Co-operatives were able to collect Rs. 136 crores.

4.40 The Kerala State Co-operative Agricultural Development Bank advanced a sum of Rs. 32 crores against a target of Rs. 30.85 crores fixed by NABARD for 1986-87. The disbursement under ordinary lending was Rs. 11.49 crores against a target of Rs. 8.85 crores (130%) and that under schematic lending was Rs. 20.51 crores against a target of Rs. 22 crores (93%). During the year under review, debentures were floated for Rs. 29.76 crores of which Rs. 9.25 crores were under ordinary and Rs. 20.51 crores were scheme debentures. The various developmental purposes covered by Bank's lending activities include minor irrigation, farm mechanisation, land development including soil conservation, cultivation of plantation/horticultural crops like coconut, rubber, cashew, coffee, pepper, cardamom, pine apple, arecanut etc. and diversified purposes like dairy, fish culture, poultry, gobargas, goat rearing, sericulture, intergrated farm development etc. The Bank also advanced loans to the non-farm sector for activities like processing of copra and other agricultural produce, coir products etc. The scheme loans advanced during the year under review amounted to Rs. 1918 lakhs where as the amount for the same during the previous year was Rs. 1908 lakhs. Out of the scheme loans sanctioned, the major share was for plantation purposes including SADEJ (58%) followed by minor irrigation (23%) and agricultural machinery (9.8%). The particulars of scheme loans sanctioned during the last two years are given in Table 4.15.

4.41 The Bank had maintained a steady record of recovery during the past years. The percentage of overdue to demand as on 30-6-1987 was 18.35 percent compared to 13.35 on 30-6-1986. However due to revision of norms fixed by NABARD stipulating that interest subsidy allowed by Primaries can be removed from demand only to the extent reimbursed by Government, the overdue has to be reckoned at 33.77 per cent on 30-6-1987 and 20.96 per cent on 30-6-1986.

#### *Production Programmes*

4.42 The year 1986-87 in general was not favourable for crop production. The drought conditions caused by the failure of the monsoon continued unabated for more than a year inflicting heavy damages to most of the crops. Timely relief operations were launched by the Government to extend every possible help to the affected farmers.

4.43 The State successfully completed during the year three World Bank assisted major projects in the crop sector namely Kerala Agricultural Extension Project, Multi-State Cashew Project and Kerala Agricultural Development Project. The Training and Visit system of extension brought in under the K.A.E.P gained momentum. Apart from intensive extension work through field level functionaries, two major campaigns for boosting the production of rice and coconut were organised on a statewide basis with public participation and involvement of input agencies concerned. In addition, 312 buildings were constructed to accommodate the offices of field level functionaries, availing assistance from World Bank. With the additional coverage of 735 ha. under cashew during 1986-87, the target of 10,000 hectares under the Multi-State Cashew Project could be achieved in full.

4.44 Under the Special Agricultural Development Unit implemented for small holder development as part of the Kerala Agricultural Development Project, rehabilitation of coconut could be organised in 20132 ha. against the target of 30,000 ha. Under fresh planting of coconut, the achievement was 7119 ha. against the target of 6000 ha. Pepper rehabilitation was another programme taken up with a target of 17,500 ha. the actual coverage being 19,482 ha. The project as a whole benefited 57,767 small holders. A supplementary programme for rejuvenation of disease affected coconut gardens was taken up with a target of 5,200 ha. The achievement was 2,976 ha. benefiting 9,211 farmers. The total credit disbursed under the project till 86-87 was Rs. 46.16 crores.

4.45 Consequent on the winding up of the above 3 projects the Department of Agriculture was reorganised with Panchayat as the basic level unit. Accordingly 1048 Agricultural Development Units were established in all Panchayats/Municipalities. Formulation and implementation of location specific credit linked programmes with people's participation has been accepted as the major strategy to be pursued by these units. Each unit is expected to mobilise institutional finance by way of long term loans to the extent of 3 lakhs per annum.

4.46 In the context of the acute shortage in the supply of vegetables due to the persistent drought in Kerala and the adjoining districts of Tamilnadu and Karnataka, the State Government launched a massive programme for vegetable production with a view to augment supplies during the 'Onam' festival season of 1987. This was organised in Trivandrum and Trichur districts with the active involvement and participation of around 3000 farmers, 80 co-operative societies, 38 Agricultural Development Units of the Department of Agriculture and the State Civil Supplies Corporation. The production was concentrated in 227 clusters located in 69 panchayats, by arranging supply of inputs and services and ensuring timely marketing support through the Civil Supplies Corporation. Other than this, no direct subsidy was provided. More than 2500 tonnes of vegetables could be procured and marketed under the programme during the onam season. This facilitated an effective control over the prices of vegetables which could be maintained at reasonable levels throughout the period.

4.47 Intensive agricultural activities were taken up in 198 micro watersheds under the Twenty Point Programme. Land development works were taken up in 2770 ha. and 530 water harvesting/storage structures were constructed in these watersheds. Intensive fertilizer use was popularised in 6286 ha. and 3392 ha. were brought under plant protection cover. Other inputs distributed under the programme include 76 quintals of paddy seeds, 35319 coconut seedlings and 20609 pepper cuttings. The area benefited by the seeds programme thus works out to 4891 ha.

4.48 The pilot project for propagation of water conservation and harvesting technology for dry farming areas was continued during 1986-87 in 7 selected watersheds in Palghat district. During the year 28 tanks and 5815 metres of bunds were constructed and land levelling works were taken up in 208.1 ha. in these watersheds.

4.49 Development of pulses and oil seeds is another important component of the Twenty Point Programme. Against the production of 26,050 tonnes of pulses targetted for the year, the achievement was 21,000 tonnes. Under the Centrally Sponsored Scheme for pulses development implemented with 50% assistance from Government of India 800 mini kits of 4 kg. each and 4,706 packets of rhizobium culture were distributed. Demonstrations on scientific management of pulses crop was organised in 600 ha. and adaptive trials in 35 ha. Under oil seeds development, the State attained a production level of 13,837 tonnes against the projected target of 16000 tonnes. The unfavourable weather conditions due to the failure of North East Monsoon adversely affected the production of these two categories of crops.

4.50 As in the previous years special schemes to suit the development needs of weaker sections of the community such as S.C./S.T. farmers were drawn up in a location specific manner and implemented colony-wise and settlement wise. Programmes worth Rs. 302 lakhs (Rs. 239 lakhs under Special Component Plan and Rs. 63 lakhs under Tribal Sub Plan) were taken up during the year benefiting 1788 SC colonies and 237 ST colonies. Agricultural development programmes were organised over an area of 11,966.06 ha under these schemes. Details of physical achievements made, itemwise, are given in Table—4.16.

4.51 Under the programme for increasing agricultural production of small and marginal farmers, the Department of Agriculture distributed free of cost 69,554 minikits each containing 4 kg. of pulses seeds (278.2 M.T.), 41,811 kits each with 1 kg of sesamum (41.81 M.T.), 320 kits of groundnut with 30 kg each (9.60 MT) and 102062 coconut seedlings. More than 3.16 lakh farmers were benefited by this programme at a total cost of Rs. 143.65 lakhs.

4.52 The National Project for Biogas Development was continued during 1986-87 with 100% Central assistance. Under the project 2224 biogas plants were installed by extending subsidy assistance to the tune of Rs. 77.014 lakhs.

4.53 Among the programmes for coconut development, production and distribution of quality coconut seedlings was the most important. Under this scheme

17.823 lakhs West Coast Tall seedlings, 0.468 lakh T x D and 0.627 lakh D x T seedlings were distributed. For the continuance of this activity during 1987-88 a total of 13.341 lakh seednuts were collected from disease free areas and supplied to the departmental coconut nurseries. Over and above this, 39970 T x D seedlings were raised in the departmental nursery at Nileswar and distributed under a Centrally Sponsored Scheme. Coconut development activities were also organised with assistance from the Coconut Development Board. Compensatory subsidy @Rs. 75 per palm was extended to coconut growers for cutting and removal of root wilt affected palms. Availing this assistance, 45,357 diseased coconut palms were cut and removed. The total subsidy provided on this account was Rs. 33.761 lakhs. Under another programme sponsored by the Board, 1180 'pumpsets' were installed for irrigating coconut, by providing a subsidy of Rs. 1000 per unit.

4.54 Besides the fresh planting programme implemented for cashew with assistance under Multi-State Cashew Project, Centrally Sponsored Schemes costing Rs. 27 lakhs were also implemented. They include a demonstration programme on improved management practices benefiting 300 plots, area expansion programme benefiting 735 ha. and plant protection programme in 2850 ha. for the control of tea mosquito.

4.55 The schemes implemented for paddy development include the registered seed growers programme in 432 ha. for multiplication of high yielding variety seeds and the community nursery programme covering 459.28 ha. Under the Centrally Sponsored scheme, 30,794 mini kits of pre-leased varieties and improved strains were distributed to the paddy growers. Fertilizer subsidy @ Rs. 100 was extended to farmers for the punja crop of Kuttanad and Kole crop of Trichur, at a cost of Rs. 35 lakhs.

4.56 Two rounds of sprayings were organised for the control of 'Mahali' disease of arecanut in 1173 ha. by subsidising the cost, in the districts of Trichur, Malappuram, Wayanad, Calicut, Cannanore and Kasaragod, at a cost of Rs. 1.839 lakhs.

4.57 The scheme for supply of mini kits of vegetables was continued in the districts of Trichur and Malappuram and 4000 kits were distributed.

4.58 Quality Control measures were enforced for fertilizers and plant protection chemicals. Under this scheme 2192 fertilizer samples and 1131 pesticide samples were tested. Penal proceedings were initiated in 91 cases for fertilizers and in 15 cases for P. P. Chemicals.

#### *Soil Survey*

4.59 Detailed Soil Survey of command areas of Periyar Valley, Idamalayar and Kuttanad problem areas was completed and survey of Karthikappally, Koothatukulan, Kottayam, Palghat, Changanacherry, Thalappally and Cannanore taluks was commenced. Survey in the command areas of Kuriyarkutty—Karappara Project, integrated survey of soil and land resources in the catchment of Kallada

Irrigation Project., was undertaken. An area of 68,309 hectares of land was covered under the programme of soil survey against 58,128 hectares during the previous year. 'Reconnaissance Soil Survey' was completed in the taluks of Mavelikara, Kanjirappally, Karthikappally, Shertalai, Ambalapuzha, Kuttanad and Meenachil

#### *Soil Conservation*

4.60 The progress of work under soil and water conservation in arable lands was 227 hectares showing a marginal increase over the previous year. Physical achievement under soil conservation measures in selected watersheds availing institutional finance was only 50.2 ha. where as the achievement during 1985-86 was 92 ha. The activities under Special Component Plan and Tribal Area Sub Plan show a marginal improvement over the previous year. About 356.88 ha. of land belonging to Scheduled Caste and Tribes were conserved with appropriate soil conservation measures.

4.61 An area of about 1330.06 ha. of land was brought under various soil conservation measures in the catchment of River Valley Project, Kundah implemented as a 100% Centrally Sponsored Scheme with 50% subsidy and 50% loan. The achievement during 1985-86 was 1367 ha.

#### *Land Use Planning*

4.62 The State Land Use Board took up identification of waste land in the State at the instance of the National Waste Land Development Board. A ground water potential map of Kasaragod district was prepared. The 'Centre for Land Use and Environment Studies, has been set up for carrying out research studies and training programmes on the applications of remote sensing technique in the related fields.

#### *Agricultural Marketing*

4.63 Marketing of agricultural produce is of special significance in Kerala where high value cash crops dominate the agricultural scene and that too contributed mostly by the small farm sector. Though Kerala is yet to introduce the regulated system of agricultural marketing, promotion of co-operative marketing of farm produce has been an integral part of the State policy on co-operatives. But development of organised marketing including processing, product diversification etc., continues to be an area that warrants greater efforts. In the area of supplies of inputs like fertilizers, co-operatives have a substantial share.

4.64 Important agencies engaged in the marketing of agricultural produce include Kerala State Co-operative Marketing Federation, Kerala State Co-operative Rubber Marketing Federation, Central Arecanut and Cocoa Marketing and Processing Co-operative and the Kerala State Coconut Development Corporation. They together handled 2,255 tonnes of pepper, 6.36 tonnes of cardamom, 12 tonnes of ginger, 69 tonnes of honey 21393 tonnes of rubber, 26773 tonnes of arecanut, 46 tonnes of cocoa, and 22891 tonnes of copra in 1986-87. Agency-wise details are given in Table 4.17. The Rubber Marketing Federation was involved in the procurement and supply

of rubber to the State Trading Corporation as part of the price support operation of Government of India. The Kerala State Co-operative Marketing Federation also deals with the supply of inputs like fertilizers (64,569 MT in 1986-87) and pesticides (value Rs. 1.13 crores). Rubber Marketing Federation also handled 16,454 tonnes of fertilizers and organised aerial spraying in 36,000 acres of rubber plantation during the year.

4.65 The State Warehousing Corporation provides warehousing facilities for agricultural commodities. As on 31-3-1987 the Corporation had a total storage capacity of 1,74,900 tonnes including 74,719 tonnes of hired godowns. Construction of additional godowns with a capacity of 18,650 tonnes is in progress. In addition Primary Agricultural Marketing Societies own a storage capacity of 39,611 tonnes.

4.66 Quality control of agricultural commodities through AGMARK grading was done through the Marketing Wing of the Department of Agriculture. The Commodities graded during 1986-87 include coconut oil (23791 qtl.), gingelly oil (290 qtl.), honey (242.31 qtl.) and ground spices (149.0 qtl.).

4.67 The steep fall in price of coconut and its products, experienced during 1985-86 and the support price operations taken up with the assistance of NAFED convinced the State of the urgent need to develop the marketing infrastructure. An integrated approach covering production, procurement, processing and marketing of the commodity was recognised as the only way to salvage the deteriorating coconut economy. A massive project at a total cost of Rs. 82.05 crores was accordingly submitted to the National Co-operative Development Corporation. The objective of the project is to modernise production, processing and marketing including diversification of coconut and its products, on co-operative lines, involving about 900 Primary Agricultural Credit Societies in the coconut growing areas. The first phase of the project covering the southern districts of Trivandrum, Quilon and Pathanamthitta, with a processing complex for 200 tonnes of copra per day was sanctioned by N. C. D. C. in March 1986. Two more such complexes are contemplated in the project for other regions. At the State level, the Kerala Kerala Karshaka Co-operative Federation has been formed to implement the Scheme.

## **Live Stock**

### *Cattle Breeding*

4.68 Cross breeding is a major activity sponsored by the State to evolve a new breed "Sunandini" which combines the good qualities of the local cattle and that of the donor breeds like Jersey and Brown Swiss. The progress achieved already is substantial as about 60 per cent of the breedable female cattle are cross-breds. The production and supply of frozen bull semen by the Kerala Livestock Development and Milk Marketing Board during 1986-87 were 20.04 lakh and 13.62 lakh doses against 19.14 lakh and 12.86 lakh doses in 1985-86. The total number of artificial inseminations performed during the year were:—

Animal Husbandry Department 10.72 lakhs, Dairy Development Department 1.98 lakhs and the

K.I.D & M.M Board (Progeny Testing Scheme) 0.65 lakhs. Corresponding figures for the previous year are 8.03, 3.72 and 0.58 respectively.

### *Veterinary Service*

4.69 Veterinary Services are provided through various institutions like District Veterinary Centres, Veterinary Polyclinics, Veterinary Hospitals, Veterinary Dispensaries, Veterinary Sub Centres, Mobile Veterinary Hospitals, Mobile Farm Aid Units, Intensive Cattle Development Projects, Regional Artificial Insemination Centres and Intensive Cattle Development Project Sub Centres etc. spread throughout the State. A total number of 36.94 lakhs cases were treated through the above Institutions for various animal diseases. During the period under review, 27.41 lakhs Livestock and 17.38 lakhs Poultry were protected from common contagious disease through vaccination. The Institute of Animal Health and Veterinary Biologicals, Palode produced 71,32,990 doses of vaccine for Avian and cattle diseases. In order to identify infertility problems especially among cross bred cattle, 209 infertility camps were conducted and 8381 problem cows treated.

### *Livestock Production*

#### (a) *Milk*

4.70 As a result of intensive cattle breeding activities the milk production increased from 12.82 lakh M. T. in 1985-86 to 13.34 lakh MT in 1986-87 an increase of 4.06%. The percapita availability of milk also increased to 131 gms. from 126 gms. (The World Health Organisation recommends 280 gms.).

#### (b) *Poultry*

4.71 Production of eggs registered an increase from 1360 million to 1397 million with a percapita per year availability of 50 eggs. The main source of egg production in the State is back yard poultry. Broiler production in the State gathered momentum as a commercial activity. Production and distribution of broiler chick in the Departmental Farms increased from 2.82 lakhs to 4.33 lakhs during 1986-87, an increase of about 54 per cent.

#### (c) *Meat Production*

4.72 The recorded production of meat in the State during the period under review was 26,829 M.T. from slaughter of 9.69 lakh animals, against 24703 M.T. during the previous year.

### *Dairy Extension*

4.73 Three Livestock Management Training Centres under the Department of Animal Husbandry, continued to provide inservice training to para veterinary personnel and extension training to farmers. Under the Special Component and Tribal Sub Plan, 2116 Scheduled Caste families and 95 Tribal families were assisted to acquire livestock assets and through these programmes 872 S. C. families and 35 ST. families could be brought above povertyline. The Department of Dairy Development continued its extension activities which included house visits, cattle shows, infertility camps, deworming in Calves, assistance for

construction Cattle shed etc. The Department also supplied 351 cross bred calves and assisted the construction of 342 model cattle sheds under SC/ST programmes. About 471 SC/ST families could be brought above povertyline.

4.74 Under Fodder Development Programmes, the Dairy Development Department, supplied high yielding varieties of grass-legume mixture to 12991 farmers which enabled them to cultivate in 765.34 hectares of land with the mixture and 250 hectares with maize.

#### *Milk Marketing*

4.75 The Kerala Co-operative Milk Marketing Federation Limited (MILMA) organised 706 Amul Pattern Co-operatives (APCO) till the end of the period under review. Out of this 676 are functional. Details of the performance of the Federation are shown in Table 4.18.

#### *Fisheries*

4.76 The fishable area in Kerala consists of the continental shelf with in 200 m. depth range a spread over 39.00 lakh ha. and the inland water areas suitable for promotion of culture fisheries extending over 3.61 lakh ha. The share of marine fishable area in Kerala is only 8% of the total area available in India. As a result the percapita availability of area is 10 ha. in Kerala, where as Gujarat has 177 ha. per fisherman. At the all India level it is 37 ha.

4.77 The resource potential in the continental shelf off Kerala is estimated at 8.00 lakh tonnes, of which 50% lies in the inshore region (area within 50 m. depth line). The maximum sustainable yield per fisherman within inshore sea is the lowest in the State, i.e. 2.88 tonnes. The figure for Orissa works out to 11.77 tonnes and at all India level it is estimated as 4.66 tonnes. Added to these peculiarities, the pressure of fishermen on the sea is very high in Kerala with 1043 fishermen per 100 sq. km. of area, compared to 56 for Gujarat and 269 for the country as a whole.

4.78 The fishing crafts involved in fishing operations in the State consist of 3366 mechanised boats, 7214 motorised country crafts and 20425 non-mechanised traditional crafts. The number of fishing gears in operation is 12,600. There are 310 ice plants and cold storages, of which 27 are in public and co-operative sectors and 283 in private sector.

4.79 The aggregate fish production in the State in 1986 was 3.64 lakh tonnes as against 3.61 lakh tonnes in the previous year. Of the total fish production 92.31 per cent was the share of marine sector.

4.80 The marine fish production in the State has characteristics of fluctuating and declining trend. It was 3.39 lakh tonnes in 1965. It shot up to 4.21 lakh tonnes in 1975, declined to 2.80 lakh tonnes in 1980 and again picked up remarkably to 4.25 lakh tonnes in 1984. The situation thereafter showed a disturbing trend and the production in 1986 was only 3.36 lakh tonnes. Contrary to this phenomenon, the marine fish production in the country showed an increasing trend. About two decades back, the contribution by Kerala to the total fish production of the

country was 40%. This declined gradually and in 1986, our share was only 18%. Table 4.19 gives data on marine fish landings in Kerala and India during selected years.

4.81 As in the previous years, in 1986 also, oil sardine continued as the major species among the marine fishes landed in Kerala. The share of oil sardine to the total fish production was 43.3% when prawns and mackerel contributed 8.9% and 5.1% respectively. In the year 1986 the production of oil sardine increased by about 39,000 tonnes over the previous years' level. At the same time the landings of prawns and mackerel declined by about 6000 tonnes and 7000 tonnes respectively. Table 4.20 gives data on annual landings of selected marine fishes in Kerala from 1982 to 1986. The species-wise composition of marine fish production in Kerala during the period is furnished in Appendix 4.12.

4.82 The marine fishing industry consists of two subsectors, namely, the traditional sector and mechanised sector. The traditional sector constitutes the backbone of the industry and contributes the dominant share of fish production, viz. 66 per cent in 1986-87.

4.83 For several years, Kerala enjoyed the top position as a maritime State in India. But in 1985-86 the State suffered a setback, and became second to Maharashtra. Now Gujarat is picking up faster than Kerala. The reason attributed to negative growth rate is mainly over-exploitation of the inshore resources (within 50 m. depth range) where as the off shore resources are virtually untapped.

4.84 During 1986-87, the beach price of marine fishes increased in the range of 12 to 50% for various species. Compared to the level of beach price during 1983-84, the increase during 1986-87 for different varieties was above 50% and for certain items, it was over 100%. Details of average beach price of selected marine fishes are given in Appendix 4.13.

4.85 The fish production from inland sector was 28194 tonnes during 1986-87, as against 28578 tonnes during the previous year. The production declined by 384 tonnes (1.3%). During the year, the production of almost all varieties showed negative growth rate. The details of inland fish production in Kerala during 1985-86 and 1986-87 are furnished in Table 4.21.

4.86 The share of inland fish production in the State was only 2.3 per cent of the inland fish production (12.00 lakh tonnes) in the country. The reason for the low share is that the developmental efforts so far been made were virtually confined to marine sector. The inland water area in the State is 3.61 lakh ha, comprising rivers (0.85 lakh ha.) tanks and ponds (0.03 lakh ha.) reservoirs (0.30 lakh ha.) and brackish water lakes, backwaters and estuaries (2.43 lakh ha.). Of this, hardly 4% of the area has been covered under culture activities. The reservoir area stocked for fish culture was only 7055 ha. In the case of fresh water area of ponds and tanks, an extent of 740 ha. has been brought under fish culture. Attempts made to bring the estuaries and backwater areas under fish and prawn culture are insignificant. Thus the real potential in the State for culture fishery remains virtually unexploited.

4.87 About 50% of the fish catches in the State is consumed as fresh, 33% cured or dried and the remaining 17%, consisting mainly of the high value prawns, is frozen or canned and exported. As a result Kerala still continues to be the principal exporter of sea food in the country. During 1986-87, Kerala exported 33906 tonnes of marine products valued at Rs. 164.57 crores, as against the all-India figures of 85,843 tonnes for Rs. 460.67 crores. Kerala's share works out to 39.50% in terms of quantity and 35.72% in terms of value.

4.88 The physical achievements in the distribution of production inputs during 1986-87 include supply of 97 crafts, 123 out board motors and 22560 Kg. of fishing gears under phase I of Integrated Fisheries Development Project, distribution of 207 out board motors under 'Subsidised Motorisation Scheme' and 351 crafts, 249 outboard motors and 64,197 Kg. of gears under Flood Relief Scheme, 1986. Under the Subsidised Housing Scheme, 2290 houses were completed and 5128 houses were under various stages of construction.

4.89 The Fish Farmers' Development Agencies in Palghat, Quilon and Trichur continued functioning and a new agency was started in Cannanore. The number of fish farmers registered under all the agencies together was 1013 and 204 farmers were given training in fish culture. Ponds and tanks over an area of 488 ha. were stocked by the agencies. About 17.33 lakh fingerlings and prawn larvae were distributed to farmers during 1986-87.

4.90 The construction of fish landing centres at Munakkakadavu and Kasaragod was completed during 1986-87. Construction of landing centres at Cheruvathur, Palacode and Dharmadam and fishing harbours at Vizhinjam and Neendakara continued during the year.

4.91 The fishermen population account for about 3.2 per cent of the total population in the State. The fishermen population in 1986-87 is estimated as 8.94 lakhs, of which 77.52% is in the marine sector. The active fishermen are 1.80 lakhs. Kerala accounted for 27% of the sea going fishermen in the country. About 17.19% of the total fishermen population in the State is in Alleppey district. Trivandrum district has the highest percentage of marine fishermen (21.27%). In respect of inland fishermen population Ernakulam district ranks first with 28.46%. The details of district-wise distribution of fishermen population (estimated) in Kerala during 1986-87 are given in Appendix 4.14.

4.92 The number of fishermen households is estimated at 1.29 lakhs. Out of this those engaged in marine fishing is 0.99 lakh and inland fishing 0.30 lakh. About 84% of the fishermen households had annual income of less than Rs. 6000 only. About 38% of the families possess land holdings less than five cents each and most of them do not enjoy clear title over the land. Of the total houses occupied by the fishermen families, about 56,800 (48%) are thatched huts and 43,100 (36%) are katcha houses. It is also estimated that only 10% of the households possess minimum sanitary facilities. Non availability of drinking water, electricity and sanitary facilities are

serious problems confronting the fishermen in the coastal belt of Kerala.

#### Forests

4.93 The total area under forest in Kerala was 11,22,320 ha. as on 31-3-1987. The forest area constitutes 28.88 per cent of the geographical area of the State. Compared to previous year, the area has increased by 495 ha. (0.02%) due to the decision of Government to declare some area as reserve forests and vested forests. The reserve forests represent 81.56 per cent of the total forest area, whereas area under vested forests and area proposed as reserve forests work out to 16.80% and 1.64% respectively. The details of division-wise area of forests in Kerala are shown in Appendix 4.15.

4.94 The area under forest plantations increased from 157216 ha. in 1985-86 to 160370 ha. in 1986-87, marking an increase of 3154 ha. (2%). Among the species covered under man made forests, teak, eucalyptus and softwood constitute the major items—about 86 per cent of the total forest plantations, with teak alone covering about 50 per cent. The species-wise area under forest plantations is given in Appendix 4.16.

4.95 The major forest produce comprise timber, firewood, charcoal, bamboo, sandalwood etc. The data on quantities of major forest produce is furnished in Appendix 4.17.

4.96 The revenue earnings from forestry sector include sale proceeds of produce and other receipts like interest on forest revenue. The net revenue from forestry during 1986-87 was Rs. 4818 20 lakhs as against Rs. 4244.51 lakhs during the previous year, an increase of Rs. 573.69 lakhs (13.52%). Among the sources of forest revenue, sale proceeds of timber accounted for 78.35 per cent. The details of forest revenue are shown in Appendix 4.18.

4.97 The achievements under major components of Kerala Social Forestry Project exceeded the targets set for 1986-87. However, the performance under certain minor items such as raising strip plantations, tribal fuelwood plantations and construction of buildings did not pick up as scheduled. The reasons attributed for shortfall in raising strip plantations are, existence of overhead electric and telephone lines by roadsides, objections by the Public Works Department against raising plantations along the sides of National Highway, grazing by cattle, lack of provision for fencing etc. The achievement under tribal fuelwood is low as most of the land earmarked for planting is in vested forest areas and hence not immediately available for planting because of litigation. Some of the areas could be raised only with huge investment. The progress of construction under the project was delayed due to non completion of formalities and lack of materials. In spite of these, the construction of major building complexes at Thirumala and Arippa and a large number of residential buildings has been completed. The physical achievements of the project during 1986-87 are shown in Appendix 4.19.

4.98 The two national parks and 12 wildlife sanctuaries in the State together cover an area of 2.25 lakh ha. of forest land. This makes 24 per cent of

the reserve forests and 5.79 per cent of the geographical area. The developmental activities undertaken in the national parks and wildlife sanctuaries during 1986-87 include, survey, demarcation and consolidation of boundaries, improvement of habitats and communication system, construction of office buildings, quarters, roads and fire protection works.

#### *Western Ghat Development Programme*

4.99 The Western Ghat Development Programmes are implemented in the selected 22 watersheds in Kerala. Soil and Water Conservation, Pasture Development, Forest Consolidation, Ecopreservation of Forest and Development of Heterogeneous Forest Vegetation, Establishment of an Arboretum, Conservation and Multiplication of Orchids of Kerala and Sericulture Development are the important programmes.

4.100 Regarding Soil and Water Conservation, by the end of 1986-87, 40% of the Seventh Plan target could be achieved. Achievement under Pasture Development was 43%. Under Forest Consolidation by erecting permanent cairns, prevention of encroachment, more than 50% achievement is anticipated by the end of 1987-88. Another scheme for cutting and removing *Loranthus Parasitica* from Teak trees, in forest is also progressing and 20% achievement of the 7th Plan target could be made during the first two years of the 7th Plan. Establishment of Eucalyptus and Bamboos and introduction of Tropical Pines under Eco preservation are reported to be progressing. The scheme 'Establishment of an 'Arboretum' aims at increasing the biological diversity of tree wealth. Since the inception of the scheme in 1985, 440 new species were collected and planted. The scheme Conservation and Multiplication of Orchids, located at Ponnudi Reserve Forest area was completed in 1986-87. Sericulture programme introduced in Pambar and Vattavada Watersheds in Idukki in 1985-86 registered fair progress. During 1986-87, 100 acres had been planted with mulberry and Rs.1.5 lakh worth cocoons were sold. Besides the above, a rubber plantation scheme of the State Farming Corporation and a Water Harvesting and Soil Conservation Scheme of the Spices Board at Udumbanchola were supported under the WGDP.

#### *Research and Education.*

4.101 Kerala Agricultural University, Central Plantation Crops Research Institute, Central Tuber Crops Research Institute and Indian Cardamom Research Institute are the important agencies engaged in agricultural research in the State. The important research highlights reported by these agencies are given below:

#### *Kerala Agricultural University*

4.102 Seven advanced cultures of rice namely, Monctamp 93, 170 and 153-1 and Pattambi 871, 745 and 796 were identified for release. In coconut, two hybrids A.O. x GB (Andaman ordinary x Gangabondam) and WCI x GB (West Coast Tall x Gangabondam), showed excellent performance consistently compared to other hybrids involving 'GB' other than L.O. x GB. These two hybrids gave copra yield of more than 20 kg./palm/year. These two hybrids have been identified

37/629/MC.

for release. In lemongrass, one variety OD-1 is getting ready for release.

One variety of Cardamom PV-1 is identified for release.

In vegetables, one variety of Pumpkin CM-14 and another variety of brinjal SM 67 are proposed for release.

In pepper, two cultures viz, 239 and 331 are also in advanced stages for release.

A project for assessment of damages caused due to drought to crops and livestock was initiated for the first time during the year.

In pepper, replanting is recommended after 18 years for Karimunda and Kottanadan varieties, after 23 years for the variety Kuthravali, after 22 years for Narayakodi and after 15 years for Balankotta.

Mulching the basins of the pepper vines with saw dust, arecanut husk or dry leaves during summer after the abatement of the North East Monsoon is found advantages for increasing productivity and conservation of soil moisture.

Propagation of cardamom through tissue culture is standardised. Studies on tissue culture techniques for propagation of cashew and nutmeg are in progress.

#### *Central Plantation Crops Research Institute*

4.103 The CPCRI conducts and co-ordinates research on coconut, oil palm, arecanut, cocoa and also on small holder plantation crops based farming systems, with major thrust on crop improvement, crop management and crop protection. Proof for a MLO etiology for root (wilt) disease of coconut, identifying the pathogen involved in the stem bleeding disease of coconut, demonstrating the compatible combination in coconut based farming systems to increase the net return from unit area (coconut pepper, & cocoa), identifying coconut geno types showing drought tolerance (W.G.T., F.M.S. L.O. x COD, Java giant, Figi LO x GB, COD, WCT Cochinchina), establishing and expanding laboratory facilities to produce oil palm tissue culture seedlings on a large scale, demonstrating the role of pollinating weevil '*Eleidobius kameranicus*' in increasing the fruit set in oil palm and releasing the two coconut varieties Banawali Green. Round for Maharashtra and ECT & MYD hybrid for Tamilnadu are some of the major achievements during the year 1987.

#### *Central Tuber Crops Research Institute*

##### *Cassava*

4.104 S-856, a short duration line with high yield potential was released with the name "Sree Prakash" In a trial in an advanced stage of testing, the selection 54-8 recorded the highest yield of tubers. The clones 15/6, N. Local, C-167 C-139 and CI-620 presented promising performances under shade conditions. Another trial conducted indicates that tuber yield increased with an increase in the level of irrigation, the maximum being 91% over rainfed. Fertilizer response under irrigation was significant upto 150:100:150 Kg/ha. In the sequential cropping system

studies for low lands, the average cassava yield was as high as 51 tonnes/ha. in H-1687 for the vegetable cowpea-cassava cropping sequence.

#### Sweet Potato

4.105 On the basis of multi-location trials 76-OP217 and 76-OP-219 were recommended for release under the names 'Sree Nandini and Sree Vardhini' respectively. The later has already been released.

#### Tams & Aroids

4.106 Two promising selection of *Dioscorea alata* Da-60 and Da-80 and two *Dioscorea rotundata* I-146 and U-195 were recommended for release under the names "Sree Keerthi", "Sree rupa", "Sree Subhra" and "Sree Priya" respectively. "Sree Keerthi" has since been released. Two new varieties of colacasia C-149 and C-266 with the yeild potential of 15-20 tonnes per ha and 13-18 tonnes per ha respectively were proposed to be released under the names "Sree Rashmi" and "Sree Pallavi". The former has since been released.

#### Indian Cardamom Research Institute.

4.107 Seven selections evaluated at Myladunpara gave an yeild of 296 to 444 kg/ha. in rainfed condition. At Sakalespur P1 progeny P6 xP6 cross showed genetic superiority for the third consecutive year. Foliar application of zinc indicated its beneficial effect on growth and yeild of cardamom. A combination of cultural method of Control (Pruning of all dried leaves, leaf sheaths and dried panicles during February prior to first round of insecticide application and thrashing in May-June) and five rounds of incsecticide application have been found to be effective for thrips management. Effective control of root grubs was achieved by timely pesticide application with phorate 10G or Carbofuran 3 G. Aliette (Fosetyl-Aluminium) a new systemic fungicide has been found to be effective in controllng 'Azhukal disease'

#### National Centre of Spices Research

4.108 Research in spices so far handled by CPCRI is now entrusted to this National Research Centre in Calicut under ICAR.

#### Agricultural Education

4.109 Kerala Agricultural University continued its education programmes in 8 colleges comprising college of Agriculture Vellayani, College of Horticulture Vellanikkara, College of Veterinary and Animal Science, Mannuthy, College of Agricultural Engineering & Technology Thavannur, College of Forestry Vellanikkara, College of Co-operation and Banking Mannuthy, College of Fisheries Panangad and College of Rural Homeo Science, Vellayani as on 31-12-1987. There were a total number of 2706 students in various faculties. Category wise details are given in Appendix 4.20

TABLE 4.1

Season-wise Percentage Departure of Rainfall in Kerala from Normal\* (During 1981 to 1987)

Sl.No.	Year	Percentage	Departure of Rainfall(%)	
		Summer	S.W. Monsoon	NE Monsoon
1	1981	-30	+22	-15
2	1982	-47	-18	43
3	1983	-76	+2	-33
4	1984	-9	-13	-30
5	1985	-9	-17	-23
6	1986	-51	-22	-18
7	1987	-54	-43	-67

\*Fifty year Average.

Source: Meteorological Centre, Trivandrum.

TABLE 4.2

Average Monthly Rainfall in Kerala

(in M.M.)

Month	Average Monthly Rainfall			
	Normal	1984-85	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)
July	706.4	638.9	424.1	318.2
August	458.8	264.8	293.2	349.7
September	250.7	210.1	132.3	261.7
October	292.4	270.9	190.9	156.3
November	196.6	71.4	82.6	200.8
December	39.9	36.0	52.3	8.9
January	13.0	63.3	4.1	0.3
February	16.0	5.2	15.0	0.7
March	35.2	41.5	5.3	3.5
April	107.4	66.7	65.3	57.6
May	215.0	268.7	122.7	118.8
June	629.4	861.0	264.4	559.0
Total	2960.8	2798.5	1652.2	2035.5

Source: Directorate of Economics and Statistics, Trivandrum.



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TABLE 4.3  
Land Use Pattern in Kerala

(Hectare)

Classification of Land	1982-83	1983-84	1984-85		1985-86		Change in area between 1984-85 and 1985-86	Percentage change
			Actual	Percent	Actual	Percent		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Total Geographical area	3885497	3885497	3885497	100.00	3885497	100.00	--	--
2. Forests	1081509	1081509	1081509	27.83	1081509	27.83	--	--
3. Land put to non-agricultural uses	275908	277719	279703	7.20	278601	7.17	(-) 1102	(-)0.39
4. Barren and uncultivable land	86217	86590	85688	2.21	83107	2.14	(-)2581	(-)3.01
5. Permanent pastures and grazing land	5311	5222	4158	0.11	4223	0.11	(+)65	(+)1.56
6. Land under miscellaneous tree crops	54705	54701	51039	1.31	50228	1.29	(-)811	(-)1.50
7. Cultivable waste land	130213	128924	130098	3.35	125559	3.23	(-)4539	(-)3.49
8. Fallow (Other than current fallow)	27425	27539	27221	0.70	28038	0.72	(+)817	(+)3.00
9. Current fallow	44485	42938	41758	1.07	43247	1.11	(+)1489	(+)3.57
10. Net areas own	2179754	2180355	2184423	56.22	2190985	56.39	(+)6562	(+)0.30
11. Area sown more than once	682319	681347	690220	17.76	675567	17.39	(-)14653	(-)2.12
12. Total Cropped Area	2862073	2861702	2874643	73.98	2866532	73.78	(-)8091	(-)0.28
Cropping intensity	131.30	131.25	131.60	..	130.83			

Source: Directorate of Economics and Statistics, Trivandrum.

TABLE 4.4

## Area, Production and Productivity of Principal Crops in Kerala

Area in hectares  
Production in tonnes  
Productivity in Kg./ha.

Crops	Area				Production				Productivity									
	1985-86	1986-87	Changes over the previous year		1985-86	1986-87	Changes over the previous year		1985-86	1986-87	Changes over the previous year							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)					
														Actual	Per cent	Actual	Per cent	Actual
1. Rice	678281	663803	(-)	14478	(-)	2.13	1173051	1133786	(-)	39265	(-)	3.35	1729	1708	(-)	21	(-)	1.21
2. Ragi	1182	1170	(-)	12	(-)	1.02	980	910	(-)	70	(-)	7.14	829	778	(-)	51	(-)	6.15
3. Pulses	28396	28136	(-)	260	(-)	0.92	20475	19591	(-)	884	(-)	4.32	721	696	(-)	25	(-)	3.47
4. Sugarcane (Gur)	7816	7631	(-)	185	(-)	2.37	42560	41179	(-)	1381	(-)	3.24	5445	5396	(-)	49	(-)	0.90
5. Pepper	121565	133083	(+)	11518	(+)	9.47	33121	31944	(-)	1177	(-)	3.55	272	240	(-)	32	(-)	11.76
6. Ginger	15671	15490	(-)	181	(-)	1.15	44466	43598	(-)	868	(-)	1.95	2837	2814	(-)	23	(-)	0.81
7. Turmeric	3164	3141	(-)	23	(-)	0.73	6201	6157	(-)	44	(-)	0.71	1960	1960	..	..	..	..
8. Cardamom*	60628	60713	(+)	85	(+)	0.14	3340	3093	(-)	247	(-)	7.40	55	51	(-)	4	(-)	7.27
9. Arecanut**	58691	N.A.	N.A.	N.A.	N.A.	N.A.	10664	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10. Coconut**	704682	683821	(-)	20861	(-)	2.96	3377	3068	(-)	309	(-)	9.15	4792	4486	(-)	306	(-)	6.38
11. Cashewnut	137747	133517	(-)	4230	(-)	3.07	80203	96766	(+)	16563	(+)	20.65	582	725	(+)	143	(+)	24.57
12. Banana & Other Plantains	53002	52762	(-)	240	(-)	0.45	361126	328827	(-)	32299	(-)	8.94	6813	6232	(-)	581	(-)	8.53
13. Tapioca	202919	146958	(-)	55961	(-)	27.58	3276877	2576066	(-)	700811	(-)	21.39	16149	17529	(+)	1380	(+)	8.55
14. Sweet Potato	4821	4805	(-)	16	(-)	0.33	40710	40281	(-)	429	(-)	1.05	8444	8383	(-)	61	(-)	0.72
15. Groundnut	11010	11119	(+)	109	(+)	0.99	6001	6121	(+)	120	(+)	2.00	545	550	(+)	5	(+)	0.92
16. Sesamun	14285	13508	(-)	777	(-)	5.44	3702	3337	(-)	365	(-)	9.86	259	247	(-)	12	(-)	4.63
17. Cotton***	5963	5844	(-)	119	(-)	2.00	9624	8958	(-)	666	(-)	6.92	1614	1533	(-)	81	(-)	5.02
18. Tea.*	34760	N.A.	-	..	..	..	52628	48616	(-)	4012	(-)	6.84	1514	N.A.	..	..	..	..
19. Coffee*	65641	N.A.	..	..	..	..	23550	N.A.	..	..	..	..	..	359	N.A.	..	..	..
20. Rubber	330315	337700	(+)	7385	(+)	2.24	184700	202129	(+)	7429	(+)	9.44	559	598	(+)	39	(+)	6.98

Note: Figures for 1986-87 are provisional.

\* Commodity Board Figures.

\*\*Production in million nuts and Productivity in nuts.

\*\*\*Production and Productivity in Bales of 170 kg.

Source: Directorate of Economics and Statistics, Trivandrum.

TABLE 4.5

*Index of Area, Production and Productivity of Crops in Kerala*  
 Base Year: Average of Triennium Ending 1979-80

Item	Area			Production			Productivity		
	Average of 3 years 1976-77 to 1978-79	1985-86	1986-87	Average of 3 years 1976-77 to 1978-79	1985-86	1986-87	Average of 3 years 1976-77 to 1978-79	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All Crops (A+B)	101.48	99.30	95.67	100.17	84.86	73.89	98.71	85.48	77.25
A. Foodgrains (1+2)	102.55	83.50	81.76	98.67	91.54	88.45	96.22	109.65	108.21
1. Cereals	102.59	83.68	81.89	98.85	91.03	87.97	96.35	108.78	107.39
2. Pulses	101.53	79.48	78.75	87.06	110.83	106.05	85.75	139.45	134.65
B. Non Foodgrains (3 to 8)	101.00	106.56	102.07	100.52	83.27	70.46	99.52	78.15	69.03
3. Oil seeds	101.66	104.84	101.75	103.48	64.15	61.43	101.79	61.20	60.38
4. Plantation Crops	95.04	140.83	143.15	93.84	125.31	131.60	98.74	88.96	91.94
5. Condiments and spices	100.65	109.52	108.94	89.40	124.22	121.20	88.82	113.41	111.26
6. Drugs & Narcotics	82.29	103.73	103.35	89.57	105.74	101.77	108.85	101.69	96.67
7. Fruits & Vegetables	103.20	88.69	78.28	105.94	80.80	66.91	102.65	91.11	85.49
8. Miscellaneous Crops	103.59	106.43	104.09	98.02	100.80	96.84	94.62	94.50	93.00

*Note:* Index numbers for 1986-87 are based on provisional estimates

Cereals: Rice, Jowar, Ragi and other Cereals and Millets

Oil Seeds: Groundnut, Sesamum and Coconut

Plantation Crops: Cocoa, Tea, Coffee and Rubber

Condiments and Spices: Pepper, Ginger, Chillies, Turmeric, Arecanut and Cardamom.

Drugs and Narcotics: Lantongrass Oil and Tobacco

Fruits and Vegetables: Banana and other Plantains, Mango, Jack, Cashewnut, Tapioca, & Sweet Potato

Miscellaneous Crops: Sugar (Gur) and Cotton.

TABLE 1.6

**Area, Production and Yield of Rice in Kerala**

Season	Area in Hectare		Change over the previous year (%)	Production in Tonnes		Change over the previous year (%)	Yield in Kg/ha.		Change over the previous year (%)
	1985-86	1986-87		1985-86	1986-87		1985-86	1986-87	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Virippu-Autumn	279699 (41.24)	286569 (43.17)	(+)2.46	461992 (39.38)	468409 (41.31)	(+)(1.39)	1652	1635	(-)-1.03
Mundakan-Winter	313423 (46.21)	297068 (44.75)	(-)-5.22	526981 (44.92)	496623 (43.80)	(-)-5.76	1681	1672	(-)-0.54
Punja-Summer	85159 (12.55)	80166 (12.08)	(-)-5.86	184078 (15.70)	168754 (14.89)	(-)-8.32	2162	2105	(-)-2.64
Total	678281 (100.00)	663803 (100.00)	(-)-2.13	1173051 (100.00)	1133786 (100.00)	(-)-3.35	1729	1708	(-)-1.21

*Source:* Directorate of Economics and Statistics

Figures in brackets indicate percentages to total.

TABLE 4.7  
High Yielding Varieties of Rice in Kerala

Season	1982-83	1983-84	1984-85	1985-86	1986-87	Percentage	Proportion	of HYV
						change between 1985-86 and 1986-87	to total rice	(per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Area in Hectare</i>								
Virippu	113088	101810	112400	83782	80076	(-)4.42	29.95	27.94
Mundakan	51867	62063	63687	40650	44604	(+)9.73	12.97	15.01
Puncha	31440	48477	44452	38846	41253	(+)6.20	45.62	51.46
Total	196395	212350	220539	163278	165933	(+)1.63	24.07	25.00
<i>Production in Tonnes</i>								
Virippu	254461	198235	233235	157225	142825	(-)9.16	34.03	30.49
Mundakan	107516	126129	122354	83489	92085	(+)10.29	15.84	18.54
Puncha	67395	106048	98254	102479	101757	(-)0.70	55.67	60.30
Total	429372	430412	453843	343193	336667	(-)1.90	29.26	29.69
<i>Average Yield in Kg./ha.</i>								
Virippu	2250	1947	2075	1876	1784	(-)4.90	113.56	109.11
Mundakan	2073	2032	1921	2054	2065	(+)0.53	122.19	123.50
Puncha	2144	2188	2210	2638	2467	(-)6.48	122.02	117.19
Total	2186	2027	2058	2102	2029	(-)3.47	121.57	118.79

Source: Directorate of Economics and Statistics, Trivandrum.  
Figures for 1986-87 are provisional.

TABLE 4.8  
District-wise Area and Production of Rice in Kerala

District	(Area in Hectare)			(Production in Tonnes)				Productivity Kg./ha.			
	1985-86	1986-87	Change Area Percentage	1985-86	1986-87	Change Qty. Per centage		1985-86	1986-87	Change Qty. Per- centage	
1. Trivandrum	26352	25444	(-)908 (-)3.45	47106	43600	(-)3506 (-)7.44		1788	1714	(-)74 (-)4.14	
2. Quilon	34794	32824	(-)1970 (-)5.66	60835	54791	(-)6044 (-)9.94		1748	1669	(-)79 (-)4.52	
3. Pathanamthitta	14498	13130	(-)1368 (-)9.43	27715	24456	(-)3259 (-)11.76		1912	1863	(-)49 (-)2.56	
4. Alleppey	56045	67838	(+)1179 (+)21.04	111971	117799	(+)5828 (+)5.20		1998	1736	(-)262 (-)13.11	
5. Kottayam	31884	33603	(+)1719 (+)5.39	58104	67907	(+)9803 (+)16.87		1822	2021	(+)199 (+)10.92	
6. Idukki	8251	7085	(-)1166 (-)14.13	16845	14962	(-)1883 (-)11.18		2042	2112	(+)70 (+)0.03	
7. Ernakulam	84804	80817	(-)3987 (-)4.70	142756	131063	(-)11693 (-)8.19		1683	1622	(-)61 (-)3.62	
8. Trichur	95215	89527	(-)5688 (-)5.97	151936	143297	(-)8639 (-)5.68		1596	1601	(+)5 (+)0.31	
9. Palghat	160855	154864	(-)5991 (-)3.72	306980	290976	(-)16004 (-)5.21		1908	1879	(-)29 (-)1.52	
10. Malappuram	65462	62308	(-)3154 (-)4.82	93056	95684	(+)2628 (+)2.82		1422	1536	(+)114 (+)8.02	
11. Kozhikode	18750	18123	(-)627 (-)3.34	22394	19988	(-)2406 (-)10.74		1194	1103	(-)91 (-)7.62	
12. Wayanad	30767	29999	(-)768 (-)2.50	54800	57718	(+)2918 (+)5.32		1781	1924	(+)143 (+)8.03	
13. Cannanore Kasaragode	50604	26961 21280	(-)2363 (-)4.67	78553	38683 32862	(-)7008 (-)8.92		1552	1483	(-)69 (-)4.45	
State	678281	663803	(-)14478 (-)2.13	1173051	1133786	(-)39265 (-)3.35		1729	1708	(-)21 (-)1.21	

TABLE 4.9

Area, Production and Productivity of Major Plantation Crops—Kerala and India

Crop	Year	Kerala			India		
		Total estimated Area (Ha)	Production' (M.T)	Productivity (Kg./Ha)	Estimated Area (Ha)	Production (M.T)	Productivity (Kg./Ha)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rubber	1980-81	247180	140320	780	278057	153100	788
	1981-82	262600	139435	770	295543	152870	779
	1982-83	278050	152662	828	313223	165850	830
	1983-84	294290	162212	864	331767	175280	857
	1984-85 (P)	311982	172092	890	351850	186450	886
	1985-86 (P)	326710	184563	897	369348	200465	898
	1986-87	337700	202129	924	384000	219520	926
Cardamom	1980-81	56376	3100	82	93947	4400	62
	1981-82	56376	2800	75	93947	4100	58
	1982-83	56376	1900	57	93947	2900	41
	1983-84	56326	1100	41	93947	1600	35
	1984-85	61000	2850	92	100000	3900	76
	1985-86	61000	3340	101	100000	4700	77
	1986-87	64000	2500	66	105000	3800	57
Coffee	1980-81	57949	21043	379.71	210119	118646	624.20
	1981-82	57905	32628	592.04	216975	150000	773.73
	1982-83	62368	15330	255.29	226848	129952	646.40
	1983-84	64009	9412	154.95	232354	105000	506.90
	1984-85	65641	35565	576.29	234531	195800	935.10
	1985-86	NA	23640	NA	NA	122000	NA
	1986-87	NA	NA	NA	NA	NA	NA.
Tea	1980	36130	53614	1484	381086	569172	1494
	1981	35589	47631	1338	383629	560427	1461
	1982	35324	48523	1374	394170	560562	1422
	1983	35020	44562	1273	396066	581484	1462
	1984	35060	58179	1659	398453	639864	1606
	1985	34760	53104	1528	399929	656162	1641
	1986	NA	48616	1399	NA	624646	1562(+)
	1987 (E) (Jan-Oct)	NA	43890	NA	NA	577465	NA

Note:—

Productivity is based on Yielding area.

Production has been estimated by annual sample surveys conducted through the Tea Board's field offices.

(P)—Provisional

(+)—Based on 1985 area

(E)—Estimated

NA—Not available.

TABLE 4.10

Average Market Price of Indigenous Natural Rubber at Kottayam Market

Year	RMA 4	Rupees per Ungraded quintal rubber
1980-81	1242	1212
1981-82	1460	1431
1982-83	1440	1409
1983-84	1752	1708
1984-85	1655	1587
1985-86	1732	1661
1986-87	1660	1592

Source: Rubber Board.

TABLE 4.11

Auction Price and Export Prices of Cardamom

Year	Kerala		India	
	Auction price (Average) (Rs./Kg.)	Export price (Average) (Rs./Kg.)	Auction price (Average) (Rs./Kg.)	Export price (Average) (Rs./Kg.)
1980-81	108.51	150.60	98.91	148.18
1981-82	120.76	132.16	116.02	129.87
1982-83	158.29	162.93	161.08	158.60
1983-84	379.42	211.25	370.49	210.90
1984-85	202.79	272.11	199.91	271.92
1985-86	142.44	164.32	132.80	163.39
1986-87	116.82	129.90	118.32	127.80

Note:— 1. Auction price is for the crop season (August-July) and Export price is for the Financial Year (April-March)

2. Kerala's Export price is the average export price of the variety produced in the State.

Source: Spices Board, Cochin.

TABLE 4.12

Auction Sale Price of Coffee

Grade	Internal Sales 1986	Price is per 50 Kg.		
		Sales 1987*	Export Sales 1986	Sales 1987*
Plantation	921.25	1016.00	2325.50	1433
Ar. Cherry AB	77350	876.00	2100.00	1169
Rob. Cherry AB	778.75	878.00	1657.50	1247

upto November 1987

Source:—Coffee Board.

TABLE 4.13

Average Sale Price of Tea

Year	(Rs./Kg.)	
	Kerala	India
1983	23.09	23.90
1984	27.08	28.58
1985	21.77	23.34
1986	19.45	23.45

Source: Tea Board Calcutta.

TABLE- 4.14

Selected Indicators of Agricultural Development

Sl. No.	Programme	Unit	1985-86	1986-87
	(1)	(2)	(3)	(4)
<b>1. Fertiliser Consumption</b>				
(a)	Nitrogen	Tonnes	59263	60783
(b)	Phosphorus	"	34412	35857
(c)	Potash	"	47655	54723
	<b>Total</b>	<b>Tonnes</b>	<b>141330</b>	<b>151363</b>
<b>2. Plant Protection</b>				
(a)	Seeds Treated	'000 Tonnes	3700	4300
(b)	Area under seed treatment	Lakh ha.	0.466	0.541
(c)	Fungicides-liquid + solid (in terms of Technical Grade)	M. Tonnes	490.75	536.45
(d)	Insecticides-liquid + Solid (in terms of Technical Grade)	"	466.48	472.15
(e)	Weedicides (in terms of Technical Grade)	"	22.49	24.35
(f)	Rodenticides (,,)	"	4.28	6.50
(g)	Area under plant protection coverage	Lakh ha.	8.678	6.158
(h)	Rodent control operation	"	0.947	0.913
(i)	Biological control of nephanthis serinopa parasites liberated.	Lakh Nos.	168.048	242.236
(j)	Weed control	Lakh ha.	1.507	1.333
(k)	Trees sprayed for control of coconut leaf diseases.	Lakh No.	29.089	33.918
<b>3. High Yielding Seeds.</b>				
(a)	HYV seeds of paddy distributed from State Seed Farms and other Government Agencies.	Tonnes	2820.00	2691.21

Sl. No	Programme	Unit	1985-86	1986-87
(1)	(2)	(3)	(3)	(4)
(b)	Coverage of HYV including natural spread	Lakh ha.	1.63	1.65
4.	Quality Planting materials distributed.			
(a)	Coconut seedlings.	Lakh No.	15.99	18.918
(i)	West Coast Tall	"	15.42	17.823
(ii)	TX D Hybrid	"	0.53	0.468
(iii)	D x T Hybrid	"	0.04	0.627
(b)	Rooted Pepper cuttings.			
(i)	Panniyoor I	"	6.39	5.18
(ii)	Other varieties	"	14.14	14.92
(c)	Cashew layers	"	0.03	0.01
(d)	Cashew seedlings	"	2.62	1.22
5.	Coconut Development			
(i)	Cutting and removal of root wilt affected and unproductive palms	Nos.	..	45357
(ii)	Installation of pumpsets for irrigation.	"	..	1180
6.	Short-term loans			
	Amount distributed	Rs. lakhs	115.82	200.00
7.	Cashew Plantation Schemes.			
(a)	Area covered	ha.	1560	740
(b)	Amount disbursed as subsidy	Rs. lakhs	11.85	9.45
8.	Pulses Development			
(a)	Pulses seeds distributed	Tonnes	179.032	294.10
(b)	Fertiliser distributed under subsidy for promoting pulses cultivation	Tonnes		
	Nitrogen	"	188.737	12.70
	Phosphorus	"	279.250	19.05
	Potash	"	125.337	6.35
9.	Other items			
(a)	Soil Samples analysed	lakh Nos.	1.16	1.83
(b)	Bio-gas units constructed	Nos.	2405	2072

Source:—Directorate of Agriculture, Trivandrum.

TABLE 4.15

Scheme loans Advanced by the Kerala State Co-operative Agriculture Development Bank at Primary Level During the Last two Financial Years (Rs. in lakhs)

Sl. No.	Schemes	1985-86	1986-87
1.	Minor Irrigation	350.24	436.58
2.	Agricultural Machinery	130.17	173.30
3.	Plantation	529.29	807.07
4.	Dairy	36.69	36.31
5.	Poultry	28.27	41.49
6.	Fisheries	6.91	21.15
7.	Goat Development	4.82	5.94
8.	Coconut and fish culture	63.09	26.19
9.	Gobar gas/Biogas	3.02	2.39
10.	Bullock and Bullock cart	5.73	5.06
11.	Marshy land reclamation	16.88	32.45
12.	SADU	712.64	307.63
13.	Others	20.20	22.20
Total		1907.95	1917.84

TABLE 4.16

Physical Achievement Under Special Component Plan and Tribal Sub Plan

Sl. No.	Particulars of benefits given	Unit	Under Special Component plan to Scheduled Castes	Under Tribal Sub Plan to Scheduled Tribes
(1)	(2)	(3)	(4)	(5)
1.	Number of colonies benefited	No.	1788	237
2.	Number of Families benefited	"	48760	9385
3.	Area benefited	Ha.	6396.12	5569.94
4.	Coconut Seedlings	Nos.	241859	141514
5.	Pepper cuttings	"	110595	84685
6.	Fertiliser distributed	MT	2121.50	512
7.	Pineapple suckers.	Nos	30500	..
8.	Cashew air layers	"	3300	..
9.	Tapioca setts	Ha.	9.79	..
10.	Cholum	Kg.	..	4000
11.	Maize	"	..	8000
12.	Metallic storage bin	No	3857	275
13.	Soil ameliorants	MT.	21.62	..
14.	Cucumber	Kg.	..	1430

(1)	(2)	(3)	(4)	(5)
15.	Cashew seeds	„	1060	500
16.	Mango grafts	No	7896	40
17.	Vegetable Seeds	Packets	21444	1948
18.	Coffee seedlings	Nos.	6480	5164
19.	Rubber Buds	Nos.	15590	15060
20.	Paddy seeds	Kg.	6790	616
21.	Ginger seeds	„	-	955
22.	Banana suckers	Nos.	107862	-
23.	Plant Protection			
	Chemicals:			
	Solid	Kg.	9021	1272

(1)	(2)	(3)	(4)	(5)
	Liquid	Lit.	53.50	61.50
24.	Pumpsets installed	Nos.	33	3
25.	Power tiller	Nos.	36	10
26.	Agricultural implements supplied	Nos.	78198	17533
27.	Soil conservation works	Sq.m.	59824	32307
28.	Land reclamation	Sq.m.	12975	-

Source: Directorate of Agriculture, Trivandrum

TABLE 4.17

Agricultural Produce and Inputs Handled by the Co-operative Sector

Sl. No.	Name of Agency	Item	Quantity handled (M.T.)		Value (Rs. crores)	
			1985-86	1986-87	1985-86	1986-87
<b>Agricultural Produce Marketed</b>						
1	Kerala State Co-operative Marketing Federation	Pepper	5319.093	2255.56	22.79	11.90
		Cardamom	16.106	6.36	0.06	0.10
		Ginger	40.487	12.00	0.02	0.01
		Honey	10.000	69.00	0.02	0.13
		Copra	11110.000	7950.00	13.34	14.26
2	Kerala State Rubber Marketing Federation	Rubber	20515	21393	36.12	36.37
3	Central Arecanut & Cocoa Marketing & Processing Co-operative (CAMPCO)	Arecanut	25495.00	26773.00	66.06	56.69
		Cocoa	26.00	46.00	0.08	0.13
4	Kerala State Coconut Development Corporation	Copra	19106.43	14941	18.36	21.55

TABLE 4.18

Performance of KCMMF in the year 1986-87

(1)	(2)		(3)
	1986	1987	
1.	No. of APCOS organised	563	706
2.	No. of APCOS Registered	569	692
3.	No. of APCOS functioning	549	676
4.	Average Milk procured by APCOS per day (litres)	1,13,592	1,38,403
5.	Average Milk supplied by APCOS to dairies (litres)	94,357	1,11,924

6.	Percentage of procured milk supplied by APCOS	83.06	80.8%
7.	Average milk procurement per day per APCOS (litres)	225	225
8.	Average milk supplied per day per supplier (litres)	3.5	3.5
9.	Average quality of milk (Fat% SNF%)	4.6 FAT 8.2 SNF	4.5 8.3
10.	Average price APCOS get Per Kg. of milk (Rs.)	3.32 Pre-Aug Post Aug.	3.38 3.74
11.	Average price supplied get Per litre of milk	3.22 Pre Aug. Post Aug.	3.29 3.65
12.	No. of families participating in the programme	103891	131515



TABLE 4.19

## Marine Fish Landings in Kerala and India

Year	Marine Fish Landings (Lakh Tonnes)		Percentage Share of Kerala
	Kerala	India	
	(2)	(3)	
(1)	(2)	(3)	(4)
1965	3.39	8.33	40
1970	3.93	10.79	36
1975	4.21	14.23	30
1980	2.80	12.50	22
1981	2.74	13.78	20
1982	3.25	14.24	23
1983	3.85	14.15	27
1984	4.25	18.09	23
1985	3.32	17.16	19
1986	3.36	18.50	18

TABLE 4.20

## Annual Landings of Selected Marine Fishes in Kerala (1982-86)

Species/Year	Quantity in '000 Tonnes				
	1982	1983	1984	1985	1986
	(2)	(3)	(4)	(5)	(6)
(1)	(2)	(3)	(4)	(5)	(6)
Oil Sardine	143.2 (44.0)	154.9 (40.2)	101.8 (24.0)	106.3 (32.0)	145.2 (43.3)

Prawns	26.7 (8.2)	29.7 (7.7)	31.1 (7.3)	35.9 (10.8)	29.8 (8.9)
Mackerel	10.7 (3.3)	12.7 (3.3)	20.9 (4.9)	24.2 (7.3)	17.3 (5.1)
Others	144.8 (44.5)	188.0 (48.8)	270.9 (63.8)	166.1 (49.9)	143.5 (42.7)
Total	325.4 (100.0)	385.3 (100.0)	424.7 (100.0)	332.5 (100.0)	335.8 (100.0)

Note: Figures in brackets indicate percentage to total.

TABLE 4.21

## Inland Fish Production in Kerala (1985-86 &amp; 1986-87)

(Actual—Tonnes)

Species	1985-86		1986-87		Variation	
	Actual	%	Actual	%	Actual	%
	(2)	(3)	(4)	(5)	(6)	(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Prawns	6112	21.3	5896	20.9	-216	-3.5
2. Etroplus	2884	10.9	2825	10.1	-59	-2.0
3. Murrels	2895	10.1	2847	10.2	-48	-1.6
4. Tilapia	5014	17.5	4936	17.5	-78	-1.5
5. Cat fish	2982	10.8	2943	10.4	-39	-1.3
6. Jew fish	1810	6.3	1730	6.1	-80	-4.4
7. Others	6881	24.0	7017	24.8	+136	+1.9
Total	28578	100.0	28194	100.0	-384	-1.3

## IRRIGATION AND POWER

**A. Irrigation**

The irrigation potential of the State is estimated at 16 lakh ha. (net) or 25 lakh ha. (gross). Till the end of March 1987 an area of 3.81 lakh ha. (net) or 5.82 lakh ha. (gross) i. e. 23% of the potential was brought under irrigation through major, medium and minor irrigation schemes with an investment of Rs. 655 crores.

*Major and Medium Irrigation*

5.2 The total extent of land that can be brought under irrigation in Kerala through major and medium schemes is estimated at 6 lakh ha. (net) or 14 lakh ha. (gross). The ten completed irrigation projects together irrigate an area of 0.77 lakh ha. (net) or 1.47 lakh ha. (gross). The seven ongoing projects through partial commissioning irrigate a gross area of 2.1 lakh ha. During 1986-87 the expenditure incurred was Rs. 51.46 crores to irrigate an area of 972 ha. (net) or 2167 ha. (gross). The project-wise details are given in appendix 5.1.

5.3 The present stage of the ongoing major and medium irrigation schemes which are nearing completion are briefly narrated below.

*Kallada*

5.4 The potential created by the project upto June 1987 is 7073 ha. (net) or 10601 ha. (gross) for which the expenditure incurred was Rs. 200.26 crores against the targeted ayacut of 61630 ha. (net) or 92800 ha. (gross) with an estimated cost of Rs. 260.70 crores. 30% of the dam work is completed. Works for the main canal, branches and distributories are in progress.

*Pamba*

5.5 The major work of Pamba irrigation project is almost completed and the other works are in progress 0.175 km. of branch canal and 0.50 km. field boothies are nearing completion. The potential created upto June 1987 was 20604 ha. (net) or 48213 ha. (gross), spending an amount of Rs. 52.61 crores, against the targeted ayacut of 21135 ha. (net) or 49456 ha. (gross) with an estimated cost of 42.97 crores.

*Periyar Valley*

5.6 The major works are almost over. Improvement to main canal for a length of 105 m. and high level canal for a length of 584 m. is in progress. Formation of branches and distributory for a length of 10.96 km s in progress. The expenditure incurred till June 1987 was Rs. 51.92 crores and the potential created was 19430 ha. (net) or 76813 ha. (gross), against the targeted ayacut of 32800 ha. (net) or 85600 ha. (gross) with an estimated cost of Rs. 39.71 crores.

*Chimony*

5.7 Construction of masonry dam from Block No. I to IX is in progress. No potential is created so far. The expenditure till 3/87 is Rs. 15.18 crores and the latest estimated cost is Rs. 29.51 crores.

*Chitturpuzha*

5.8 The ayacut achieved upto June 1987 is 13748 ha. (net) or 25571 ha. (gross), spending an amount of Rs. 15.95 crores, against the targeted ayacut of 15570 ha. (net) or 26960 ha. (gross). The estimates cost of the scheme is Rs. 24.90 crores. The works are nearing completion. Works of Meenakshipuram lift irrigation scheme is in progress.

*Kanjirapuzha*

5.9 The potential created till the end of June 1987 is 6883 ha. (net) or 15487 ha. (gross), spending an amount of Rs. 41.04 crores, against the targeted ayacut of 6720 ha. (net) or 21863 ha. (gross) at an estimated cost of Rs. 59.76 crores. Formation of field boothies and work on the distributories are in progress. 56.68 to 61.71 km. length of canal works were arranged in 11 reaches and are in progress

*Kuttiady*

5.10 The ayacut achieved upto the end of June 1987 is 14108 ha. (net) or 34710 ha. (gross), spending an amount of Rs. 49.31 crores, against the targeted ayacut of 14570 ha. (net) or 35850 ha. (gross) at an estimated cost of Rs. 44.65 crores. The project is nearing completion. The balance work of distributories and channels are in progress.

*Pazhassi*

5.11 The ayacut achieved till the end of June 1987 is 7448 ha. (net) or 14896 ha. (gross), against the targeted ayacut of 16187 ha. (net) or 32374 ha. (gross), with an estimated cost of Rs. 69.25 crores. In Chavassery-Veliambara road 60% of work, and Nos. of culverts have been completed. In the case of construction of aqueduct cum bridge at Parassinikadavu 55% of the work has been completed. 25% of the protection works of maintenance have been completed. Out of 13 reaches of Pulloppy distributory 11 reaches were completed. All the other works are in progress.

*Idamalayar*

5.12 The amount spent on the project till 3/87 is 16.92 crores against the estimated cost of Rs. 65.00 crores. No potential is created so far. The balance work of main canal and investigation work of branch canals are in progress.

*Muvattupuzha*

5.13 The amount spent on the scheme till the end of 3/87 is Rs. 23.27 crores and no potential is created far. In L.B., Main canal work is in progress for a length of 4.588 km., and work on R.B. main canal for a length of 4.08 km. is in progress.

5.14 The work on Kuriakutty-Karappara has been stopped as per the instructions of Central Water Commission.

5.15 All the other ongoing schemes are in the initial stages of construction and the works are in different stages of progress. The details of cost escalation and the amount spent upto March 1987 of various ongoing schemes are given in Table No. 5.1.

TABLE 5.1  
*Details of cost escalation of Major & Medium Irrigation Projects*

Name of Project	Year of Starting	Original estimate (Rs. lakhs)	Latest estimated cost (Rs. lakhs)	Expected area to be irrigated (in Ha.)		Expenditure till 3/87 (Rs. lakhs)	% increase in original estimate
				Net	Gross		
1. Periyar Valley	1956	348	3971	32800	85600	5192.84	1091
2. Pamba	1964	383	4297	21135	49456	3261.07	1022
3. Kuttiady	1962	496	4185	14570	35850	4931.62	804
4. Pazhassi	1964	442	6925	16187	32374	5452.90	1466
5. Chitturpuzha	1964	106	2490	15570	26960	1595.01	2249
6. Kanhirapuzha	1961	365	5976	6720	21863	4104.51	1537
7. Kallada	1961	1328	26070	61630	92800	20026.82	1863
8. Muvattupuzha	1976	2086	6859	17400	52200	2327.12	229
9. Chimoni	1975	633	2951	13000	26200	1518.55	366
10. Idamalayar	1981	1785	6500	13659	39318	1692.36	264
11. Kakkadavu	1979	1335	5100	12817	26106	166.08	276
12. Beyporepuzha	..	37800	..	5812	13620	48.03	..
13. Kuriakutty-Karappara	1978	1036	4881	11736	23472	125.32	371
14. Attappady	1975	476	5000	4323	13041	594.67	950
15. Karapuzha	1975	760	3607	4650	9300	838.66	975
16. Meenachil	1980	3500	3640	8803	18014	65.51	4
17. Vamanapuram	1981	1982	4956	9960	20000	140.94	150
18. Banasurasagar	1979	800	1798	2800	4800	123.58	114
		55661	99506	273572	590974	54205.82	..

*Minor Irrigation*

5.16 Upto the end of 1985-86 an amount of Rs. 69.32 crores was spent to give irrigation facilities additionally to 168936 ha. (net) or 201510 ha. (gross). During 1986-87 the outlay was Rs. 570 lakhs to benefit an ayacut of 5685 ha. (net) or 7070 ha. (gross). Against this the expenditure was Rs. 756 lakhs to give irrigation facilities to 6894 ha. (net) or 9406 ha. (gross) additionally. During 1986-87, 48 Class I Schemes, 66 Class II Schemes, 41 Lift Irrigation Schemes and 51 I.P.D. Yelah Schemes were completed and also 36 damaged minor irrigation schemes were renovated. A new scheme, "Community Irrigation Scheme", was launched by Government during 1986-87. The physical and financial achievement in

respect of minor irrigation schemes are given in appendix 5.2 and 5.3.

*Anti-sea erosion*

5.17 Kerala has a coast line of 560 km. The major portion of this coast line is characterised by narrow longitudinal strip of coastal zone formed of alluvial deposits which is subjected to severe erosion. More than 320 km. is vulnerable. Upto the end of 1985-86 an amount of Rs. 81.85 crores was spent to protect an area of 305.49 km. from the damages. During 1986-87 Rs. 686 lakhs was spent to protect 6.68 km. of new sea wall and to reform 6.32 km. of old wall to standard size.

### Flood Control

5.18 The main works taken up under flood control programme were construction of embankment retaining walls and bed bars, etc., to protect the area from the ravages of flood. Till the end of 1985-86 an amount of Rs. 12.90 crores was spent and the area protected was 23648 ha. During 1986-87 Rs. 150 lakh was spent to benefit 2100 ha. from the ravages of flood.

5.19 The physical and financial achievement of anti-sea erosion and flood control programme are given in Appendix 5.4.

### Command area Development

5.20 The ultimate aim of Command Area Development Programme (CADP) is maximisation of agricultural production by effecting equitable distribution of water to individual fields and by introducing scientific practices of farming. The main activities are construction of field channels to the ten completed irrigation projects of Malampuzha, Walayar, Pothundy, Gayathri, Mangalam, Peechi, Chalakudy, Vazhani, Checrakuzhy and Neyyar.

5.21 Initially there were so many lacunae for the implementation of CADP. Statutory backing which was found very essential for implementing the scheme was provided during 1985 and since then the pace of progress gained momentum. As a result of streamlining the whole system much progress has been achieved during 1986-87. Field channels were constructed in 8913 ha. Rotational supply of water was ensured where field channels were constructed 1042 beneficiary farmers associations were organised and registered for managing the water distribution.

### B. Power

#### Generation

5.22 On energy front, the situation during 1986-87 was not satisfactory compared to that of the previous years. The Power generation as on 31-3-1987 was 461.6009 MU. This was 716 MU less than that of the previous year. Even though the installed capacity has increased from 1271.5 MW to 1476.5 MW by 1987, the target of power generation could not be achieved due to failure of monsoons. This addition in the installed capacity was due to the commissioning of 3rd Unit of Idukki Stage II and Idamalayar Hydro Electric station. The growth of power system at a glance and project wise installed capacity and generation of power during 1987 are given in appendix 5.5 and 5.6.

5.23 In the context of very grim power shortage during 1987 due to poor inflow of water to the reservoirs K.S.E.B. imposed load shedding and power cut to the consumers. The details of load shedding and power cut imposed on various categories of consumers are given below.

#### Load shedding 1-1-1987 to 31-12-1987

3-8-1987 to 7-8-1987	1/2 hour in the night.
8-8-1987 to 10-8-1987	Day time two hours in the cities and other parts 3 hours, and at night half an hour.

11-8-1987 to 18-8-1987 Day time 4 hours and night half an hour.

19-8-1987 to 5-10-1987 Day time 6 hours and night one hour

6-10-1987 to 3-11-1987 Day time 6 hours

Load shedding in the night a had been cancelled with effect from 6-10-1987.

4-11-1987 to 16-12-1987 Day time 5 hours

17-12-1987 onwards 3 hours during day time 3 hours load shedding is still continuing.

#### Details of Power Cut

5.24 During 1986-87 100% power cut was imposed for the industrial consumers i.e. for HT and EHT only from 13-6-1986 to 14-8-1986. This restriction was withdrawn on 15-8-1986. From 20-4-1987 to 1-6-1987 20% Power cut was introduced to HT and EHT consumers which was withdrawn on 4-6-1987. Again K.S.E.B. was constrained to introduce a 25% power cut for industrial sector for HT and EHT consumption. This was enhanced to 40% from 7-8-1987 to 31-12-1987.

5.25 Kerala, which was exporting energy to Tamil Nadu and Karnataka for 6 years during 1976-82, is now importing power. During 1986-87 511.85 MU of power was imported from our neighbouring State as against 227.72 MU during 1985-86. Even with the import of power, the full requirement cannot be met. The percapita consumption of power had gone down from 136.06 Kwh during 1985-86 to 131.26 Kwh during 1986-87, which is very low compared to the neighbouring states and All India average (of 178 Kwh).

5.26 The ongoing major generating projects are in various stages of execution. All the major works of Idamalayar and Idukki Stage II have been completed. Idukki Stage III diversion tunnel was completed and part benefit was being obtained. Kallar dam was completed and Erattayar dam work was in progress. In Sabarigiri augmentation, Upper Muzhiyar diversion was completed. Other works are in progress. In Kallada generating units were procured and other civil works are under execution. For Kakkad scheme contract for all component structure have been awarded and the work is progressing. In Lower Periyar tunnel driving, 70% of work was completed, work on dam pressure shaft, power house etc., are in progress. For the small H.E. Schemes Malampuzha, Madupetty, Chimony and Peppara. tender for the supply of generating equipment have been received.

5.27 On the transmission and distribution sector 275 ct. km. of 110 KV line, 68 ct. km. of 66 KV lines 2614 ct. km. of 11 KV line and 4668 ct. km. of LT line have been commissioned during 1986-87. During 1986-87 158,548 service connections were given 15,459 pumpsets energised, 10,225 street lights installed and 827 harijan colonies and 55 tribal colonies were supplied with electricity.

5.28 Financial achievement and expected year of commissioning of major ongoing power projects are given in Appendix 5.7.

5.29 The pattern of consumption of power and revenue collected from various category of consumers are given in appendix 5.8 and average rate of electricity supply and electricity duty during 31-12-1987 is given in Appendix 5.9.

*Non Conventional Energy*

5.30 Agency for Non Conventional Energy and Rural Technology (ANERT) is the organisation dealing with programmes for promoting the use of non-conventional energy in the State.

5.31 ANERT has been implementing the following three programmes

(i) Solar Thermal Extension Programme

(ii) National programme on Improved Chullahs.

(iii) Integrated Rural Energy Planning Programme,

During 1986-87 ANERT has undertaken three projects on Water Heating System with a total installed capacity of 14000 litres per day. These Water Heating Systems are installed at VSSC Trivandrum, SAP Trivandrum and Milk Dairy Plant, Mannar. The projects come under 75% subsidy scheme of the Department of Non Conventional Energy Source, Government of India. ANERT has also installed 10 photo voltaic street lighting systems in Attappadi Tribal Block. Under the National Programme on Improved Chullahs 28 training course were organised and 6,924 chullahs were constructed during 1986-87. Under integrated Rural Energy Planning Programme, the first Block level IREP Cell started functioning at Wadakkancherry in September 1987.

## CHAPTER 6

## INDUSTRY

**Large and Medium Industries***Industrial Production*

The vagaries of monsoons during the last few years had a deleterious effect on the economy of the State. The serious power shortage the State has been facing, considerably retarded the industrial production during the year under report. During 1986-87, the State had witnessed an unprecedented power cut of 100% on high and extra high tension consumers from 13-6-1986 to 14-8-1986 resulting in lay offs and consequent loss of production in respect of most of the industrial units.

6.2 In spite of this adverse situation, the industrial sector has been resilient to a great extent. The provisional index of industrial production worked out by the Directorate of Economics and Statistics shows that the index had risen from 200.6 in 1985-86 to 209 in 1986-87. However, the situation in the current year presents not so encouraging a picture for the reason that since the beginning of the financial year partial power cut has been imposed. 20% power cut was imposed since April 1987, which had to be increased to 40% since August 1987. This will have an adverse impact on industrial production in 1987-88. The details of indices of industrial production from 1975-76 are furnished in Appendix 6.1 and the annual industry-wise indices of industrial production from 1983-84 to 1985-86 in Appendix 6.2

6.3 Quick estimate of the State's net domestic product by the Directorate of Economics and Statistics also reveals that there has been improvement in the contribution of manufacturing sector during the period under report. State's net domestic product from manufacturing sector at current prices rose by 10.9% from Rs. 914.13 crores in 1985-86 to Rs. 1013.77 crores in 1986-87. However, growth in real terms was only 3.4 percent.

6.4 Government are taking effective steps to revive units which have fallen sick or are likely to become sick, to work out a medium term strategy for the growth of low power consuming employment oriented industries as well as a long term strategy for augmenting the State's power supply.

6.5 A brief review of the achievements of the various departments, institutions and public sector undertakings etc., engaged in the development of the industries sector of the State during 1986-87 based on the available statistics furnished by them are attempted in the following paragraphs.

*Working Factories and Employment*

6.6 Total number of registered working factories in the State stood at 11489 as on 31-12-1986 registering a growth of 3.53 per cent over that in the previous year. A marginal growth of 0.17 percent in the number of workers employed in these factories was also recorded during 1986. The number of workers employed in the

factories has increased to 2,92,279 in 1986 from 291,788 in 1985. The number of working factories increased in all the districts except Cannanore and Wayanad. Maximum increase in the number of factories was recorded in Ernakulam district where it rose to 1915 in 1986 from 1846 in 1985, an increase of 69. In Pathanamthitta and Palghat districts the increase was 58 each. The number of factories in Cannanore district decreased to 1362 in 1986 from 1380 in 1985. Fall in the number of workers was noticed in seven districts. In Quilon district the number of workers decreased to 102055 in 1986 from 103789 in 1985, whereas in Cannanore district it decreased from 20414 in 1985 to 19630 in 1986. On the other hand, increase in the number of workers was noticed in six districts. The increase in the districts of Pathanamthitta, Palghat and Malappuram were 851, 888 and 771 respectively. District-wise details of working factories in the State are given in Table 6.1.

6.7 As in the previous years, the cashew industry offered the maximum employment opportunities among the industries under registered factory sector. It employed 101832 workers accounting for 35 percent of the total workers in this sector during 1986. Industry-wise distribution of registered working factories and employment in them for the years 1985 and 1986 are given in Appendix 6.3 and 6.4.

TABLE 6.1  
Registered Working Factories in Kerala

District	Number of Factories		Employment (Nos.)	
	1985	1986*	1985	1986*
1. Trivandrum	451	454	20570	20523
2. Quilon	920	938	103789	102055
3. Pathanamthitta	78	136	660	1511
4. Alleppey	762	781	16289	16640
5. Kottayam	1012	1033	13431	13164
6. Idukki	216	235	5715	5677
7. Ernakulam	1846	1915	44222	44616
8. Trichur	1368	1411	23804	24214
9. Palghat	1196	1254	13620	14508
10. Malappuram	487	536	5801	6572
11. Kozhikode	1317	1371	22147	21982
12. Wayanad	64	63	1326	1186
13. Cannanore	1380	1362	20414	19630
Total	11097	11489	291788	292278

\*Provisional

Source: Directorate of Economics and Statistics

*Joint Stock Companies in Kerala:*

6.8 A total number of 3062 joint stock companies were working in Kerala as on 31-3-1987 which included 2450 private limited and 612 public limited companies as against 2801 companies comprising of 2228 private limited and 573 public limited companies as at the end of March, 1986. Number of companies newly registered during 1986-87 was 280. This included 239 private and 41 public limited companies. Nineteen companies including 17 private limited and two public limited companies were wound up during 1986-87. Thus the net addition to the total number of joint stock companies in the State during this period was 261 which included 222 private limited and 39 public limited companies. The number of Government Companies rose to 95. Among these, 72 were private limited and 23 were public limited companies. Four companies viz., the Transformers and Electricals, Kerala Ltd., Sidkel Television Ltd., Astral Watches Ltd., and Steel and Industrial Forgings Ltd., registered earlier became Government Companies under Section 617 of the Companies Act of 1956. Details of joint stock companies working in Kerala are given in Table 6.2.

TABLE 6.2

*Details of Joint Stock Companies Working in Kerala*

Particulars	Private Limited	Public Limited	Total
1	2	3	4
1. Number of Joint Stock Companies in Kerala as on 31-3-1986	2228	573	2801
2. Number of Companies newly registered during 1986-87	239	41	280
3. Number of Companies wound up during 1986-87	17	2	19
4. Number of Companies Transferred to other states during 1986-87	Nil	Nil	Nil
5. Net addition to total during 1986-87 (Item 2—(3+4))	222	39	261
6. Total Number of Joint Stock Companies in Kerala as on 31-3-1987	2450	612	3062
7. Number of Government Companies Registered up to 31-3-1986	72	23	95

8. Number of Government Companies Registered during 1986-87	Nil	Nil	Nil
9. Number of Government Companies wound up during 1986-87	Nil	Nil	Nil

Source: Registrar of Joint Stock Companies, Ernakulam

*Industrial Promotional Agencies**Kerala State Industrial Development Corporation Ltd.*

6.9 The Corporation, one of the major institutions engaged in the promotion of industrial development activities in the State continued its assistance to large and medium industries during 1986-87 also. It sanctioned share capital, loans and guarantee assistance amounting to Rs. 16.35 crores to various units during this period. As against this, it disbursed Rs. 13.65 crores which was 51.7 per cent higher than that of the previous year. During 1986-87, nine projects involving a capital investment of Rs. 15.50 crores, assisted by the Corporation have been commissioned. Total number of projects commissioned with the financial as well as technical assistance of the Corporation stood at 98 as on 31-3-1987. These projects covering a wide range of products such as textiles, chemicals, electronics etc. involve a total investment of Rs. 410 crores and employ 34230 persons. The details of financial assistance sanctioned and disbursed by the Corporation from 1984-85 to 1986-87 are shown in Table 6.3.

6.10 During 1986-87, the Corporation obtained sanction from the Central Government for setting up eight new projects for the manufacture of products such as silicon oxide grains, aluminium powder, hard ferrites, epoxy resins, DC. micromotors, aluminium extrusions etc. and signed 17 memoranda of understanding and 10 promotional agreements with private entrepreneurs for development and execution of new projects. Besides, investment decisions were taken with regard to 12 projects involving an estimated investment of Rs.26 crores. Of these, four projects costing Rs. 7.77 crores are proposed in the Idukki district. Ten projects costing Rs. 24 crores were taken up for implementation during 1986-87 itself. Including these, the total number of projects under execution with the assistance of the Corporation as on 31-3-1987 stood at 41. The total cost of these projects would be Rs. 85 crores and on completion they are expected to provide employment to 4140 persons.

TABLE 6.3

Financial Assistance Sanctioned and Disbursed by the Kerala State Industrial Development Corporation Ltd. from 1984-85 to 1986-87

(Amount in Rs. lakhs)

Assistance	1984-85		1985-86		1986-87	
	Sanctioned	Disbursed	Sanctioned	Disbursed	Sanctioned	Disbursed
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Share Capital	587.75	53.12	207.05	100.86	1635.00	1365.00
2. Loan	1054.91	640.76	1532.66	790.24		
3. Guarantee	7.50	7.50	8.79	8.79		
Total	1630.16	701.38	1748.50	899.89	1635.00	1365.00

Source:—Kerala State Industrial Development Corporation, Trivandrum.

6.11 The Corporation earned an income of Rs. 372 lakhs by way of interest, dividend etc., during 1986-87 showing an increase of 22.7 per cent over the earnings in the previous year. The gross profit earned during this period amounted to Rs. 34.32 lakhs.

#### Kerala State Electronics Development Corporation Ltd.

6.12 This corporation which was set up in 1972 with the major objective of promoting an integrated and self-reliant electronics industry in the State has at present nine divisions manufacturing a wide range of electronics items such as consumer electronics, control instruments, cybernetics, traffic signalling equipment, communication equipment etc. The accounts of the corporation for the year 1986-87 has not yet been finalised. However it is estimated that the total sales turnover of the Keltron Group of companies would be around Rs. 70 crores during 1986-87 as against Rs. 61 crores in the previous year. The working of the Corporation is expected to result in a loss during the period under review. The major reasons for the loss are the poor performance of the consumer electronics and industrial electronics divisions, fall in production due to decrease in demand for the products, shortage of rawmaterials etc. The Corporation has drawn up a number of projects for the revitalisation/expansion/modernisation of its various divisions and subsidiary companies in order to set them on a more sound footing. Besides, the Corporation has initiated steps to enter into new thrust areas for future growth. These cover components, SAW filters, crystal filters, equipment and systems in high-tech areas like space electronics, satellite and micro wave communication, defence hardware etc.

#### Kerala State Industrial Enterprises Ltd.

6.13 The Kerala State Industrial Enterprises Limited set up in 1973 as a Holding Company of the State Government is at present managing the following seven Government owned companies.

1. Kerala Ceramics Limited
2. Kerala Soaps and Oils Limited

3. Travancore Plywood Industries limited
4. Kerala State Drugs and Pharmaceuticals Limited
5. Kerala Electrical and Allied Engineering Company Ltd.
6. Kerala State Detergents and Chemicals Limited
7. Kerala State Salicylates and Chemicals Limited.

6.14 Of these, the Kerala State Salicylates and Chemicals Limited is yet to start production. The performance of other companies has shown improvement during 1986-87 by producing goods worth Rs. 2907 lakhs as compared to Rs. 2828 lakhs in 1985-86. The sales turnover has also increased from Rs. 2886 lakhs in 1985-86 to Rs. 3471 lakhs during this period registering a growth of 20 per cent over the previous year. Production could not be brought to the desired level mainly due to acute working capital shortage and continuous cash losses incurred by majority of these companies.

6.15 The revenue earnings from the Air Cargo operations continued to be the main source of income for the Holding Company in 1986-87 also. Cargo complexes at Trivandrum and Cochin handled 4890 MT of cargo during 1986-87 as against 4045 MT in 1985-86 marking an increase of 21 per cent over the previous year. The clearing and forwarding value of the cargo exported during 1986-87 worked out to be Rs. 1716 lakhs as against Rs. 1105 lakhs in the previous year. The sales turnover of the Company's Emporium at Trivandrum was badly affected during 1986-87 due to low volume of production in the Travancore Plywood Industries and lay off of Kerala Ceramic Ltd., since it is dealing mainly with the products of these two companies. Actual turnover was Rs. 38.4 lakhs as against the target of Rs. 76.60 lakhs for the year under review. The working of the company during 1986-87 ended with a net profit of Rs. 1.61 lakhs as compared to Rs. 0.78 lakh in the previous year.



### *Kerala State Textile Corporation Limited*

6.16 The Corporation is at present engaged in the development of textile industries in the State. The Corporation has been managing three textile mills, viz., Malabar Spinning and Weaving Mills, Calicut, Kottayam Textiles, Ettumanoor and Prabhuram Mills, Chengannoor which were taken over by the State Government under the Sick Textile Undertakings (Acquisition and Transfer of Undertakings) Act 1985. Now these mills are functioning as fully owned units of the Corporation. Besides, the Corporation is running a hosiery manufacturing unit, elastic tape manufacturing unit and a textile testing laboratory. The corporation has established a spinning mill in the State sector, at Edaricode in Malappuram district.

6.17 The three textile units being run by the Corporation produced 13.88 lakhs Kg. of cotton yarn valued at Rs. 468.16 lakhs and 11.28 lakh metres of cloth valued at Rs. 59.31 lakhs during 1986-87 as against 17.25 lakh kg. of yarn and 16.36 lakh metres of cloth valued at Rs. 588.25 lakhs and Rs. 89.84 lakhs respectively during 1985-86. The major reasons for the low production were lack of adequate working capital, power shortage and increase in cotton prices without a matching increase in sales realisation. Details of production and value of output of these three mills are given in Table 6.4. As per the provisional accounts, the working of the Corporation during 1986-87 ended in a net loss of Rs. 105.52 lakhs as against a net loss of Rs. 11.94 lakhs incurred during 1985-86.

TABLE 6.4

*Consolidated Production Details of Malabar Spinning and Weaving Mills, Kottayam Textiles and Prabhuram Mills managed by KSTC Limited*

Year	Cotton Yarn		Cloth		Total value (Rs. lakhs)
	Production (Lakh Kg)	Value (Rs. lakhs)	Production (Lakh Metre)	Value of production (Rs. lakhs)	
1984-85	16.39	521.10	16.25	86.66	607.76
1985-86	17.25	588.25	16.36	89.84	678.09
1986-87	13.88	468.16	11.28	59.31	527.47

Source: Kerala State Textile Corporation Ltd.

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

6.18 This Corporation is engaged in the trade of monopoly products being produced by the State Public Sector industrial units. During 1986-87, it procured and sold items such as titanium dioxide, potassium titanate and sodium titanate worth Rs. 31.51 crores as against Rs. 25.44 crores in 1985-86. The major item of sale was titanium dioxide. The Corporation procured and sold 9705 MT of titanium dioxide during 1986-87

compared to 9691 MT in 1985-86. The total income of the Corporation amounted to Rs. 31.94 crores marking a growth of 23.7 per cent over that of the previous year. It earned a net profit of Rs. 11.46 lakhs during 1986-87 as against Rs. 8.38 lakhs in 1985-86. The details of items procured and sold by the Corporation during 1985-86 and 1986-87 are furnished in Appendix 6.5.

### *Government Owned Companies*

6.19 There are twenty-five manufacturing companies which are fully owned by the State Government. These include the subsidiary companies of State owned corporations. Of these, seven companies are being managed by the Kerala State Industrial Enterprises, the Holding Company of the State Government. The management of the Trivandrum Rubber Works Limited formerly managed by the Holding Company has been entrusted with KSRTC. The Foam Matting (India) Ltd., is under lock out since 16-6-1984 and the Kerala State Engineering Works Ltd., is under orders of winding up.

6.20 The annual accounts of some of these companies are yet to be finalised. However, based on the details furnished by the companies certain indicators showing their performance during 1986-87 have been arrived at. Accordingly, the total capital invested by the companies under this group has increased from Rs. 260.47 crores in 1985-86 to Rs. 271.75 crores in 1986-87 registering a growth of 4.34 per cent. The total number of workers employed in these companies as on 31-3-1987 was 9870. The company-wise details of capital invested and employment in these companies during 1985-86 and 1986-87 are furnished in Appendix 6.6.

6.21 Among the 23 companies which were functioning during 1986-87 only 19 companies have furnished details regarding their performance during this period. The Kerala State Salicylates and Chemicals Limited has not started production. The Kerala Minerals and Metals Limited, Sitarum Textiles Limited and the Steel and Industrial Forgings Limited have not furnished the required details.

6.22 The performance of these 19 companies during 1986-87 were found to be satisfactory. Value of production and sales turnover have improved considerably over the previous year. Together these companies produced goods worth Rs. 76.79 crores during 1986-87 which was 4.3 per cent higher than that (Rs. 73.13 crores) attained in 1985-86. The sales turnover of these companies, on the other hand recorded a growth of 16.7 per cent over that of the previous year, increasing from Rs. 76.09 crores in 1985-86 to Rs. 89.39 crores in 1986-87. The performance of these companies in terms of value of production and sales turnover during 1985-86 and 1986-87 are furnished in Appendix 6.7.

6.23 Among these 19 companies, only seven companies viz. The Kerala Electrical and Allied Engineering Company Limited, Metal Industries Limited, Steel Industries Kerala Limited, Kerala Agro Machinery Corporation Limited, Astral Watches Ltd., Kerala Premopipe Factory Limited and Kerala Clays and

Ceramic Products Limited were operating on profit during 1986-87. In spite of a number of adverse factors affecting the working of these companies, such as low volume of production due to power cut, lesser orders for products, stiff competition from small scale sector etc., faced by the Kerala Electrical and Allied Engineering Company, increase in the price of inputs, tool down strike for 38 days by the workers, power cut resulting partial lay off etc., faced by Kerala Agro Machinery Corporation etc., they could earn a gross profit of Rs. 155.69 lakhs during this period. All other companies in this group were incurring losses. The loss incurred by the five subsidiary companies of the Kerala State Industrial Enterprises viz. the Kerala Ceramics Ltd., Kerala Soaps and Oils Ltd., Kerala State Drugs and Pharmaceuticals Ltd., Kerala State Detergents and Chemicals Ltd. and Travancore Plywood Industries Ltd., amounted to Rs. 635.42 lakhs. Others viz. Malabar Cements Limited, Trivandrum Spinning Mills Ltd., Scooters Kerala Limited, Kerala Automobiles Ltd., Kerala State Wood Industries Ltd., Meat Products of India Ltd. and Trivandrum Rubber Works Limited were incurring losses as in the previous year. The major reasons attributed to the unsatisfactory performance of this group of companies include shortage of raw materials and working capital, delay in the implementation of expansion/rehabilitation projects, continuous cash losses, technical obsolescence, lack of demand for their products, power cut etc.

6.24 The Malabar Cements had to face innumerable difficulties like low quality of limestone deposits, problems in the ropeway system, low voltage, frequent failure of refractory lining in the kiln due to silicon problem in the raw material etc., during the year under review. The loss of production on account of power cut alone was estimated at Rs. 457 lakhs. The working of the Trivandrum Spinning Mills was adversely affected by problems such as power cut, hike in cotton price etc. Production loss due to power cut has been estimated at Rs. 46.60 lakhs. The Kerala Automobiles Ltd. was experiencing non-availability of engine components during this period. Besides, the company had a production loss of Rs. 62.91 lakhs on account of power cut alone. The working of the Meat Products of India was also affected adversely by shortage of working capital during this period. The performance of the Kerala State Wood Industries Limited was affected adversely by non-availability of adequate quantity of rosewood and other species of timber, two months lay off due to power cut, strike of workers for forty days and frequent power interruptions. Loss of production due to power cut and other reasons was estimated Rs. 45.09 lakhs. The details of installed capacity and capacity utilisation in respect of Government Owned Companies are given in Appendix—6.8.

#### *Government Majority Companies*

6.25 The State Government was holding not less than 51 per cent of the paid up share capital of twenty manufacturing companies including nine subsidiaries of Government owned corporations during 1986-87. Among the subsidiaries, eight companies viz., the Keltron Counters Ltd., Keltron Rectifiers Ltd., Keltron Crystals Ltd., Keltron Magnetics Ltd., Keltron Power Devices Ltd., Keltron Electro Ceramics Ltd., Keltron Resistors Ltd. and Keltron Component Complex

Limited were being managed by the Kerala State Electronics Development Corporation Ltd., and the remaining one viz., Steel Complex Ltd. by the Kerala State Industrial Development Corporation Ltd. Among these twenty companies, annual accounts of four companies viz., the Traco Cable Company Ltd., Kerala Construction Components Ltd., Metropolitan Engineering Co. Ltd. and Travancore Cements Ltd., have not yet been finalised for the year 1986-87. Hence the latest available information is considered for assessment.

6.26 The capital invested by the nineteen companies in this group, excluding Kerala Construction Components Ltd., stood at Rs. 9753.85 lakhs as on 31-3-1987 as against Rs. 9400.27 lakhs as on 31-3-1986, representing a growth of 3.76 per cent. The employment in these 19 companies showed only a marginal increase from 8462 in 1985-86 to 8514 in 1986-87. The details of capital invested and employment in respect of Government majority companies as on 31-3-1986 and 31-3-1987 are given in Appendix 6.9

6.27 The total value of goods produced by the 16 companies, who have furnished details regarding their performance during 1986-87 decreased noticeably. The value of production of these companies declined to Rs. 9711.91 lakhs in 1986-87 from Rs. 10939.69 lakhs in 1985-86, registering a decline of 11.22 per cent from that attained in 1985-86. Total sales turnover also decreased during 1986-87 from Rs. 10944.60 lakhs in 1985-86 to Rs. 10368.48 lakhs which was 5.56 per cent lower than that achieved in the previous year. The details of value of production and sales turnover in respect of the Government majority companies are furnished in Appendix 6.10.

6.28 Among these 16 companies, seven viz., the Keltron Counters Ltd., Keltron Crystals Ltd., Keltron Magnetics Ltd., Keltron Component Complex Limited, Steel Complex Ltd., and the Travancore Titanium Products Limited generated profit during 1986-87. These seven companies earned an operating profit of Rs. 752.65 lakhs during this period. The profit earned by the Steel Complex Limited and Keltron Component Complex Limited decreased considerably during 1986-87 compared to that in 1985-86. On the other hand, the profit earned by the Travancore Titanium Products Ltd., increased to Rs. 566.87 lakhs in 1986-87 from Rs. 205.87 lakhs in 1985-86. Nine companies were running on loss during 1986-87. Travancore Cochin Chemicals Ltd., which was operating on profit during 1985-86 incurred a net loss of Rs. 121.71 lakhs in 1986-87. The remaining eight companies incurred loss during 1986-87 as in the previous year. The total accumulated loss incurred by these eight companies as on 31-3-1987 amounted to Rs. 1372.97 lakhs which exceeded their paid up capital.

6.29 Major reasons for the poor performance were loss of production due to power cut, lack of working capital which are common to almost all the companies, fall in demand for the products of some of the companies such as Travancore Cochin Chemicals Ltd., and United Electrical Industries Ltd. interest burden, and increase in operational cost in the case of a few others. The Keltron Electro Ceramics Ltd., Travancore Cochin Chemicals Ltd., United Electrical Industries Ltd.,

Transformers and Electricals Kerala Ltd., and Forest Industries (Travancore) Ltd., lost 1,38,909 mandays during 1986-87 due to power cut and consequent lay off alone. As a result they suffered a loss in production of Rs. 17.70 crores during this period. The details regarding installed capacity, production and capacity utilisation in respect of the Government Majority Companies during 1985-86 and 1986-87 are given in Appendix 6.11.

### Small Scale Industries

6.30 During the year, 4977 new small scale industrial units were given permanent registration and 19920 units were given provisional registration. There were 40342 registered small scale units in the State on 31-3-87. Out of these, 1143 units were started by women entrepreneurs and 1317 units by SC/ST entrepreneurs. As at the end of the year there were 1874 sick small scale units in the State. Under the sick units revival programme 34 sick units could be revived during the year.

6.31 The total investment made in the new units registered during 1986-87 is estimated at Rs. 66.69 crores, the production capacity generated is estimated to produce goods worth Rs. 202.69 crores, and the employment generated 29862. This means that the investment required to generate one additional employment in the small scale sector was Rs. 22,333. The district-wise break-up of the above details are furnished in Appendix Tables 6.16 and 6.17 respectively.

6.32 Under the entrepreneurial development scheme, 24 training programmes were conducted during 1986-87 and 607 entrepreneurs including 101 SC/ST entrepreneurs were trained through the Centre for Management Development, Trivandrum and KITCO, Ernakulam. Out of these, four programmes were exclusively for entrepreneurs from SC/ST category two programmes for women and two programmes for ex-servicemen. According to the Department 111 of the trained entrepreneurs started their own industrial units during the year. The details on entrepreneurs trained are furnished in Appendix table 6.18.

6.33 During the year under report, 636 units were given margin money assistance, 857 units were given State Investment Subsidy and 723 SC/ST entrepreneurs were given loan and grant either to set up or to strengthen their own units. Under artisans' development programmes 10882 artisan units were established during 1986-87, out of which 4297 units were by SC/ST entrepreneurs. Under the scheme "Self Employment for Educated Unemployed Youth" for the year, 19015 educated youth were assisted for setting up self employment ventures under industry, service and business and Rs. 38.06 crores were sanctioned and Rs. 18.67 crores disbursed by Commercial Banks. The district-wise break-down of the above details are furnished in Appendix 6.19 and 6.20 respectively.

6.34 As on 30-6-1986 there were 1515 Industrial Co-operative Societies in the State of which 46 were beedi industrial societies, 221 women's industrial societies, 95 Scheduled Caste Societies and 25 were Scheduled Tribe Societies. The district-wise details are furnished in appendix 6.21.

6.35 A survey (Card Survey.) was conducted to ascertain the condition of the small scale industrial units in the State. On the basis of the details collected units have been classified into three groups, green, yellow and red. The units working satisfactorily are classified as green, units working but likely to become sick as yellow and sick/closed/non-existent units are classified as red. As on 31-3-1987 the details collected from 36128 small scale units excluding the de-registered units, revealed that 88.89% units were green, 4.61% yellow and the rest were red. The district-wise details are furnished in Appendix 6.22

6.36 The Kerala State Small Industries Development Corporation (SIDCO) formed in 1977 is the promotional agency for the development of Small Scale Industries in the state. At present the activities of the Corporation is limited to the vital areas such as creation of infrastructural facilities, compilation of project profiles, distribution of scarce raw materials, providing marketing assistance rehabilitation of revivable sick units, and gathering and dissemination of information. Further the construction, maintenance, management, and administration of the Industrial Estates and Development plots, technical and managerial assistance and provision of consultancy services etc., for the promotion of small scale industrial units are vested with this corporation.

6.37 Out of the 360 Industrial sheds in the 36 mini industrial estates maintained by SIDCO in 1986-87, 341 sheds were occupied. In these occupied sheds, there are 322 units, and among them 123 units are working and 149 are defunct. In the 17 conventional type industrial estates managed by SIDCO, out of the 517 sheds, 503 are occupied by 326 SSI units. Out of this, only 255 units are working. The Corporation assisted 79 units in 1986-87, in marketing their products. The total value of products sold through the Corporation within the country works out to Rs. 40 lakhs during the year. The raw material division distributed raw materials worth Rs. 1323 lakhs during 1986-87 to 2495 small scale units.

6.38 The value of products exported was about Rs. 11 lakhs. The paid up capital of the Corporation was Rs. 448.39 lakhs in 1986-87 against an authorised capital of Rs. 500 lakhs. According to the provisional accounts, the Corporation has incurred a loss of Rs. 100.38 lakhs during 1986-87 as against the loss Rs. 106.21 lakhs during the previous year.

6.39 The Small Industries Service Institute for Kerala came into existence in 1956 at Trivandrum as a field agency of the National Small Industries Development Organisation. Later on in 1960 it was shifted to Trichur. It provides technical, managerial, promotional and developmental services to existing and prospective small industrialists in Kerala and Lakshadweep islands. The SISI undertakes promotional and developmental activities maintain Extension Centres at Alleppey, Shoranur, Calicut and a Foot-wear Service Centre and a Central Workshop at Trichur. It works in close association with the State Directorate of Industries, Small Industries Development Corporation, Kerala Financial Corporation, Nationalised Banks and other agencies connected with the development of small industries.

6.40 Under the Technical Assistance Programme the Institute offers consultancy services in all the major groups of technical disciplines viz. Mechanical, Chemical, Electrical, Electronics, Food, Leather Glass and Ceramics etc. Investigation and Statistics Division undertakes techno-economic surveys and assists in the selection of suitable manufacturing lines to the needy entrepreneurs. The Industrial Management and Training Division provides management consultancy services for solving specific problems and conducts special managerial training programmes to the managers and supervisory staff of small industries. It organises entrepreneurial development programmes and helps the SSI units in the field of marketing especially in export promotion measures. The institute provides full support to District Industries Centres in implementing programmes for the development of small scale industries. Further, the central workshop, Food Preservation Training Unit and the Footwear- Service Centre attached to the institute and the workshops attached to the extension centres provide training facilities in various fields.

#### *Khadi and Village Industries*

6.41 Kerala Khadi and Village Industries Board (KVIB) a statutory body functioning from 1957, in Kerala, is implementing programmes for the development of Khadi and 20 Village Industries in the State. It provides employment opportunities to a large number of rural people through its various production centres, registered institutions and co-operative societies. During 1986-87 the total employment provided through khadi and village industries programmes was 1.61 lakhs as against 1.63 lakhs in the previous year. An amount of Rs. 19.55 crores was disbursed as wage to the workers engaged in khadi and village industries during the year compared to Rs. 17.44 crores in the previous year. The value of production of khadi cloth decreased from Rs. 247 lakhs in 1985-86 to Rs. 236 lakhs in 1986-87. The sales value also decreased by Rs. 34 lakhs to Rs. 291 lakhs during the same period. But in the case of village industries the production and sales showed considerable improvement during this year. The value of production of village industries during 1986-87 was Rs. 46.06 crores as against Rs. 39.81 crores in the previous year. The sales turnover during this period was for Rs. 48.26 crores against a sales of Rs. 41.71 crores in 1985-86. The Khadi and Village Industries Board gave assistance for the construction of 405 gobar gas plants during the year compared to 340 plants in 1985-86. The details relating to production, sales turnover, employment and wages in Khadi and Village Industries sector are given in Appendix 6.23.

#### *Traditional Industries*

##### *Coir Industry*

6.42 The coir industry is the largest traditional industry of Kerala, giving employment to about 4.3 lakh people. Majority of the coir workers belong to the weaker sections of society and most of them are women.

6.43 The co-operativisation programme has been adopted as an important measure for revitalising coir industry in the state. As on 31-3-1987, there were 577 primary coir co-operative societies as against 555 as on

31-3-1986 in the state out of which 56 were dormant and 92 had not started production. There were 43 manufacturing societies, 6 small scale producers societies, 3 husk procurement and distribution societies as at the end of 1986-87. The apex organisation viz. the Kerala State Co-operative Coir Marketing Federation is undertaking the marketing of coir and coir products manufactured in the co-operative sector. In addition to this, as on 31-3-1987, there were 191 societies under liquidation whereas it was 182 in the previous year.

6.44 During the financial year 1986-87, the production of coir and coir goods in the co-operative sector was 12966 tonnes valued at Rs. 1273 lakhs as against 11121 tonnes valued at Rs. 973 lakhs during the previous year. The export of coir and coir products from India recorded a decline during 1986-87. During 1985-86 the export from India was 24672 tonnes valued at Rs. 32.85 crores. In 1986-87 it declined to 23214 tonnes valued at Rs. 31.44 crores. During 1986-87, the primary coir co-operatives could purchase only 12.64 crores of husk valued at Rs. 152 lakhs as against 21.70 crores husk worth Rs. 260 lakhs purchased in the previous year.

6.45 Non availability of adequate quantity of husk at reasonable price, inadequacy of working capital, decline in export market, huge accumulation of unsold stock due to periodical slump in the market etc., are the major problems facing the coir industry. With a view to controlling the price of husks and to ensure the availability of husks to coir societies at reasonable price, the levy system was introduced from September 1986. But the single point levy system has been found to be a total failure and the minimum quantity of husk required by the co-operative societies could not be collected. Hence the state Government have submitted a proposal to the Government of India for sanction for introducing three point levy system and it is still under consideration of the Central Government.

6.46 The details regarding the number of coir societies, their working results, the production and export of coir and coir products etc, are given in the Appendix 6.24 to 6.26.

##### *Handloom Industry*

6.47 The total number of handlooms in the State stagnated around 95,000. The coverage of handlooms in the co-operative sector increased to 58,000 in 1986-87 from 57,000 in the previous year. There were 580 primary handloom weavers co-operative societies in the State as in the previous year. Total employment in the co-operative sector increased to 1.45 lakhs from 1.42 lakhs in the previous year.

6.48 The production of handloom cloth in the organised sector increased to 50.40 million metres valued at Rs. 31.49 crores in 1986-87 from 42.55 million metres valued at Rs. 30 crores in the previous year. In the un-organised sector production increased to 41.02 million metres worth Rs. 40.5 crores during the year under review from 40.51 million metres worth Rs. 39.24 crores in 1985-86. Eventhough it may be possible to achieve a daily production of six metres per loom, the fact is that it is possible to activate the looms,

only for about 200 days in an year as against the prescribed norm of 300 days. This is mainly due to the scarcity of raw materials. Total number of looms covered effectively under co-operative sector was 37,500 and that under corporate sector was 6,348 at the end of June 1987. The productivity of handlooms was very high in the unorganised sector (1108 metres per loom) compared to that in the organised sector (869 metres per loom).

6.49 In order to increase the sale of handloom cloth government continued to give rebate subsidy for the sale of handloom products during festival seasons for 101 days during 1986-87 also. An amount of Rs. 414.16 lakhs was disbursed as rebate during the year. Subsidy was also given for the production of Janatha Cloth to the State Handloom Apex Society and Handloom Development Corporation. The value of unsold stock in the organised sector slightly decreased to Rs. 24.30 crores during the year under review from Rs. 25.35 crores in the previous year. The details regarding the production, productivity value of unsold stock etc., are furnished in Appendix 6.27.

6.50 The Kerala State Handloom Weavers Apex Co-operative Society (Hantex) has 381 members consisting of 378 primary handloom co-operative societies, 2 co-operative spinning mills and Government. The paid-up capital of the Apex Society was Rs. 226.53 lakhs on 30-6-1987 against an authorised capital of Rs. 300 lakhs. At present it has got 253 sale outlets which include own depots/showrooms within the State, 2 depots outside the State and 52 agency depots. Its member societies are having about 35,000 looms and 50,000 workers. During the year under review, Hantex purchased yarn worth Rs. 219.22 lakhs, distributed yarn worth Rs. 241.27 lakhs to primary societies and procured goods worth Rs. 781.79 lakhs from them. The sales turnover of this society increased to Rs. 877 lakhs in 1986-87 from Rs. 829 lakhs in 1985-86. The working results of the Handloom Apex Society are furnished in Appendix 6.28(a).

6.51 The Kerala State Handloom Development Corporation started functioning in 1977 for assisting handloom weavers outside the co-operative fold. The total number of looms covered by the corporation was 7100 at the end of 1986-87. The production and sale of Janatha variety of cloth had been newly introduced in order to make effective sales among the weaker sections and for providing employment to the weavers. Also, the export of ready-made shirts was effected from February 1987 onwards. The provisional working results of the corporation for 1986-87 are furnished in appendix 6.28 (b).

6.25 The Kerala Garments Ltd., the subsidiary company of the Handloom Development Corporation is producing ready-made garments using Kerala Handloom Fabrics for export as well as for domestic market. The company has produced 1,11,000 pieces of garments as on 30-9-1987 and the stitching charges realised was Rs. 20.33 lakhs. The provisional accounts for 1986-87 shows a net loss of Rs. 7 lakhs excluding the amount receivable from the Holding company towards share of the profit on export revenues.

6.53 In spite of various measures taken a National and state levels to revive the handloom industry, it is still facing problems like accumulation of unsold stock, scarcity of raw materials and open competition from the mill sector. The survey to identify and eliminate bogus societies in the State has been completed during the year and the data is being processed.

6.54 The details regarding production and productivity in powerloom sector are furnished in Appendix 6.29.

#### *Cashew Industry*

6.55 The various units run by the Kerala State Cashew Development Corporation could work only for 71 days during 1986-87 and processed 18819 metric tonnes of raw cashewnuts. The corporation could produce 4671 tonnes of cashew kernels and 300 tonnes of cashewnut shell liquid during the period. The total sales turn over during the year under review was 4430 tonnes of cashew kernels and 65 tonnes of cashewnut shell liquid. The two major consumers of cashew products continued to be the USA and USSR. There were 29888 employees on the rolls of the corporation as on 31-3-1987. Due to non-availability of raw cashew nuts, the capacity utilisation was only 22% for cashew kernels and 10% in the case of cashewnut shell liquid during 1986-87. However, the corporation exported during the year 1986-87, cashew kernels valued at Rs. 3515 lakhs and earned a net profit of Rs. 83.29 lakhs after tax. The State Government had invested Rs. 2996 lakhs as on 31-3-1987 in the share capital of the Corporation.

6.56 The Cashew Workers Apex Co-operative Society (CAPEX) was registered on 9-8-1984 for taking up and organising the closed cashew factories into primary societies. At the end of 1986-87, there were 8 primary societies with 4360 cashew workers as members. The CAPEX procured 5640 tonnes of raw cashewnuts valued at Rs. 895 lakhs during 1986-87. It produced and sold 1237.97 tonnes of cashew products viz., cashew shell, cashew skin and shell oil worth Rs. 4.40 lakhs during 1986-87. During the year under report the Corporation exported about 1364 tonnes of cashew kernels worth Rs. 1141 lakhs. The accounts for the year 1985-86 and 1986-87 are not yet finalised and approved and hence the working results of the society for these periods are not available.

6.57 The Export of cashew kernels during 1986-87 had several notable features. The quantity of cashew kernels exported was 41759 MT valued at Rs. 334.11 crores, the quantity was the largest since 1976-77 and the value the highest ever on record. It was 35153 MT valued at Rs. 215.27 crores, during 1985-86. There was a 55% increase in export earnings from cashew kernels during 1986-87 from that of the previous year. The exports of cashewnut shell liquid during 1986-87 increased to 2716 MT valued at Rs. 1.46 crores compared to 2180 MT valued at Rs. 1.25 crores during 1985-86. Total imports during 1986-87 more than doubled to 49045 MT valued at Rs. 69.49 crores against 23310 MT valued at Rs. 25.88 crores

in the previous year. The net foreign exchange earnings in 1986-87 from cashew products increased to Rs. 266.11 crores from Rs. 190.64 crores in the previous year. The details on foreign exchange earnings from cashew industry and import of raw cashewnuts into India are given in Appendix Tables 6.30 and 6.31 respectively.

#### *Handicrafts Industry*

6.58 The major handicrafts of Kerala are ivory carving, wood and horn carving, bell metal casting, lapidary works, screwpine mat weaving, bamboo and reed weaving, cane and rattan work, coconut shell carving and paddy straw picture making. It is estimated that the handicrafts industry provides employment to more than 50,000 craftsmen.

6.59 The workers engaged in this industry are not getting full time employment due to scarcity of raw materials especially ivory and rosewood. There is difficulty in the marketing of handicrafts products too.

6.60 At the end of 1986-87, there were 348 handicraft co-operative societies with 12,769 members in the State. Out of 348 societies, 129 societies were working, 49 societies were liquidated and 170 societies were dormant.

6.61 Handicrafts Development Corporation of Kerala Ltd., was set up in 1968 to help the craftsmen engaged in handicrafts industry. The Corporation buys handicrafts products directly from craftsmen offering fair prices and sells them through its emporia. The Corporation's major source of fund is the share capital contribution by Government.

6.62 The performance of the Corporation for the year 1986-87 was quite encouraging. Total sales of handicrafts goods during the year was worth Rs. 214.73 lakhs as against Rs. 156.66 lakhs in 1985-86. In 1986-87, the value of goods sold within Kerala amounted to Rs. 97.35 lakhs, to other parts of India Rs. 109.26 lakhs and outside India 8.12 lakhs. It has made a nominal profit of Rs. 0.15 lakh in 1986-87 as against a loss of Rs. 15.47 lakhs in 1985-86. The accumulated loss as on 31-3-1987 amounted to Rs. 145.12 lakhs. The paid up capital of the Corporation on 31-3-1987 was Rs. 146.24 lakhs and there were 177 employees on the rolls of the Corporation at the end of the year.

6.63 During 1986-87, the Corporation has renovated the existing showroom at Calicut at a cost of Rs. 0.97 lakh and completed all the works relating to opening of two new showrooms at Hyderabad and Bangalore.

6.64 Kerala Artisans' Development Corporation registered on 1-10-1981 is a welfare oriented Corporation constituted by the Government of Kerala with a view to providing package of assistance to the indigent artisans in seven trades such as Carpentry, Goldsmithy, Blacksmithy, Pottery, Copper Bronze-smithy, Masonry and shoe making. The project report envisaged to set up 3200 primary production units all over the state in the above trades within a period of ten years. But this aim could not be achieved

so far. The Corporation could establish only 6 such units in Kottayam and 3 units in Cannanore district. The reasons reported for this poor performance are (i) the non-availability of working capital (ii) the pattern of financing not acceptable to banks and (iii) artisans not coming forward to take up projects intended to be mainly partnership projects. The other major schemes of the Corporation are (1) registration of artisans (2) sponsoring artisans' applications for composite term loan to the commercial banks. These schemes were under operation in 1986-87 and is being continued in 1987-88.

6.65 As on 31-3-1987, the Corporation had a paid up capital of Rs. 19.06 lakhs and there were 38 employees on the rolls of the Corporation on this date. According to the provisional annual accounts, the Corporation incurred a net loss of Rs. 6.02 lakhs during 1986-87 as against Rs. 2.17 lakhs in the previous year.

#### *Bamboo Industry*

6.66 The Kerala State Bamboo Corporation is a fully owned Government Company set up for the promotion of bamboo industry in the State. The main function of the Corporation is to collect reeds from the forests and to distribute it among the traditional bamboo workers, registered small scale units, scheduled caste/scheduled tribe co-operative societies and other actual users all over the State. The marketing of the finished products also is arranged by the Corporation. Government have allotted 180 lakh number of reeds to the corporation per year free of seigniorage so as to enable it to discharge its functions properly. There are 15,000 weaver families directly depending on the Corporation for meeting their reed requirements and about 3 lakhs of traditional workers in the State depending on bamboo and reed based cottage industries. However, the availability of reeds from the forests is steadily declining on account of large scale fowering of reeds and collection of reeds by the Hindustan Paper Corporation for their Newsprint factory at Velloor. This has adversely affected the business of the Corporation.

6.67 The paid up share capital of the Corporation as on 31-3-1987 is Rs. 94.20 lakhs. There were 192 employees on the rolls of the Corporation at the end of the year under report. During 1986-87, the Corporation collected and distributed 100 lakh reeds and procured 483 lakh sq. ft. of bamboo mats for sales. Total value of sales during the year was only Rs. 133.22 lakhs as against Rs. 209 lakhs in 1985-86. Non-availability of reeds has adversely affected the activities of the corporation and the year 1986-87 ended with a net loss of Rs. 34.78 lakhs as against the loss of Rs. 21.64 lakhs in the previous year. In order to ensure a steady market for bamboo mats, the Corporation has taken up a Project for making resin bonded bamboo boards using bamboo mats in place of veneers and it would go into production shortly.

#### *Beedi Industry*

6.68 There are at present two central beedi co-operative societies in the State in the organized sector namely—the Kerala Dinesh Beedi Society and the Kairali Beedi Society. The Kerala Dinesh Beedi

Beedi Workers' Central Co-operative Society and its 22 primaries which started work in February 1969 has completed 18 years of successful working in February 1987. Seven Primary Societies of the Kasaragode district, fourteen of the Cannanore district and one of the Calicut district affiliated to the Kerala Dinesh Beedi Society provided employment to about 40,000 beedi workers during 1986-87. The paid-up capital of the Central Society during 1986-87 was Rs. 35.75 lakhs against an authorised capital of Rs. 50 lakhs. The capital employed by the society during the year is Rs. 169.79 lakhs. The Central society procures raw materials in bulk and mobilises financial resources. Beedies are manufactured by the primaries using the raw materials supplied by the Central Society and the marketing is done by the central society. During 1986-87 Kerala Dinesh Beedi Society utilised raw materials and components worth Rs. 7.31 crores and paid Rs. 16.22 crores as wages, salary and bonus of the employees and workers of primary and central societies. The value of beedies produced was Rs. 33.30 crores and the sale proceeds amounted to Rs. 34.20 crores during the year. The net profit after tax was Rs. 33.88 lakhs. The society paid Rs. 275 lakhs as excise duty during the year. The number of employees on the roll as on 31-3-1987 was 151 of which 6 joined during 1986-87. The main problem faced by the society is the huge amount of money to be remitted to the Government of India by way of central excise duty.

6.69 The Kairali Beedi Society was registered in 1984 January at Palghat. Though this society has 10 primary societies with 3000 beedi workers on their rolls, work could be provided only to about 300 workers. The society obtained Rs. 15 lakhs as share participation from Government and a working capital loan of Rs. 15 lakhs from the District Co-operative Bank, Palghat on Government guarantee. As the activities of the society became non-viable (it stopped functioning six months ago), it has been decided to wind up the society.

The proposal to set up another central beedi society in the Southern region with head quarters at Quilon has not yet materialised.

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

6.70 Most of the State Public Sector companies are yet to finalise their accounts relating to the financial year 1986-87. However, an analysis based on the details available on 41 public sector undertakings, reveals that the paid up capital of these companies amounted to Rs. 144.54 crores as on 31-3-1987 as against Rs. 135.16 crores as at the end of March 1986. The total funds borrowed by these companies also increased during 1986-87 to a level of Rs. 309.67 crores from Rs. 276.37 crores in 1985-86. The total gross block in these companies stood at Rs. 224.81 crores as on 31-3-1987 as against Rs. 212.99 crores as at the end of March 1986. Among these 41 companies, 15 were working on profit during the period under review. They earned a profit of Rs. 4.50 crores during this period. On the other hand, 26 companies were operating on loss during 1986-87. The total loss incurred by these companies during this period was Rs. 32.22 crores. The total accumulated loss of 28 companies in this group amounted to Rs. 132.81 crores as on 31-3-1987. The group-wise working results of the State public sector companies are shown in Appendix 6.32.

6.71 Some of the public sector companies are working on loss for the last few years. The Trivandrum Rubber Works Ltd., Transformers and Electricals Kerala Ltd., Kerala Ceramics Ltd., Kerala Soaps and Oils Ltd., etc., are some of the major companies which have incurred loss continuously and whose accumulated loss exceeded their paid up capital. Among the 41 companies, details of which are available, twenty companies had an accumulated loss exceeding their paid up capital. The total accumulated loss of these companies stood at Rs. 126.50 crores as on 31-3-1987 against their paid up capital of Rs. 49.13 crores. Details of state public sector manufacturing companies whose accumulated loss exceeded their paid up capital are furnished in Table 6.5.

TABLE 6.5

#### **Details of State Public Sector Manufacturing Companies Whose Accumulated Loss exceeded their Paid up Capital**

<i>Name of Company</i>	<i>Paid up Capital as on 31-3-1987</i>	<i>Accumulated Loss as on 31-3-1987</i>
(1)	(2)	(3)
<i>Keltron Group.</i>		
1. Keltron Counters Limited	233.90	319.99
2. Keltron Electro Ceramics Limited	100.09	217.74
3. Keltron Resistors Limited	68.76	134.05
4. Keltron Power Devices Limited	190.23	515.76
5. Keltron Rectifiers Limited	169.37	380.86
<i>Kerala State Industrial Enterprises Group</i>		
6. Kerala Ceramics Limited	205.33	982.34
7. Kerala Soaps and Oils Limited	185.59	1029.97
8. Kerala State Detergents and Chemicals Ltd.	154.63	432.28
9. Travancore Plywood Industries Limited	48.59	244.00
10. Kerala State Drugs and Pharmaceuticals Ltd.	120.00	570.35
<i>Chemicals</i>		
11. Mullar Cements Limited	1490.00	1615.57
12. Trivandrum Rubber Works Ltd.	234.75	1156.62
<i>Textiles</i>		
13. Trivandrum Spinning Mills Limited	184.99	360.06
<i>Electricals and Cables</i>		
11. United Electrical Industries Ltd.	249.07	285.78
15. Transformers and Electricals Kerala Ltd.	500.43	3547.01
<i>Ceramics and Refractories</i>		
16. Chulakudy Refractories Ltd.	134.47	186.00
17. Kerala Clays and Ceramic Products Ltd.	1.82	6.26
<i>Wood based Industries</i>		
18. Forest Industries (Travancore) Ltd.	17.71	26.10
19. Kerala State Wood Industries Ltd.	170.00	317.57
<i>Engineering/Automobiles</i>		
20. Kerala Automobiles Ltd.	253.42	321.47
<b>Total:</b>	<b>4913.14</b>	<b>12650.78</b>

*Performance of State Financial Institution and Casuality Organisations.*

*Kerala Financial Corporation*

6.72 The Kerala Financial Corporation was established in 1953. Its main objective is to encourage, promote and aid the industrialisation of Kerala by providing long term loans to small and medium scale industrialist to start new industries and also to expand, diversify and modernise existing industries. The Corporation which had been incurring cash losses continuously since 1968-69, improved its performance by earning profit from 1984-85, onwards. It has earned a net profit of Rs. 71.97 lakhs (before appropriation) on cash basis during 1986-87 as against Rs. 50.58 lakhs in 1985-86. This was possible mainly due to the increased level of recovery of dues.

6.73 The total loan disbursed by the Corporation has recorded a substantial increase during 1986-87, amounting to Rs. 2952.22 lakhs against Rs. 1950.68 lakhs in the previous year. The details of loan sanctioned and disbursed by the Corporation for three years from 1984-85 and the summary of loan operations as on 31-3-1987 are furnished in Appendix 6.33 and 6.34 respectively.

6.74 Bulk of the Corporation's assistance has been going to the small scale sector as in previous years. During the year the Corporation sanctioned loans to 1197 small scale units for an amount of Rs. 38.83 crores, which works out to nearly 82% of the total amount sanctioned and to about 97% of the total number of units assisted by the Corporation. The District-wise and industry-wise details of sanctions and disbursements of loans for 1986-87 are furnished in Appendix 6.35 and 6.36 respectively.

6.75 The Corporation has stepped up the development activities considerably. Entrepreneurial Development Programmes were organised by the Corporation during the year in Kottayam, Ernakulam, Palghat and Trichur. A total number of 100 probable entrepreneurs were covered under this programme. Two special entrepreneurial programmes for the benefit of senior engineering students were held at Quilon and Calicut and another special programme for attracting Non-resident Indians and their relative was also held at Calicut. The State Government have designated the Corporation as the disbursing agency for investment subsidy in the State in respect of units assisted by the Corporation. This will eliminate delay in processing and sanction of investment subsidy. In order to carry the benefits fully to the loanees, the Corporation has decided to sanction bridge loan against investment subsidy in the backward districts of the State. This will considerably speed up implementation of projects.

6.76 The Corporation has recovered dues amounting to Rs. 1775 lakhs during 1986-87 which is 27% higher than the collection of dues in 1985-86. However, this should be viewed against the total arrears of Rs. 5330 lakhs fell due including previous dues of Rs. 3505 lakhs. The total arrears outstanding on 31-3-1987 was Rs. 3555 lakhs. The collection of dues in 1986-87 was about 33% of the total dues.

6.77 The paid up capital of the Corporation as on 31-3-1987 was Rs. 12.6 crores including Rs. 2.8 crores

received as advance towards share capital from Government of Kerala, Industrial Development Bank of India, Scheduled Banks and other parties. The progress in the working of Kerala Financial Corporation from 1980-81 to 1986-87 is furnished in Appendix 6.37.

*Kerala Industrial and Technical Consultancy Organisation Ltd. (KITCO)*

6.78 KITCO was established in 1972 by the Industrial Development Bank of India as its subsidiary with the objective of servicing mainly the technical consultancy needs of small and medium entrepreneurs, particularly in the rural and backward regions, and that of financial institutions and commercial banks for a systematic appraisal and post sanction monitoring of industrial projects.

6.79 The paid up capital of the Company continued to be the same as in the previous year being Rs. 15 lakhs against an authorised capital of Rs. 20 lakhs. There has been a very adverse situation in the industrial sector of the State, during the year under report, because of the severe power cut imposed from June to August 1986. As a result of this there has been a relative slow down of the activities of the company relating to preparation of project reports and appraisal reports. However, KITCO was able to achieve satisfactory progress during the year on account of the growth in business in other fields. The turnover of the company was Rs. 34.12 lakhs during 1986-87, recording an increase of 11.9% over that of the previous year. There was a corresponding increase in the expenditure of the company during 1986-87 and the net profit of the company came down to Rs. 0.42 lakhs compared to Rs. 0.61 lakhs in 1985-86.

6.80 During 1986-87 over 1300 feasibility reports/project reports have been prepared by its consultants covering the entire spectrum of industries viz., tiny, small scale, medium scale and large scale. KITCO has appraised over 300 projects on behalf of the financial institutions and banks. Market surveys for about forty products have been carried out and diagnostic and revival studies for over forty sick units have been completed. The management and consultancy division has successfully completed twelve entrepreneur development programmes assigned by the Directorate of Industries and Commerce of the State Government with assistance from IDBI.

*Central Public Sector Investment*

6.81 The total public sector investment under the Central Sector in the Country increased to Rs. 5669 crores by the end of March 1986 from Rs. 47323 crores as at the end of March, 1985 recording a growth of 19.8 per cent. The States of Maharashtra, Madhya Pradesh, Bihar, Andhra Pradesh and Orissa shared more than 50 per cent of the total investment in the central public sector. Their share in the total investment as on 31-3-1986 stood at Rs. 31445 crores, accounting for 55.5 per cent of the total. The State of Madhya Pradesh received Rs. 1437 crores accounting for 15.3 per cent of the total increase of Rs. 9372 crores in the central investments recorded during 1985-86, followed by the states of Maharashtra, Andhra Pradesh and Orissa which got additional investment of Rs. 1359 crores, Rs. 1212 crores and Rs. 1073 crores respectively.



during this period. The central investments in industries in Kerala recorded only an increase of Rs. 89 crores during 1985-86. It increased to Rs. 920 crores by the end of March 1986 from Rs. 831 crores as at the end of March 1985. The state-wise investment under the central public sector is given in Appendix 6.38.

6.82 The Central investment in industries increased to Rs. 56695 crores on 31-3-1986 from Rs. 3885 crores on 31-3-1970. During this period the central investments in Kerala grew by Rs. 804 crores. In other words the state received only 1.52% of the increase in central investments during this period. The relevant details are furnished in Table 6.6.

TABLE 6.6

## Central Sector Investment (Gross Block) in Kerala

Year	Investment as on 31st March		Percentage of Column 3 to Column 2
	All India	Kerala	
(1)	(2)	(3)	(4)
1970	3885	116	2.99
1975	6242	202	3.24
1980	18161	423	2.33
1985	47323	831	1.76
1986	56695	920	1.62

Source: (i) Bureau of Public Enterprises, Government of India.

(ii) A Statistical Review of the Central Government Enterprises, 1985-86, Centre for Monitoring Indian Economy.

6.83 Out of the 12 Central Sector manufacturing companies nine companies reported details regarding employment generated. The total number of persons employed by the nine companies, details of which are available, as at the end of March 1987 was 10157. The Kalamassery unit of the HMT Ltd., alone employed 3073 persons. The details of capital invested and persons employed by the Government of India companies working in Kerala are given in Appendix 6.12.

6.84 A total number of 1,50,699 mandays were lost in respect of nine companies in the Central Sector including Alagappa Textiles (Cochin) Mills, Kerala Lakshmi Mills, Cannanore Spinning and Weaving Mills and Parvathy Mills managed by the National Textile Corporation Ltd., during 1986-87. The loss of mandays in respect of the Kalamassery unit of the HMT Ltd., during this period was estimated at 52902. The major reasons for this were power cut and resultant lay off, strike, etc. The loss of production on account of these during 1986-87 in eight companies has been estimated at Rs. 1075.29 lakhs. Details of mandays lost, loss of production and the major reasons in respect of Government of India Companies are shown in Table 6.7.

TABLE 6.7

## Details of Mandays Lost and Production Loss in the Government of India Companies functioning in Kerala during 1986-87

Sl. No.	Name of Company	Total Mandays Lost (Nos.)	Total Production Loss (Rs. lakhs)	Main Reasons
(1)	(2)	(3)	(4)	(5)
1.	Fertilizers and Chemicals Travancore Ltd.	NA	NA	..
2.	Hindustan Latex Limited	..	11.03	Power cut, mechanical break down, electrical break down and steam failure.
3.	Hindustan Newsprint Limited	21688	Not reported	Strike and power cut
4.	Hindustan Insecticides Limited, Udya gamandal	14938	612.38	Strike, Lay off and power cut
5.	Instrumentation Limited, Palghat	106	50.15	Power cut
6.	HMT Limited, Kalamassery	52902	167.67	Strike and Power cut
7.	Balmer Lawrie and Co. Ltd., Aroor	2280	32.75	Lock out and Power cut
<i>Units under National Textile Corporation</i>				
1.	Alagappa Textiles (Cochin) Mills	30534	76.93	Lay off and power cut
2.	Kerala Lakshmi Mills	07	120.03	Power cut and others
3.	Cannanore Spinning and Weaving Mills	1722	4.30	Power cut
4.	Parvathy Mills	23462	Not reported	Strike, Lay off and Power cut
Total		150699	1075.29	

## Industrial Disputes

6.85 According to the provisional figures furnished by the Directorate of Economics and Statistics there had been 98 industrial disputes during 1986 which led to work stoppages in the selected industries in the State as against 70 disputes in 1985. This has resulted in a total loss of 23,11,000 mandays affecting 1,32,912 workers in the industries like plantation, textile, coir, saw mills, tiles etc., in 1986 as compared to a total loss of 18,84,000 mandays which affected 62786 workers in 1985. The details of industrial disputes resulting in work stoppages in selected industries in the State during 1985 and 1986 are furnished in Table 6.8.

TABLE 6.8

*Industrial Disputes resulting in Work Stoppages in Selected Industries in Kerala during 1985 and 1986*

Industry	1985			1986*		
	No. of Disputes	No. of Workers Affected	Mandays Lost (in thousand)	No. of Disputes	No. of Workers Affected	Mandays Lost (in Thousand)
(1)	(3)	(3)	(4)	(5)	(6)	(7)
1. Plantation	10	4547	90	13	92297	342
2. Textiles	11	6368	120	6	7139	1244
3. Coir	1	215	66	1	215	66
4. Saw Mills	2	117	1	1	650	4
5. Tiles	2	102	4	6	3313	54
6. Cashew	..	..	..	..	..	..
7. Others	44	51437	1603	71	29298	601
Total	70	62786	1884	98	132912	2311

\*Provisional

Source: Directorate of Economics and Statistics, Trivandrum.

### Mining

6.86 The Department of Mining and Geology continued its activities concentrating mainly on the regulatory functions entrusted with it in respect of exploration and development of the mineral resources of the State. During the year 1986-87, the Department conducted surveys on limeshell deposits in different parts of the State. The investigations conducted by the Department in Chempallikundu—Vengara—Payangadi area revealed that about 0.72 sq.km. bears shell deposits. In Quilon district, the reconnaissance survey conducted, using specially fabricated spike and sinking a total number of 422 probe holes at a regular intervals of 2500 m. + 1000 m. covering an area of 54.72 sq. km. in the Ashtanudi lake and adjacent land portion revealed that a shell bearing formation having a thickness of 0.28 m. is occurring over an area of 1.90 sq.m. near Neendakara. An indicated reserve of about 0.17 million tonnes of limeshell has been estimated in and around Dhavalapuram near Neendakara. The Naduppuni area in Chittur taluk of Palghat district was located during 1986-87 for detailed investigation. Trial pits/trenches were opened for a total volume of 175 mm. where a crystalline limestone band was observed. An inferred reserve of about 20,000 tonnes of crystalline limestone has been estimated in this area.

6.87 A total area of about 197 sq. km. was covered by reconnaissance survey in the area east and south east of Sultan's Battery in Wayanad district and several mica and pegmatites and quartz veins were located during 1986-87. A reserve of 7.3 lakh tonnes of silica sand was estimated in an area of about one kilometre in Alleppey district. As part of the detailed investigation for Kaolinitic clays in Pudukai area near Nileswar in Kasaragode district, 280 metres of drilling in 15 bore holes were completed in 1986-87. A reconnaissance survey was carried out over an area of about 16 sq. km. in Cannanore and Taliparamba taluks for identifying suitable tile and brick clay bearing areas.

6.88 Production of certain mineral sands such as ilmenite, brown ilmenite, rutile, sillimanite etc., in the State, during 1986-87 decreased compared to the

previous year. But their value and sales turnover increased during this period. Details of production and sale of important mineral sands and major minerals in the State during 1985-86 and 1986-87 are furnished in Appendices 6.39 and 6.40.

### Kerala Mineral Exploration and Development Project

6.89 During 1986-87, the Project attended to field investigations for primary gold and placer gold in the Nilambur region, the follow up investigation for scheelite in Attappadi region, the geo chemical follow up work in Pirmed area, preliminary survey for gold and scheelite in Kanjirapuzha region of Palghat district and carried out drilling for the re-assessment of the quality of limestone at the mine sites of the Malabar Cements Limited.

6.90 Drilling operations at Maruda in Nilambur region were continued during 1986-87 and a total of 209 metres of drilling was carried out from three boreholes collecting 366 samples for analysis. An exploration programme for making a quick assessment of the placer gold occurrence in Chaliyarpuzha river beds between Mukkom and Pothukal has been completed during this period. The results indicate that the grade and the mode of occurrence of the Chaliyarpuzha gravels are comparable to those of the Punnapuzha. The project has contacted the Atomic Minerals Division of Government of India for its services for designing and fabricating indigenously a suitable washing plant for the conduct of pilot scale exploration of placer gold occurrences in Nilambur.

6.91 A mineral survey was launched in and around the Kanjirapuzha drainage area in Palghat district to look for scheelite and gold in view of its proximity to Nilambur and Attappadi regions and the similar geological characteristics present in this area. In the meanwhile, the Project completed the first phase of drilling operations for the re-assessment of limestone resources at Walayar for the Malabar Cements Limited in November, 1986 and started the second phase of this programme with the approval of the State Government.

## TRANSPORT AND COMMUNICATIONS

Kerala has a fairly well developed transport and communications Infrastructure. The year under review witnessed further improvements in the existing facilities. The length of roads in the state increased by 1901 kms. to 110649 kms. This worked out to 285 kms. per hundred sq. kms. of area. Of this, length of PWD roads is 19,752 kms (which is 51 kms per hundred sq. km. of area). The panchayat road length increased by 1374 kms. The total number of vehicles in the state stood at 4.14 lakhs showing a motor vehicle density of 1066 vehicles per hundred sq. km. area and 1628 vehicles per lakh of population in 1986-87. Ernakulam had the highest number of motor vehicles and Wayanad the least. The passenger transport operations in the state are carried out both by the public and private sectors simultaneously. The Kerala State Road Transport Corporation constitutes the public sector agency which accounts for 24 per cent of the total stage carriages in the state. Goods transport is by and large the monopoly of the private sector.

7.2 The Railway route length in the state is one of the lowest in the country. The total railway route length of 913 kms consist of 800 kms Broadgauge lines and 113 kms Metregauge lines. Air traffic in the state is carried out by the Airports at Trivandrum and Cochin. Trivandrum Airport provides direct flight to Gulf countries, Colombo and Mali.

7.3 The Kerala Inland Navigation Corporation. (KINCO), Kerala State Road Transport Corporation (KSRTC) and State Water Transport Department (SWTD) are the three public sector agencies which carry out water transport operations in the state. While KINCO is mainly concerned with cargo

transport, the other two agencies are concentrated on passenger transport. The SWTD carries out water transport operations in Quilon & Alleppey. KINCO and KSRTC concentrate their activities around Cochin area. These three agencies together owned 95 boats and average daily passengers stood at 73151. The volume of cargo handled by KINCO has gone up by 7 per cent where as that of SWTD fell down by 9 per cent. All the three agencies were incurring losses during the year as they had expenditure in excess of their revenues.

7.4 The Cargo handled through the intermediate & minor ports of Kerala and also the revenue earned through these ports declined by 20 per cent and 31.6 per cent respectively during the year under review. Neendakara Port alone handled about 46 per cent of the total cargo transported and about 32 per cent of the revenue earned through the intermediate and minor ports was accounted by the Neendakara Port alone. The Cochin Port handled 68.83 lakh tonnes of cargo as against 52.78 lakh tonnes in the previous year. But the container traffic through this port declined by 4.26 per cent. The revenue earned from Cochin Port increased by 14 per cent over the previous year.

7.5 The State has made rapid advance in the sphere of communication facilities. The average area served by a post office in the state is 8.10 sq. kms. as against 22.16 sq. kms. in India as a whole. Kerala has on an average 7 telephones per thousand population against the all India average of 6 as on 1-4-1987.

7.6 The growth of transport and communications infrastructure in the state over the years is furnished below (Table 7.1).

TABLE 7.1

Growth of Transport and Communication Infrastructure for the period 1975 to 1987

Item	Unit	1975	1980	1985	1986	1987
Road Length (PWD)	KM.	14870	17408	19107	19460	19752
Road Length (Panchayat)	,,	54812	66158	81515	81539	82913
Motor vehicles	Nos.	119720	174704	319259	361617	414310
Passenger Buses	,,	7828	8705	12910	13497	16704
Goods Vehicles	,,	15875	21121	40879	45325	51284
Buses under KSRTC	,,	2212	2935	3239	3070	3019
<i>Railway Route Length</i>						
Broad Gauge	Kms.	774	803	828	940	800*
Metre Gauge	,,	122	113	113	113	113
Sub Total	,,	896	916	941	1053	913

Item	Unit	1975	1980	1985	1986	1987
Minor Ports	Nos.	10	11	9	9	10
Intermediate Ports	"	2	3	4	4	3
<i>Traffic through Minor/Intermediate Ports</i>						
Export	Lakh tonnes	17.3	1.87	1.49	0.99	0.75
Import	"	1.28	0.76	0.26	0.12	0.15
<i>Traffic through Cochin Port</i>						
Export	"	12.82	11.10	3.90	7.19	12.83
Import	"	35.9	43.6	36.76	45.59	56.00
Length of navigable water ways	Kms.	NA	1895	1895	1895	1895
No. of Passenger boats in Public Sector 1. SWT	Nos.	..	..	74	75	75
2. KINCO	Nos.	68	76	8	8	8
3. KSRTC	Nos.	..	..	12	12	12
Post Offices	Nos	4024	4512	4751	4748	4734
Telephone Exchanges	Nos	286	441	561	584	599
Total equipped capacity	Nos.	70410	104595	144462	162721	177721
Public Call Offices	"	2352	2292	2766	2858	2932

\*The figure relating to the Broad Gauge Route length under Palghat Division reported during the previous year was not correct. Therefore the decrease in Railway Route length.

## Roads

7.7 The State has a road net work of 110649 kms. comprising roads maintained by the National Highways, Public Works Department, Municipalities, Corporations, Panchayats, Forests and other Departments. The length of roads under different Departments is furnished below.

TABLE 7.2  
Length of roads in Kerala under different Departments as on  
31st March 1986 and 1987

Department	Length of roads (in kms.)			Percentage to the total
	1985-86	1986-87		
(1)	(2)	(3)	(4)	
1. National Highways	836	836	0.76	
2. Public Works Department	19460	19752	17.85	
Panchayats	81539	82913*	74.93	

	(1)	(2)	(3)	(4)
4. Municipalities (including Corporations)		4639	4526*	4.09
5. Forests		1674	2022	1.83
6. Others		600	600	0.54
Total		108748	110649	100.00

\*Figures are provisional

7.8 During the year 1986-87 there was no change in the length of National Highways in the state. Out of a total length of 836 kms of National Highways, 417 kms come under NH 47 and 419 kms under NH17. The length of roads maintained by the PWD increased by 292 kms. While the road length under Panchayats increased by 1374 kms. that under Municipalities and Corporations has come down by 113 kms. Length of roads under other Departments remained at the previous year's level.

7.9 Out of a total length of 19752 kms. of roads maintained by the P.W.D. more than 80 per cent was

black topped. The surface-wise distribution of P.W.D. roads is given below:

TABLE 7.3

*Distribution of Public Works Department roads by type of surface as on 31-3-1987*

(In Kms.)

Sl. No.	Category	Cement concrete	Black topped	Water Bound macadam	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	State Highways	18	1990	13	..	2021
2.	Major District Roads	7	5793	97	42	5939
3.	Other District Roads	..	7316	587	747	8650
4.	Village Roads	..	718	188	2236	3142
Total		25	15817	885	3025	19752

Source: Public Works Department

7.10 The Public Works Department improved/developed 555 kms. of roads during the year 1986-87. Of these, Kottayam also took over 35 village roads with a total length of 141 kms. The District-wise length of roads improved/developed during 1986-87 is shown in the Appendix 7.1.

7.11 The P. W. D. has 15 Divisions which are concerned with the road development in the State. Of these, Kottayam had the maximum road length of 1981 kms. followed by Quilon (1740 kms.) Wayanad had the least length of roads with 582 kms. The Division-wise distribution of P. W. D. roads is furnished in Appendix 7.2.

7.12 Out of a total length of 82913 kms. of Panchayat roads, only about 7 per cent was black topped and metalled while more than 60 per cent remained earthen. Quilon had the maximum length of Panchayat Roads (11988 kms.) where as Wynad had the least (2470 kms.) The District-wise length of Panchayat roads by type of surface is furnished in the Appendix 7.4

7.13 Out of the 279 MLA roads with a total length of 1571 kms. 217 road works with a total length of 1163 kms. were taken up for execution till the end of December 1987. Out of this, 44 works with a length of 205 kms. were completed upto 1987 incurring a total cost of about Rs 9 crores.

#### Road Transport

7.14 Road transport operations in the state are undertaken by both the public as well as the private sectors. The Kerala State Road Transport Corporation is the public sector agency which handles passenger transport operations in the state. Goods transport through road is more or less the monopoly of private sector.

7.15 The number of motor vehicles in the state showed an increase of 14.36 percent from 3.62 lakhs in 1985-86 to 4.14 lakhs during the year under review. The growth of motor vehicles in the state from 1975 onwards is shown in the Appendix 7.5. The density of motor vehicles in Kerala is high when compared to many other states in the country. Kerala had 1066 vehicles per hundred sq. kms. of area and 1628 vehicles per lakh of population during 1986-87. The corresponding figures for the country as a whole during 1985-86 were 300 and 1442 respectively.

7.16 A category-wise analysis of motor vehicles in the state for the year 1986-87 showed that about more than one-third of the motor vehicles were scooters/motor cycles. Out of the 4,14,310 vehicles, 1,59,863 (38.6 percent) were scooters/motor cycles, 1,39,175 (33.59 per cent) cars, station wagons including taxi car and jeep, 51284 (12.38 percent) goods vehicles, 16704 (4.03 per cent) buses, and 47284 (11.41 percent) were other vehicles (Appendix 7.6).

7.17 The number of vehicles newly registered in the state has increased by 29.47 percent from 37,972 in 1985-86 to 49,172 during 1986-87. As on 31-3-1987, the newly registered vehicles in the state consisted of 2,8025 (57 percent) scooter/motor cycles; 8438 (17.16 percent) cars, station wagons including taxi car and jeep 5098 (10.37 percent) goods vehicles, 1529 (3.11 percent) buses and 6082 (12.37 percent) were other vehicles. In the registration of new vehicles, Trivandrum leads the other districts with 8,652 vehicles, followed by Ernakulam with 8,336 vehicles (Appendix 7.8).

7.18 During the year under review 25,809 temporary and 110 pucca permits were issued by the Regional Transport Authorities. Under the National permit Scheme, 211 permits were issued during 1986-87. Details are given in the following table.

TABLE 7.4

Details relating to issue of permits and National permits granted under National Permits Scheme

		1986-87
1.	Permits granted under	
	(i) Existing Inter-state operators (Nos)-	} 211
	(ii) Existing Intra-state operators " "	
	(iii) Ex-army personnel	
	(iv) Unemployed Drivers " "	
	(v) Scheduled Caste/Scheduled Tribes-	} 211
	Total	
2.	State Quota of National Permits	Nil
3.	No. of goods vehicles having interstate permits (Not included under National permit scheme)....	
	(i) Vehicles registered in Kerala having permit to operate in other states	2500 Tamil Nadu 1000 Karnataka
	(ii) Vehicles registered in other states having permit to operate in Kerala	2500 Tamil Nadu 1000 Karnataka
	Total	7000
4.	Number of stage carriage permits issued by RTA	
	(a) Temporary	25,809
	(b) Pucca	110

7.19 Among the districts of Kerala, Ernakulam had the highest number of motor vehicles (68,261) followed by Trivandrum (66,151), the lowest being Wayanad district (5366) (Appendix. 7.6).

7.20 The total revenue collected from motor vehicle taxes and fees amounted to Rs. 53.36 crores in 1986-87. This shows an increase of about Rs. 6.59 crores (14.09 percent) in revenue earnings over the previous year. The total arrears of tax to be collected under motor vehicles including that of K.S.R.T.C. as on 31-3-1987 stood at Rs. 19.99 crores of which Rs.17.35 crores was due from K.S.R.T.C. alone.

7.21 The analysis of motor vehicle density in the State, compared to road length showed that the growth of road length (P.W.D.) in the state has not kept pace with the growth of motor vehicles which is evident from the table given below.

TABLE 7.5

Comparison of increase in Road length (PWD) and Registered Motor vehicles from 1980 to 1987 (in percentage)

District	Increase in road length (from 1980 to 87)	Increase in registered motor vehicles (during 1980-87)
Malappuram	40	186
Idukki	23	112
Palghat	20	118
Kottayam	13	124
Trivandrum	13	113
Trichur	8	153
Ernakulam	6	122

#### Road Accident

7.22 The road accidents in the State showed 21 percent increase during 1986-87. The number of accidents during the year comes to 12,595 against 10,426 in the previous year. The number of persons injured stood at 14,811 in 1986-87 and persons killed was 1,503. (See appendix 7.9). Of the total number of road accidents in the state, 86 percent was caused by fault of drivers. Cause-wise and vehicle-wise analysis of road accidents occurred in 1986-87 are furnished in the Appendix 7-10- and Appendix 7.11 respectively.

#### Passenger Transport

7.23 Passenger transport operations in the state is carried out both by public as well as private sectors. The Public sector accounts only for about one fourth of the total stage carriages in the state. The district-wise distribution of stage carriages in the state is shown in the table given below.

TABLE 7.6

Distribution of stage carriages in the State

Sl.No.	District	K.S.R.T.C.*		Other stage carriages	Total stage carriages
		No. of Transport units	No. of buses held in the unit		
(1)	(2)	(3)	(4)	(5)	(6)
1.	Trivandrum	12	949	205	1154
2.	Quilon	3	215	676	891
3.	Pathanamthitta	3	108	417	525
4.	Idukki	1	23	320	343
5.	Alleppey	5	278	531	809
6.	Kottayam	6	258	810	1068
7.	Ernakulam	5	250	1419	1669
8.	Trichur	5	211	1441	1652
9.	Palghat	1	77	746	823
10.	Malappuram	3	75	809	884
11.	Calicut	2	114	1121	1235
12.	Wynad	1	167	88	255
13.	Cannanore	2	114	1092	1206
14.	Kasargode	1	18	307	325
	Total	50	2857	9982	12839

\*Excludes 162 vehicles held in various workshops. The number of stage carriages under KSRTC as per Transport Commissioner's Office is 3120.

Source:-K.S.R.T.C. (2) Office of the Transport commissioner.

7.24 According to the statistics provided by the Transport Commissioner's office, the number of stage-carriages registered in the state decreased from 13,497 during 1985-86 to 13,102 during 1986-87. This is mainly due to the decrease in the number of stage carriages in the public sector. It is evident from the statistics that the private sector plays a key role especially in the northern districts of the state wherever K.S.R.T.C. is not strongly represented.

#### Passenger transport under public sector

7.25 The fleet strength of the K.S.R.T.C. stood at 3019 on 31-3-1987 compared to 3070 on 31-3-1986. The Corporation replaced 217 buses in the year under review as against 283 in the previous year. But the Corporation added 166 buses as against 114 during the same period. The number of schedules operated by the Corporation increased by 2.36 per cent from 3039 during 1985-86 to 3162 during 1986-87. The Corporation operated 3827 routes in 1986-87 as against 3819 in 1985-86. The total route distance operated by the Corporation was 1,71,942 kms., during 1986-87 against 171,473 kms. in 1985-86. Eventhough there was a fall in the fleet strength of the corporation by 1.7 per cent, the passengers carried showed an increase of 2.90 per cent. The total number of passengers carried by K.S.R.T.C. had increased from 7349.65 lakhs in the previous year to 7562.59 lakhs in 1986-87.

7.26 The district-wise distribution of transport units in K.S.R.T.C. shows that Trivandrum district alone had 12 transport units. The total number of buses held in these units comes to 949 which is 31 per cent of the total buses held by the Corporation. Alleppey ranks second with 278 buses and Kasargod the last with the least.

7.27 The Gross revenue earnings of the Corporation showed an increase of 9.2 per cent from 101.99 crores in 1985-86 to Rs. 111.33 crores in 1986-87. The basic fare structure and minimum fares remained without any change during the year under report. The students who formed about 6 per cent of the total passengers, availed of concessions during the year 1986-87 also. The latest fare structure of K.S.R.T.C. (from 15-4-1985 onwards) is given in the following table

TABLE 7.7

Fare Structure of K.S.R.T.C. as on 1-4-1987

Sl. No.	Type of service	Basic fare/ km. (Ps.)	Minimum fare (Ps.)
(1)	(2)	(3)	(4)
1.	City	9	40
2.	Ordinary	9	50
3.	Fast passenger	11	100
4.	Express	12	300

7.28 The average earnings per passenger increased from 136 paise in 1985-86 to 145 paise (6.6 per cent) in 1986-87. In the same period the average earnings per km. of buses operated had also showed an upward trend from 443 paise to 467 paise (5.4 per cent). The earnings per vehicle on road per day also had gone up

by 14.55 per cent in 1986-87, in absolute terms from Rs. 1210 in 1985-86 to Rs. 1386 in 1986-87.

7.29 The gross expenditure of the Corporation was Rs. 125.12 crores during 1986-87 as against Rs. 121.85 crores which shows an increase of 2.68 per cent over the previous year. Out of the total expenditure, staff cost amounted to Rs. 55.34 crores (44.23 per cent); expenditure on fuel comes to Rs. 26.07 crores (20.84 per cent); expenditure on repair and maintenance Rs. 16.61 crores (13.28 per cent) and others Rs. 27.10 crores (21.66 per cent) during the year under review. This shows an increase of over 8 per cent for staff, 6.9 per cent for fuel and decrease of 12.3 per cent for repair and maintenance and 1.5 per cent for others over the previous year. In contrast to the previous year, the gross revenue earnings of the Corporation increased by 9.2 per cent while the expenditure increased only by 2.68 per cent.

7.30 The total loss of the Corporation for the year stood at Rs. 13.79 crores as against Rs. 19.86 crores during 1985-86. The total accumulated loss of the corporation has increased from Rs. 84.11 crores during 1985-86 to Rs. 97.90 crores during 1986-87.

7.31 As regards capital invested, Rs. 36.32 crores is contributed by the State Government and Rs. 16.65 crores by Government of India. The loans outstanding amounts to Rs. 31.36 crores in the reference year.

7.32 The operational efficiency depends mainly on the age and composition of fleet, staff productivity, fleet utilisation etc. The overaged buses under K.S.R.T.C. is about 46 percent of the total fleet in 1986-87. As a result, the fleet utilisation was also low in K.S.R.T.C. compared to All India level. The fleet utilisation of K.S.R.T.C. in 1986-87 was 72.3 per cent.

7.33 According to the study on the 'Performance of State Road Transport Undertakings' by the Planning Commission (May 1986), the staff-cost per worker per day is highest in K.S.R.T.C. (Rs. 49.34), where as the All India average stood at Rs. 47.06. It is revealed from the above study that the staff productivity per worker per day in K.S.R.T.C. during 1986-87 accounted for 20.8 kms as against the All India average of 30 kms. The staff-bus ration in K.S.R.T.C. has come down from 10.4 per cent in 1985-86 to 10.2 per cent in 1986-87. The total staff strength of the Corporation came down from 32042 (excluding the water transport staff under K.S.R.T.C.) in 1985-86 to 30,849 in the year under report. The following table reveals the category-wise staff position of K.S.R.T.C. in 1986-87.

TABLE 7.8

Category wise staff position of K.S.R.T.C.

Sl. No.	Category	At the end of March 1986	At the end of March 1987
(1)	(3)	(2)	(4)
1.	Administrative staff including watch and ward	4520	4387
2.	Traffic Personnel	19964	19414
3.	Maintenance Personnel	7558	7048
Total		32042*	30849*

\* Excludes the staff under water Transport Wing of K.S.R.T.C.

7.34 Goods transport through road in the state is mainly carried out by the private sector. The number of goods vehicles in the state has shown considerable increase in the last two decades. The total number of goods vehicles as on 31-3-1987, stood at 51284 as against 45325 on 31-3-1986 showing 13 per cent increase. Four wheelers and above comes to 88 per cent (45144 nos.) of the total goods vehicles in the state. The following table shows the growth of goods vehicles since 1966.

TABLE 7.9  
Growth of goods vehicles in Kerala since 1966

Year	Number of goods Vehicles	Index
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

*Railways*

7.35 The three Railway Divisions—Trivandrum Palghat and Madurai—cover the entire network of rail route in the state. Out of a total length of about 913 kms of railways in the state, 800 Kms. constitute Broad Gauge lines under Trivandrum and Palghat Divisions and 113 kms of Metre Gauge lines. The Trivandrum Division introduced four new Express trains ie from Cochin Harbour Terminus to Ahmedabad, Gauhati, Bombay Victoria Terminus and Hyderabad from 1-4-87. No additional trains were introduced by the Palghat Division during 1986-87.

7.36 Government have taken steps to construct new railway lines at places which are not connected by rail routes. The construction of Ernakulam—Alleppey line with a total length of 57 kms. is targeted to be completed by September 1989. Up to the end of January 1988, 44 per cent of its work was completed. The projected cost of the work comes to Rs. 50 crores. The work of the Alleppey-Kayamkulam rail route (43 km length) is also in progress. It is expected to be completed by June 1991 at a total estimated cost of Rs. 35 crores. In the case of Trichur-Guruvayoor line only 10 per cent of the work was completed. The total length of this railway line is 24 kms and is targeted to be completed by June 1991. As a second reach of this line the work of Guruvayoor -Kuttippuram route is proposed to be taken up.

7.37 There are 72 stations under Trivandrum Division comprising 46 block stations and 26 halt flag stations

where as Palghat Division has got 74 stations consisting of 46 block stations and 28 halt /flag stations. During the year 1986-87 the number of wagons loaded in the Divisions of Trivandrum, Palghat and Madurai stood at 1.45 lakhs, 0.81 lakhs and 2.14 lakhs respectively. During the same period 1.15 lakhs and 0.73 lakhs wagons were received by the Trivandrum and Palghat Divisions respectively.

7.38 A total number of 338 lakhs passengers and 2.71 lakhs tonnes of goods were originated from Trivandrum Division during 1986-87 where as the number of passengers and goods originated stood at 101.73 lakhs persons and 20.13 lakh tonnes respectively in the Palghat Division.

7.39 The three minor yards viz. Irimpanam, Cochin and Ernakulam Marshalling yard are dealing with the bulk of the freight operation in and around Ernakulam. The Irimpanam yard undertakes freight operations of M/S Cochin Refineries Ltd. and M/S FACT Cochin Division. The Cochin yard deals with the traffic originating at the port area and it is the largest FACT godown of the division. Ernakulam Marshalling yard takes up the freight operations of the farthest corners of the Division like Thirunelveli, Nagercoil and industrial belts in and around Ernakulam.

7.40 The gross receipts from stations under Trivandrum Division during 1986-87 amounted to Rs. 9510 lakhs which comprised Rs. 5471 lakhs from goods traffic and Rs. 4039 lakhs from Passenger traffic. The total receipts from goods and passengers under Trivandrum Division (Rs. 9510 lakhs) showed an increase of 8.06 percent over that of the previous year which stood at Rs. 8801 lakhs. The Madurai Division earned an amount of Rs. 5813 lakhs from good traffic during 1986-87. The total receipts of the Palghat Division amounted to Rs. 2294 lakhs comprising Rs. 547 lakhs from goods traffic and Rs. 1747 lakhs from passenger traffic.

*Air Transport*

7.41 Indian Airlines and Air India are the two agencies which undertake air transport operations in the State. While the former operates services from Trivandrum and Cochin to the major cities in the country in addition to the two international services to Colombo and Mali the latter takes up services to Gulf Countries from Trivandrum Airport.

7.42 The total number of passengers originating from the Airports of Cochin and Trivandrum under service operated by the Indian Airlines registered an increase of 1.85 percent from 3.24 lakhs during 1985-86 to 3.30 lakhs during the year under review. The Passenger traffic terminating at these two airports increased only marginally by 2 percent from 3.56 lakhs in 1985-86 to 3.63 lakhs in 1986-87. The freight traffic originated from these two airports operated by Indian Airlines stood at 1918.57 tonnes during 1986-87 which showed a fall of 12.58 percent over the previous year

7.43 The freight traffic terminated at the two airports in Kerala also came down from 3449.5 tonne during 1985-86 to 3443.98 tonnes during 1986-87. The details of the air traffic operated by Indian Airlines are furnished in Appendix 7.14



7.44 The details of passports issued, emigration clearance granted etc from the Regional Passport Offices in the State are given in the Appendix 7.15.

### Water Transport

7.45 Water transport operations in the state are carried out by three agencies viz, Kerala Inland Navigation Corporation (KINCO), State Water Transport Department (SWTD) and Kerala State Road Transport Corporation (KSRTC). While KINCO is mainly concerned with cargo transportation activities, KSRTC and SWTD carry out passenger transport operations in the State. The activities of SWTD are concentrated in the water logged areas of Quilon and Alleppey where as KINCO and KSRTC undertake transport operations in the areas around Cochin. These three agencies together possessed 95 boats with a total seating capacity of 8912 during the year under review. About 2.67 crore passengers were carried by these three agencies. The number of persons employed in these three organisations stood at 1100 during 1986-87.

7.46 The fleet strength of the State Water Transport Department stood at 75 with a seating capacity of 6663 during the year under review. Out of the 75 boats, 24 were more than 30 years old and only 54 boats were in operation.

7.47 The Department operated services in 69 routes. The number of Schedules operated stood at 54 in 1986-87 and covered a total distance of 7683.6 Kms. in 479 trips as against 7540.60 Kms. in 466 trips during the previous year. While the number of passengers carried by the Department increased by 12.43 percent from 137.32 lakhs in 1985-86 to 154.40 lakhs in 1986-87, the volume of cargo handled dwindled from 7130 tonnes in 1985-86 to 6470 tonnes in 1986-87. As in the previous year, students and handicapped persons availed of the travelling concessions during 1986-87 also.

7.48 The revenue receipts of the Department registered an increase of 6 per cent from Rs. 140.70 lakhs in 1985-86 to Rs. 149.73 lakhs in 1986-87. Out of this total revenue, 98 per cent was contributed by passenger transport. While the revenue from passenger transport has gone up by 7 per cent, that from cargo transport fell down by 9 percent during the year under review.

7.49 Out of the total expenditure of Rs. 233.60 lakhs, salaries and wages constituted 53 per cent and fuel and lubrication was only 2 per cent. While the total revenue receipts of the Department increased by 6 percent the total expenditure rose by more than 8 per cent thereby resulting in a loss of Rs. 83.87 lakhs to the Department during the year under review. This shows that while the Department received 97 ps. it had to spend 151 ps. per passenger. The number of persons employed by the Department stood at 1100 in 1986-87 showing no change over the previous year. The

operational details of State Water Transport Department are given in the Table below—

TABLE 7.10  
Operational Statistics of State Water Transport Department

Particulars	1985-86*	1986-87	Percentage change over previous year
1. Total number of boats owned	75	75	Nil.
2. Boats aged over 20 years	20	20	Nil.
3. Boats in operation	54	54	Nil.
4. No. of trips operated	466	479	2.79
5. Gross route distance (Km.)	7540.6	7683.6	1.90
6. No. of passengers carried (lakhs)	137.33	154.40	12.43
7. Volume of cargo carried (in tonnes)	7130	6470	(-) 9.26
8. Total revenue receipts (Rs. lakhs)	140.70	149.73	6.42
9. Total revenue expenditure (Rs. lakhs)	215.61	233.60	8.34
10. Net loss (Rs. lakhs)	74.91	83.87	11.98
11. No. of persons employed	1100	1100	Nil.

\* Variation in figures provided for 1985-86 from that provided in the Economic Review 1986 is due to the fact that provisional figures were provided for 1985-86 in the Economic Review 1985-86.

7.50 The Kerala State Road Transport Corporation conducted ferry services around Cochin during the year under review. While the number of boats possessed by the Corporation has remained at 12, the same as last year, the total seating capacity of the boats was reduced by 1.28 per cent from 1643 in 1985-86 to 1622 in 1986-87. The Corporation conducted ferry services in 8 routes operating 333 scheduled trips per day. The number of trips increased by 10.63 per cent in 1986-87 to 333 from 301 in the previous year. The number of passengers carried also registered an increase of about 6 per cent from 80.47 lakhs in 1985-86 to 85.19 lakhs in 1986-87.

7.51 While the total revenue receipts of the Corporation increased by 2.97 per cent during the year under review, the total expenditure increased more than proportionately by 11.47 per cent which resulted in a net loss to the Corporation by Rs. 32.32 lakhs, as against Rs. 25.94 lakhs in the previous year. The total revenue receipts of the Corporation stood at Rs. 41.23 lakhs in 1986-87 as against Rs. 40.04 lakhs in 1985-86. The total expenditure of the Corporation which stood at Rs. 65.98 lakhs in 1985-86 increased to Rs. 73.55 lakhs in 1986-87. Of the total expenditure, salaries and wages constituted about 63 per cent.

7.52 The number of persons employed in the Corporation including administrative staff increased from 286 in 1985-86 to 307 in 1986-87 resulting in a rise of salary component of expenditure by 28.6 per cent. The increase in staff members was mainly in the category of Mechanical, Supervisory and non-Supervisory cadres.

7.53 The Kerala Inland Navigation Corporation undertakes passenger and cargo transportation activities around Cochin area. The Corporation owned 8 passenger boats with a seating capacity of 627. Out of these 8 boats, 2 were under repair and only 6 boats were in operation during the year under review. The construction of one boat is going on. The boats were operated in 2 routes covering a route distance of 704 Kms. in 1986-87 as against 781 Kms. in 1985-86.

7.54 The construction of one barge was completed during the year under review and the number of barges stood at 9 as against 8 in the previous year. Out of this, only 8 barges were in operation during the year. The total capacity of the barges increased from 2120 MTs. in 1985-86 to 2320 M.T. per trip in 1986-87.

7.55 The number of passengers carried by the Corporation increased from 32.48 lakhs in 1985-86 to 35.45 lakhs in 1986-87. The volume of cargo handled by the Corporation also registered an increase of 6.7 per cent during the year under review. The Corporation transported 1.42 lakh M. T. of Sulphur and Rock Phosphate to the FACT, Cochin Division during the year 1986-87 as against 1.33 lakhs M.T. in the previous year.

7.56 Out of the total revenue receipts of the Corporation, 63 per cent was constituted by the earnings from cargo transport and 37 per cent from passenger transport. The earnings from passenger transport increased by 9 per cent from Rs. 18.76 lakhs in 1985-86 to Rs. 20.48 lakhs in 1986-87 where as the earnings from cargo transport increased only marginally from Rs. 37.21 lakhs in 1985-86 to Rs. 37.27 lakhs in 1986-87.

7.57. The total expenditure of the Corporation stood at Rs. 82.91 lakhs during the year under review as against Rs. 65.04 lakhs in the previous year. Of this total expenditure, salaries and wages comes to 22 per cent, fuel and lubricants 14 per cent.

7.58 While the total revenue receipts of the Corporation increased by 9.4 per cent, the total expenditure increased by more than 3 times (27.47 per cent). The net loss of the Corporation increased from Rs. 7.96 lakhs in 1985-86 to Rs. 24.57 lakhs. The number of persons employed by the Corporation stood at 186.

#### Ports and Harbours

Kerala has one Major Port at Cochin, 3 Intermediate ports and 10 Minor Ports.

7.59 The operating conditions at the Cochin Port were satisfactory during 1986-87. The number of ships called at the port during the year under review rose to 791 from 777 in the previous year. Correspondingly, Net Registered Tonnage (NRT) has also increased to 57.75 lakh tonnes from 53.99 lakh tonnes in 1985-86. Number of sailing vessels entered in the port

has considerably declined from 37 in the previous year to 22 in 1986-87. The NRT of the vessels has also fallen during the same period from 6431 tonnes to 3701 tonnes. A category-wise analysis of ships with corresponding NRT called at Cochin Port is given in the Appendix 7.16.

7.60 The Cochin Port handled 68.83 lakh tonnes of cargo consisting of 56 lakh tonnes of imports and 12.83 lakh tonnes of exports during the year 1986-87. This recorded an increase of 30 per cent from the volume of traffic handled in the previous year. i.e. 45.59 lakh tonnes of import and 7.19 lakh tonnes of export totalling 52.78 lakh tonnes. Both exports and imports registered an increase of 78 per cent and 22.8 per cent respectively during 1986-87 over the previous year.

7.61 Total volume of container traffic handled at the Cochin Port during the year 1986-87 recorded a fall of 4.26 per cent i.e. to 2,11,574 tonnes from 2,20,978 tonnes in the preceding year. Both import and export recorded a fall during the year under report.

7.62 During the year under review, coastal traffic increased by 42 per cent over the previous year. i.e. from 29.77 lakh tonnes to 42.34 lakh tonnes. At the same period, foreign traffic has increased only by 15 per cent i.e. from 23.01 lakh tonnes to 26.49 lakh tonnes. A significant feature of the traffic handled through Cochin Port was that both export and import were on the increase during 1986-87 over the period 1985-86. Details regarding coastal and foreign traffic through Cochin Port are given in the following table.

TABLE 7.11

<i>Coastal and foreign traffic through Cochin Port during 1985-86 and 1986-87 (in lakh tonnes)</i>						
<i>Traffic</i>	<i>Export</i>		<i>Import</i>		<i>Total</i>	
	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
Coastal	2.21	5.64	27.56	36.70	29.77	42.34
Foreign	4.98	7.19	18.03	19.30	23.01	26.49
Total	7.19	12.83	45.59	56.00	52.78	68.83

7.63 Total revenue earned by Cochin Port during 1986-87 has increased to Rs. 37.18 crores from last year's level of Rs. 32.64 crore—marking an increase of 14 per cent. Expenditure was also on the increase by 3 per cent from 1985-86 level of Rs. 39.31 crore to Rs. 40.68 crore during 1986-87.

7.64 The total number of passengers sailed from and arrived at the Cochin port during the year were 17,828 and 19,287 respectively as against 16,737 and 20,202 in the preceding year.

7.65 The Intermediate Ports in the state are Beypore, Alleppey and Neendakara and ten Minor Ports are Trivandrum, Vizhinjam, Quilon, Kodungalloor, Ponnani, Badagara, Tellicherry, Cannanore, Azhikkal and Kasargode. During the year 1986-87, only the ports at Neendakara, Azhikkal and Beypore handled any significant traffic.

7.66 The total number of vessels called at the ports increased from 259 in 1985-86 to 347 in 1986-87. Correspondingly, the tonnage carried also went up by 4296 tonnes. Number of steamers called at the ports also increased from 8 in 1985-86 to 10 in 1986-87. Details relating to the number and tonnage of steamers and sailing vessels called at the ports of Kerala are shown in the Appendix 7.17. The number of crafts registered at the minor and intermediate ports of Kerala during 1986-87 was 1056 as against 1083 in the previous year. Of this, 82 per cent was registered at Neendakara, Alleppey and Kodungalloor.

7.67 Cargo handled through the intermediate and minor ports of Kerala during the year under report was 90,090 tonnes against 1.12 lakh tonnes of cargo during 1985-86 showing a decrease of 20 per cent. In the matter of export of cargo, Neendakara alone has handled 55 per cent of the total export. Even though no commodity was imported through Neendakara, it stands at the top in the case of cargo transportation.

7.68 Revenue earned during 1986-87 from various ports of Kerala fell down by 31.6 per cent to Rs. 42.46 lakh from Rs. 62.07 lakh in the previous year.

7.69 The State Hydrographic Survey Wing has its Head Quarters at Trivandrum and two field unit offices at Quilon and Beypore. The Hydrographic survey Wing carries out field surveys and also collects investigation data for the development of various Minor Ports, Fishing Harbours and other selected places. The data so collected is made available to the Harbour Engineering Department for use in the design of cargo and fishing harbours. The Department also undertakes special surveys for channel making.

7.70 During 1986-87, hydrographic surveys were conducted in ports of Vizhinjam, Neendakara, Azhikkode, Ponnani, Beypore, Azhikkal and Mopla Bay at Cannanore. With a view to construct Fishing Harbour, Hydrographic surveys were conducted at Kayamkulam and Channal. In addition, surveys for conducting dredging in various ports were also undertaken by the Hydrographic Survey Wing.

7.71 During the year 1987-88 dredging was carried out at the port at Beypore, Neendakara Cargo Harbour, Neendakara Fishing Harbour and Neendakara port using the dredgers owned by the Department of Ports. Dredging was also undertaken for Cochin Port Trust during the year. Departmental dredging done during 1986-87 was to the extent of 3.22 lakh M<sup>3</sup> valuing Rs. 61.53 lakh and dredging undertaken for other agencies was 1.36 lakh M<sup>3</sup> which earned a revenue of Rs. 27.20 lakh against Rs. 30 lakh in 1985-86.

7.72 The Harbour Engineering Wing carries out all the development works of Ports and Fisheries Department consisting of mainly investigation, design, construction of cargo harbour, construction of houses for port staff, maintenance work etc. During the year under report, the Department continued investigation

works at Beypore, Azhikkal, Ponnani, Kasargod and Kayamkulam. Model studies for the Fishing Harbour at Kayamkulam was commenced at Engineering College, Trivandrum. The Project Report for Fishing Harbour at Mopla Bay was also completed during 1986-87. Annual maintenance work of all port structures and piers at Calicut, Alleppey and Valiyathura also continued during 1986-87.

#### Communications

7.73 Kerala Postal Circle consists of 23 postal divisions, 3 RMS divisions with 98 Subordinate Offices, 5 Mail Motor Service divisions and one Central Stamp Depot. The number of post offices in the State stood at 1734, the same as last year. The post offices functioning in the State consisted of 50 Head Officers, 1410 Sub Offices, and 549 Extra departmental sub offices and 2725 branch offices and mobile post offices.

7.74 The average area and population covered by a post office within the state during 1986-87 stood at 8.10 sq.kms. and 5377 persons respectively. At the All India level, the average area served by each post office stood at 22.16 sq.km. and the average number of persons covered by each post office was 5206 during 1986-87. The data relating to the expansion of the post offices since 1975 is given in the Appendix 7.20. The Division-wise information relating to post offices in Kerala is furnished in the Appendix 7.22.

7.75 The speed post service "Inland" and "International" started at Cochin, linked Cochin with 13 centres in India and five countries abroad i.e. UK, USA, Japan, Honkong and Germany. This system has facilitated delivery of postal articles on the next day itself within the country and quick and speedy delivery in foreign countries.

7.76 Kerala on an average has 7 numbers of telephones per thousand population against the all India average of 6 as on 1-4-1987. Total number of working connections in Kerala has increased from 1,51,761 in 1985-86 to 1,67,314 in 1986-87 i.e. an increase of 10 per cent. The demand for new telephone connections is perhaps the highest in Kerala compared to other states in India. As on 1-4-1987, 84,356 such cases were there in the waiting list as against 67,181 in 1985-86 marking an increase of 26 per cent. The number of telephone exchanges in the state has also increased from 581 in 1985-86 to 599 during the reporting year with a total equipped capacity of 1,77,721. As on 1-4-1987, 2932 public call offices were functioning in Kerala, out of which 176 were operated by physically handicapped persons as shown in the Appendix 7.23.

7.77 A notable feature of Kerala Telecom net work is that all the district head-quarters in the state are linked with the state capital by Subscriber Trunk Dialing service or by No Delay Service. Kerala is the pioneer State to achieve this facility. Besides, International Subscriber Trunk Dialing System to 151 countries was also introduced in important district head-quarters during 1986-87.

## EXPORT-IMPORT TRADE

## 1. India's Foreign Trade

During 1986-87, the foreign trade of India showed further expansion with exports showing an increase of 15.3 per cent over the previous year and imports increasing by 2.2 per cent. During the first nine months of 1987-88 exports amounted to Rs. 11197 crores recording an increase of 24.7 per cent compared with the corresponding period of the previous year. At the same time, imports rose to Rs. 16110 crores registering an increase of 13.5 per cent during the same period. The larger imports had an adverse impact on the trade deficit during the current year. The balance of payments position continued to be under strain with a decline of Rs. 1338 crores in foreign exchange reserves during the first ten months of the current year. The position in the coming months would be difficult in view of the larger imports of key commodities such as edible oil, pulses, petroleum products etc., in order to compensate for drought induced shortfall in domestic availability. However, a better export performance would be able to ease the situation.

## 2. Trade through Cochin Port

8.2 Cochin Port in Kerala plays an important role in the sea-borne trade, both foreign and coastal. During 1986-87, Cochin Port handled 12.83 lakh tonnes of total export valued at Rs. 1102 crores of which 7.19 lakh tonnes valued at Rs. 1009 crores represented foreign trade. As compared with the previous year the total volume of exports through Cochin Port showed an increase of 78.4 per cent. The main items accounting for the increase are Cashew Kernels, sea-foods and P.O.L. products. As far as imports are concerned, the total volume in 1986-87 amounted to 56 lakh tonnes as compared with 45.6 lakh tonnes in the previous year. Of this, as much as 19.3 lakh tonnes with a value of Rs. 274.8 lakhs represented foreign imports. The main imports were fertilizers, foodgrains, cement, iron and Steel and machinery. Details of exports and imports through Cochin Port may be seen at Appendices (8.3 & 8.4).

## Composition of Exports

8.3 Broad commodity-wise details of export in terms of volume and value are given in the Table below:—

TABLE 8.1

Foreign Exports through Cochin Port during 1985-86 &amp; 1986-87

Sl. No.	Commodities	Quantity: Tonnes.		Value: Rs. Crores	
		1985-86		1986-87	
(1)	(2)	Quantity	Value	Quantity	Value
		(3)	(4)	(5)	(6)
1.	Cashew Kernels	36391	188.38	42685	302.81
2.	Pepper	36288	150.44	36547	191.65

3.	Seafoods	34947	114.28	40235	167.11
4.	Coffee	46456	131.67	31056	112.84
5.	Tea	26178	53.57	22307	37.10
6.	Coir Products	25795	27.89	24677	33.10
7.	Cardamom	817	10.20	320	3.99
8.	Ginger	5158	7.86	2335	2.47
9.	Miscellaneous	285318	155.02	518623	138.77
Total		497648	839.31	718785	1009.84

Source:—Cochin Port Trust.

8.4 Items that accounted for increase in exports during 1986-87 over the year 1985-86 are: (i) cashew kernels from 36391 tonnes to 42685 tonnes (14.8%) and (ii) seafoods from 34947 tonnes to 40235 tonnes (15.1%). However exports of spices declined by 17.3 per cent from 44491 tonnes to 41391 tonnes, that of coffee by 4.3 per cent from 46456 tonnes to 31056 tonnes, tea by 33.1 per cent from 26178 tonnes to 22307 tonnes and coir products by 7 per cent from 25795 tonnes to 24677 tonnes. In respect of a large number of miscellaneous items, export trade during 1986-87 recorded an impressive increase of 114 per cent. The overall increase in volume of exports during 1986-87 was 78.4 per cent.

8.5 In terms of value, it will be seen the increase during 1986-87 was 20.3 per cent, the major items accounting for the increase being Cashew Kernel, Pepper, Seafoods and Coir Products. Two third of the value of exports was accounted for by three items, viz., Cashew, Pepper and Seafoods which together accounted for Rs. 662 crores out of a total value of Rs. 1009 crores of exports through the Cochin Port.

8.6 A quantity of 36547 tonnes of pepper was exported from Kerala through Cochin Port during 1986-87 as against 36388 tonnes during the previous year. The export earnings amounted to Rs. 191.65 crores as against Rs. 150.44 crores in the previous year.

8.7 Through Cochin Port 42685 tonnes of Cashew Kernels has been exported during 1986-87. There was an increase of 15 per cent over the previous year. Value of foreign exports of Cashew Kernels through Cochin Port amounted to Rs. 302.81 crores during 1986-87. Compared to the previous year the value of foreign exports of cashew kernels also increased by 61 per cent.

8.8 During 1986-87 a quantity of 40235 tonnes of marine products worth Rs. 167.11 crores has been exported through Cochin Port as against 34947 tonnes worth Rs. 114.28 crores during 1985-86. The quantity and value have increased by 15 per cent and 46 per cent respectively.

8.9 A quantity of 24677 tonnes of Coir Products has been exported through Cochin Port. It was against 25795 tonnes during 1985-86. There was a decrease of 4 per cent in the quantity exported. The value of foreign exports of Coir Products through Cochin Port was Rs 33.10 crores against Rs. 27.89 crores during 1985-86. This shows there was an increase of 19 per cent in the value of foreign exports.

8.10 During 1986-87, 2335 MT of ginger valued at Rs. 2.47 crores were exported through Cochin Port against 5458 MT valued at Rs. 7.86 crores during 1985-86. Export of ginger through Cochin port has also declined both in quantity and in value.

8.11 Kerala has exported 22307 tonnes of tea through the Port of Cochin. The value of foreign export of tea through Cochin port amounted to Rs. 37 crores. It was against 54 crores during 1985-86. That means the value of foreign export through Cochin Port has decreased by 31 per cent and the quantity exported has decreased by 15 per cent.

8.12 During 1986-87 the export of coffee through Cochin Port was 31056 tonnes worth Rs. 112.84 crores. This was against 46456 tonnes worth Rs. 131.67 crores during 1985-86. The quantity as well as the value decreased during 1986-87.

#### Composition of Imports:

8.13 Broad composition of imports handled at the Cochin Port are given below:—

TABLE 8.2

#### Foreign and Coastal Imports through Cochin Port

Year	Coastal		Foreign		Total	
	Quantity (Lakh tonnes)	Value (Rs. crores)	Quantity (Lakh tonnes)	Value (Rs. crores)	Quantity (Lakh tonnes)	Value (Rs. crores)
1984-85	14.89	180.21	21.87	367.95	36.75	548.16
1985-86	27.56	297.69	18.03	503.32	45.59	801.01
1986-87	36.70	361.14	19.30	274.80	56.00	635.94

Source:—Cochin Port Trust.

8.14 The total value of imports in 1986-87 amounted 56 lakh tonnes showing an increase of 22.8 per cent over the previous year's level of 45.6 lakh tonnes. Fertiliser and its materials import amounted to 8.9 lakh tonnes in 1986-87. As compared with 1985-86, imports of foodgrains were only marginal. Cochin port has been playing an important role in Coastal imports. In 1986-87, of the total volume of 56 lakh tonnes of imports, as much as 36.7 lakh tonnes represented Coastal Cargo valued at Rs. 361 crores. The Volume of imports from other countries was 19.3 lakh tonnes valued at Rs. 275 crores.

#### 3. Trade through Intermediate and Minor Ports

8.15 Only three ports viz., Neendakara, Calicut including Beypore and Azhikkal had trading activities of any kind during 1986-87. Through Neendakara Port 41124 tonnes of Hemerite has been exported to abroad during 1986-87. Calicut/Beypore and Azhikkal ports had both export and import activities during the period under review. The total imports of Calicut/Beypore port amounted to 13753 tonnes and the exports were to the tune of 26885 tonnes. The total Cargo handled by Calicut/Beypore port during 1986-87 amounted to 40638 tonnes of which 31863 tonnes were coastal exports and the rest 8775 tonnes were foreign exports. The main items of exports from this port include timber (8510 tonnes), Bricks (6595 tonnes), Cement (3190 tonnes), Rice (1033 tonnes), Coir products (479 tonnes) and Wooden Machuva (715 tonnes). The main articles imported through this port during 1986-87 include Iron materials, iron scrap, soda ash, copra and empty barrels.

8.16 The Azhikkal port handled a total cargo of 8328 tonnes during 1986-87 which includes 1085 tonnes of M.O.F. Dredger for breaking imported from Coastal area and 7243 tonnes of Timber exports to coastal areas. Details of exports and imports through Intermediate and Minor ports are furnished in Appendix-8.3

## CHAPTER 9

### SOCIAL SERVICES

#### *Introduction*

It is a matter of great interest to social scientists how Kerala, being a low income State, could register commendable progress in various fields of social services. The standards that Kerala has attained compare with those achieved by many of the advanced countries of the world. This was possible because the State has been following a path of development different from the rest of the country laying greater emphasis on social and community services. Adoption of a number of Social Welfare and Security measures by successive Governments in Kerala and the voluntary effort initiated in this area have also helped the State to attain the present high level of social development.

#### *Education*

##### *General Education*

9.2 The net work of educational institutions in the school education sector in 1985-86 consisted of 12,138 schools which increased to 12,142 schools in 1986-87, comprising of 6828 L.P. schools, 2884 U. P. schools and 2430 High Schools. Out of the total of 12,142 schools, government schools accounted for 36.83 per cent,

private aided schools for 60.54 per cent and private unaided schools 2.63 per cent.

9.3 The average area served by one high school was 16 sq km., one U. P. school 13 sq. km. and one L. P. School 6 sq. km. In Kerala, problem of regional imbalance with respect to institutions is not so acute, but there is problem of availability of facilities in these schools, which is given priority during these years. District-wise and management-wise distribution of schools is given in Appendix 9.1.

9.4 Enrolment at school level registered an increase from 57.16 lakhs in 1985-86 to 57.17 lakhs in 1986-87. Unlike in 1985-86 the enrolment at the L. P. stage recorded a decline of 8465 students and at U. P. stage an increase of 12,623 students. At the secondary stage the enrolment declined by 2852 students. Thus the net increase in enrolment was 1306 during 1986-87 (Table 9.1). An urban-rural classification would show that out of the 57.17 lakh students, 48.97 lakh students are in rural areas and 8.20 lakhs in urban areas. Enrolment in standard I marked a substantial decline of 16,003 students—from 6,30,639 in 1985-86 to 6,14,636 in 1986-87. The female enrolment stood at 48.97 per cent. The standard-wise enrolment is furnished in Appendix 9.2.

TABLE 9.1

*Enrolment in schools-stage-wise*

Stage	Enrolment		Variation (Nos.)	Variation (Percent)
	1985-86 (Nos.)	1986-87 (Nos.)		
Lower Primary	2995396	2586931	(- )8465	( - )0.33
Upper Primary	1777076	1789699	(+)12623	(+)0.71
Secondary	1343679	1340827	(- )2852	(- )0.21
Total	5716151	5717457	(+)1306	(+)0.02

9.5 The number of teachers increased from 1.88 lakhs in 1985-86 to 1.92 lakhs in 1986-87 of which the number of trained teachers was 1,84,460 and that of untrained teachers 7124. The teacher-pupil ratio remained at 1:30 in 1986-87 as in the previous year. Data on staff strength in schools is provided in Appendix 9.3. The number of protected teachers decreased from 5072 in 1985-86 to 4748 in 1986-87. Scholarship worth Rs. 20.98 lakhs was disbursed to 1,72,810 students.

9.6 Vocational education has been under implementation in 73 schools—54 high schools and 19 technical high schools. The course covers about 28 different vocations covering various fields in engineering, technology, agriculture, fisheries, veterinary, sports, para-medical and agro-industries. The enrolment in these courses during the year under review stood at 3650.

9.7 Out of the total of 4.97 lakh students appeared for the S. S. L. C. examination during March 86, 2.32 lakhs i.e. 46.7 per cent passed the examination. The pass percentage of girl students was 48.8 while that of boys was 44.8 per cent. In the 1987 March examination, 4.51 lakh students appeared for the examination out of which 2.95 lakhs i.e., 45.5 per cent passed the examination. The pass percentage of girls and boys were 47.3 and 43.9 respectively. Appendix 9.4 highlights the relevant data for the period from 1980- to 1987.

#### University Education

9.8 For imparting higher education there were 168 Arts and Science Colleges (excluding 4 evening colleges) in the State spread over the three Universities viz. Kerala, Calicut and Gandhiji. The number of colleges affiliated to these Universities were: Kerala

University 43, Calicut University 69 and Gandhiji University 56. The number of colleges remained at 168 since 1982-83. Of the total colleges, private sector accounted for 79 per cent. The district-wise distribution of arts and science colleges is given in Appendix 9.5.

9.9 The student strength in the Arts and Science Colleges increased from 3.04 lakhs in 1985-86 to 3.13 lakhs in 1986-87. The stage-wise analysis shows that enrolment at the pre-degree stage went up from 1,92,320 to 1,97,259, at the degree stage from 102,873 to 1,06,517 and at the post graduate stage (excluding university departments) from 8876 to 9016 during the year under report. The girl students accounted for 51.05 per cent. The total number of teachers in the three universities increased from 13249 in 1985-86 to 13374 in 1986-87. The University-wise details of colleges, students and teachers are furnished in Table 9.2. and 9.3 respectively.

TABLE 9.2

*Enrolment in Arts and Science Colleges in Kerala—Stage-wise and university-wise—1986-87*

Name of University	No. of Colleges	Enrolment 1986-87											
		Pre-degree			Degree			Post Graduate			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Kerala	43	29816	32614	62430	15293	18099	33392	1106	1489	2595	46215	52202	98417
Calicut	69	37216	29653	66869	19859	16878	36737	1460	1016	2476	58535	47547	106082
Gandhiji	56	30973	36981	67960	15548	20840	36388	1828	2117	3945	48349	59944	108293
Total	168	98005	99254	197259	50700	55817	106517	4394	4622	9016	153099	159693	312792

TABLE 9.3

*Number of Teachers in Arts and Science Colleges*

	1985-86			1986-87		
	Men	Women	Total	Men	Women	Total
Kerala	2445	1662	4107	2373	1731	4104
Calicut	3006	1503	4509	3005	1564	4569
Gandhiji	3008	1625	4633	3051	1650	4701
Total	8459	4790	13249	8429	4915	13374

#### Technical Education

9.10 The technical education sector witnessed remarkable changes during the year 1986-87. The technical education infrastructure included mainly 7 engineering colleges, 47 technical high schools, 25 polytechnics, 19 pre-vocational training centres and 262 Industrial Training Centres.

9.11 Enrolment in the engineering colleges increased from 9568 in 1985-86 to 9662 in 1986-87. The relevant data are given in Appendix 9.6. The number of students in polytechnics registered an increase from

9710 in 1985-86 to 9768 in 1986-87. But the enrolment in the technical high schools marked a rise from 8617 to 8651 during the period under review. Details of polytechnics and technical high schools are furnished in Appendices 9.7 to 9.11.

9.12 During 1986-87 the University of Cochin was upgraded into a full fledged Science and Technological University for promotion of postgraduate studies and advanced research in applied science, technology, industry and management. The University at present offers facilities for such studies/research to 626 students. The data on the course of study/research

and intake in the various Department/schools under the Cochin University of Science and Technology is provided in appendix 9.12.

9.13 Other notable achievements include opening of a number of institutions and starting of new courses in the technical education sector. The new engineering college started during 1986-87 at Mangattu-paramba in Cannanore district offers courses in civil engineering, mechanical engineering, electronics and communication and electrical and electronics with an intake of 40 students in each course.

9.14 Three technical high schools started during the year one at Naduvil in Cannanore district one at Purapuzha in Idukki district and the other one at Ulloor in Trivandrum district. The two extension centres of the Food Craft Institute Kalamassery, one at Trichur and the other at Cannanore, started functioning during 1986-87.

9.15 The Institute for Human Resources Development for Electronics was started during the year for the promotion of electronics and computer science. Some of the courses which the Institute offers include computer operation and maintenance (part-time), a one year industry oriented Postgraduate course in computer applications, Post-diploma in computer engineering etc. It has also taken up two projects which are sponsored by the Department of Electronics, Government of India, viz. development and preparation of electronics teaching materials and courseware, and setting up of pilot centres for the repair and maintenance of electro medical equipment.

9.16 New courses started during 1986-87 include degree courses in Architectural Engineering and com-

puter science at Regional Engineering College, Calicut Master of Computer Applications course with an intake of 30 at the College of Engineering, Trivandrum and T.K.M. College of Engineering, Quilon. Computer centres have been established at Central Polytechnic, Trivandrum, Govt., Polytechnic, Palai and the Women's Polytechnics Kalamassery, Trichur and Calicut.

#### *Trend in Government Expenditure on Education*

9.17 The state has incurred an expenditure of Rs. 482.88 crore in 1986-87-an increase of Rs. 69.80 crores over the previous year. A detailed analysis of the pattern of expenditure would show that out of the total expenditure primary education accounted for 52.33 per cent, secondary education 27.45 per cent, university education 13.30 per cent, technical education 4.46 per cent, special education 0.51 per cent and others 1.95 per cent. The percapita expenditure on education which was only Rs. 10.72 in 1961-62 rose to Rs. 175.55 in 1986-87 and the cost per pupil at the primary stage increased from Rs. 54.17 in 1966-67 to Rs. 577.61 in 1986-87 and at the secondary stage from Rs. 103.81 to 988.29 during the same period. The details of expenditure on education are highlighted in tables 9.4, 9.5 and 9.6 respectively. The state wise analysis, as per the Basic statistics relating to Indian Economy Vol. II sept. '87, shows that the percapita expenditure on education in Kerala increased from Rs. 28 in 1970-71 to Rs. 85 in 1980-81 and to Rs. 165 in 1985-86. The corresponding All India figures are Rs. 15, Rs. 47 and Rs. 103 respectively. The state-wise data on total and percapita expenditure on education for the period from 1970-71 to 1985-86 are given in Appendix 9.13.

TABLE 9.4  
*Expenditure on Education -Stage-wise 1985-86 & 1986-87*

Stages	<i>(Rs. lakhs)</i>					
	1985-86 (Accounts)			1986-87 (Revised Estimate)		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I Primary Education	259.79	20692.16	20951.95 (50.72)	1084.00	24186.23	25270.23 (52.33)
II Secondary Education	223.42	11965.40	12188.82 (29.51)	147.13	13105.79	13252.92 (27.45)
III Special Education	22.39	215.62	238.01 (0.58)	26.00	220.43	246.43 (0.51)
IV University and Other Higher Education	210.87	5102.69	5313.56 (12.86)	242.43	6180.83	6423.26 (13.30)
V Technical Education	819.18	1100.91	1920.09 (4.65)	872.50	1277.47	2149.97 (4.46)
VI Others	232.47	463.78	696.25 (1.68)	341.30	603.58	944.88 (1.95)
Total	1768.12	39540.56	41308.68 (100.00)	2713.36	45574.33	48287.69 (100.00)

Figures in bracket indicate Percentage to total  
Source: Detailed Budget of the State Government.



TABLE 9.5

*Per Capita Government Expenditure on Education in Kerala*

Year	Population (lakhs)	Government Expenditure on Education (Rs. lakhs)	Index of growth	Per Capita Expenditure (Rs.)	Index of growth
(1)	(2)	(3)	(4)	(5)	(6)
1961-62	173.02	1854.84	100	10.72	100
1966-67	194.35	2774.60	150	17.88	167
1971-72	218.29	6614.87	357	30.30	283
1976-77	239.50	11102.81	760	58.88	549
1980-81	253.84	21098.54	1137	83.12	775
1981-82	254.03	24251.00	1307	95.46	890
1982-83	259.49	26527.29	1430	102.33	954
1983-84	268.47	30709.23	1656	114.59	1069
1984-85	270.05*	34595.27	1865	128.10	1194
1985-86	274.05*	41308.68	2227	150.73	1406
1986-87	275.06*	48287.69	2603	175.55	1638

\* Source: Projected school age population of Kerala 1981-91 by R. Ramkumar.

TABLE 9.6

*Cost of Education Per Pupil from 1966-67 to 1986-87*

Year	Primary stage (Rs.)	Percentage increase from previous year	Secondary stage (Rs.)	Percentage increase from previous year
(1)	(2)	(3)	(4)	(5)
1966-67	54.17	..	103.81	..
1980-81	265.24	..	454.25	..
1981-82	298.18	12.41	536.37	18.08
1982-83	326.13	9.37	589.41	9.89
1983-84	372.62	14.25	657.60	11.57
1984-85	414.43	11.22	737.31	12.12
1985-86	479.23	15.64	906.91	23.00
1986-87	577.61	20.53	908.29	8.97

*Health Allopathy*

9.18 Kerala could establish a strong health care and delivery system over the years. The number of institutions and beds had registered a manifold increase during last thirty-seven years of development. During the period 1951-85 there was 415 per cent increase in the number of institutions and 559 per cent increase in the number of beds. The number of institutions and beds had increased from 197 and 6752 to 1014 and 33,529 respectively during the period. As a

result of the substantial increase in facilities in terms of institutions, beds, health personnel etc., Kerala's health standards are almost comparable to that of developed countries in the world. An interesting feature of the development of health is that when compared to major cities in India the pricing of health services is the lowest in Kerala both in the public sector and in the private sector.

The following health development indicators would highlight the situation.

Year	Birthrate per '000 population	Death rate	Infant mortality rate
1941-50	39.8	22.3	153
1951-60	38.9	16.9	120
1968	34.3	10.4	74
1970	32.3	9.2	61
1980	26.8	7.0	42
1981	25.6	6.6	37
1985	22.9	6.4	33

9.19 The maternal mortality rate is below 2, couple protection rate 50 per cent and the natural growth rate of population is 1.65 per cent. All these indicators are higher than the all India average. The chain of medical institutions extends from subcentres at the lowest level, catering to the needs of 500 population on an average to the sophisticated referral medical college hospitals.

9.20 During 1986-87, there were 1038 medical institutions in the state with a total bed strength of 36,404. In respect of beds per lakh of population the state is far ahead of other states. The health infrastructure consisted of 159 hospitals with 29,363 beds, 444 Primary health centres (including MCH Centres) with 3404 beds and 397 dispensaries with 799 beds. Besides, the 20 T.B. Centres and 15 grant-in-aid institutions had a bed strength of 323 and 2515 respectively. The number of institutions and beds has gone up from 1015 to 1038 and 35,744 to 36,404 respectively over the previous year (table 9.7 and 9.8). The number of Primary Health Centres has increased from 299 in 1985-86 to 444 during the year under report. By 1990 every panchayat on an average will have a primary health centre. Bed population ratio increased to 132 during 1986-87 compared to 130 last year. A district-wise distribution of institutions and beds is given in Appendix 9.14.

9.21 In the case of bed population ratio districts of Quilon, Idukki, Malappuram, Palghat, Wynad and Cannanore lag behind when compared to other districts. But the situation has been slowly improving by increasing the number of beds in the hospitals of the

districts. Almost all the panchayats have been covered by government medical institutions of one type or other. For every 21 sq.km. there is one government medical institution and for every 38 sq.km. there is one allopathic medical institution in the State. Similarly the bed population ratio is 132 when allopathic system alone is taken and 142 when all the systems are considered.

9.22 In Kerala, private medical institutions play an equal role in the provision of medical facilities to the people. When these institutions are also taken, there will be one medical institution for every 3.5 sq.km. and the bed population ratio will be as high as 325.

9.23 The total number of medical and paramedical personnel has shown an increase from 17222 in 1985 to 18,910 in 1986 and 20,400 in 1987. This means that the number of personnel increased by about 13 per cent during the period 1985-87. The relevant details are furnished in Table 9.9. The details of registered medical practitioners of all systems of medicine are given in Table 9.10 and that of Registered medical practitioners in Table 9.11. The number of attacks and deaths due to principal diseases during the reporting year are shown in Appendix 9.15.

TABLE 9.7

*Number of Medical Institutions and Beds in Kerala*

Year	No. of Medical Institutions	Index of growth	No. of beds	Index of growth	No. of Beds Per lakh of Population
(1)	(2)	(3)	(4)	(5)	(6)
1976-77	888	100	27607	100	113
1977-78	893	101	28862	105	116
1978-79	898	101	29947	108	119
1979-80	918	103	30220	109	119
1980-81	968	109	32447	118	127
1981-82	991	112	32532	118	126
1982-83	1005	113	32880	119	125
1983-84	1009	114	33380	121	124
1984-85	1014	114	33529	121	124
1985-86	1015	114	35744	129	130
1986-87	1038	116	36404	132	132

TABLE 9.8  
Number of Medical Institutions and Beds under Allopathy (District-wise)

District	No. of Medical Institutions		No. of Beds		No. of Beds per lakh of population	
	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trivandrum	99	101	6389	6540	233	237
Quilon	71	70	1875	1973	64	67
Alleppey	72	74	4186	4193	172	172
Pathanamthitta	47	48	831	887	..	..
Kottayam	70	70	3551	3581	199	199
Idukki	50	51	472	499	43	45
Ernakulam	102	105	4070	3859	152	142
Trichur	100	101	3887	4018	152	155
Palghat	85	85	1597	1623	71	71
Malappuram	91	97	1390	1406	50	50
Kozhikode	67	69	3950	4224	153	165
Wynad	30	33	528	590	84	92
Cannanore	81	84	2422	2403	78	76
Kasaragode	50	50	596	608	..	..
<b>KERALA</b>	<b>1015</b>	<b>1038</b>	<b>35744</b>	<b>36404</b>	<b>130</b>	<b>132</b>

Source: D.H.S.

TABLE 9.9  
Medical and Paramedical Personnel in the Health Services Department

Sl. No.	Category	1985	1986	1987
1.	Medical Officers	3126	3514	3514
2.	Dentists	71	71	71
3.	Sr. Nurses	917	932	1024
4.	Jr. Nurses	4176	4589	4589
5.	Lady Health Inspectors/ Supervisors	500	600	1009
6.	Pharmacists	1620	1626	1731
7.	Jr. P. H. Nurses (ANMs)	3817	3919	4236
8.	Jr. Health Inspectors	2150	2583	3381
9.	Health Inspectors/Supervisors	845	1076	845
Total:		17222	18910	20400

Source: D.H.S.

TABLE 9.10  
Details of Registered Medical Practitioners in the State

System	Class of Registration	1985-86	1986-87
(1)	(2)	(3)	(4)
1. Modern Medicine	A	14631	15000
	B	635	635
	Listed	204	204
	Sub Total	15470	15839
2. Homoeopathy	A	2872	3019
	B	1486	1486
	Listed	279	279
	Sub Total	4637	4784
3. Ayurveda	A	5136	5203
	B	6100	6100
	Listed	599	599
	Sub Total	11835	11902
4. Siddha	A	58	61
	B	1218	1218
	Listed	41	41
	Sub Total	1317	1320
5. Unani	A	1	1
	B	51	51
	Listed	5	5
	Sub Total	57	57
Grand Total:		33316	33902

Source: Registrar of Medical Councils

TABLE 9.11

## List of Registered Para-Medical Practitioners

Sl.No.	Category	1985-86			1986-87		
		Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Nurse	236	10192	10428	244	10627	10871
2	Midwife	..	10137	10137	..	10565	10565
3	Nurses & Midwives (Integrated)	..	7300	7300	..	8394	8394
4	Auxiliary Nurse Midwives	..	5933	5933	..	6635	6635
5	Health Visitors	..	308	308	..	313	313
Grand Total		236	33870	34106	244	36534	36778

Source: Registrar of Medical Councils.

### Medical Education

9.24 There are five medical colleges in the state, viz. Trivandrum, Kottayam, Alleppey, Trichur and Calicut. All the colleges together have a total admission capacity of 700 for MBBS course-200 each in Trivandrum and Calicut colleges and 100 each in the remaining 3 colleges. The under graduate courses like BDS, B.Pharm, BSc. Nursing and BSc MLT are also offered in these colleges except at Alleppey and Trichur. There are two dental colleges in the state, at Trivandrum (admission capacity 40) and Calicut (admission for 30 students). There are 28 seats for the B. Pharm course and 24 seats for BSc MLT Course which are offered only in Trivandrum Medical College. Intake for BSc Nursing is 75, shared equally among Trivandrum, Calicut and Kottayam medical Colleges. There are about 524 seats for different para medical courses and 171 seats for post doctoral diploma courses of 2 years duration. For post doctoral degree course

there are 242 seats on the whole. Except MD Psychiatry all the courses are offered in Trivandrum Medical College. Almost all the courses are offered in Kottayam and Calicut Colleges also. In Alleppey Medical College M.D. course in general medicine and M.S. in general surgery only are offered. There are 23 seats in the state for super speciality courses like MCH and D.M. All the super speciality courses are offered in the Medical College, Trivandrum. Details of courses under Directorate of Medical Education is given in Table 9.12

9.25 There are several construction works in different stages of progress in the medical colleges during the year under report. All facilities including the transfer of 300 bedded T.B. & Chest Diseases hospital are being provided to Medical College, Trichur. Medical College, Calicut has started functioning as a referral hospital and the three shift system has been introduced in the MGH, Calicut and in the Institute for Maternity and Child Health care, Calicut.

TABLE 9.12

## Details of courses under Directorate of Medical Education

Name of Course	Duration of courses	Number of Seats					Total
		Trivandrum	Calicut	Kottayam	Alleppey	Trichur	
1. Super Speciality Courses	2 years	14	8	1	..	..	25
2. Post-Doctoral Degree courses	3 years	121	75	41	4	..	242
3. Post Doctoral Diploma courses	2 years	76	62	33	..	..	171
4. Under Graduate courses	3 to 5½ years	317	255	125	100	100	897
5. Para medical courses	1 to 3½ years	214	185	60	50	15	524

## Indian Systems of Medicine

### Ayurveda

9.26 There is a net work of ayurveda hospitals, dispensaries and grant-in-aid institutions in the state catering to the medical needs of the public. The number of institutions by the end of 1985-86 comprised 94 hospitals, 473 dispensaries and 228 grant-in-aid vaidyasalas. During 1986-87 27 dispensaries were added to this and 3 dispensaries were upgraded into 10 bedded hospitals, thus raising the number of hospitals to 97. There are also specialised institutions like mental hospital, two vishavaidya hospitals, a marmā hospital, a pancha-karma hospital and a nature cure hospital. The number of beds increased from 1689 in 1985-86 to 1769 in 1986-87.

9.27 During 1986-87, the department has conducted 159 medical camps. A district office at Wynad was started during the year thus making the total number of district offices to 12. The total number of patients treated during the period was nearly 141 lakhs. The district-wise details of institutions, beds and the number of patients treated are given in Appendix 9.16.

9.28 There are two Government ayurveda colleges in the state at Trivandrum and Thrissur conducting BAMS courses. In the private sector, even though there are two colleges at Shornur and Ollur, the College at Shornur has not yet started functioning. The ayurveda college at Kottakkal is a quasi-government institution. The post-graduate centre for ayurveda education, started functioning in the state since 1971, has an annual intake capacity of 30 students. There is also a model Demonstration Garden of medicinal plants at Poojappura extending to more than 5 acres of land which supplies drugs needed for research work of P.G students. A Regional Research Centre is also functioning there.

### Homoeopathy

9.29 The total number of homoeopathic institutions in 1986-87 was 279 which increased from 251 in 1985-86. The increase was effected only in the case of dispensaries i.e. from 227 in 1985-86 to 255 in 1986-87 and the number of hospitals and beds remained the same at 24 and 700 respectively. Out of these institutions, 55 dispensaries and one taluk hospital were functioning under the plan schemes. The number of dispensaries functioning under the special component plan and the tribal sub plan were 5 and 3 respectively during the period under review. The number of inpatients treated in the hospitals has increased from 13,621 in 1985-86 to 16,101 in 1986-87 and the number of outpatients from 63 lakhs to 70 lakhs.

9.30 There were 6 homoeopathic colleges of which 3 were offering degree courses and 3 diploma courses. The SC/ST reservation is 10 per cent in the case of degree colleges and 20 per cent in the case of diploma colleges. The district-wise details of institutions, beds and the number of patients treated are furnished in appendix 9.17.

## Family Welfare

9.31 In Kerala Family Welfare programmes have been accorded high priority since the beginning of the Fourth Plan. The ultimate aim of the policy of the Government is to reduce the Net Reproduction Rate (NRR) to 1 by 2000 AD and the present rate is 1.3 as against 1.67 for all India.

9.32 During 1986-87 nearly 2 lakh PPS operations were done and the achievements of the programmes are as follows: Vasectomy 7011, IUD 76,164, number of conventional contraceptives supplied nearly 126 lakhs, oral pills supplied 3.6 lakhs and case of induced abortions 29,264. The District-wise details are furnished in appendix 9.18. The infrastructure consist of 600 rural and 6 urban family welfare centres in the state in 1986-87 and the details of programmes are given in appendix 9.20. The expenditure under Family Welfare programmes for a number of years is shown in Table 9.13.

TABLE 9.13

### Expenditure on Family Welfare Programme

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	3853.14

Source: Budget Documents

### Trend in Government Expenditure on Health

9.33 The expenditure under health sector has gone up from Rs. 9525 lakhs in 1985-86 to Rs. 11142 lakhs in 1986-87 which registered an increase of 17 per cent over the previous year. The allopathy system accounted for 90.78 per cent while Ayurveda and Homoeopathy system shared 7.23 per cent and 1.93 per cent respectively. The share of Siddha system was 0.06 per cent. Per capita expenditure on health increased from Rs. 40.44 in 1985-86 to Rs. 50.13 in 1986-87 (Tables-9.14 and 9.15)

A comparative statement on State-wise per capita expenditure is given in Appendix 9.20. Per capita expenditure on health in Kerala has gone up from Rs. 7 in 1970-71 to Rs. 32 in 1980-81 and to Rs. 63 in 1985-86 while the corresponding figures for all India are Rs. 6, Rs. 24 and Rs. 55 respectively as per the Basic Statistics Relating to Indian Economy-Vol. II.

TABLE 9.14

*Expenditure under Health other than Family Welfare*

(Rs. lakhs)

Item	1985-86 (Accounts)			1986-87 (RE)		
	Plan	Non-plan	Total	Plan	Non-plan	Total
1. Allopathy	781.74	7888.22	8669.96 (91.02)	1031.80	9082.91	10114.71 (90.78)
2. Ayurveda	51.97	628.62	680.59 (7.15)	77.00	729.04	806.04 (7.23)
3. Siddha	0.85	2.31	3.14 (0.03)	2.00	4.25	6.25 (0.06)
4. Homoeopathy	28.58	142.71	171.29 (1.80)	53.90	161.29	215.19 (1.93)
Total	863.12	8661.86	9524.98 (100.00)	1164.70	9977.49	11142.19 (100.00)

(Figures in bracket indicate percentage to total)

TABLE-9.15

*Percapita Expenditure on Medical and Public Health*

(Rs. lakhs)

Year	Population (lakhs)	Expenditure on Health including Family Welfare	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

\*Source: Projected school Age population of Kerala-1981-91 by R. RAMKUMAR.

**Housing**

9.34 The housing programmes in the State are implemented by a few Government departments and some autonomous bodies. Of the autonomous bodies the Kerala State Housing Board is the major agency which is presently implementing 9 housing schemes with a view to meeting the housing requirements of various income groups. During 1986-87 the Housing Board has extended financial assistance for the construction of nearly 8000 houses in the state. The major schemes which made notable progress were Subsidised aided Self Help Housing Scheme Stage II, Co-operative Housing Scheme for Economically Weaker Sections and the Rehabilitation Housing Scheme. The number of houses constructed under each scheme during 1986-87 being 2090, 2625 and 2241 respectively.

9.35 In this connection it may also be pointed out that for rehabilitating the persons belonging to the economically weaker sections in rural areas the Board has formulated the Rehabilitation Housing Scheme with loan assistance from HUDCO, Consortium of Banks, H.D.F.C. etc. The scheme is implemented through Revenue Authorities. The target was 1,50,000 houses under 1st and 2nd phases of the scheme. The first phase of 100,000 houses were completed and the second phase of 50,000 houses are under various stages of construction. Since the Subsidised Aided Self Help Housing Scheme does not have much basic difference from this scheme it has been merged with the Rehabilitation Housing Scheme.

9.36 During the period under review the Housing Board has incurred an expenditure of Rs. 2794.61

lakhs for the completion of various housing schemes and in addition to government loan and grant the Board received Rs. 2287.20 lakhs from HUDCO and Rs. 300 lakhs from Housing Development Finance Corporation as loan.

9.37 The Kerala State Development Corporation for SC/ST has extended financial assistance to 27,172 families for house construction till the end of 1986-87 incurring an expenditure of Rs. 1231.56 lakhs by way of subsidy and loan. The subsidy is provided by the State government and the loan is arranged from HUDCO through the Corporation. During 1986-87 the Corporation had implemented three ongoing housing schemes which were started in 1978, 1980 and 1984 and altogether 2215 houses were completed in the year incurring an expenditure of Rs. 55.55 lakhs.

9.38 The Kerala State Co-operative Housing Federation, the Central financing agency in the field of co-operative housing is implementing housing schemes through its 207 affiliated primary co-operative societies. It raises funds by receiving share capital contribution from government and availing loans from the Life Insurance Corporation of India and other sources. The authorised share capital of the Federation is Rs. 1000 lakhs made up of 10 lakh shares of Rs. 100

each. Its paid up share capital as on 31-3-1987 was Rs. 672.08 lakhs. So far the Federation has disbursed an amount of Rs. 8078.37 lakhs and assisted construction of 24,848 houses as on 31-3-1986. During 1986-87 Rs. 1894 lakhs has been distributed for the construction of 8387 houses. During 1986-87, an amount of Rs. 10 crores was received from L.I.C. alone.

9.39 The Board of Revenue is implementing 7 housing schemes. The most important among them are the allotment of house sites to landless workers in rural areas and the house construction assistance to rural workers. During 1986-87, 5517 house sites were distributed in rural areas incurring an expenditure of Rs. 150 lakhs. In the same period 974 rural workers were given financial assistance for the construction of houses for which a sum of Rs. 11.27 lakhs was spent.

9.40 A noteworthy feature of the scheme is that nearly 50% of the beneficiaries of the scheme are from SC or ST. Out of a total number of 5517 people who received house sites, 2237 belong to SC and 84 belong to ST. As regards house construction assistance, out of 974 beneficiaries, 386 are from SC and 21 are from ST. The achievements for the period from 1980-81 to 1986-87 are presented in Table 9.16.

TABLE 9.16

*Housing Scheme (Under MNP) implemented by the Board of Revenue*

Year	Allotment of sites			Expenditure (Rs. lakhs)	Construction of Houses		
	No. of sites allotted	S.C.	S.T.		No. of persons assisted	S.C.	S.T.
1980-81	6248	700	198	102.72	1503	393	11
1981-82	6605	525	100	90.22	1828	640	16
1982-83	8024	400	111	72.15	1254	987	25
1983-84	3141	420	115	76.13	894	291	11
1984-85	4841	691	129	200.61	1235	498	15
1985-86	5151	2125	68	111.36	888	318	17
1986-87	5517	2237	84	150.00	974	386	21

9.41 The Scheduled Caste Development Department has given assistance for the construction of 2039 houses during 1986-87 incurring an expenditure of Rs. 39 lakhs. The Tribal Welfare Department has spent nearly Rs. 37 lakhs during 1986-87 for housing schemes. But they could complete only 90 houses during the year while a few houses were under different stages of construction. During the period under review the finance department also disbursed a sum of Rs. 620.50 lakhs to the State government employees as house construction advance as against a sum of Rs. 500.35 lakhs distributed during the previous year.

9.42 The Kerala State Co-operative Federation for Fisheries has completed the construction of 2290 houses during 1986-87. In addition to this, they have also taken up the construction of 5128 houses

which are under various stages of construction. During the year the Federation has spent a sum of Rs. 119.83 lakhs for implementing housing programmes

9.43 A close look at the housing sector in the State will show that there has been a definite shift in emphasis in favour of economically weaker sections as far as the disbursement of house construction assistance is concerned. The major housing schemes like the Subsidised Aided Self Help Housing Scheme, Cooperative Housing scheme for Economically weaker sections and the Rehabilitation Housing Scheme are all designed to extend house construction assistance to economically weaker sections. Besides the housing schemes implemented by the Scheduled Caste Development Department, Tribal Welfare

Department, Scheduled Caste Development Corporation and the Cooperative Federation for Fisheries Development are solely meant to help the economically weaker sections to realise their long cherished dream of having their own houses. Infact during the year under review the Government together with other-

autonomous bodies have extended financial assistance for the construction of 101536 houses to the people belonging to the weaker sections of society. The details of achievements under various housing schemes is given in Table 9.17.

TABLE 9.17  
*Achievement in the Housing—Major Schemes*

Sl. No.	Name of the Scheme	Expenditure (Rs. in lakhs)		Physical Achievements	
		1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)
1	Provision of housesites to rural landless workers	111.36	150.00	3022	5517
2	Huts/Houses for rural workers	36.62	11.27	700	974
3	Village housing project	2.81	5.05	..	..
4	Low-income group housing	10.15	7.55	184	..
5	Middle income group housing	10.44	14.4	113	59
6	Land acquisition and development	10.00	3.94	NA	..
7	Co-operative housing scheme for economically weaker sections	39.97	..	2427	2625
8	Subsidised aided self help housing scheme with co-operation of voluntary agencies	134	..	12125	2090
9	Rental Housing Scheme	..	13.58	152	..
10	Public Housing Scheme	..	311 house plots	528	613
11	Kudikilappukar housing	5.00	..	743	212
12	Scheduled Caste development Corporation	165.00	55.55	3870	2215
13	Tribal Welfare Department	41.99	37.00	596	90
14	Scheduled Caste Development Department	..	1.58	313	159
15	Kerala Fishermen Welfare Corporation	150.00	119.83	17019	2290
16	Kerala State Co-operative Housing Federation	50.00	1894	4869	8387
17	Rehabilitation Housing Scheme	..	..	..	85364

### *Sewerage and Water Supply*

9.44 Water supply schemes in Kerala can be categorised as LIC aided schemes, World Bank and bilaterally aided schemes, Accelerated rural water supply schemes being implemented with assistance from Government of India and the other urban and rural water supply schemes implemented with state funds only.

#### *LIC aided and Externally aided schemes*

9.45 In order to achieve the targets set for the decade 1981-91 the Government implemented several schemes with assistances from LIC, World Bank and from bilateral agencies. This has helped the state to augment additional funds for the water supply schemes. LIC assisted water supply schemes were started in the state as early as in 1970-71. At present there are 15 urban water supply schemes and 22

rural water supply schemes being implemented with assistance from LIC. About 50 percent of the schemes are nearing completion. Of the eleven bilaterally aided schemes one was started in 1980, another in 1982 and the remaining schemes were started in 1985. At present there are 7 World Bank aided schemes, 3 Danish aided schemes and 8 schemes with assistance from Denmark.

9.46 During the year under review Rs. 600 lakhs was received as LIC assistance. Central assistance during 1986-87 amounted to Rs. 1213 lakhs for implementing the Accelerated Rural Water Supply Programme. The external assistance was Rs. 729.14 lakhs. When compared to the previous year the increase was Rs. 56 lakhs in the case of LIC aided schemes, Rs. 123 lakhs in the case of externally aided schemes and Rs. 128 lakhs in the case of Central assistance. The flow of funds from LIC, Government of India and external sources are shown below for the period 1980-81--1987-88.



TABLE 9.18

Flow of funds from LIC, Government of India and External Agencies

Year	Flow from LIC	Flow from External agencies	Flow from Government of India for ARWS
1980-81	116.00	..	328.40
1981-82	273.70	..	526.25
1982-83	430.00	..	641.00
1983-84	464.00	523.38	1571.30
1984-85	471.00	268.70	1471.30
1985-86	543.61	606.12	1085.00
1986-87	600.00	729.14	1213.00
1987-88 (anticipated)	600.00	1283.20	1232.00

*Expenditure.*

9.47 The plan and non plan expenditure on water supply and sewerage schemes for the period from 1980-81 is given in Appendix 9.24. It can be seen that the expenditure was Rs. 39.87 crores in 1986-87 of which plan component amounted to Rs. 20.63 crores and the remaining Rs. 19.24 was spent under non plan. A further analysis would show that of the total expenditure for water supply schemes was Rs. 35.91 crores and the balance for sewerage schemes. Out of the expenditure under water supply schemes, 48.29 per cent was on rural water supply. This can be seen in Table 9.19

9.48 The number of towns having protected water supply remained at 34 during 86-87, same as that of 85-86. There were 14 schemes under implementation of which 9 were original schemes and 5 augmentation schemes. During the year under review no scheme was completed. In the case of rural water supply, there were 1691 schemes in operation during 1986-87. During the year, 80 schemes were completed. As on 31-3-1987 six problem villages were fully covered and 1158 problem villages were partially covered. The relevant data (district wise) are presented in Table 9.20. The rural population covered increased from 94.29 lakhs in 1985-86 to 96.5 lakhs in 1986-87.

TABLE 9.19

Expenditure on Sewerage and Water Supply

(Rs. in lakhs)

Year	Urban Water Supply Schemes	Rural Water Supply Schemes	Sewerage/ Drainage Schemes	Grand Total
(1)	(2)	(3)	(4)	(5)
1980-81	1369.47	745.42	140.10	2254.99
1981-82	1389.22	1249.42	192.94	2831.58
1982-83	1171.02	1701.65	216.37	3089.04
1983-84	1581.71	4396.15	317.87	6292.73
1984-85	1569.04	1649.28	261.73	3480.05
1985-86	2598.11	1628.42	254.43	4480.96
1986-87 (Provisional)	1857.72	1733.73	396.02	3987.47
1987-88 (Anticipated)	2010.00	3628.98	675.59	6312.57

TABLE 9.20

Population covered and Number of Schemes in operation under Urban and Rural Water Supply Schemes

District	Urban water supply No. of towns having protected Water supply		Percentage of urban population covered		Rural Water supply Scheme No. of schemes in operation by schemes completed during	
	1983-86	1986-87	1985-86	1986-87	1986-87	1986-87
	(2)	(3)	(4)	(5)	(6)	(7)
Trivandrum	3	3	84	84	156	11
Quilon	2	2	63	63	124	2
Pathanamthitta	1	1	..	..	8	1
Alleppey	4	4	85	85	166	..
Kottayam	4	4	76	76	162	6
Idukki	..	..	..	..	76	3
Ernakulam	5	5	83	85	212	10
Trichur	6	6	75	75	186	15
Palghat	2	2	62	62	167	5
Malappuram	2	2	57	57	133	6
Kozhikode	2	2	71	71	111	8
Wynad	..	..	..	..	13	..
Cannanore	2	2	59	60	166	4
Kasaragod	1	1	..	..	11	9
Total	34	34	..	..	1691	80

*Urban Development*

9.49 The various urban development schemes in the State are implemented by the departments of Town Planning, Municipal Administration, three City Corporations, nine Development Authorities and 42 Municipalities. The Kerala Urban Development Finance Corporation is providing financial assistance by way of loans and advances to urban local bodies for their development schemes.

9.50 The department of Town Planning is mainly engaged in the preparation of development plans for urban and rural areas, for fast developing regions and preparation of spatial development plans. During 1986-87 the department prepared 7 detailed town planning schemes, 2 project reports for the integrated development of small and medium towns, 28 project reports for environmental improvement of slums. Besides it prepared 33 lay out plans for local bodies, approved 121 factory sites and cleared 1924 building plans. During 1986-87 the department provided Rs. 9.08 lakhs towards establishment charges, Rs. 6.43 lakhs as grant-in-aid and Rs. 5 lakhs as loans to 7 Development Authorities viz. Trivandrum, Quilon, Kottayam, Palghat, Calicut, Trichur and Idukki. During the same period Rs. 10 lakhs as grant-in-aid was provided to municipalities and township committees of Malappuram, Chalakudy, Punalur, Kasargod and Thiruvalla. The department also provided loans amounting Rs. 2.30 lakhs to Guruvayur Township Committee, Rs. 3 lakhs to Punalur Municipality and Rs. 4.70 lakhs to Thiruvalla Municipality for implementing town planning schemes during 1986-87. The expenditure of the department increased from Rs. 80.51 lakhs in 1985-86 to Rs. 89.14 lakhs in 1986-87.

9.51 The department of municipalities implemented three schemes viz. non remunerative Town Improvement Scheme, Integrated Development of Small and Medium Towns and Environmental Improvement of Slums. Under the non remunerative town improvement scheme 5 projects were sanctioned during 1986-87 for which an expenditure of Rs. 7 lakhs was incurred. Of the 148 projects already sanctioned under the scheme 'Environmental Improvement of Slums' 129 schemes were completed by the end of March 1987. Under this scheme a population of 7032 was benefited during 1986-87. Under the scheme 'Integrated development of small and medium towns' nine towns viz. Guruvayur, Kottayam, Trichur, Tirur, Changanacherry, Kayamkulam, Badagara, Tellicherry and Malappuram were already selected for central assistance. The central assistance incurred during the period 1985-87 amounted to Rs. 112.25 lakhs.

9.52 Kerala Urban Development Finance Corporation upto 31-3-1986 assisted 384 projects/schemes

of the various urban bodies of which 304 projects were completed. During the period April 1986 to March 1987 the corporation has assisted 33 projects of which 11 were completed. The expenditure of the Corporation upto 31-3-1986 amounted to Rs. 27.26 crores. An amount of Rs. 2.58 crores was disbursed during 1986-87.

9.53 The Trivandrum Development Authority has acquired 11 hectares of land in Medical College, Vellar, Palayam and Kesavadasapuram as a part of implementing the sanctioned DTP schemes. The Phase II of the Medical College commercial complex is nearing completion and an amount of Rs. 13.5 lakhs was expended during 1986-87. The construction of the tourist resort at Vellar which is part of the first stage of the development of Vellar subcentre was completed during the year under review. As an initial step towards the implementation of the sub centre development project at Palayam, 60.39 ares of land has been acquired. During 1986-87 also the Authority continued the housing loan scheme for EWS and disbursed an amount of Rs. 33.96 lakhs which had benefited 420 beneficiaries. At the same time two housing loan schemes for weaker sections and for middle income and higher income groups costing Rs. 87.41 lakhs were started with assistance from HUDCO.

9.54 The Greater Cochin Development Authority has 28 detailed Town Planning schemes under implementation for which 250 hectares of land has been acquired and developed. The authority has so far distributed 1200 residential plots to different sections of the society. Of the total number of 2196 houses already constructed 500 were provided to economically weaker sections, 824 to low income groups, 510 for middle income groups and only 362 to higher income groups. In addition to this for rehabilitating slum dwellers 450 houses were constructed in four localities. Under the cash loan scheme, loans were disbursed for the construction of 13245 houses. Of these 11400 were for EWs, 950 for LIGs, 795 for MIGs and 100 for HIGs. Under the Cochin Marine Drive Scheme the authority has constructed two units of residential blocks with 204 housing units and the first phase of commercial complex is nearing completion.

9.55 The Calicut Development Authority during 1986-87 has acquired land worth Rs. 19.98 lakhs towards construction of a road connecting Kallai Road and Railway station road and also land to the extent of 10.66 hectares costing Rs. 70.36 lakhs for the "Jawahar Nagar" housing colony. During the same period for establishing commercial complex 0.11 hectare of land at a cost of Rs. 3.16 lakhs was also acquired.

## SPECIAL PROGRAMMES FOR THE WEAKER SECTIONS

The State's development strategy has been laying great emphasis on poverty alleviation programmes. Under IRD Programme, the highest average investment per family viz. Rs. 6110 was achieved during the first nine months of 1987-88. Another notable achievement was generation of 128.04 lakh man days of employment under NREP and RLEGP. Further, 367 acres of land was distributed to the landless during the first nine months of 1987-88.

*Integrated Rural Development Programme (IRDP)*

During the first nine months of 1987-88 under IRD Programme, 53,676 old families and 27,462 new families were assisted. The per family investment reported for the period is Rs. 3782 for old families and Rs. 6110 for new families. Among the families assisted a little over 30% constitute SC/ST beneficiaries.

10.2 The performance of IRDP during 1985-86 and 1986-87 is given in Table 10.1. The coverage of families in 1986-87 is more than double the coverage in 1985-86. While the achievement in 1985-86 was below target, the achievement in 86-87 exceeded the target. (Comparatively low coverage in 1985-86 was due to late start of the Programme). During 1986-87, 50,375 new families were assisted with an average investment of Rs. 5713 which was the highest average investment per family in India during that year. The average second dose of assistance extended to 93,024 old families was Rs. 3572 which was close to the all India average of Rs. 3585. The coverage of SC/ST families (32.3%) and women beneficiaries (31.3%) were also appreciable during 1986-87.

10.3 Though in terms of achievement of targets, IRDP has been presenting a good picture, the performance is not very impressive with regard to attainment of objectives. The second round of Concurrent Evaluation for the period January 1987 to March 1987 reports a 14% success rate (percentage of assisted families enabled to cross the poverty line of Rs. 6400) for Kerala against the national achievement of 12%. The Concurrent Evaluation is also critical of the delay in acquisition of assets once the scheme is approved.

10.4 The State has taken measures for intensive follow up of the programme by field level staff. With the establishment of KERAMS (Kerala Rural Development and Marketing Society), the difficulties the IRDP beneficiaries have been facing in the marketing of products are expected to be overcome. With comparatively high investment per family and close follow up, the Programme is expected to achieve a higher success rate during 1987-88.

*National Rural Employment Programme (NREP)*

10.5 NRE Programme generated 63.99 lakh mandays of employment during the first nine months of 1987-88. During the period 5813 group houses and 408.78 km. of roads were completed under the programme. The expenditure reported is Rs. 1892.85 lakhs for the nine months.

10.6 In terms of both physical and financial achievements the performance of NREP showed improvement in 1986-87 compared to that in the previous year (See Table 10.1). During 1986-87, 9544 group houses and 616 roads (1037.92 km) were completed against 2301 group houses and 586 roads (950 km.) in 1985-86.

10.7 The Programme Evaluation Organisation of the Planning Commission which conducted a study of NREP in all 11 States including Kerala, has appreciated the consistent achievement of employment generation targets under NREP. It has recommended scientific and systematic planning of projects and active involvement of Panchayats in the formulation and implementation of projects.

*Rural Landless Employment Guarantee Programme (RLEGP)*

10.8 During 1987-88, upto 31-12-1987, under RLEGP, 64.05 lakh mandays of employment were generated. The major physical achievements during this period were the completion of 8864 group houses and 311.62 km. of roads. A sum of Rs. 1908.20 lakhs has been expended till the end of December 1987.

10.9 The comparative performance of RLEGP during 1985-86 and 1986-87 is given in Table 10.1. In terms of expenditure, mandays generated and assets created 1986-87 registered considerable improvement over 1985-86. Construction of 14,888 houses, 278 new roads (555.36 Km), 3322 sanitary latrines and improvement to 17 irrigation canals were the important achievements during 1986-87.

*People's Action for Development—Kerala (PAD—K)*

10.10 People's Action for Development (Kerala) an organisation under the Rural Development Department, started functioning in April 1986 with the objective of encouraging the involvement of voluntary organisations in the State in rural development activities. It helps voluntary organisations to formulate projects according to the guidelines issued by the Council for Advancement of People's Action and Rural Technology (CAPART) for financial assistance.

10.11 During 1986-87, PAD (K) processed and forwarded 72 projects costing Rs. 4.17 crores to CAPART for approval and financial assistance. CAPART has sanctioned 13 of them so far. Most of them are Awareness Generation Camps and Sanitation Projects. The PAD (K) organised an orientation camp for voluntary organisations for the formulation of CAPART Projects, in November, 1987.

*Training of Rural Youth for Self Employment (TRYSEM)*

10.12 Compared to 1985-86, the year 1986-87 registered improvement in the number of youth trained and number settled. Out of the 4835 persons trained during the year, 1834 were settled in self employment and 1400 in wage employment. Out of 3254 employed, 61% were women and 33% belonged to SC/ST.

10.13 During 1987-88, as on 31-12-1987, a total of 4211 youth had completed training, of which 65% were women. From the trained 2514 were settled of which women constituted 68%.

10.14 There is always a lag between the number trained and number settled. Willingness and ability to set up self employment ventures immediately are not observed in all youth trained. It is also not easy to identify youth with aptitude in some trade, from the identified list of proposed beneficiaries.

10.15 Towards the end of 1986-87 two schemes were sanctioned for strengthening the TRYSEM infrastructure. Accordingly, 16 Block level Training-cum-Service Centres for production of processed food items are being established at a cost of Rs. 15 lakhs. Another scheme for 3 peripatetic training teams for training IRDP/TRYSEM trainees, at a cost of Rs. 6.28 lakhs, was also approved towards the end of 1986-87.

*Development of Women and Children in Rural Areas (DW CRA)*

10.16 During 1986-87, under DW CRA programme, 255 women groups were organised in Palghat,

41 women groups in Wayanad and 100 women groups in Idukki. But assistance could be rendered to only 56 groups in Palghat and 38 groups in Wayanad, helping a total of 1206 beneficiaries.

10.17 Efficient running of enterprises and finding out markets are problems for some of the groups. The establishment of KERAMS is expected to ease the marketing problems of DW CRA groups to a large extent.

*Small and Marginal Farmers' Development Programme*

10.18 The financial allotment for Small and Marginal Farmers' Development Programme share of both Centre and State, was reduced to Rs. 398.64 lakhs in 1987-88 against Rs. 755 lakhs in previous years. A sum of Rs. 212.81 lakhs has been distributed as subsidy till the end of 1987 against Rs. 636.98 lakhs distributed during 1986-87. On the physical side, 2,13,725 minikits and 22,393 pumpsets were distributed and 8693 wells were constructed during 1986-87.

TABLE 10.1

*Physical and Financial Achievement under Rural Development Programmes (1985-86 and 1986-87)*

Programme	Unit	Achievement	
		1985-86	1986-87
<b>I. (a) I.R.D.P.</b>			
(i) Families assisted	No.	71376	143399
(ii) SC/ST families assisted	"	24854	46387
(iii) Subsidy adjusted	Rs. in lakhs	775.28	2010.97
(iv) Loan Disbursed	"	1677.23	4189.60
<b>(b) TRYSEM</b>			
(i) Persons Trained	No.	3717	4835
(ii) SC/ST persons trained	"	1264	1592
(iii) Women trained	"	2526	3089
(iv) Persons settled out of trained	"	2201	3254
(v) SC/ST persons settled out of trained	"	504	1078
(vi) Women settled out of trained	"	1250	1983
<b>(c) DW CRA</b>			
(i) Women groups organised	No.	83	396
(ii) Women groups functioning	"	154	550
<b>II. NREP</b>			
(i) Total Expenditure	Rs. in lakhs	1896.52	2782.09
(ii) Expenditure for SC/ST	"	708.92	1170.06
(iii) Mandays generated	lakhs	72.34	105.32
(iv) Mandays generated for SC/ST	"	27.34	44.05
(v) Foodgrains utilised	M.T.	24178.236	36553.48

Programme	Unit	Achievement	
		1985-86	1986-87
<b>III. RLEGP</b>			
(i) Total Expenditure (including value of Foodgrains)	Rs. in lakhs	2096.61	3263.48
(ii) Expenditure for SC/ST	"	908.23	1308.75
(iii) Mandays generated	Lakhs	77.62	113.72
(iv) Mandays generated for SC/ST	"	33.74	52.93
(v) Foodgrains utilised	M.T.	21810.918	59123.49
<b>IV. Scheme for Small and Marginal Farmers</b>			
(i) Amount of subsidy disbursed	Rs. lakhs	552.28	636.98
(ii) Small and Marginal Farmers assisted	No.	201046	344593
(iii) SC/ST Farmers assisted	No.	18395	36292

Source: Rural Development Commissionerate.

#### Land to the Landless

10.19 The extent of land declared surplus as on 30-11-1987 stood at 1,26,195 acres. Out of this 89,587 acres have been taken possession of by Government and 36,608 acres remain to be taken over. Excluding the land covered by stay orders, disputes etc. the land that remains to be taken over is 1198 acres. More than 67% of this is in two districts of Palghat and Malappuram.

10.20 Out of 89,587 acres of land taken over, 59,651 acres have been distributed, 19,959 acres are reserved for public purposes and 9977 acres are left for distribution. Excluding the area covered by stay, disputes, etc., 1202 acres of land is available for distribution. The district-wise availability varies from 4 acres in Trivandrum to 390 acres in Palghat. Of the 59,651 acres distributed 23,236 acres of land (38.95%) was given to the SC (49,818 beneficiaries) 4938 acres of land (8.28%) was given to the ST (6659 beneficiaries) and 31,477 acres of land (52.77%) was given to others (61,926 beneficiaries). See Appendix 10.3.

10.21 Annual target for distribution of surplus land is fixed by Government. During 1985-86 against the target of 1500 acres, 1462 acres were distributed. In 1986-87, the achievement was 941 acres against the target of 1000 acres. The target fixed for 1987-88 is 988 acres while the achievement till 31-12-1987 is 367 acres.

#### Development Programmes of Panchayats

10.22 Panchayats undertake a number of development and welfare activities. Construction of Community Halls/Kalyanamandapam, Mini Stadia, burial grounds and provision of environmental amenities such as drinking water and sanitation facilities, electrification of houses, installation of TVs and radios and improvement of link roads are the important schemes implemented with Government grant. Following are the main achievements under Special Component Plan and Tribal Sub Plan during 1986-87.

1. Installation of 20 TV Sets.
2. Wiring of 1047 houses.
3. Construction of 461 ESP Type latrines.
4. Improvement of 9 roads.
5. Establishment of 3 burial grounds.
6. Extension of 3 pipe lines, construction of 2 bore-wells and renovation of one well.
7. Construction of 1 bathing ghat, 2 TV Stalls, 1 radio Kiosk and 1 public latrine.

Paucity of fund affected the development activities of local bodies. It is expected that development activities will gain momentum once the elected bodies start functioning.

#### Rural Development Board

10.23 The Kerala State Rural Development Board is implementing Remunerative Development Schemes in rural areas on the specific request of the Panchayats. The Board has so far completed 427 schemes and 50 schemes costing Rs. 461 lakhs are under different stages of implementation. The funds for undertaking remunerative construction activities are raised by floating debentures.

#### Social Security Welfare and Nutrition

10.24 The successive State Governments have introduced several welfare measures and with the result the State have now got a large number of welfare schemes in the form of pensions for the old, destitutes, handicapped, widows, agricultural workers, unemployment allowance etc. An attempt is made below to briefly bring out the major achievements under social security and welfare sector during 1987.

#### Welfare of Women and Children

##### Pre-school Feeding

10.25 Mal-nutrition and under nourishment are the two basic reasons for the ill health of children and women among the poor strata of the society. In order to combat mal-nutrition, the State Government implemented several nutrition programmes including Inte-

grated Child Development Services, Special Nutrition Programmes in Urban areas, Mid-day meal programme in schools, applied Nutrition programme and composite programme for women and pre-school children. ICDS is a package programme which provides feeding, immunisation, nutrition, health care, referral services, nutrition, education and pre-school education. The number of feeding centres increased from 8100 in 1985-86 to 8272 in 1986-87 and beneficiaries increased from 6,10,993 to 7,82,443 during the period. The ANP and CPWP Programmes together benefited 2,29,717 persons through a net work of 3902 centres. During 1985-86 the I.H.P.P. Programme benefited 6,13,120 women and 11,44,859 children which increased to 5,89,579 mothers and 9,11,158 children in 1986-87. The number of beneficiaries and feeding centres under all programmes is given in table 10.2.

#### School feeding

10.26 Under the Mid-day meals programmes, 19 lakh L.P. students were benefited of which 2,93,557 were scheduled caste and 28128 are scheduled tribe students. The expenditure towards this programme increased from Rs. 3.94 crores in 1985-86 to Rs. 14.37 crores in 1986-87. From 1987 June onwards the mid-day meals programme has been extended to U.P. school children also and the present coverage is about 30 lakh children of L.P. and U.P. standards. The anticipated expenditure is about 30 crores during 1987-88.

TABLE 10.3

#### Feeding Centres-Beneficiaries under different Feeding Programmes

Name of programme	No. of centres		No. of beneficiaries (in lakhs)	
	1985-86	1986-87	1985-86	1986-87
Special Nutrition Programme	472	420	0.35	0.40
Integrated Child Development Service	8100	8272	6.11	7.82
School Meals Programme	8100 <sup>a</sup>	8796	19.04	19.04
Applied Nutrition Programme	2213	1985	1.10	0.97
Composite Programme for Women and Pre-school Children	1798	1790	1.36	1.28

#### Scheme for the Handicapped

10.27 There are several schemes implemented for the welfare of handicapped and the achievements briefly are presented below.

TABLE 10.4

#### Welfare programmes for the Handicapped

Name of scheme	Year of starting	No. of beneficiaries		Expenditure (in Rs.)	
		1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)
1. Home for Mentally Deficient Children—					
Trivandrum	1963	60	52		
Calicut	1976				
2. Custodial care Homes		..	10		
3. Care Home for Disabled children					
Quilon	1960	87	88	10,85,296	12,63,921
Alleppey	1982				
Trichur	1960				
Tellicherry	1961				
4. Home for physically Handicapped—					
Trivandrum	1976	91	95	..	..
Alleppey	1962				
Ernakulam	1980				
Palghat	1962				
Calicut	1980				
5. Self employment programme for Disabled	1972	200	200	100000	100000
6. Pre-matric scholarships for the physically handicapped	1980	2393	8503	994325	339445
7. Scholarship for mentally retarded	1979	172	219	112020	134130

*Pension and other social security schemes*

10.28 There are several schemes implemented for the aged, widows etc. and the achievements are presented in Table 10.5.

TABLE 10.5  
*Social Security and Pension Scheme*

Name of the scheme	Rate of pension (Assistance in Rs.)	Amount spent		No. of beneficiaries	
		1985-86 (Rs. in lakhs)	1986-87 (Rs. in lakhs)	1985-86	1986-87
1. Oldage Destitutes, Nxidowed, divorced destitutes	Rs. 55 p.m.	1077	1071	45951	55588
2. Special pension scheme for the physically handicapped	Rs. 75 p.m.	306.631	330	43145	52821
3. Pension to sportsmen	Rs. 100	72.00	2.88	234	67
	„ Rs. 150	2.09	..	..	86
	.. Rs. 200	..	..	..	22
4. Agricultural workers pension scheme	Rs. 45 p.m.	1801.00	1641.63	177821	261584
		3.0	2.60	285	56
5. Tree climbers welfare scheme	Rs. 5000 per person	11.25	..	..	..
6. Cashew workers welfare scheme	Rs. 200 to 5000	16.41	18.13	20964	14990
7. Coir workers welfare scheme	Rs. 200 to Rs. 5000	0.80	1.90	70	115
8. Kerala Handloom workers welfare scheme	Rs. 200 to Rs. 5000	..	1.00	..	180
9. Kerala construction workers and quarry workers	Rs. 5000 per person	..	0.75	..	15
10. Pension to circus stars	Rs. 150 p.m.	3.25	3.67	104	204
11. Unemployment assistance scheme	Rs.50 p.m.	1012308	835.08	200803	255683
12. Self employment scheme	Rs. 600 per person	174.89	159.71	29149	26619
13. Welfare fund for journalists	Rs. 300 to Rs. 500	3.00	4.42	137	154
14. Welfare fund for cine artists	Rs. 150 to Rs. 300	2.12	2.92	91	85

*Welfare of Scheduled Castes Scheduled Tribes and Other Backward Classes*

*Education*

10.29 The total enrolment of Scheduled Caste students in schools increased from 651648 in 1985-86 to 652139 during 1986-87. This accounted for 11.44 per cent of the school enrolment. The scheduled tribe students enrolment stood at 52672. In the case of enrolment in Colleges it decreased from 24433 in 1985-85 to 24098 in 1985-86.

10.30 During 1986-87 pre-matric scholarships were distributed to 512261 scheduled caste students which accounted for 78.55 per cent of the total S.C. students. An expenditure of Rs. 361.606 lakhs was incurred on this account. Post-matric scholarships were issued to 32448 students incurring an expenditure of Rs. 527.783

lakhs. Other welfare measures for Scheduled Castes included distribution of clothes worth Rs. 2.52 lakhs to 3597 students hostel accommodation for the pre-matric and post-matric students were provided to scheduled caste students as in the previous years. Pre-Examination Training Centres, Balawadi cum feeding centres, nursery schools, Book Banks etc. are some other Welfare schemes for Scheduled Castes.

10.31 The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes implemented several schemes during 1986-87 for the socio-economic development of this particular section. The Corporation disbursed Rs. 219.05 lakhs under the various programmes and had benefited 10,393 persons during 1986-87. Of the total amount disbursed the bulk of it was under margin money scheme for self employment and housing schemes. In addition, the Corporation arranged Rs. 333.27 lakhs from the banks for the self employment programme. An analysis of the progra-

mmes of the Corporation would show that since inception the schemes of the Corporation benefited 72066 persons and the total financial commitment amounted to Rs. 2580.65 lakhs. The scheme-wise achievement till 31-3-1987 is as shown below:—

TABLE 10.6

Name of Scheme	Achievement till 31-3-1981	
	Physical	Financial
1. Agiruchutral Land purchase	6004	416.46
2. Foreign Employment Scheme	1982	165.84
3. Margin Money scheme for Self Employment	26934	449.48
4. Housing Scheme	27172	1231.56
5. Assistance to Co-operative Societies	10	47.92
6. Loan for purchase of machinery	5	0.42
7. Loan for starting—industries in Mini Industrial Estates	20	2.53
8. Sewing machine scheme	4908	73.51
9. Old Margin Money Scheme	622	2.77
10. Autorikshaw, hire Purchase scheme	232	28.43
11. Small Business, Trade, Industry Scheme	4028	160.96
12. Training in autorikshaw driving	149	0.77
Total	7206	2580.65

10.32 The financial and physical achievement under various programmes of the Corporation during 1986-87 and 1987-88 are presented in the following table 10.7.

TABLE 10.7

Sl. No.	Name of Scheme	No. of beneficiaries	Financial Achievement (Rs. lakhs)	No. of Beneficiaries	Financial Achievement (Rs. lakhs)
1.	Agricultural Land Purchase Scheme	434	59.19	2	0.24
2.	Foreign Employment	152	15.20	151	15.07
3.	Margin Money Schemes for Self Employment (including Distribution of Autorickshaws)	6917	121.34	8025	148.19
4.	Housing Scheme (II, IV, V)	3870	165.84	2215	55.55
	Total	11373	361.57	10393	219.05

10.33 Of the total expenditure the Corporation incurred an amount of Rs. 109.72 lakhs as subsidy and Rs. 38.47 lakhs as margin money deposit during 1986-87. As regards housing, the Corporation assisted 27172 families and incurred an expenditure of Rs. 1231.56 lakhs as subsidy and loan. During the year under review 2215 houses were completed.

#### SC/S.T. Representation in Government Service

10.34 The number of SC/ST Gazetted Officers and Non-Gazetted staff in Government service increased considerably from 1981 to 1986 as a result of the policy measures taken by the Government. Out of the 20274 Gazetted Officers in the State as on 1-1-1986, 1750 were SC/ST Officers. In the Non-gazetted cadre (class 3) out of total 242634 posts 24803 were SC/STs which accounted for 10.22 per cent of the total. In the last grade service there were 6245 SC/STs post against the total of 45821 posts.

#### SC/ST Beneficiaries under Land Reforms

10.35 Under the Land Reform measures a total of 181582.77 hectares of land was assigned to 526456 families upto 1986-87. Of this 29633.71 hectares was assigned to 106392 SC/ST families. The land assigned to SC/ST families constituted 16.32 per cent of total land. Among the benefitted families 20.21 per cent belonged to SC/STs. Considerable increase is seen in the extent of land and number of families assisted during 1986-87. In the case of distribution of surplus land, of the total 54750 hectares of land distributed upto 1986-87 to 118898 beneficiaries 28216 hectares of land was distributed to 56640 SC/ST beneficiaries. The district-wise distribution of puramboke land and surplus land can be seen in Appendix 10.4 & 10.5.

TABLE 10.8

#### Achievement of the Scheduled Caste Department under Major Schemes

Name of the Scheme	Expenditure (Rs. lakhs)	No. of persons benefited
1. Pre-matric Scholarship for SC	361.60	51221
2. Pre-matric Scholarship for OBC	127.34	16557
3. Post matric studies for SCs	527.78	32441
4. Post matric studies for OBC	136.00	4131
5. Boarding grant for SCs	3.88	37
6. Boarding grant for OBC	0.57	40
7. Supply of cloths	2.52	3591
8. Prematric hostel	57.91	
9. Post matric hostel	25.50	
10. Girls hostel	2.56	



CHAPTER 11

INSTITUTIONAL FINANCE

As agencies which mobilise substantial portion of the Community's Savings, public sector institutions like the Commercial banks, Life Insurance Corporation of India (LIC), 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), Housing and Urban Development Corporation (HUDCO), to mention the major institutions, have an important role to play in the balanced regional development of the Country.

11.2 There has been a phenomenal growth in the deposits of the public sector banks since their nationalisation in 1969. From a level of Rs. 3897 crores in 1969, the deposits increased to Rs. 97663 crores by the end of June 1987. However, in the disbursement of credit, the state-wise picture shows that there have been wide variations between States as the following table would bring out:

TABLE 11.1  
Deposits and Credit of the Public Sector Banks (as at June end)

States	(Rs. crores)					
	Deposits		Credit		Credit Deposit Ratio %	
	1986	1987	1986	1987	1969	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Andhra Pradesh	121	5596	122	4296	100.8	76.8
2. Assam	33	1156	13	596	39.4	51.6
3. Bihar	169	1895	52	1709	30.8	34.9
4. Gujarat	401	6581	195	3612	48.6	54.9
5. Haryana	49	2027	23	1221	46.9	60.2
6. Karnataka	188	1628	143	4195	76.1	90.6
7. Kerala	117	3369	77	2152	65.8	63.9
8. Madhya Pradesh	107	3859	63	2324	58.9	60.2
9. Maharashtra	903	16956	911	13183	100.9	77.7
10. Orissa	29	1227	15	1008	51.7	82.2
11. Punjab	185	5758	50	2437	27.0	42.3
12. Rajasthan	74	2447	38	1523	51.4	62.2
13. Tamil Nadu	233	5821	311	5615	133.5	96.5
14. Uttar Pradesh	337	1089	154	4512	45.7	43.9
15. West Bengal	456	9549	526	4557	115.4	47.7
Total—Major States	3402	81158	2693	52940	79.2	62.9
All India	3897	97663	3835	59410	77.9	60.8

It will be seen that States like Andhra Pradesh, Karnataka, Maharashtra, Orissa and Tamil Nadu had more favourable credit-deposit ratio as compared with States like Assam, Bihar, Kerala, Uttar Pradesh and West Bengal. Many of these States are also relatively more backward. For Kerala the credit deposit ratio has been coming down over the years from 65.8 per cent in 1969 to 63.9 per cent in 1986. This ratio in respect of the State Bank of India, has been even lower, being only 54 per cent. For a State like Tamil Nadu the credit-deposit ratio is as high as 96.5 per cent. The average ratio for the 15 major States would work out to 62.9

per cent. As far as Kerala is concerned, considering the industrial backwardness of the State and the chronic unemployment situation, the resources of the banking sector could be drawn upon in a large measure for which the banks also have to put in their initiative. Up to the end of June 1987 the credit extended by commercial banks for various development activities in the State amounted to Rs. 2152 crores, which would constitute only about 3.6 per cent of the aggregate credit disbursement of all the nationalised banks. The State wise credit deposit ratio since 1969 is given in Appendix 11.1.

11.3 As far as the All India financial institutions are concerned, as at the end of March 1986/1987 a total amount of Rs. 33306 crores were disbursed to the different States. During 1969-70, this amount was only Rs. 123 crores. Thus during the last 20 years there has been a substantial increase in the resources deployed though the major public sector financial institutions in the country for various developmental activities undertaken in different states. The State-wise position in respect of the different institutions is given in Appendix 11.3. The following table summarises the position.

TABLE 11.2  
(Rs. in crores)

States	Total assistance extended upto March 1986	
	Amount	% to total
<i>Major States</i>		
1. Andhra Pradesh	2713	8.15
2. Assam	351	1.05
3. Bihar	1227	3.68
4. Gujarat	2401	7.21
5. Haryana	1336	4.01
6. Karnataka	2362	7.09
7. Kerala	1199	3.60
8. Madhya Pradesh	1751	5.26
9. Maharashtra	4912	14.75
10. Orissa	1051	3.15

11. Punjab	1584	4.76
12. Rajasthan	1713	5.14
13. Tamil Nadu	2083	6.25
14. Uttar Pradesh	3511	10.54
15. West Bengal	1605	4.82
Total - Major States	29799	89.46
All India	33306	100.00

It will be seen that economically backward States have, on the whole, received proportionately much lower assistance as compared with the more advanced States. The share accruing to States like Assam (1.05 per cent), Kerala (3.6 per cent), Orissa (3.15 per cent) would illustrate this point. Industrially advanced States like Maharashtra and Gujarat have been able to attract sizeable share of the institutional resources. However, institution-wise, there have been variations. This is dependent on the nature of the schemes and their funding by different institutions.

11.4 For Kerala while the overall share of institutional finances was 3.6 per cent, the share of HUDCO and LIC assistance was higher, being 7.47 per cent and 5.16 per cent respectively. However, in respect of assistance given by other institutions, the share of Kerala has been much lower - IDBI (3.32 per cent), IFCI (3.10 per cent), ICICI (1.63 per cent), NABARD (2.98 per cent) and NCDC (2.59 per cent). It should be possible for the State to avail of such assistance on a larger scale for which on the one hand the State Government should be able to formulate sufficient number of viable schemes and on the other these financial institutions should take a more positive approach in financing schemes in economically backward States.

**APPENDIX**  
**STATISTICAL TABLES**



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## APPENDIX 2.1

## Estimate of National Income

(Rs. in crores)

Item	At current prices			At constant (1970-71) prices			
	1970-71	1983-84	1984-85	1985-86	1983-84	1984-85	1985-86
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. National product</b>							
1.1 Gross National Product at Factor cost	36452	171713	189417 (10.3)	213553 (12.7)	59260	61427 (3.7)	64583 (5.1)
1.2 Net National product at factor cost (National Income)	34235	158265	174018 (10.0)	195707 (12.5)	55300	57243 (3.5)	60143 (5.1)
1.3 Gross National product at Market prices	39979	193070	212914 (10.3)	242080 (13.7)	65212	67582 (3.6)	71869 (6.3)
1.4 Net National product at Market prices	37762	179622	197515 (10.0)	224234 (13.5)	61252	63398 (3.5)	67429 (6.4)
<b>2. Domestic product</b>							
2.1 Gross Domestic product at factor cost	36736	172704	190888 (10.5)	215024 (12.6)	59541	61838 (3.9)	64988 (5.1)
2.2 Net Domestic product at factor cost	34519	159256	175489 (10.2)	197178 (12.4)	55581	57654 (3.7)	60518 (5.0)
2.3 Gross Domestic product at Market prices	40263	191061	214385 (10.5)	243551 (13.6)	65493	67993 (3.8)	72274 (6.3)
2.4 Net Domestic product at Market prices	38046	180613	198986 (10.2)	225705 (13.4)	61533	63809 (3.7)	67034 (6.3)
<b>3. Per capita Income</b>							
3.1 Per capita Net National product at factor cost(Rs.)	632.8	2186.0	2354.8 (7.7)	2595.6 (10.2)	763.8	774.6 (1.4)	797.7 (3.9)

N.B.—Figures with in brackets indicates percentage change over previous year.

Source: Central Statistical Organisation.

## APPENDIX 2.2

## Net National Product at Factor Cost by Industry of Origin

(Rs. Crores)

Sector	At Current Prices				1985-86	PCP	At constant prices			1985-86	PCP
	1970-71	1983-84	1984-85	PCP			1983-84	1984-85	PCP		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Agriculture	16354	56444	57331	1.6	60721	5.9	21461	21218	-1.1	21450	1.1
2. Forestry and Logging	387	1327	1522	14.7	1745	14.7	273	280	2.6	288	2.9
3. Fishing	229	1191	1460	22.6	1666	14.1	339	363	7.1	381	5.0
4. Mining and Quarrying	327	4232	4861	14.9	5381	10.7	652	692	6.1	728	5.2
4. Sub Total Primary	17307	63194	65174	3.1	69513	6.6	22725	22553	-0.7	22847	1.3
5. Manufacturing	4619	24774	27960	12.9	32206	15.2	8229	8673	5.4	9270	6.9
6. Electricity, Gas and Water supply	318	2546	3072	20.7	3894	26.8	796	892	12.1	969	8.6
7. Construction	1853	8140	9332	17.1	11041	15.8	2447	2526	3.2	2647	4.8
7. Sub Total—Secondary	6790	25460	40564	14.39	47141	16.21	11472	12091	5.4	12886	6.6
8. Trade, Hotels and Restaurants	3880	24553	27388	11.5	30562	11.6	7025	7324	4.3	7683	4.9
9. Transport, Storage and Communication	1574	8910	10325	15.9	12280	18.9	3483	3743	7.5	4061	8.5
10. Financing, insurance Real Estate and Business Services	1683	9139	11022	20.6	13075	18.6	3444	3712	7.8	4010	8.0
11. Community, Social and Personal Services	3285	18000	21016	16.8	24607	17.1	7432	8231	10.8	9061	10.1
Sub Total Tertiary	10422	60602	69751	15.1	80524	15.44	21384	23010	7.6	24815	7.8
Total Net domestic Product at factor cost	34519	159256	175489	10.2	197178	12.4	55581	57654	3.7	60548	5.0

Note:—P.C.P.—Percentage change over previous year.

## APPENDIX 2.3

Net Domestic product of Kerala at Factor cost by Industry of origin 1980-81 to 1986-87

Sector	At current prices								At 1970-71 prices							
	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 (P)	1986-87 (Q)	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 (P)	1986-87 (Q)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
1. Agriculture	58263	129481	130114 (0.5)	151684 (14.2)	194758 (22.1)	222933 (12.6)	200969 (-10.9)	230995 (13.0)	59862	60265 (0.7)	59887 (0.6)	55538 (-7.8)	62684 (11.4)	63808 (1.8)	58787 (-8.5)	
2. Forestry and logging	1102	7034	3927 (-79.2)	9704 (59.5)	5245 (-85.0)	5919 (11.4)	7085 (16.5)	6282 (-12.8)	1028	555 (-85.2)	838 (33.8)	445 (-88.3)	383 (-16.3)	391 (2.1)	383 (-2.1)	
3. Fishing	2569	7997	6677 (-19.8)	8407 (20.6)	9442 (11.0)	9379 (-0.7)	12284 (23.6)	12652 (2.9)	2235	1933 (-15.6)	2245 (13.9)	2574 (12.8)	2334 (-10.3)	2373 (1.6)	2075 (14.4)	
4. Mining and Quarrying	96	531	701 (24.3)	768 (8.7)	807 (4.8)	910 (11.3)	1086 (16.2)	954 (-13.8)	150	162 (7.4)	213 (23.9)	149 (-43.0)	160 (6.9)	197 (18.8)	186 (-5.9)	
Sub Total Primary	62030	145043	141419 (-2.6)	170563 (17.1)	210252 (18.9)	239141 (12.1)	221424 (-8.0)	250883 (11.7)	63275	62915 (-0.6)	63153 (0.4)	58706 (-7.6)	65561 (10.5)	66769 (1.8)	61431 (-8.7)	
5. Manufacturing	15632	54524	60822 (10.4)	67238 (9.5)	74332 (9.5)	825171 (91.1)	91413 (-802.7)	101377 (9.8)	21932	22632 (3.1)	23339 (3.0)	26779 (12.8)	21715 (-23.3)	23493 (7.6)	24286 (3.3)	
6. Construction	3668	13156	17126 (23.2)	16635 (-3.0)	26060 (36.2)	25360 (-2.8)	31632 (19.8)	36611 (13.6)	5749	6225 (7.6)	4749 (-31.1)	6513 (27.1)	5472 (19.0)	6014 (9.0)	6248 (3.7)	
7. Electricity, Gas and Water Supply	1181	7824	8206 (4.7)	7695 (-6.6)	6211 (-23.9)	9830 (36.8)	11570 (15.0)	13628 (15.1)	3426	4711 (27.3)	3604 (-30.7)	3310 (-8.9)	4106 (19.4)	4823 (14.9)	5667 (14.9)	
Sub Total Secondary	20481	75504	86152 (12.4)	91568 (5.9)	106607 (14.1)	117707 (9.4)	134615 (12.6)	151616 (11.2)	31107	33568 (7.3)	31692 (-5.9)	36602 (13.4)	31293 (-17.0)	34330 (8.8)	36201 (5.2)	
8. Transport, Storage and Communication	6063	22974	25962 (11.5)	32168 (19.3)	32430 (0.8)	37567 (13.7)	44146 (14.9)	51416 (14.1)	10420	11487 (9.3)	12244 (9.9)	12469 (-2.2)	13691 (8.9)	14505 (5.6)	15350 (5.5)	
9. Trade, Hotels and Restaurants	16220	43739	44471 (1.6)	49606 (10.4)	57927 (14.2)	64980 (11.9)	63499 (-2.3)	68578 (7.4)	18216	19443 (6.3)	17942 (-8.4)	17803 (0.8)	19121 (6.9)	19695 (2.9)	20680 (4.8)	
10. Banking and Insurance	1629	11158	15384 (27.8)	19356 (20.5)	22406 (13.6)	27613 (18.9)	32003 (16.1)	38825 (15.3)	3973	4132 (3.8)	4104 (-0.7)	5183 (20.8)	5650 (8.3)	6434 (12.2)	7141 (9.9)	

Sector	At current prices								At 1970-71 prices							
	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 (P)	1986-87 (Q)	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86 (P)	1986-87 (Q)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
11. Real Estate, Ownership of Dwelling etc.	2395	5261	5370 (2.0)	5589 (3.9)	6123 (8.7)	6374 (3.9)	6635 (3.9)	7033 (5.7)	3117	3259 (4.4)	3376 (3.5)	3492 (3.3)	3598 (2.9)	3706 (2.9)	3817 (2.9)	
12. Public Administration	3712	15265	16977 (10.1)	18019 (5.8)	19838 (9.2)	25455 (22.1)	29019 (12.3)	32501 (10.7)	9857	10682 (7.7)	10779 (0.9)	11261 (4.3)	13825 (18.5)	15761 (12.3)	17967 (12.3)	
13. Other services	12894	29596	35483 (16.6)	40525 (12.4)	46367 (12.6)	52524 (11.7)	59509 (11.7)	67245 (11.5)	15733	16077 (2.1)	16333 (1.6)	16658 (2.0)	16932 (1.6)	17271 (2.0)	17616 (2.0)	
Sub Total Tertiary	42953	127993	143647 (10.9)	165263 (13.1)	184991 (10.7)	214513 (13.8)	235711 (9.0)	265598 (11.3)	61316	65080 (5.8)	65278 (0.3)	66866 (2.4)	72817 (8.2)	77372 (5.9)	82571 (6.3)	
Net State Domestic Product at Factor Cost	125464	348540	371218 (6.1)	427394 (13.1)	501850 (14.9)	571361 (12.2)	591750 (2.4)	668097 (11.4)	155698	161563 (3.6)	160153 (-0.9)	162174 (1.2)	169671 (4.4)	178471 (4.9)	180203 (1.0)	
Per capita Income	594	1377	1444 (4.6)	1633 (11.6)	1883 (13.3)	2104 (10.5)	2140 (1.7)	2371 (9.7)	615	628 (2.1)	612 (-2.6)	608 (-0.7)	625 (2.7)	646 (3.3)	639 (-1.1)	

Figures in bracket show the percentage change over the previous year.

Source : Department of Economics & statistics.

P. Provisional

Q. Quick Estimates.

## APPENDIX 2.4

## District Income of Kerala

(Rs. in lakhs)

District	At Current prices													
	1970-71	%	1980-81	%	1981-82	%	1982-83	%	1983-84	%	1984-85	%	1985-86	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Trivandrum	12741	10.1	35479	10.2	37693	10.1	43831	9.8	51499	10.3	59290	10.4	60687	10.3
2. Quilon	15263	12.1	40490	11.6	41434	11.2	48794	11.4	44819	8.9	49763	8.7	52551	8.9
3. Pathanamthitta	..	..	..	..	..	..	..	..	21030	4.2	24314	4.3	26738	4.5
4. Alleppey	12499	9.9	31172	8.9	34498	9.3	38601	9.1	36225	7.3	42012	7.4	42797	7.2
5. Kottayam	10106	8.1	24860	7.1	28157	7.5	33049	7.7	38183	7.6	41491	7.3	43408	7.3
6. Idukki	4645	3.7	17699	5.1	19424	5.2	21640	5.1	27220	5.4	28313	5.0	30912	5.3
7. Ernakulam	14232	11.3	43814	12.6	50029	13.5	56590	13.2	62973	12.5	75005	13.1	79382	13.4
8. Trichur	11858	9.5	32240	9.3	34349	9.3	39762	9.3	46484	9.3	50783	8.8	53523	9.1
9. Palghat	9623	7.7	24180	6.9	27095	7.3	30421	7.1	34733	6.9	38362	6.7	39927	6.7
10. Malappuram	8405	6.7	21935	6.3	22377	6.0	26018	6.1	28790	5.7	33388	5.8	34450	5.8
11. Kozhikode	13039	10.4	35907	10.3	28820	7.8	36470	8.5	45811	9.2	50113	8.0	46420	7.8
12. Wayanad	..	..	..	..	13257	3.6	12491	2.9	14198	2.8	18942	3.3	20383	3.4
13. Cannanore	13053	10.5	40764	11.7	34085	9.2	41727	9.8	49885	9.9	59585	10.4	39471	6.7
14. Kasaragod	..	..	..	..	..	..	..	..	..	..	..	..	21101	3.6
Kerala	125464	100	348540	100	371218	100	427394	100	501850	100	571361	100	591750	100

District	At Constant Prices													
	1980-81	%	1981-82	%	1982-83	%	1983-84	%	1984-85	%	1985-86	%		
(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)		
1. Trivandrum	16597	10.7	17214	10.7	16293	10.2	17397	10.7	18926	11.2	18866	10.6		
2. Quilon	17860	11.4	17703	11.0	17622	11.0	14445	8.9	14847	8.8	14909	8.4		
3. Pathanamthitta	..	..	..	..	..	..	6938	4.3	7329	4.3	7809	4.4		
4. Alleppey	14509	9.3	15571	9.6	15113	9.4	12338	7.6	12967	7.6	14008	7.8		
5. Kottayam	11761	7.5	12355	7.7	12419	7.8	12134	7.5	12711	7.5	13265	7.4		
6. Idukki	7095	4.6	7274	4.5	7300	4.6	7440	4.6	7134	4.2	7514	4.2		
7. Ernakulam	19666	12.6	21065	13.0	20884	13.1	21100	13.0	21642	12.8	23233	13.1		
8. Trichur	14609	9.4	15201	9.4	14959	9.3	15302	9.4	15246	9.0	17103	9.6		
9. Palghat	12068	7.7	12650	7.8	12399	7.7	12326	7.6	12800	7.5	15120	8.5		
10. Malappuram	9824	6.3	9844	6.1	9717	6.1	9236	5.7	9805	5.8	10514	5.9		
11. Kozhikode	15519	10.0	12722	7.9	13682	8.5	13706	8.5	14113	8.3	13622	7.6		
12. Wayanad	..	..	5378	3.3	4389	2.7	4667	2.9	5558	3.3	5756	3.2		
13. Cannanore	16380	10.5	14586	9.0	15376	9.6	15145	9.3	16593	9.8	11098	6.2		
14. Kasaragod	..	..	..	..	..	..	..	..	..	..	5654	3.2		
Kerala	155698	100	161563	100	160153	100	162174	100	169671	100	178471	100		

Source: Department of Economics and Statistics.

## APPENDIX 2.5

Sector-wise Distribution of Net State Domestic Product of District at Factor cost

(Rs. in lakhs)

District	At Current Prices					At Constant (1970-71) Prices			
	Year	Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Trivandrum	1980-81	12122 (34.2)	7578 (21.3)	15779 (44.5)	35479 (100.0)	5470 (33.0)	3185 (19.2)	7942 (47.8)	16597 (100.0)
	1981-82	11743	8540 (22.6)	17410 (46.2)	37693 (100)	5247 (30.5)	3531 (20.5)	9436 (49.0)	17214 (100)
	1982-83	13031 (31.2)	8956 (21.4)	19844 (47.4)	41831 (100)	4614 (28.3)	3253 (20.0)	8426 (51.7)	16293 (100)
	1983-84	18568 (36.1)	10164 (19.7)	22767 (44.2)	51499 (100.0)	4970 (28.6)	3608 (20.7)	8819 (50.7)	17397 (100)
	1984-85	20717 (34.9)	11468 (19.4)	27105 (45.7)	59290 (100.0)	5791 (30.6)	3275 (17.3)	9860 (52.1)	18926 (100)
	1985-86	17126 (28.2)	13138 (21.6)	30423 (50.2)	60687 (100.0)	4611 (24.4)	3630 (19.2)	10625 (56.4)	18866 (100)
2. Quilon	1980-81	18778 (46.4)	9201 (22.7)	12511 (30.9)	40490 (100)	8077 (45.2)	3736 (20.9)	6047 (33.9)	17860 (100)
	1981-82	17133 (41.7)	10438 (25.2)	13863 (33.5)	41434 (100)	7260 (41.0)	4046 (22.9)	6397 (36.11)	17703 (100)
	1982-83	21729 (44.5)	11174 (22.9)	15891 (32.6)	48794 (100)	7260 (42.2)	3859 (21.9)	6511 (36.9)	17622 (100)
	1983-84	19578 (43.7)	10169 (22.7)	15072 (33.6)	44819 (100)	5388 (37.3)	3582 (24.8)	5475 (37.9)	14455 (100)
	1984-85	20901 (42.0)	11411 (22.9)	18451 (35.1)	49763 (100)	5893 (39.7)	3024 (20.4)	5930 (39.9)	14847 (100)
	1985-86	20372 (38.8)	12979 (24.7)	19200 (36.5)	52551 (100)	5285 (35.4)	3318 (22.3)	6306 (42.3)	14909 (100)
3. Pathanamthitta	1983-84	7861 (37.4)	4636 (22.0)	8533 (40.6)	21030 (100)	2310 (33.3)	1630 (23.5)	2998 (43.20)	6938 (100)
	1984-85	9911 (40.8)	5141 (21.2)	9262 (38.10)	24314 (100)	2828 (38.6)	1417 (19.3)	3084 (42.1)	7329 (100)
	1985-86	10818 (40.5)	5829 (21.8)	10091 (37.7)	26738 (100)	2976 (38.2)	1552 (19.7)	3281 (42.1)	7809 (100)
4. Alleppey	1980-81	10375 (33.3)	7770 (24.9)	13027 (41.8)	31172 (100)	4974 (34.3)	3307 (22.8)	6228 (42.9)	14509 (100)
	1981-82	11294 (32.7)	8694 (25.2)	14510 (41.1)	34498 (100)	5387 (34.6)	3535 (22.7)	6649 (42.7)	15571 (100)
	1982-83	12560 (32.6)	9241 (23.9)	17800 (43.5)	38601 (100)	5210 (34.6)	3339 (22.3)	6505 (43.1)	15113 (100)
	1983-84	13453 (37.1)	8427 (23.3)	14345 (39.6)	36225 (100)	4200 (34.0)	2958 (24.0)	5180 (42.0)	12338 (100)
	1984-85	16392 (39.0)	9224 (22.0)	16396 (39.0)	42012 (100)	4800 (37.0)	2653 (20.5)	5514 (42.5)	12967 (100)
	1985-86	14651 (34.2)	10411 (24.3)	17732 (41.5)	42797 (100)	5264 (37.6)	2907 (20.8)	5837 (41.6)	14008 (100)



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5. Kottayam	1980-81	10809 (43.5)	4569 (18.4)	9482 (38.1)	24860 (100)	5212 (41.7)	1915 (16.4)	4544 (38.9)	11671 (100)
	1981-82	12211 (43.4)	5194 (18.4)	10752 (38.2)	28157 (100)	5351 (43.5)	2138 (17.3)	4866 (39.4)	12355 (100)
	1982-83	15130 (45.7)	5404 (16.4)	12515 (37.9)	33049 (100)	5568 (44.8)	1935 (15.6)	4916 (39.6)	12419 (100)
	1983-84	18505 (48.5)	6210 (16.3)	13468 (35.2)	38183 (100)	5181 (42.7)	2172 (17.9)	4791 (39.4)	12134 (100)
	1984-85	18868 (45.5)	6985 (16.8)	15638 (37.7)	41491 (100)	5568 (43.8)	1961 (15.4)	5182 (40.8)	12711 (100)
	1985-86	18156 (41.8)	8051 (18.5)	18210 (39.7)	43408 (100)	5598 (42.2)	2173 (16.4)	5494 (41.4)	13265 (100)
6. Idukki	1980-81	10182 (57.5)	4288 (24.2)	3229 (18.3)	17699 (100)	3829 (54.0)	1705 (24.0)	1561 (22.0)	7095 (100)
	1981-82	11329 (58.3)	5025 (25.9)	3070 (15.8)	19424 (100)	4041 (55.6)	1834 (25.2)	1399 (19.2)	7271 (100)
	1982-83	12784 (59.1)	5354 (24.7)	3502 (16.2)	21640 (100)	4186 (57.4)	1710 (23.4)	1404 (19.2)	7300 (100)
	1983-84	16287 (59.8)	6486 (23.8)	4447 (16.4)	27220 (100)	3674 (49.4)	2132 (28.7)	1634 (21.9)	7140 (100)
	1984-85	16807 (59.4)	7113 (25.1)	4393 (15.5)	28313 (100)	3886 (54.5)	1704 (23.9)	1544 (21.6)	7134 (100)
	1985-86	17812 (57.6)	8243 (26.7)	4857 (15.7)	30912 (100)	4018 (53.5)	1863 (24.8)	1733 (21.7)	7514 (100)
7. Ernakulam	1981-82	12799 (29.2)	15396 (34.2)	15619 (35.6)	13814 (100)	6324 (32.1)	6208 (31.6)	7134 (36.3)	19666 (100)
	1981-82	13462 (26.9)	17657 (35.5)	18910 (37.8)	50029 (100)	6609 (31.4)	6609 (31.4)	7847 (37.2)	21065 (100)
	1982-83	15941 (28.2)	18993 (33.6)	21656 (33.2)	56590 (100)	6419 (30.7)	6362 (30.5)	8103 (38.8)	20884 (100)
	1983-84	18772 (29.8)	22193 (35.2)	22008 (35.0)	62973 (100)	5839 (27.7)	7575 (35.9)	7686 (36.4)	21100 (100)
	1984-85	24169 (32)	24478 (32.6)	26358 (35.2)	75005 (100.0)	6855 (31.7)	6205 (28.7)	8582 (39.6)	21642 (100)
	1985-86	21889 (27.6)	27929 (35.2)	29554 (37.2)	79382 (100)	7296 (31.4)	6775 (29.2)	9162 (39.4)	23233 (100)
8. Trichur	1980-81	11873 (36.8)	7207 (22.4)	13160 (40.8)	32240 (100)	5295 (36.2)	2974 (20.4)	6340 (43.4)	14609 (100)
	1981-82	11682 (34.0)	8205 (23.9)	14462 (42.1)	34349 (100)	5421 (35.7)	3195 (21.0)	6585 (43.3)	15201 (100)
	1982-83	14325 (36.0)	8738 (22.0)	16699 (42.0)	39762 (100)	5399 (35.7)	3036 (22.8)	6584 (44.8)	14959 (100)
	1983-84	17496 (37.6)	10136 (21.8)	18852 (40.6)	46484 (100)	4964 (32.4)	3488 (22.8)	6850 (44.8)	15302 (100)
	1984-85	17325 (34.1)	11164 (22.0)	22294 (43.9)	50783 (100)	4688 (33.9)	2980 (19.1)	7578 (49.7)	15246 (100)
	1985-86	16319 (30.5)	12729 (23.8)	24475 (45.7)	53523 (100)	5800 (33.9)	3264 (10.1)	8039 (47.0)	17103 (100)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
9 Palghat		1980-81	10527 (43.6)	4311 (17.8)	9342 (38.6)	24180 (100)	5724 (47.4)	1809 (15.0)	4535 (37.6)	12068 (100)
		1981-82	11953 (44.1)	4939 (18.2)	10203 (37.7)	27095 (100)	6019 (47.6)	1963 (15.5)	4668 (36.9)	12605 (100)
		1982-83	13494 (44.4)	5182 (17.0)	11745 (38.6)	30421 (100)	5936 (47.9)	1817 (14.7)	4646 (37.4)	12399 (100)
		1983-84	15244 (43.9)	6143 (17.7)	13346 (38.4)	34733 (100)	5449 (44.2)	2071 (16.8)	4806 (39.0)	12326 (100)
		1984-85	16791 (31.3)	6712 (22.1)	14859 (46.6)	38362 (100)	5936 (53.3)	1818 (13.2)	5046 (35.5)	12800 (100)
		1985-86	10934 (31.3)	7729 (22.1)	16264 (46.6)	34927 (100)	7757 (51.3)	1998 (13.2)	5365 (35.5)	15120 (100)
10. Malappuram		1980-81	11082 (50.5)	1855 (8.5)	8998 (41.0)	21935 (100)	4783 (48.7)	790 (8.0)	4251 (43.3)	9824 (100)
		1981-82	10095 (45.1)	2200 (9.8)	10082 (45.1)	22377 (100)	4477 (45.5)	859 (8.7)	4508 (45.8)	9844 (100)
		1982-83	12076 (46.4)	2253 (8.6)	11689 (45.0)	26018 (100)	4453 (45.8)	753 (7.7)	4511 (46.5)	9717 (100)
		1983-84	13163 (45.7)	2910 (10.1)	12717 (44.2)	28790 (100)	3760 (40.7)	895 (9.7)	4581 (49.6)	9236 (100)
		1984-85	16089 (48.2)	3061 (9.2)	14238 (42.6)	33388 (100)	4192 (42.8)	783 (8.0)	4830 (49.2)	9805 (100)
		1985-86	15185 (44.7)	3621 (10.5)	15444 (44.8)	34450 (100)	4557 (43.8)	862 (8.2)	5095 (48.5)	10514 (100)
11 Kozhikode		1980-81	15117 (42.1)	7394 (20.6)	13396 (37.3)	35907 (100)	6128 (39.5)	3014 (19.4)	6377 (41.4)	15519 (100)
		1981-82	9154 (31.8)	6373 (22.5)	13193 (45.7)	28820 (100)	4274 (33.6)	2477 (19.5)	5971 (46.9)	12772 (100)
		1982-83	14541 (39.9)	6918 (19.0)	15011 (41.4)	36470 (100)	5422 (36.0)	2359 (20.1)	5901 (43.9)	1382 (100)
		1983-84	20909 (45.6)	8065 (17.6)	16837 (36.8)	45811 (100)	4929 (36.0)	2761 (20.1)	6016 (43.9)	13706 (100)
		1984-85	22122 (44.1)	8900 (17.8)	19091 (38.1)	50113 (100)	5431 (38.5)	2315 (16.4)	6367 (45.1)	14113 (100)
		1985-86	15498 (33.4)	10167 (21.9)	20755 (44.7)	46420 (100)	4359 (32.0)	2533 (18.6)	6730 (49.4)	13622 (100)
12. Wayanad		1918-82	7160 (54.0)	3565 (26.9)	2532 (19.1)	13257 (100)	2875 (53.5)	1368 (25.4)	1135 (21.1)	5378 (100)
		1982-83	5633 (45.1)	3802 (30.4)	3056 (24.5)	12491 (100)	1922 (43.8)	1300 (29.6)	1167 (26.6)	4389 (100)
		1983-84	5762 (40.6)	4467 (31.5)	3969 (27.9)	14198 (100)	1731 (37.1)	1516 (32.5)	1420 (30.4)	4667 (100)
		1984-85	9839 (51.9)	4891 (25.8)	4212 (22.3)	18942 (100)	2767 (47.9)	1276 (24.3)	1515 (27.8)	5558 (100)
		1985-86	10288 (50.5)	5589 (27.4)	4506 (22.1)	20383 (100)	2760 (47.9)	1397 (24.3)	1599 (27.8)	5756 (100)
13. Cannanore		1980-81	21379 (52.4)	5935 (14.6)	13450 (33.0)	40764 (100)	7459 (45.5)	2561 (15.7)	6357 (38.8)	16380 (100)
		1981-82	14203 (41.7)	5222 (15.3)	14660 (43.0)	34085 (100)	5954 (40.8)	2013 (13.8)	6619 (45.5)	14586 (100)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	1982-83	19319 (46.3)	5553 (13.3)	16855 (40.4)	41727 (100)	6862 (44.6)	1910 (12.4)	6604 (43.0)	53376 (100)
	1983-84	24654 (49.4)	6601 (13.3)	18630 (37.3)	49885 (100)	6311 (41.7)	2214 (14.6)	6620 (43.7)	15145 (100)
	1984-85	29210 (49.0)	7159 (12.0)	23216 (39.0)	59585 (100)	6926 (41.7)	1882 (11.4)	7785 (46.9)	16593 (100)
	1985-86	17016 (43.1)	4866 (12.3)	17589 (44.6)	39471 (100)	4154 (37.4)	1223 (11.0)	5721 (51.6)	11098 (100)
14. Kasargode	1985-86	10147 (48.1)	3334 (15.8)	7620 (36.1)	21101 (100)	2334 (41.3)	835 (14.8)	2485 (43.9)	5654 (100)
15. Kerala State	1980-81	145043 (41.6)	75504 (21.7)	127993 (36.7)	348540 (100)	63275 (40.6)	31107 (20.0)	61316 (39.4)	155698 (100)
	1981-82	141419 (38.1)	86152 (23.2)	143617 (38.7)	371218 (100)	62915 (38.9)	33568 (20.8)	65080 (40.3)	161563 (100)
	1982-83	170563 (40.0)	91568 (21.4)	165263 (38.6)	427394 (100)	63183 (39.5)	31692 (19.8)	65278 (40.7)	160153 (100)
	1983-84	210252 (41.9)	106607 (21.2)	184991 (36.9)	501850 (100)	58706 (36.2)	36602 (22.6)	66866 (41.2)	162174 (100)
	1984-85	239141 (41.9)	117707 (20.6)	214513 (37.5)	571361 (100)	65561 (38.6)	31293 (19.5)	72817 (42.9)	169671 (100)
	1985-86	221424 (37.4)	134615 (39.8)	356039 (22.8)	356039 (100)	66769 (37.4)	34330 (19.2)	77372 (43.4)	178471 (100)

Note: The figures in brackets represents the percentage sectoral contribution.

Source: Directorate of Economics & Statistics, Trivandrum.

#### APPENDIX 2.6

##### Per capita Income of Districts in Kerala at Current and Constant Prices

District (1)	At Current prices											
	1980-81 (2)	rank (3)	1981-82 (4)	rank (5)	1982-83 (6)	rank (7)	1983-84 (8)	rank (9)	1984-85 (10)	rank (11)	1985-86 (12)	rank (13)
1. Trivandrum	1378	6	1441	7	1570	9	1894	7	2140	5	2152	7
2. Quilon	1441	4	1154	6	1686	5	1950	5	2126	6	2305	8
3. Pathanamthitta	..	..	..	..	..	..	1813	10	2057	9	2223	6
4. Alleppey	1329	8	1457	5	1612	6	1854	8	2111	7	2111	10
5. Kottayam	1468	3	1647	4	1914	4	2148	4	2291	4	2354	4
6. Idukki	1836	1	1972	2	2143	3	2682	1	2733	3	2936	2
7. Ernakulam	1736	2	1954	3	2173	1	2372	3	2773	2	2882	3
8. Frichun	1328	9	1397	8	1594	7	1820	9	1952	12	2020	9
9. Palghat	1191	10	1311	9	1442	11	1622	10	1759	11	1799	13
10. Malappuram	923	11	918	12	1040	12	1114	13	1302	13	1320	14
11. Kozhikode	1376	7	1272	10	1580	8	1949	6	2092	8	1903	11
12. Wyanad	..	..	2346	1	2169	2	2443	2	3200	1	3380	1
13. Cannanore	1379	5	1204	11	1445	10	1700	12	1993	10	1881	12
14. Kasaragod	..	..	..	..	..	..	..	..	..	..	2226	5
Kerala	1377		1444		1633		1863		2104		2140	

District	At constant prices											
	1980-81	rank	1981-82	rank	1982-83	rank	1983-84	rank	1984-85	rank	1985-86	rank
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
1. Trivandrum	645	4	658	5	612	6	640	5	683	5	669	7
2. Quilon	636	4	621	7	609	7	629	7	634	7	626	10
3. Pathanamthitta	..	..	..	..	..	..	598	9	620	8	649	8
4. Alleppey	618	6	658	5	631	5	631	6	652	6	691	5
5. Kottayam	689	3	723	4	719	4	682	4	702	3	719	3
6. Idukki	736	2	736	3	723	3	733	3	690	4	714	4
7. Ernakulam	779	1	823	2	802	1	795	2	800	2	844	2
8. Trichur	602	7	618	8	600	8	599	8	586	11	646	9
9. Palghat	594	9	612	9	588	11	576	11	587	10	681	6
10. Malappuram	413	11	404	12	388	12	367	13	382	13	403	14
11. Kozhikode	595	8	562	10	593	9	583	10	589	9	559	12
12. Wayanad	..	..	952	1	762	2	803	1	939	1	955	1
13. Cannanore	551	10	515	11	533	10	516	12	555	12	529	13
14. Kasaragode	..	..	..	..	..	..	..	..	..	..	596	11
<b>Kerala</b>	<b>615</b>		<b>628</b>		<b>612</b>		<b>608</b>		<b>625</b>		<b>646</b>	

Source: Directorate of Economics and Statistics, Trivandrum.

#### APPENDIX 2.7

##### Growth of Population and Density of Population—Kerala and India.

Year	Population (in thousands)		Decennial growth (percentage)		Density of population (per sq km.)	
	India	Kerala	India	Kerala	India	Kerala
	(1)	(2)	(3)	(4)	(5)	(6)
1901	238,337	6,396	..	..	..	165
1911	252,005	7,148	+5.73	+11.75	..	184
1921	251,239	9,507	-0.30	+9.16	81	245
1931	278,869	9,507	+11.00	+21.85	90	201
1941	318,539	11,032	+14.23	+16.04	103	284
1951	360,950	13,549	+13.31	+22.82	117	349
1961	439,073	16,904	+21.64	+24.76	142	435
1971	547,950	21,347	+24.80	+26.29	177	549
1981	685,185	25,454	+25.00	+19.24	216	655

Source: Census of India 1971 & 1981.

## APPENDIX 2.8

*Age Distribution of Population in Kerala: 1971 and 1981*

(in percentage)

Age group	1971			1981		
	Persons	Males	Females	Persons	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0-4	13.38	13.62	13.14	10.77	11.11	10.43
5-9	13.47	13.77	13.18	11.49	11.85	11.13
10-14	13.42	13.66	13.18	12.76	13.12	12.41
15-19	10.95	10.65	11.25	11.83	11.52	12.12
20-24	9.32	9.24	9.40	10.29	9.98	10.60
25-29	6.50	6.27	6.72	8.18	7.98	8.37
30-34	5.67	5.55	5.78	6.20	6.30	6.10
35-39	5.99	5.83	6.14	5.50	5.38	5.62
40-44	4.65	4.70	4.61	4.45	4.49	4.42
45-49	4.51	4.71	4.32	4.60	4.60	4.59
50-54	3.24	3.32	3.16	3.48	3.56	3.40
55-59	2.68	2.72	2.64	2.91	2.95	2.88
60-64	2.26	2.21	2.30	2.68	2.64	2.73
65-69	1.64	1.56	1.71	2.04	1.92	2.16
70-	2.32	2.19	2.47	2.80	2.59	3.02
Age not stated	0.00	0.00	0.00	0.02	0.01	0.02
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Census of India 1981.

## APPENDIX 2.9

*Literacy Rate in Kerala (Age-wise and Sex-wise) 1971 and 1981*

Age group	P- Persons M- Male F- Female	1971			1981		
		Total	Rural	Urban	Total	Rural	Urban
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All ages	P	60.42	59.28	66.31	70.42	69.10	76.11
	M	66.52	65.57	71.99	75.26	74.13	80.10
	F	54.31	53.10	60.62	65.75	64.25	72.20
5+	P	69.75	68.54	75.92	78.92	77.62	84.48
	M	77.13	76.06	82.50	84.67	83.59	89.25
	F	62.53	61.22	69.33	73.39	71.89	79.85
10+	P	72.84	71.65	78.83	80.99	79.67	86.53
	M	81.62	80.62	86.57	87.72	86.69	92.05
	F	64.33	63.00	71.13	74.58	73.01	81.21
15+	P	69.15	67.76	76.02	78.14	76.58	86.53
	M	79.37	78.19	85.08	85.98	84.74	92.05
	F	59.35	57.82	67.08	70.79	68.94	81.21
35+	P	55.66	54.14	63.41	63.90	61.78	73.03
	M	70.16	68.69	77.66	77.16	75.29	85.23
	F	41.44	39.89	49.38	51.36	48.96	61.61

Source: Statistics for planning—1986.

## APPENDIX 2.10

## Population Statistics of Kerala from 1901 to 1981

Period	Area (Sq. km.)	Population			Density per sq. km.	Sex ratio female per 1000 males	land percapita (Hectare)
		Total	Male	Female			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1901	38855	6396262	3191466	3204796	165	1004	0.60
1911	"	7147673	3559425	3588248	184	1008	0.54
1921	"	7802127	3879458	3922669	201	1011	0.49
1931	"	9507050	4702951	4804099	245	1022	0.41
1941	"	11031541	5443296	5588245	284	1027	0.35
1951	"	13549118	6681901	6867217	349	1028	0.28
1961	"	16903715	8361927	8541788	435	1022	0.23
1971	"	21347375	10587851	10759524	549	1016	0.18
1981	"	25453680	12527767	12925913	654	1034	0.15

Source: Census of India 1981.

## APPENDIX 2.11

## Estimated Annual Birth and Death Rates—State wise

State	Birth rate (No. of live Births per Thousand Pop.)						Death rate (No. of Deaths per Thousand Pop.)					
	1984			1985			1984			1985		
	C	R	U	C	R	U	C	R	U	C	R	U
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Andhra Pradesh	31.2	31.4	30.6	29.9	29.8	30.2	11.0	11.7	8.6	10.3	11.1	7.3
2. Assam	35.3	36.0	26.1	34.3	35.0	25.0	13.2	13.5	9.3	13.2	13.5	8.4
3. Bihar	39.9	40.6	33.6	37.8	38.5	31.1	14.5	15.1	9.7	15.0	15.6	9.0
4. Gujarat	33.4	34.6	30.9	33.0	33.8	31.2	10.8	12.0	8.2	10.8	11.8	8.7
5. Haryana	37.2	38.5	32.6	35.7	36.5	32.9	10.9	11.7	7.9	9.1	9.7	7.1
6. Himachal Pradesh	30.8	31.3	23.6	30.2	30.7	23.8	10.3	10.6	6.3	10.5	10.8	6.5
7. Jammu & Kashmir	33.5	35.5	26.2	33.6	35.9	25.4	9.5	10.1	7.3	9.8	10.5	7.2
8. Karnataka	30.3	30.9	28.5	29.6	30.9	26.2	9.6	10.7	6.6	8.8	9.8	6.1
9. Kerala	22.9	22.6	24.1	23.3	23.1	24.1	6.4	6.2	7.3	6.5	6.5	6.6
10. Madhya Pradesh	36.9	38.1	32.2	39.4	41.0	33.0	14.2	15.5	9.0	14.2	15.3	9.4
11. Maharashtra	31.1	32.1	29.3	29.0	29.8	27.7	9.4	10.7	7.1	8.4	9.4	6.7
12. Manipur	29.1	29.7	27.1	28.5	29.8	24.4	6.2	6.4	5.8	7.7	7.9	7.1
13. Meghalaya	38.3	41.9	20.9	39.1	42.4	21.1	11.8	13.2	5.5	12.7	14.3	5.6
14. Nagaland	20.7	22.7	11.2	25.3	28.4	11.2	5.3	6.3	0.5	6.3	7.0	3.0
15. Orissa	32.7	33.0	29.8	30.7	30.9	28.3	14.4	14.8	10.1	14.0	14.6	8.1
16. Punjab	30.3	30.9	28.6	28.5	28.8	27.6	9.0	10.1	5.8	8.9	9.7	6.7
17. Rajasthan	39.7	40.8	35.0	39.7	41.1	33.6	14.3	15.3	9.8	13.2	14.0	9.8
18. Sikkim	31.7	34.1	20.6	33.1	35.1	24.2	10.2	11.3	5.0	10.7	11.7	6.2
19. Tamil Nadu	28.0	28.4	27.2	24.7	25.2	23.8	10.8	11.9	8.7	9.5	10.9	6.9
20. Tripura	26.6	27.4	19.7	27.3	27.6	24.5	9.6	9.7	7.9	9.9	10.1	8.0
21. Uttar Pradesh	38.7	39.8	34.3	37.6	39.0	31.6	17.8	19.1	12.2	15.8	17.2	9.6
22. West Bengal	30.4	34.3	20.5	29.4	33.0	20.5	10.7	12.0	7.5	9.6	10.7	6.8
India	33.9	35.3	29.4	32.9	34.3	28.1	12.6	13.8	8.6	11.8	13.0	7.8

Notes: C—Combined, R—Rural, U—Urban

Source: Sample Registration Bulletin, Registrar General of India, June 1987.

## APPENDIX 2.12

*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)
31-12-1970	293754	110304	39.25	151279	7469	17707	1994	178449	60.75
31-12-1975	691242	331628	47.98	281989	28329	44456	4840	359614	52.02
31-12-1979	1249372	575366	46.05	530742	70342	64365	8567	674016	53.95
31-12-1980	1579164	767141	48.45	658652	79310	67841	8220	814023	51.55
31-12-1981	1903719	979830	51.47	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
31-12-1976	2704874	1209462	44.71	1251793	136193	107426	10207	1505621	55.66
31-12-1987	2951897	1268591	42.97	1408007	156522	106567	12210	1683306	57.02

Source: Directorate of Employment, Trivandrum.

## APPENDIX 2.13

*Number of Professional and Technical Work Seekers*

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)
31-12-1970	281	1852	3547	8380	133	70
31-12-1975	809	1850	3990	20113	32	117
31-12-1980	871	1505	6833	28873	106	17
31-12-1981	651	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	11645	68452	263	42
31-12-1985	1143	2917	11257	53237	149	25
31-12-1986	1270	3805	14812	59225	209	14
31-7-1987	1532	4443	15764	60262	297	25

Source: Directorate of Employment, Trivandrum.

## APPENDIX 2.14

*Number of placing through the Employment Exchanges in Kerala*

Year	Number of Placings	Monthly average number of employers using the employment exchange
1985	13700	403
1986	15607	446
1987*	8008	484

\* Upto July 1987.

Source: Directorate of Employment.

## APPENDIX 2.15

*Year-wise and Country-wise Deployment of personnel by O.D.E.P.C. as on 31-12-1987*

Name of the Country	Year									
	1978-79	1979:80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Libya	118	81	..	17	..	..	7	130	4	357
U.A.E.	149	10	..	66	2	3	61	27	4	256
Maldives	5	..	..	..	..	..	2	..	..	7
Singapore	..	25	..	..	..	..	..	..	..	25
Kuwait	..	251	25	54	..	7	..	..	..	337
Mozambique	..	23	..	..	..	..	..	..	..	23
Saudi Arabia	..	..	9	117	69	1	84	..	152	432
Bahrain	..	..	29	..	12	11	..	..	..	52
Iraq	..	..	..	10	48	..	..	..	..	58
Muscat	..	..	..	39	52	..	..	..	..	91
Qatar	203	10	..	3	22	..	18	..	..	256
Total	475	400	63	240	205	22	172	157	160	1894

Source: ODEPC.

## APPENDIX 2.16

*Personals Deployed by the \*ODEPC Category-wise as on 31-12-1987*

Category	No. of persons deployed
1. Specialist Doctors	102
2. General Duty Doctors	70
3. Nurses	409
4. Male Nurses	11
5. Midwives	26
6. Medical technicians	96
7. Pharmacist	8
8. Engineers	87
9. Electrician	22
10. Foreman	6
11. Supervisor	2
12. A/C. Mechanic	5
13. Labourer/Helpers	350
14. Drivers	114
15. Lathe Operator	1
16. Mechanic	54
17. Road Roller Driver	2
18. Store keeper	1
19. Accountant	3
20. Administrator	1



21. Purchaser	1
22. Denter	1
23. Operator	36
24. Office boy	1
25. Watchman	2
26. Plumbers	2
27. Sales Representatives	4
28. Fabricators	2
29. Cleaners	18
30. Dental Doctor	1
31. Rigger	4
32. Steel Binder	2
33. Cook	25
34. Welder	15
35. Fitter	11
36. Boiler Operator	10
37. Deck Hand Helper	150
38. Cable Joints/Technician	35
39. Barbender	15
40. Mason	97
41. Carpenter	23
42. Auto Electrician	4
43. Telephone Cable Engineer	17
44. Technicians	7
45. Excavator Inspector	2
46. Clerks	8
47. Bench fitter	1
48. Aluminium Technicians	14
49. Gypsum workers	11
50. Secretary	1
51. Waiters	2
52. Bakers	1
53. Plastic cup printing mechanic	1
	1894

Source: ODEP.

APPENDIX 2.17

Employment in the public and private sector in Kerala.

Period ending	Public Sector	Private Sector	Total
31-12-1985	568713	507395	10,76,088
31-12-1986	576784	519115	10,95,899
Available only upto 31 3 1987	576536	512169	10,88,705

Source: Directorate of Employment.

## APPENDIX 2.18

Employment Situation in Kerala as on 31-3-1986

(Organised sector)

District	Employment as on 31-3-1986			Percentage change			
	Public	Private	Total	Public	Private	Total (1984-85)	
Trivandrum	116181	32238	148419	+2.5	+11.3	+4.2	-2.6
Quilon	64600	71749	136349	-3.5	-4.9	-4.2	-9.4
Alleppey	34638	20860	55498	+0.1 <sup>e</sup>	-6.5	-2.1	-17.1
Kottayam	28517	26062	54579	+4.0	-2.5	+0.8	+0.1
Idukki	13134	61960	75094	..	+4.7	+3.8	+4.1
Ernakulam	86540	52050	138590	+0.7	-0.8	+0.2	1.0
Palghat	47344	25247	72591	+3.2	-2.9	+1.0	+1.8
Trichur	42931	50414	93345	+0.3	-1.8	-0.8	-0.9
Malappuram	29983	21440	51423	+7.0	+1.5	+4.7	+2.6
Kozhikode	43945	48232	92177	+2.7	+1.1	+1.8	+0.8
Cannanore	31099	51427	82526	-26.1	-21.4	-23.2	-5.0
Wynad	8438	18108	26546	+10.7	-1.4	-2.1	+4.4
Pathanamthitta	14519	15088	29607	+13.7	+3.1	+8.0	+100.0
Kasaragod	9328	14985	24313	+100.0	+100.0	+100.0	..
Kerala	571197	509860	1081057	+1.4	+0.1	+0.8	+1.1

Source: National Market Information Unit Trivandrum

## APPENDIX 3.1

Wholesale Price Index of Agricultural Commodities—Kerala—1987

(Base: 1952-53=100)

Crops	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)
1. Rice	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	629.1	529.1	529.1
2. Molasses	805.6	759.6	741.5	750.9	783.5	828.8	814.4	893.9	930.6	990.1	1007.9	991.3
3. Condiments and Spices	589.8	590.3	581.4	659.5	748.5	755.1	688.4	633.9	621.3	565.7	543.4	529.4
4. Fruits and Vegetables	1431.1	1412.7	1370.6	1452.4	1466.8	1449.9	1443.7	1455.7	1439.9	1443.6	1444.1	1412.8
5. Food Crops	700.3	695.8	686.6	713.5	731.5	731.1	718.8	714.5	710.9	704.4	701.4	693.3
6. Oil Seeds	1626.4	1597.0	1580.4	1565.2	1623.7	1679.6	1667.8	1704.9	1717.3	1656.7	1685.4	1697.4
7. Plantation Crops	549.9	558.8	568.3	585.0	591.4	586.1	577.0	563.5	553.9	558.5	564.6	563.7
8. Non-food Crops	1301.3	1283.5	1274.7	1269.2	1311.9	1349.4	1338.4	1360.2	1366.0	1325.0	1346.9	1355.0
All Crops	919.7	910.3	901.3	916.3	943.3	956.8	945.0	950.2	950.0	930.9	937.0	934.8

## APPENDIX 3.2

Month end (Last Friday) Retail Prices of Essential Commodities for the year—1987

(Rs.)

Sl. No.	Name of Commodity	Unit	Prices at the end of the Month											
			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)
1.	Rice (O.M. Matta)	Kg.	4.33	4.21	4.10	4.25	4.36	4.45	4.43	4.43	4.29	4.30	4.58	4.61
2.	Greengram	Kg.	6.20	6.39	6.59	7.40	7.17	7.27	7.48	7.22	6.99	6.87	7.17	7.15
3.	Blackgram	„	6.73	6.73	6.62	6.65	6.63	6.64	6.70	7.04	6.95	6.99	7.17	7.41
4.	Redgram	„	6.07	6.02	5.86	5.92	6.03	6.25	6.51	6.97	7.15	7.15	7.24	7.33
5.	Dhall	„	9.31	9.45	9.70	10.20	10.68	11.01	11.32	11.43	11.79	11.97	12.81	14.34
6.	Sugar	„	6.33	6.28	6.34	6.45	6.60	6.38	6.48	6.49	6.35	6.41	6.34	6.71
7.	Milk (cow's)	Ltr.	4.46	4.46	4.46	4.46	4.56	4.54	4.54	4.78	4.77	4.84	4.88	4.88
8.	Tea (B.B. A1-Dust)	Kg.	41.28	41.28	41.61	41.60	41.61	41.52	41.21	40.93	40.86	40.95	40.89	40.87
9.	Coffee powder (F.B.)	„	35.46	35.46	34.71	34.74	34.74	34.69	33.42	32.59	32.76	33.38	33.87	34.15
10.	Babyfood (Ammul)	„	44.64	44.45	44.64	44.60	44.64	44.83	45.65	46.21	47.14	48.30	48.89	49.14
11.	Egg (Hen's)	Doz.	7.85	6.44	7.02	6.34	7.89	7.68	7.88	7.75	7.96	8.19	9.28	8.76
12.	Mutton	Kg.	33.00	33.00	33.00	33.20	33.40	33.60	33.80	34.00	34.14	34.14	34.43	34.57
13.	Coconut Oil	„	31.58	29.15	28.51	30.80	30.28	34.26	33.22	36.30	35.16	34.70	35.43	35.58
14.	Groundnut Oil	„	24.23	24.43	24.40	24.55	25.54	27.69	28.79	30.41	29.62	28.72	27.96	27.66
15.	Refined Oil (Postman)	Kg.	34.33	37.83	34.03	34.00	37.78	39.04	40.97	40.86	42.63	43.09	43.09	43.05
16.	Gingelly Oil	„	28.58	29.16	29.09	30.27	30.74	29.48	30.29	31.60	30.46	29.50	29.83	29.65
17.	Coconut (Without husk)	100 Nos.	278.00	265.00	262.00	270.50	269.00	284.50	281.00	309.00	313.00	306.00	316.00	311.79
18.	Corriander	Kg.	20.17	18.85	17.95	18.15	19.88	20.20	20.00	20.57	20.70	20.68	20.61	19.86
19.	Chillies (dry)	„	11.95	11.46	11.00	10.00	11.10	11.10	12.06	20.50	20.90	21.07	22.50	22.71
20.	Onion	„	2.78	2.87	3.11	3.55	3.52	3.27	3.69	3.77	4.33	5.41	5.52	3.64
21.	Tamarind	„	9.90	9.30	9.40	9.20	9.15	9.35	9.55	9.61	9.61	9.68	9.64	9.71
22.	Chenai	„	2.34	2.49	2.59	3.25	3.40	3.45	3.19	2.91	2.80	2.70	2.79	2.76
23.	Tapioca (Raw)	„	1.55	1.58	1.58	1.64	1.64	1.55	1.47	1.49	1.57	1.55	1.53	1.53
24.	Potato	„	2.93	2.58	2.59	2.54	2.82	3.10	3.13	2.95	3.31	4.14	3.83	3.84
25.	Banana	„	4.42	4.35	3.63	3.85	4.91	5.55	5.63	5.63	5.39	4.76	4.15	4.36

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
26.	Tobacco	„	16.19	17.85	17.35	17.50	17.30	16.13	15.94	15.72	15.10	15.73	15.10	15.10
27.	Mundu (Mall)	Each	17.65	17.69	17.68	17.71	17.75	17.79	17.84	17.70	17.80	18.05	18.05	18.10
28.	Mundu (kora)	Each	13.04	13.36	13.38	12.05	13.39	13.43	12.80	12.32	12.45	12.46	12.54	12.60
29.	Washing soda	Kg.	5.80	5.80	5.70	5.75	5.75	5.75	5.82	5.86	6.00	6.01	6.09	6.09
30.	Washing Soap (Sunlightbar)	Each	3.77	3.79	3.76	3.71	3.63	3.67	3.71	3.53	3.65	4.35	4.15	4.23
31.	Toilet soap (Lux)	Each	3.14	3.15	3.22	3.28	3.36	3.39	3.53	4.00	4.27	4.40	4.41	4.44
32.	Tooth paste (Colgate 50 gms tube)	Each	4.62	4.62	4.68	4.68	4.72	4.77	4.77	4.77	4.77	4.76	4.76	4.76
33.	Razer blade	5 Nos.	1.91	1.95	1.95	1.97	1.99	2.15	2.23	2.27	2.27	2.28	2.30	2.29
34.	Anacin	2 tabs	0.36	0.36	0.36	0.36	0.36	0.36	0.36	03.6	0.36	0.37	0.37	0.37
35.	Electric bulb	Each	4.92	4.92	4.93	4.93	4.93	4.96	5.02	5.02	5.04	5.08	5.08	5.05
36.	Torch battery	Each	3.30	3.31	3.37	3.40	3.46	3.51	3.54	3.53	3.53	3.56	3.54	3.55
37.	Paper	24 sheet	3.28	3.28	3.28	3.28	3.28	3.29	3.29	2.99	2.99	2.99	2.99	2.98
38.	Aluminium (cooking pot)	Kg.	48.44	48.44	52.20	53.24	53.23	53.74	52.89	53.64	53.50	53.50	53.93	53.93
39.	Firewood-local split	Qtl.	64.38	67.86	62.50	63.50	63.50	66.66	66.88	60.36	61.07	60.64	61.00	67.18
40.	Cement (ordinary)	Bag	77.25	77.03	75.77	75.83	76.17	77.34	77.88	80.94	82.13	82.81	81.75	81.74
41.	Colocasisa	Kg.	3.70	3.80	3.97	4.85	5.72	5.72	4.78	4.88	4.51	4.54	4.21	3.79
42.	Onion (Big)	„	2.32	2.02	2.00	2.02	3.02	3.57	3.88	4.84	4.54	3.75	3.23	3.34
43.	Brinjal	„	2.23	2.50	2.50	2.73	2.70	2.95	2.53	2.89	2.61	3.04	3.18	3.46
44.	Pumpkin	„	1.86	2.04	2.11	2.60	2.50	2.70	2.35	2.41	2.38	2.23	2.33	2.32
45.	Cucumber	„	2.05	1.78	1.97	1.95	2.15	3.35	2.35	2.30	2.34	2.81	2.31	2.37
46.	Ladies finger	„	2.70	2.90	3.50	3.50	3.60	3.85	3.15	3.46	2.96	3.14	3.07	3.89
47.	Bitter gourd	„	4.25	3.70	4.25	4.63	5.85	7.10	4.40	4.39	4.11	6.07	5.07	5.36
48.	Ash gourd	„	2.07	1.76	1.73	1.95	2.10	2.10	1.96	1.99	1.90	1.82	1.79	1.81
49.	Chillies (green)	„	3.65	3.70	4.30	4.90	6.60	8.00	5.75	7.68	5.14	4.75	7.04	14.71
50.	Plantain (green)	„	3.03	3.15	2.95	3.15	3.25	3.27	3.60	3.86	4.00	3.71	3.50	3.50

Source: Directorate of Economics & Statistics.

## APPENDIX-3.3

Consumer Price index (Cost of Living Index) numbers for Agricultural and Industrial Workers—Kerala—1987

(Base 1970=100)

Centre	Cost of living Index											
	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)
1. Trivandrum	367	370	369	370	374	379	383	385	384	382	385	387
2. Quilon	381	385	384	383	386	390	393	393	392	391	397	400
3. Punalur	349	349	348	348	352	358	361	364	361	363	366	370
4. Alleppey	358	358	356	356	359	365	369	371	371	369	375	378
5. Kottayam	360	361	364	364	367	371	375	377	376	274	379	381
6. Mundakayam	341	343	343	345	347	353	357	357	356	355	362	365
7. Munnar	352	352	349	350	354	357	360	363	363	361	366	370
8. Ernakulam	340	342	342	343	348	354	358	362	362	361	368	370
9. Chalakudy	364	364	363	365	370	373	376	378	377	376	381	384
10. Trichur	357	357	355	355	359	364	367	367	368	368	374	378
11. Palghat	346	348	346	349	354	360	365	369	370	369	372	375
12. Malappuram	364	366	368	370	375	381	385	385	384	382	387	390
13. Kozhikode	359	362	364	366	370	376	379	381	380	379	384	386
14. Meppady	357	359	361	363	366	371	374	375	375	376	376	379
15. Cannanore	363	365	363	366	371	376	379	380	379	377	380	382
State average	357	359	358	360	363	369	372	374	373	372	377	380

Source: Directorate of Economics and Statistics

## APPENDIX 3.4

Index Number of Wholesale Prices—By Groups and sub groups—All India (Base 1970-71 = 100)

	Weight	1987											
		December	January	February	March	April	May	June	July	August	September	October	November
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
All Commodities	1000.00	377.9	377.7	376.6	378.1	381.2	390.3	394.0	398.0	407.3	407.3	408.4	411.1
I. Primary Articles	416.67	350.9	345.0	343.4	346.5	352.4	365.3	370.3	374.7	389.3	386.9	388.7	329.9
1. Food Articles	297.99	335.6	336.1	335.0	339.8	345.7	358.5	359.2	360.6	371.2	370.8	373.9	375.7
(i) Food grains	129.22	298.8	300.6	299.8	298.6	298.6	304.8	309.0	315.3	332.5	338.0	336.3	343.0
(a) Cereals	107.43	278.7	279.2	277.8	276.8	273.5	277.9	283.0	286.8	298.2	303.4	302.1	305.5
(b) Pulses	21.79	397.8	406.5	408.4	405.8	421.2	437.5	437.0	455.6	501.8	508.7	504.9	528.2
(ii) Fruits and Vegetables	61.32	405.9	395.4	391.4	413.6	434.6	471.7	459.8	450.3	466.0	442.3	449.7	448.6
(iii) Milk and Milk products	61.50	300.3	305.6	311.1	313.2	310.8	319.7	322.1	322.8	322.8	347.3	352.3	348.7
(iv) Egg, fish and Meat	18.97	491.3	503.2	486.6	504.5	533.1	530.7	528.0	535.5	504.5	476.2	490.6	497.5
(v) Condiments and Spices	10.94	209.4	209.9	211.2	211.0	217.1	221.9	231.2	235.2	270.0	294.0	303.9	307.5
(vi) Other Food Articles	16.04	400.8	400.2	401.2	384.5	387.3	397.0	409.0	405.3	379.7	380.1	378.9	367.2
2. Non-Food Articles	106.21	314.7	327.0	323.4	322.2	328.5	343.6	360.9	374.5	401.7	401.7	418.2	402.3
(i) Fibres	31.73	205.4	227.5	227.5	235.9	244.8	248.3	261.4	274.5	310.8	292.4	275.4	279.8
(ii) Oil seeds	42.01	355.8	376.9	364.4	356.3	367.2	392.5	419.3	448.4	482.4	471.3	463.6	471.5
(iii) Other Non-Food Articles	32.47	368.5	359.8	364.4	362.5	360.4	373.5	382.6	377.2	386.1	390.7	412.3	432.4
3. Minerals	12.47	1024.3	711.2	713.1	713.1	714.0	714.0	716.7	714.0	715.1	716.7	717.5	723.7
Petroleum, Crude and Natural gas	6.02	1736.2	1077.2	1079.1	1079.1	1079.1	1079.1	1079.1	1079.1	1079.1	1079.1	1079.1	1079.1
II. Fuel, Power Light and Lubricants	84.59	620.5	621.5	624.2	626.2	626.2	633.4	632.6	628.2	634.5	634.5	634.5	635.7
III. Manufactured Products													
1. Manufactured Products (Item-wise)	498.74	359.3	363.7	362.4	362.5	363.8	369.9	373.3	378.4	383.8	385.9	386.6	388.2
(i) Food Products	133.22	378.4	383.2	373.9	367.5	307.7	388.1	401.8	416.2	435.3	433.7	431.0	433.3

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(ii) Dairy Products	3.88	378.3	380.0	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	379.4
(iii) Sugar, Khandasari and Gur	72.41	382.3	378.6	364.4	354.6	350.6	371.5	382.2	395.1	416.8	424.1	420.1	414.8
(iv) Edible Oils	37.16	402.7	417.5	411.2	407.4	412.8	441.7	463.9	486.1	508.8	487.6	490.1	503.0
2. Beverages, Tobacco and Tobacco Products	27.08	346.6	346.6	350.8	366.2	370.9	370.9	349.6	370.9	349.3	349.6	360.0	360.3
3. Textiles	110.26	272.3	280.4	282.8	283.5	287.5	288.4	288.8	289.6	292.5	293.5	295.5	299.3
4. Paper and Paper products	8.51	392.6	392.6	392.6	391.6	391.6	391.6	391.6	406.4	397.5	406.4	406.4	406.4
5. Leather and Leather Products	3.85	508.8	520.5	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	530.6	527.4
6. Rubber & Rubber Products	12.07	382.7	382.7	382.7	385.2	385.2	385.2	385.2	392.0	398.9	400.0	401.3	403.2
7. Chemical and Chemical products	55.48	332.5	334.5	337.1	336.5	338.3	339.0	340.8	341.0	343.9	352.4	353.7	352.8
(i) Fertilisers	12.52	288.8	288.8	288.8	288.8	288.8	288.8	288.8	288.8	288.8	288.4	288.4	288.4
(ii) Pesticides	1.16	484.9	484.9	484.9	484.9	484.9	484.9	484.9	484.9	487.1	496.0	496.0	496.0
(iii) Drugs and Medicines	9.83	206.7	207.7	206.9	206.9	208.9	208.9	209.5	209.0	209.5	209.5	209.5	209.5
8. Non-Metallic Mineral Products	14.15	451.6	449.7	450.0	450.4	448.6	450.0	457.8	456.3	459.9	459.6	459.1	455.7
9. Basic Metals Alloy & Metals Products	59.74	478.8	481.0	482.4	489.0	489.8	490.1	490.3	491.0	491.9	496.6	498.2	499.0
10. Machinery and Transport Equipment	67.18	356.6	362.7	361.7	362.1	361.0	363.0	363.7	363.0	363.5	367.8	368.4	369.6
(i) Motor vehicles and parts	13.73	414.1	418.7	418.6	418.9	419.2	419.2	419.4	419.2	419.3	402.9	404.0	431.1
(ii) Miscellaneous products	7.20	286.4	288.3	287.3	287.3	288.0	288.0	288.3	288.8	288.6	290.0	290.3	290.3

Source: Centre for Monitoring Indian Economy

## APPENDIX 3.5

Consumer Price Index Numbers for Industrial Workers—All India and Selected Centres  
(1960=100)

Centres	1986					1987							
	August	September	October	November	December	January	February	March	April	May	June	July	August
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
All India*	672	676	685	692	688	688	686	686	691	703	715	724	736
Ahmedabad	648	656	664	676	675	678	675	668	670	681	693	711	735
Alwaye	712	708	758	762	753	762	764	762	773	800	808	744	725
Bangalore	716	725	743	750	744	740	755	758	761	779	791	798	800
Bombay	709	706	709	726	728	738	739	738	754	771	773	781	787
Calcutta	672	680	698	703	694	676	662	673	674	687	705	704	716
Coimbatore	715	717	712	732	729	729	732	735	739	742	765	770	772
Delhi	707	715	716	714	711	716	715	722	724	735	752	790	806
Gwalior	671	681	691	686	681	679	679	680	678	681	691	708	742
Hydrabad	689	702	704	708	705	695	696	693	705	721	726	744	750
Jamshedpur	645	651	646	650	638	636	634	640	636	640	655	668	680
Madras	676	678	680	695	696	706	701	706	708	718	727	745	747
Madurai	698	702	704	719	724	713	708	715	727	735	752	758	789
Mundlakayam	643	628	663	683	685	712	707	694	699	723	750	740	724
Nagpur	681	676	630	678	676	678	686	673	675	688	701	724	722

\* Based on indices of 50 centres

Source:—Reserve Bank of India, Bulletin.

## APPENDIX 3.6

Consumer Price Index Numbers for Agricultural Labourers (July 1960 June 1961=100)

State	1986				1987							
	October	November	December	January	February	March	April	May	June	July	August	September
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
All India	586	585	579	573	573	573	572	579	588	604	621	649
Ahmed Pradesh	494	494	495	486	483	481	476	483	490	501	509	528
Assam*	618	617	611	690	599	598	601	605	619	623	642	671
Bihar	606	612	596	582	583	590	586	593	599	621	641	680
Gujarat	532	529	527	525	524	526	528	535	549	555	581	595
Jammu & Kashmir	628	528	627	619	613	609	611	612	627	643	659	693
Karnataka	564	564	562	560	553	550	550	559	565	581	587	607
Kerala	651	662	672	672	676	671	666	689	708	702	680	686
Madhya Pradesh	578	580	584	583	582	582	582	591	599	611	634	660
Maharashtra	580	577	585	589	590	584	587	590	596	614	625	642
Orissa	654	626	599	580	578	579	591	612	633	652	672	734
Punjab **	614	616	604	605	600	595	590	595	605	625	640	664
Rajasthan	570	564	559	571	565	559	555	558	575	583	614	656
Tamilnadu	570	580	580	573	579	577	577	587	590	598	603	628
Uttar Pradesh	601	601	590	593	598	596	583	588	602	628	673	696
West Bengal	634	616	599	584	586	596	600	598	609	627	641	675

\*Including Manipur, Meghalaya and Tripura.

\*\*Including Delhi, Haryana and Himachalpradesh.

Source:—RBI Bulletin



## APPENDIX 3.7

Consumer Price Index Numbers for Urban Non Manual Employees—All India and selected Centres  
(1960=100)

Centre	1986				1987							
	Septem-ber	October	Novem-ber	Decem-ber	January	Februa-ry	March	April	May	June	July	August
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
All India *	615	622	625	622	625	624	625	630	638	645	658	670
Bombay	610	616	620	622	624	623	624	637	653	659	668	667
Delhi-New Delhi	598	601	607	601	601	603	606	616	622	625	645	667
Calcutta	528	546	549	541	540	535	533	537	545	554	561	574
Madras	670	680	684	684	697	700	697	705	716	725	742	747
Hydrabad-Secondarabad	646	651	659	659	658	653	653	661	673	678	698	707
Bangalore	641	648	651	655	656	657	656	664	676	684	699	708
Lucknow	598	607	606	607	611	609	612	612	618	625	644	657
Ahamedabad	605	603	604	604	613	609	607	609	615	623	645	656
Jaipur	690	698	698	693	705	703	697	704	714	721	743	777
Patna	652	655	659	652	654	657	668	667	667	674	687	701
Srinagar	636	637	641	648	655	661	666	666	668	673	683	699
Trivandrum	703	709	724	729	726	725	722	728	734	746	751	758
Cuttak-Bhuvaneswar	626	645	649	638	633	625	619	614	619	629	648	657
Bhopal	658	662	666	656	654	652	647	647	650	655	672	689
Chandigarh	569	575	578	571	571	579	588	591	591	599	610	629
Shillong	703	700	704	691	672	662	663	669	675	683	691	690

\* Based on indices of 45 cities and towns  
Source:—RBI Bulletin

## APPENDIX 3.8

Wholesale price Index of Agricultural Commodities Kerala 1978-87

Group	Weight	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
A. Food Crops	63.5	360	364	388	417	413	499	597	582	679	709
1. Food grains (Rice)	40.4	319	319	319	319	319	406	442	448	501	529
2. Molasses	2.0	289	384	629	606	412	626	692	709	689	626
3. Condiments & Spices	10.4	324	378	403	442	439	548	854	637	1324	1435
1. Fruits and Vegetables	10.7	564	518	589	728	740	779	913	1008	758	858
B. Non-food crops	36.5	565	545	673	680	672	930	1477	966	1009	1324
1. Oil seeds	25.5	677	648	822	819	796	1112	1863	1142	1227	1650
2. Plantation crops	11.0	308	306	331	358	386	508	585	560	509	568
C. All Crops	100.00	345	430	492	513	507	656	918	722	800	933

## APPENDIX 3.9

*Kerala State Civil Supplies Corporation—Turnover and Profit and Loss*

(Rupees in crores)

Year	Turnover	Profit	Loss
1974-75	5.75	0.44	..
1975-76	12.75	0.22	..
1976-77	20.29	..	0.02
1977-78	7.12	..	1.34
1978-79	10.54	..	0.36
1979-80	23.14	..	0.12
1980-81	81.57	0.73	..
1981-82	103.53	..	1.94
1982-83	119.27	..	4.15
1983-84	161.76	..	11.99
1984-85	174.43	5.64	..
1985-86	158.65	1.21	..
1986-87	165.91	4.38	..

(Figures upto 1982-83 are audited)

Source: Kerala State Civil Supplies Corporation.

## APPENDIX 3.10

## Farm Commodity Prices—Kerala

Commodity Month	Paddy/Quintal		Tapioca/Quintal		Coconut/100 Nos.		Pepper/Quintal		Ginger Quintal		Cashew/Quintal		Sugarcane/Quintal		Arecanut/100 Nos.		Banana/100 Nos.	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)	(6)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
January	236.72	241.40	94.54	101.67	135.10	260.42	3772.38	5287.47	807.80	1286.04	1154.86	1295.42	200.00	255.00	10.56	8.85	57.04	65.05
February	238.93	241.42	96.60	103.99	144.95	249.16	3865.18	5199.75	795.83	1321.66	1231.79	1305.97	215.00	255.00	11.79	9.41	58.09	65.20
March	241.41	241.07	99.38	105.21	154.66	247.91	4020.42	5147.27	785.26	1234.17	1105.59	1329.99	230.00	210.00	12.34	9.82	59.99	64.34
April	240.17	243.73	98.78	108.39	177.53	249.99	4359.88	5190.30	794.84	1264.09	1009.78	1399.49	230.00	210.00	13.80	11.33	58.64	63.89
May	242.10	248.46	99.07	108.85	182.63	254.11	4429.34	5296.27	749.71	1289.49	992.71	1380.79	230.00	..	16.36	12.88	63.02	66.47
June	246.92	255.86	98.72	103.61	174.59	261.76	4508.47	5345.89	730.51	1292.06	952.08	1258.78	250.00	..	17.98	13.65	65.60	71.73
July	246.29	258.64	96.50	103.28	172.53	262.96	4609.03	5435.66	706.11	1211.15	..	1500.00	290.00	..	13.97	11.75	66.76	75.16
August	247.15	259.10	96.45	104.14	181.97	270.39	4833.41	5473.44	666.71	1530.90	..	..	290.00	..	11.06	9.83	68.28	79.42
September	245.59	249.73	99.45	107.60	224.33	268.34	5342.20	5427.66	1078.02	1631.39	..	..	250.00	..	9.92	8.32	74.13	75.92
October	237.19	243.03	100.03	106.52	253.20	266.02	5788.98	5428.03	1145.39	1599.17	..	..	250.00	245.84	9.26	7.50	70.86	70.37
November	239.54	..	101.06	..	261.60	..	5763.88	..	1053.91	..	..	..	244.17	..	8.79	..	69.87	..
December	245.04	..	101.86	..	263.14	..	5703.85	..	976.53	..	..	..	255.00	..	8.64	..	67.92	..
<b>Average</b>	242.25	248.24	98.54	105.33	193.85	259.11	4749.75	5323.17	857.56	1366.01	1074.47	1364.35	244.51	235.17	12.04	10.33	65.02	69.76

Source: Directorate of Economics and Statistics, Trivandrum.

## APPENDIX 4.1

## Station-wise Average Monthly Rainfall

(in M. M.)

Station	1987											
	January	February	March	April	May	June	July	August	September	October	November	December
Trivandrum	2.1	0.0	7.9	116.2	196.5	176.1	48.5	353.8	162.4	414.9	198.6	333
Quilon	..	..	..	..	..	..	..	..	..	..	..	236
Alleppey	0.1	41.7	2.8	36.5	123.2	808.0	127.0	435.0	144.6	346.8	256.4	126
Kottayam	0.0	3.2	0.0	84.6	118.8	646.3	158.8	541.4	203.8	189.7	278.2	123
Peerumedu	..	..	..	..	..	..	..	..	..	..	..	131
Cochin	5.2	0.5	0.2	70.00	125.7	634.0	227.1	596.0	131.3	328.2	251.4	32
Trichur	..	..	..	..	..	..	..	..	..	..	..	119
Palghat	0.0	0.0	4.2	21.0	142.0	219.0	235.0	277.4	88.0	276.4	90.4	193
Nilambur	..	..	..	..	..	..	..	..	..	..	..	59
Kozhikode	0.0	0.0	0.0	38.2	65.0	821.6	405.8	428.3	124.8	425.2	269.4	71
Wayanad (Mananntody)	..	..	..	..	..	..	..	..	..	..	..	9
Cannanore	0.0	0.0	0.0	38.3	40.0	871.1	378.1	428.9	115.9	77.8	194.6	83

Source: Meteorological Centre, Trivandrum

## APPENDIX 4.2

## District-wise Area, Production and Productivity of Principal Crops in Kerala 1986-87

Area in hectare, Production in tonne  
Productivity in Kg/ha.

Crops	Trivandrum			Quilon			Pathanamthitta			Alleppey		
	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Pulses	2756	631	229	1533	1169	763	310	240	744	635	549	865
2. Sugarcane	17	78	4588	211	1217	5768	1380	8116	588	1289	7210	5593
3. Pepper	4258	900	211	5675	1205	212	3512	1000	285	1181	391	331
4. Ginger	208	844	4058	929	2633	2834	511	1333	2609	210	673	3205
5. Cardamom	164	5	30	103	4	38	45	..	..	..	..	..
6. Coconut	83038	400806	4826	65496	300307	4585	20895	102855	4922	51732	248757	4809
7. Cashewnut	4377	1801	411	6547	6607	1009	1873	658	351	5081	1732	341
8. Banana & Other Plantains	6057	30399	5019	3807	27115	7122	2878	23485	8160	2188	15172	6934
9. Tapioca	8409	144219	17150	51614	843882	16350	9826	208312	21200	12908	192325	14900
10. Groundnut	9	5	555	..	..	..	..	..	..	1	1	1000
11. Sesamum	18	6	333	1747	533	305	221	77	348	4242	790	186

Crops	Kottayam			Idukki			Ernakulam			Trichur		
	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity
(1)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
1. Pulses	2175	1716	789	1107	851	769	1417	1015	716	2402	1715	714
2. Sugarcane	244	1450	5943	1596	8349	5231	42	238	5667	6	35	5833
3. Pepper	7648	1080	141	39250	6885	175	5449	777	143	3781	975	258
4. Ginger	2611	6467	2477	1736	4897	2821	2431	7703	3169	131	213	1626
5. Cardamom	23	..	..	51617	2425	47	..	..	..	..	..	..
6. Coconut	47315	213929	4521	12580	32361	2572	49045	276028	5628	63277	332191	5250
7. Cashewnut	900	317	352	652	128	205	2325	549	236	5601	2730	487
8. Banana & other Plantains	4714	36877	7823	2652	15657	5904	5470	35310	6455	5180	22142	4275
9. Tapioca	13618	298650	21931	7725	161443	20900	3178	62065	19530	4432	72467	16351
10. Groundnut	..	..	..	..	..	..	..	..	..	..	..	..
11. Sesamum	61	12	196	197	55	279	2017	423	210	1218	330	271

Crop	Palghat			Malappuram			Kozhikode			Wayanad		
	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity
(1)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
1. Pulses	8632	6184	716	1155	857	742	1147	873	761	325	248	763
2. Sugarcane	2775	14116	5087	8	42	525	4	21	525	15	78	52
3. Pepper	1121	161	144	4750	835	176	9974	2062	207	30478	10844	356
4. Ginger	484	1188	2455	352	719	2043	1540	2195	1425	3020	10874	3600
5. Cardamom	3180	363	114	188	2	11	290	4	14	4343	240	55
6. Coconut	21442	48793	2276	79413	296265	3731	91409	425224	4652	916	1356	1480
7. Cashewnut	6543	2989	457	14098	6313	448	4125	1765	428	771	468	607
8. Banana & Other Plantains	3983	27742	6965	4969	32227	6486	3829	20212	5279	1783	12367	6936
9. Tapioca	4685	61516	13130	12399	174578	14080	4591	76665	16699	2458	71968	29279
10. Groundnut	11043	6079	550	20	11	55	..	..	..	..	..	..
11. Sesamum	1291	214	166	2019	722	358	65	24	369	117	52	444

Crops (1)	Cannanore			Kasaragode		
	Area (38)	Production (39)	Productivity (40)	Area (41)	Production (42)	Productivity (43)
1. Pulses	3396	2649	780	1146	894	780
2. Sugarcane	25	130	52	19	99	5210
3. Pepper	9730	2772	285	6276	2057	328
4. Ginger	770	2239	2908	557	1620	2908
5. Cardamom	760	50	66	..	..	..
6. Coconut	73114	299476	4096	24149	89677	3713
7. Cashewnut	36230	36781	1015	44394	33928	764
8. Banana & Other Plantains	3428	22794	6649	1824	7328	4018
9. Tapioca	9054	4281	19249	2061	33694	16348
10. Groundnut	40	22	55	6	3	5
11. Sesamum	295	99	336	..	..	..

## APPENDIX 4.3

*Production, Import, Export and Consumption of Rubber in India*

(Tonnes)

Items	1982-83	1983-84	1984-85	1985-86	1986-87
<i>Production</i>					
Natural Rubber	165850	175280	186450	200465	219520
Synthetic Rubber	30290	32270	37669	34758	38816
<i>Import</i>					
Natural Rubber	33401	35940	37461	41431	45356
Synthetic Rubber	24394	23287	30248	30821	28136
<i>Consumption</i>					
Natural Rubber	195545	209480	217510	235440	257305
Synthetic Rubber	55250	62300	65400	70035	71785
Reclaimed Rubber	29190	30690	34625	38215	38635
Total Consumption	279985	302470	317535	343690	367725

Source:—Rubber Board

## APPENDIX 4.4

*Distribution of Registered Cardamom Estates by size of holdings as on 31-3-1987*

Size of holdings	Kerala		India	
	No. of holdings	Area (Hect.)	No. of holdings	Area (Hect.)
Below 2 Hect.	16985	15756	26308	23329
2-4 "	3811	10629	5902	16315
4-20 "	2943	20685	4287	30675
20-40 "	152	3960	259	6756
Above 40 "	107	11710	219	24268
Total	23998	62740	36975	101343

Source:—Spices Board, Cochin.

## APPENDIX—4.5

*Consumption of Fertilizers in Kerala*

(In Tonnes)

Year	Nutrients			Total
	Nitrogen	Phosphorus	Potash	
(1)	(2)	(3)	(4)	(5)
1971-72	31257	15670	18044	64971
1972-73	31484	22314	22470	76268
1973-74	31691	22609	24546	78846
1974-75	32143	17187	18032	67362
1975-76	31654	14374	16643	62671
1976-77	33553	15696	20157	69406
1977-78	36995	19167	25394	81556
1978-79	45689	23382	39766	108837
1979-80	46341	25402	33872	105615
1980-81	41697	23402	32432	97531
1981-82	40612	23215	30934	94761
1982-83	45233	26555	38065	109853
1983-84	62480	31178	35819	129477
1984-85	57657	32642	37346	127645
1985-86	59263	34412	47655	141330
1986-87	60783	35857	54723	151363

Source :—Directorate of Agriculture

## APPENDIX 4.6

*Average price of important Agricultural inputs*

	Unit	1985-86	1986-87	Change in per cent	
<b>1. Fertilizers</b>					
(a)	Nitrogen-Urea/Amoniam Sulphate	Rs/Kg.	2.35	2.35	Nil
			1.65	1.65	Nil
(b)	Phosphorus-Super Phosphate	"	0.95	0.95	Nil
(c)	Potash-Muriate of potash	"	1.30	1.30	Nil
<b>2. Seeds and other planting materials</b>					
(a)	Paddy Seeds	Rs/quintal	150.00	150.00	Nil
(b)	Green Manure seeds	"			
	(i) Sunhemp	"	381.00	393.00	3.14
	(ii) Dianch	"	275.00	N.A.	
	(iii) Kolinji	"	215.00	235.00	9.30
(c)	Coconut seedlings				
	(i) W. Coast Tall	Rs/Seedlings	8.50	10.00	17.60
	(ii) T x D	"	10.75	12.50	16.20
	(iii) D x T	"	10.75	12.50	16.20
(d)	Arecanut seedlings	"	N.A.	N.A.	..
(e)	Rooted pepper cuttings	Rs/cutting			
	(i) Panniyur-I	"	0.35	0.50	42.86
	(ii) Other varieties	"	0.25	0.50	100.00
(f)	Cashew layers	Rs/layer	2.00	2.00	Nil
(g)	Cashew seedlings	Rs/seedlings	1.50	1.50	Nil
(h)	Nutmeg seedlings	Rs/seedlings			
	(i) One year old	Rs/seedlings	2.00	3.00	50.00
	(ii) Two year old	Rs/seedlings	3.00	5.00	66.66
<b>3. Other items</b>					
(a)	Soil ameliorants	Rs/tonne	..	..	..
	(i) Calcium carbonate (Bulk)	Bagged	..	..	..
	(ii) Dolomite	Rs/tonne	..	..	..
	(iii) Full Burnt lime	Rs/tonne	..	..	..
(b)	Farm Yard Manure	Rs/tonne	170	N.A.	..
	Wood ash		300	N.A.#	..

Source:—Directorate of Agriculture, Trivandrum.



## APPENDIX 4.7

*Selected Indicators of the Performance of Agricultural Credit Societies*

Sl. No.	Indicators	As on 30-6-1985	As on 30-6-1986
1.	Average Membership per Society (No)	3428	3982
2.	Average Share Capital per Society (Rs. lakhs)	2.92	3.24
3.	Average Deposit per Society (Rs. lakhs)	20.53	25.91
4.	Average Deposit per Member (Rs.)	598	651
5.	Average Loan per Member (Rs.)	804	844
6.	Percentage of Borrowing Members to Total Members (Borrowed during the year)	41	41
7.	Average Loan Advanced per Advancing Society (Rs. lakhs)	29.21	35.37
9.	Average Loan Advanced per Borrowing Member (Rs.)	1978	2065
10.	Percentage of Overdue to Outstanding	21	20.4

## APPENDIX 4.8

*Selected Indicators of the Credit Operations of Primary Agricultural Credit Societies*

Sl. No.	Indicators	As on 30-6-1985	As on 30-6-1986
(1)	(2)	(3)	(4)
1.	No. of Societies	1370	1374
2.	No. of Members (Lakhs)	54	63
3.	Paid-up Share Capital (Rs. lakhs)	4580	5095
4.	Statutory Reserves (Rs. lakhs)	535	662
5.	Other Reserves „	1920	2289
6.	Deposits „	32237	40785
7.	Other Borrowings „	19457	20371
8.	Working Capital „	74049	69267
9.	Loans advanced during the year		
	(a) Short Term Loans (Rs. lakhs)	35689	44767
	(b) Medium Term Loans „	6999	7273
	(c) Long Term Loans „	624	840
10.	Loans issued for Agricultural purpose alone (Rs. lakhs)	22534	25771
11.	Loans outstanding at the end of the year (Rs. lakhs)	41549	51401
12.	Loans overdue (Rs. lakhs)	8730	10478
13.	No. of societies that worked on profit (Nos.)	892	884
14.	Net profit for the year (Rs. lakhs)	593	742
15.	No. of societies that worked on loss	659	660
16.	Loss sustained (Rs. lakhs)	985	1129
17.	No. of societies without profit/loss	19	30
19.	Long-Term Loans issued by PLMBS (Rs. lakhs)	3019	3895

## APPENDIX 4.9

## Animal Husbandry and Dairy Development Activities

Sl.No.	Item	Unit	Performance	
			1985-86	1986-87
(1)	(2)	(3)	(4)	(5)
<b>A. Department of Animal Husbandry</b>				
1.	Artificial Inseminations carried out	Lakhs	8,03,765	10,72,468
2.	Estimated Milk Production	'000 tons	1,282	1,334
3.	Meat Production	Tonnes	22,505	26,829
4.	Egg production	Million	1,360	1,397
5.	Veterinary Institutions & Services			
	(a) Veterinary Polyclinics	Number	49	51
	(b) Veterinary Hospitals]	"	66	61*
	(c) Veterinary Dispensaries	"	461	481
	(d) Veterinary Sub Centres	"	113	106*
	(e) Other Institutions	"	817	822
	(f) Animals treated	No.	47,17,640	36,93,633
	(g) Vaccinations & inoculations conducted			
	on Livestock	"	15,23,203	27,41,122
	on Poultry	"	19,68,660	17,38,098
<b>B. Kerala Live Stock Development &amp; Milk Marketing Board</b>				
1.	Production and supply of inputs for cattle breeding programmes			
	(a) No. of breeding bulls maintained for semen collection	Numbers	118	147
	(b) Production of frozen semen	Lakh doses	17.49	17.36
	(c) Production of LN2	Lakh litres	4.45	4.74
	(d) No. of officers trained in the training centre	Numbers	238	151
	(e) No. of A.I. Centres established	"	1336	1376
	(f) Distribution of Frozen semen	Lakhs	12.86	13.62
	(g) Number of buffalo bulls maintained	Number	37	38
	(h) Production of frozen buffalo semen	Lakh doses	1.65	2.68
<b>II Herd Book organisation</b>				
	(a) No. of animals to be identified	Nos.	5743	5754
	(b) No. of growth measurements for recording growth	"	19799	20823
	(c) No. of herd book cards introduced	"	5743	14072
<b>III. Fodder Development</b>				
	(a) Production of fodder seeds	MT	27	15
	(b) Distribution of Fodder seeds to dairy farmers	MT	61	3415
<b>IV. Centrally Sponsored Progeny Testing Scheme</b>				
	(a) No. of young bulls to be introduced for progeny testing	No.	48	48
	(b) No. of test A.I.	"	58642	66526
	(c) No. of completed lactations	"	1912	1905
	(d) Selection of bull calves	"	59	54
<b>C. Dairy Development Department</b>				
1.	Artificial Insemination conducted	No.s	3,71,685	1,97,917
2.	Construction of Model Cattle sheds	"	499	353
3.	House visits	"	51862	44390
4.	Antisterility camps	"	170	38
5.	Discussion classes	"	5748	5157
6.	Cattle shows/seminars	"	671	103
7.	Deworming of calves	"	33560	38509
8.	Vitamin supplements	Nos. bottles (200 ML.)	4000	4159
			195	159
9.	Film shows	Nos.		

\*6 Veterinary hospitals and

7 Veterinary sub centres were upgraded

Source: 1. Department of Animal Husbandry (2) Department of Dairy Development

3. K.I.D and MM Board.

## APPENDIX 4.10

## Dairy Co-operatives in Kerala

As on 31-3-1987

Sl.No.	District	Primary	Union	Regional Union	Total	Anand Model Co-operative Societies
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Trivandrum	254	..	1	255	156
2.	Quilon	166	1	..	167	79
3.	Pathanamthitta	63	..	..	63	24
4.	Alleppey	133	..	..	133	74
5.	Kottayam	131	1	..	132	65
6.	Idukki	78	..	..	78	23
7.	Ernakulam	168	1	1	170	131
8.	Trichur	165	1	..	166	68
9.	Palghat	102	1	..	103	..
10.	Malappuram	73	1	..	74	..
11.	Kozhikode	82	1	..	83	..
12.	Cannanore	104	1	..	105	..
13.	Wayanad	35	1	..	36	..
14.	Kasaragode	28	..	..	28	..
<b>Total</b>		<b>1582</b>	<b>9</b>	<b>2</b>	<b>1593</b>	<b>620</b>

## APPENDIX 4.11

## Performance of the Dairies during 1986 and 1987

Name of the Dairy	Procuring capacity per day (litres)	Procurement (litres)		Average Procurement per day (litres)		Total Sales (litres)		Average Sales (litres)	
		1986	1987	1986	1987	1986	1987	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trivandrum	40000	13216277	10400763	36206	28495	15799949	19767894	43288	54159
Quilon	60000	4520116*	9942281	12384	27239	2262611**	5284087	6199	14477
Alleppey	60000	1612110	2031829	4417	5567	3145179	4818673	8617	13284
Kottayam	6000	2203515	3642094	6037	9978	2812103	3715031	7704	6178
Ernakulam	50000	17270894	18401515	47318	50423	14642341	18063493	40116	49489
Trichur	60000	Nil	3700675***	Nil	10139	Nil	665104	****Nil	1822
Palghat	6000	3738568	3829461	10243	10492	4495365	4764654	12316	13054
Cannanore	10000	2621005	1209057	7181	3312	6517608	7313594	17843	20037

\* Only 289 day

\*\* Only 285 days

\*\*\* Only 184 days

\*\*\*\* Only 122 days

## APPENDIX 4.12

*Species-wise Composition of Marine Fish Landings in Kerala (1982-86)*

(Quantity in Tonnes)

Species	1982	1983	1984	1985	1986	Average for 1982-86
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Elasmobranches	6287 (1.9)	8463 (2.2)	5036 (1.2)	7966 (2.4)	6057 (1.8)	6762 (1.9)
2. Catfish	9497 (2.9)	15159 (4.0)	13928 (3.3)	1815 (0.5)	5084 (1.5)	9097 (2.5)
3. Chirocentrus	1060 (0.3)	1090 (0.3)	2771 (0.6)	5045 (1.5)	2237 (0.7)	2440 (0.7)
4. (a) Oil sardine	143205 (44.0)	154372 (40.2)	101844 (24.0)	106321 (32.0)	145259 (43.3)	130300 (36.1)
(b) Other sardines	7864 (2.4)	5315 (1.4)	71880 (16.9)	31465 (9.5)	24245 (7.2)	28154 (7.8)
5. Anchoviella	13184 (4.0)	55030 (14.3)	46624 (11.0)	19349 (5.8)	9500 (2.8)	28737 (8.07)
6. Thrissoles and Other Clupeoids	3983 (1.2)	7899 (2.1)	19421 (4.6)	4121 (1.2)	8019 (2.4)	8694 (2.4)
7. Perches	11067 (3.4)	9814 (2.5)	2808 (0.7)	500 (0.1)	6577 (2.0)	6153 (1.7)
8. Redmulletts	244 (0.1)	152 ..	.. ..	11621 (3.5)	6329 (1.9)	3669 (1.0)
9. Sciaenids	3568 (1.1)	6110 (1.6)	7128 (1.7)	3990 (1.2)	4601 (1.3)	5079 (1.4)
10. Ribbon Fishes	11042 (3.4)	1109 (0.3)	2442 (0.6)	3251 (1.0)	3536 (1.1)	4276 (1.2)
11. Carangids	2997 (1.0)	16508 (4.3)	2071 (0.5)	1870 (0.6)	11799 (3.5)	7049 (2.07)
12. Leiognathus	8723 (2.7)	9495 (2.5)	4183 (1.0)	1536 (0.4)	3642 (1.1)	5516 (1.5)
13. Lactarius	1609 (0.5)	1099 (0.3)	1412 (0.3)	931 (0.3)	1194 (0.3)	1249 (0.3)
14. Pomfrets	4242 (1.3)	1991 (0.5)	1423 (0.3)	988 (0.3)	1892 (0.6)	2107 (0.6)
15. Mackerel	10717 (3.3)	12675 (3.3)	20894 (4.9)	24157 (7.3)	17294 (5.1)	17147 (4.8)
16. Seer Fish	5619 (1.8)	6999 (1.8)	3988 (0.9)	2808 (0.8)	3005 (0.9)	4488 (1.2)
17. Tuunnies	7279 (2.2)	5750 (1.5)	4715 (1.1)	6206 (1.9)	7042 (2.1)	6198 (1.77)
18. Soles	11601 (3.6)	13323 (3.4)	6454 (1.5)	3366 (1.0)	5080 (1.5)	7965 (2.2)
19. (a) Prawns	26772 (8.2)	29857 (7.7)	31139 (7.3)	35882 (10.8)	29817 (8.9)	30693 (8.5)
(b) Lobsters and Crustaceans	4464 (1.4)	6880 (1.8)	93 ..	852 (0.3)	1606 (0.5)	2779 (0.87)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
20. Cephalopodes	3524 (1.1)	1730 (0.4)	4910 (1.2)	3102 (0.9)	3997 (1.2)	3452 (1.0)
21. Miscellaneous	26819 (8.2)	13955 (3.6)	69554 (16.4)	55361 (16.7)	28014 (8.3)	38740 (10.7)
Total	325367 (100.0)	385275 (100.00)	424718 (100.0)	332503 (100.0)	335856 (100.0)	360744 (100.0)

Note: Figures in brackets denote the percentage to total

## APPENDIX 4.13

*Average Beach Price of Selected Marine Fishes in Kerala*

Species	Average Beach Price (Rs. kg)				Percentage increase over the period
	1983-84	1984-85	1985-86	1986-87	
1. Elasmobranchs	1.51	1.81	2.85	3.60	139(26)
2. Catfish	1.54	1.92	2.65	3.35	117(26)
3. Chirocentrus	1.55	2.00	2.85	3.40	119(19)
4 (a) Oil sardine	1.00	1.08	1.45	1.85	85(27)
(b) Other sardines	1.12	1.25	1.75	2.10	87(29)
5. Sciaenids	1.41	1.77	2.60	3.00	112(15)
6. Carangids	1.94	2.14	3.45	3.90	101(13)
7. Leleognathus	0.85	1.05	1.75	2.15	152(23)
8. Lactorius	2.67	3.45	3.50	4.50	68(28)
9. Pomfrets	4.51	5.34	6.50	8.00	77(23)
10. Mackerel	2.15	2.79	3.35	4.00	86(19)
11. Seer fish	5.65	6.35	7.10	9.30	64(90)
12. Tunnies	3.47	4.21	5.00	5.60	61(12)
13. Soles	0.97	1.11	1.50	1.95	101(30)
14. Cephalapods	3.05	4.17	5.00	5.80	90(16)
15. Prawns	12.93	14.12	16.50	20.00	55(21)
16. Miscellaneous	1.34	1.49	2.25	2.45	82(9)

Note: Figures in brackets indicate the percentage variation during 1986-87 over the previous year.

## APPENDIX 4.14

*District-wise Distribution of Fishermen Population in Kerala (1986-87 Estimated)*

District	Marine				Inland				Total
	Male	Female	Children	Total	Male	Female	Children	Total	
1. Trivandrum	43997	42555	60892	147444 (21.27)	323	329	417	1069 (0.53)	148513 (16.62)
2. Quilon	26298	24236	32231	82765 (11.94)	9583	8802	11912	30297 (15.08)	113062 (12.63)
3. Alleppey	30485	29812	38357	98654 (14.23)	18162	17219	19622	55003 (27.38)	153657 (17.19)
4. Pathanamthitta	..	..	..	..	245	232	265	742 (0.36)	742 (0.08)
5. Kottayam	..	..	..	..	7294	6966	7737	21997 (10.96)	21997 (2.40)
6. Idakki	..	..	..	..	..	..	..	..	..
7. Ernakulam	20610	20159	23281	60450 (9.24)	19588	18797	18802	57187 (28.46)	121237 (13.56)
8. Trichur	18845	19206	23508	61559 (8.87)	5827	5619	6100	17546 (8.73)	79105 (8.81)
9. Palghat	..	..	..	..	110	128	283	471 (0.23)	471 (0.05)
10. Malappuram	20663	21182	24824	66669 (9.62)	1198	1185	1379	3762 (1.87)	70431 (7.87)
11. Wayanad	..	..	..	..	265	253	326	844 (0.41)	844 (0.09)
12. Calicut	27287	26474	33668	87439 (12.61)	3321	3168	4117	10606 (5.27)	98045 (10.96)
13. Cannanore	14806	14413	17222	46441 (6.70)	301	264	219	784 (0.39)	47225 (5.28)
14. Kasaragod	12215	11881	14200	38286 (5.52)	249	218	180	647 (0.33)	38933 (4.35)
State	215206 (24.06)	209918 (23.48)	268163 (29.98)	693287 (77.52)	66466 (7.44)	63180 (7.07)	71309 (7.97)	200955 (22.48)	894242 (100.00)

Note: Figures in brackets denoted the percentage to total.

## APPENDIX 4.15

## Division-wise Area of Forests in Kerala

Division	Area in hectares as on 31-3-1987			
	Reserve Forests	Proposed for Reserve Forests	Vested Forests	Total
(1)	(2)	(3)	(4)	(5)
<b>A. General Divisions</b>				
1. Trivandrum	38376	775	397	39548
2. Thenmala	46730	..	794	47524
3. Punalur	28005	..	17	28022
4. Kanni	32064	1102	310	33476
5. Ranni	105029	717	161	105907
6. Kottayam	65548	526	3141	69215
7. Munnar	66275	4726	631	71632
8. Kothamangalam	31687	..	21	31708
9. Malayattoor	61724	52	6	61782
10. Vazhachal	41394	..	..	41394
11. Chalakudy	35471	..	..	35471
12. Trichur	33102	..	390	33492
13. Nenmara	20993	..	..	20993
14. Palghat	37327	..	..	37327
15. Nilambur	32469	..	..	32469
16. Kozhikode	6760	8614	..	15374
17. Wayanad	36277	1506	..	37783
Sub Total (A)	719231	18018	5068	743117
<b>B. Special Divisions</b>				
1. Tellicherry	..	..	17915	17915
2. Palghat	..	..	75148	75148
3. Kozhikode	..	359	46081	46440
4. Nilambur	..	..	43461	43461
Sub Total (B)	..	359	182605	182964
<b>C. Wildlife Divisions</b>				
1. Trivandrum	28132	..	..	28132
2. Idukki	28253	..	..	28253
3. Thekkady	77700	54	..	77754
4. Parambikulam	27414	..	..	27414
5. Wayanad	34686	..	..	34686
Sub-Total (C)	196185	54	..	196239
Total (A+B+C)	915416 (81.56)	18431 (1.64)	188473 (16.80)	1122320 (100.00)

Note: Figures in brackets indicate percentage to total.

37 629 MC.

## APPENDIX 4.16

*Species-wise Area under Forest Plantations*

Name of Species	Area in Hectares		
	As on 31-3-1986	As on 31-3-1987	Percentage to total 31-3-1987
(1)	(2)	(3)	(4)
1. Teak	79596	79416	49.52
2. Eucalyptus	34808	34728	21.65
3. Softwood	23133	23101	14.40
4. Mixed Plantations	4532	5955	3.71
5. Cashew	4658	4658	2.90
6. Bamboo	1056	3010	1.88
7. Wattle	2865	3006	1.87
8. Hardwood	1162	1162	0.72
9. Fuelwood	1059	1072	0.67
10. Pepper	543	543	0.34
11. Pine	449	449	0.28
12. Mahagony	173	173	0.11
13. Rosewood	158	158	0.10
14. Balsa	117	117	0.07
15. Cardamom	27	27	0.02
16. Sandalwood	14	14	0.01
17. Kongu	17	14	0.01
18. Zylouicum	4	4	0.01
19. Others	2845	2763	1.72
<b>Total</b>	<b>157216</b>	<b>160370</b>	<b>100.00</b>

## APPENDIX 4.17

*Production of Major Forest Produce*

Item	Unit	Period		Actual increase or decrease over the year
		1985-86	1986-87	
(1)	(2)	(3)	(4)	(5)
1. Timber (Round Log)	'000 Cum.	81	107	+26
2. Timber (Round Poles)	'000 Nos.	1404	1008	-396
3. Timber (Swan & Squard)	Cum.	37	42	+5
4. Firewood	'000 Tonnes	38	78	+40
5. Charcoal	Tonnes	281	25	-256
6. Cardamom	Kg.	9922	42024	+32102
7. Honey	Tonnes	22	14	-8
8. Reeds	Lakh Nos.	529	266	-263
9. Bamboo	'000 Nos.	413	6281	+5868
10. Jungle wood Poles	Nos.	4664	1400	-3264
11. Sandalwood	Tonnes	36	65	+29



## APPENDIX 4.18

## Forest Revenue in Kerala

Item	Sale Proceeds (Rs. lakhs)		Increase or Decrease	
	1985-86	1986-87	Actual (Rs. lakhs)	Percentage
(1)	(2)	(3)	(4)	(5)
<b>A. Revenue from Forests</b>				
1. Timber	3463.24 (81.59)	3775.30 (78.35)	+312.06	+9.01
2. Firewood & Charcoal	82.99 (1.96)	90.35 (1.87)	+7.36	+8.87
3. Livestock	0.95 (0.02)	0.35 (0.00)	-0.60	-63.16
4. Others	361.38 (8.51)	812.30 (16.86)	+450.92	+124.78
Sub Total (A)	3908.56 (92.09)	4678.30 (97.10)	+769.74	+19.69
<b>B. Other Receipts</b>				
	361.62 (8.52)	176.89 (3.67)	-184.73	-51.08
<b>C. Total (A+B)</b>				
	4270.18 (100.60)	4855.19 (100.77)	+585.01	+13.70
<b>D. Refunds</b>				
	25.67 (0.60)	36.99 (0.77)	+11.32	+44.10
<b>E. Net Revenue (C-D)</b>				
	4244.51 (100.00)	4818.20 (100.00)	+573.69	+13.52

Note: Figures in brackets indicate percentage share to net revenue.

## APPENDIX 4.19

## Performance of Kerala Social Forestry Project During 1986-87

Item	Unit	1986-87		
		Target	Achievement	Percentage of Achievement
(1)	(2)	(3)	(4)	(5)
1. Farm Forestry—Distribution of Seedlings	Lakh Nos.	500	1050	210
2. Block Plantations on Government Land				
(a) Large Block	Ha.	1800	2339	130
(b) Small Block	„	150	172	115
3. Strip Plantations	„	200	66	33
4. Tribal Fuelwood Plantations	„	300	149	50
5. Tribal Medicinal Plantations	„	15	1	7
6. Seedlings Production (Governmental)	Lakh Nos.	119	153	129

## APPENDIX 4.20

*Students Statistics of Kerala Agricultural University 1987*

Course of Study	Admission	On rolls as on 31-12-1987	Successful Completion
<i>U. G. Courses</i>			
B. Sc. (Ag.)	159	993	121
B.V.Sc. & A.H.	110	669	18
B.F. Sc.	21	183	8
B. Sc. (C & B)	25	175	..
B. Tech (Ag. Engg.)	..	52	..
B.Sc. (Home Science)	..	31	..
B.Sc. (Forestry)	..	16	..
Total for U.G. Courses	315	2119	147
<i>P.G. Diploma Courses</i>			
Diploma in Food and Nutrition	..	1	..
Diploma in Agricultural Sciences(DABE)	..	102	15
Diploma in Agricultural Engineering (DARE)	..	21	14
Diploma in Natural Rubber Production	..	..	1
Total for Diploma Courses	NIL.	124	30
<i>Master's Degree Courses</i>			
M.Sc. (Agriculture)	49	270	36
M.V. Sc.	3	25	5
M.E.Sc.	..	2	..
M. Sc. (Hort.)	11	42	15
M.Sc. (Food & Nutrition)	..	16	..
M.Sc. (Forestry)	..	6	..
M.Sc. (Statistics)	5	5	5
Total Master's Courses	68	366	51
<i>Ph.. D. Courses</i>			
Ph. D. (Vety.)	5	10	..
Ph. D. (Hort.)	3	21	..
Ph. D. (Ag.)	9	66	3
Total for Ph.D.	17	97	3
Grand Total	400	2706	231

Source: Agricultural University.

## APPENDIX 5.1

## Major and Medium Irrigation Projects—Achievement during 1986-87

Sl. No.	Name of Project	Command Area in (ha.)		Physical Achievement during		Cumulative achievement up to		Expenditure during 1986-87 (Rs. in lakhs)
		Net	Gross	(ha.)		1986-87 (ha.)		
				1986-87	Gross	Net	Gross	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>A. Completed Schemes</i>								
1.	Chalakydy	26680	39380	..	..	13530	27258	..
2.	Peechi	17555	28080	..	..	15262	23718	..
3.	Malampuzha	29463	42090	..	..	19802	40208	..
4.	Neyyar	16042	17952	..	..	8300	16716	..
5.	Pothundy	8792	10930	..	..	4685	10046	..
6.	Gayathri	7651	10930	..	..	4880	10114	..
7.	Walayar	4536	6470	..	..	3752	6503	..
8.	Vazhani	3565	7130	..	..	2113	4226	..
9.	Maugalom	4816	6880	..	..	3313	6608	..
10.	Cheerakuzhi	2268	2828	..	..	952	1746	..
<i>B. Ongoing Scheme</i>								
11.	Kallada	61630	92000	..	..	7073	10601	3409
12.	Pamba	21135	49456	186	435	20604	48213	159
13.	Muvattupuzha	17400	52200	..	..	..	..	275
14.	Periyarvally	30444	32800	295	771	29430	76813	225
15.	Chimoni	13000	26200	..	..	..	..	199
16.	Chittupuzha	14500	28960	153	285	13748	25571	52
17.	Kanjirapuzha	9720	21863	..	..	6883	15487	250
18.	Kuttiadi	14570	35850	..	..	14108	34710	50
19.	Pazhassi	11525	32374	338	676	7448	14896	235
20.	Vamanapuram	8803	18014	..	..	..	..	49
21.	Idamalayar	13659	39318	..	..	..	..	63
22.	Kuriarkutty	1736	23472	..	..	..	..	2
23.	Chattiar (Beyyore puzha)	5812	13621	..	..	..	..	9
24.	Kakkadavu	12817	26106	..	..	..	..	3
25.	Attappady	4190	13041	..	..	..	..	36
26.	Karapuzha	4650	9300	..	..	..	..	111
27.	Meenachil	10000	20000	..	..	..	..	16
28.	Banasurasagar	2400	1800	..	..	..	..	3
<b>Total</b>		<b>267991</b>	<b>759936</b>	<b>972</b>	<b>2167</b>	<b>175883</b>	<b>373434</b>	<b>5146</b>

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## APPENDIX 5.2

*Physical and Financial Achievement under Minor Irrigation*

Rs. in lakhs)

Sl. No.	Items	1985-86 Actual expenditure	1985-86 cumulative Achievements upto		1986-87 Actual Expenditure	1986-87 achievement Area in (ha.)		Total Area Irrigated till 1986-87	
			Net	Gross		Net	Gross	Net	Gross
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Minor Irrigation Class I	139.84	29166	43900	214.64	2493	3740	31659	47640
2.	Minor Irrigation Class II PWD	51.53	82289	82289	137.01	913	913	83202	83202
3.	Minor Irrigation Class II with Peoples participation	..	..	..	..	..	..	..	..
4.	Lift Irrigation	140.57	35904	53858	184.00	2530	3795	38434	57653
5.	I.P.D. Yelah Schemes	1.73	18353	18353	49.80	323	323	18676	18676
6.	Repairs to Minor Irrigation Structures and others	41.04	3494	3494	40.47	635	635	4129	4129
Total		374.71	169206	201894	625.92	6894	9406	176100	211300

## APPENDIX 5.3

*Number of Minor Irrigation Works Proposed and completed during 1986-87*

Sl. No.	Item	No. of works pending completion	No. of works proposed during the year	No. of works completed
(1)	(2)	(3)	(4)	(5)
1.	Minor Irrigation Class I	61	162	48
2.	Minor Irrigation Class II PWD	153	245	66
3.	Minor Irrigation Class II (with Peoples Participation)	-	-	-
4.	Lift Irrigation	48	127	41
5.	Repairs to Minor Irrigation Structures	35	71	36
6.	I.P.D. Yelah Scheme	63	114	51

## APPENDIX 5.4

*Physical and Financial achievement under Flood control and Anti Sea Erosion during 1986-87.*

Items	No. of Works Proposed	No. of Works completed	No. of Works pending	Achievement	Amount Spent (Rs. lakhs)
(1)	(2)	(3)	(4)	(2)	(6)
Anti Sea Erosion	153	19	80	6.68 K M new sea wall, 6.52 K M old sea wall	686.75
Flood Control	84	15	32	2100 ha. of area protected from the ravages of flood.	150.37

## Growth of Kerala Power System at a Glance

Particulars	Position as on	
	31-3-1986	31-3-1987
(1)	(2)	(3)
1. Installed Capacity—MW	1271.5	1476.5
2. Maximum demand -MW		
(a) System	993.1	1073.4
(b) Internal	991.0	1060.6
3. Generation per annum—MU	5357.139	4641.6009
4. Import per annum—MU	227.7239	511.8525
5. Export per annum—MU	396.3987	19.1598
6. Energy sales per annum—MU	4171.9162	3716.0331
7. Energy losses as percentage of Energy available for sale	24.94%	27.5%
8. Per capita consumption—KWH	136.06	131.26
9. 220 KV lines—Ct. km.	887.83	887.83
10. 110 KV lines—Ct. km.	1777.19	2072.19
11. 66 KV lines—Ct. km.	2486.34	2534.34
12. 11 KV lines—Ct. km.	14917.6	17531.08
13. I.T Lines—Ct. km.	76141.3	80809.45
14. Step up transformer capacity MVA	1486	1726
15. No. of the E.H.T. Sub Stations	109	116
16. Step down transformer capacity MVA	3913.8	4164.8
17. Distribution transformer		
(a) Nos.	13314	14015
(b) Capacity—KVA	1349133	1443393
18. No. of villages electrified	All the villages (1268 Nos <sup>1</sup> ) had been electrified by 5/79	
19. No. of consumers	2391854	26,06,800
20. Connected load—MW	3144.73	3379.07
21. No. of street lights	4,60648	470730
22. No. of irrigation pumps	1,45,852	158345
23. Total revenue per annum (Rs. lakhs)	13984.44	17709.16

## APPENDIX—5.6

Power Projects and Power Generation Capacity (1986-87) as on 31-3-1987

Project	Installed capacity in MW	Energy potential MKWH	Units MKWH
(1)	(2)	(3)	(4)
1. Pallivasai	37.5	284.0	206.1377
2. Sengulam	48.0	182.0	127.6920
3. Neriamangalam	45.0	237.0	245.1470
4. Panniar	30.0	149.0	76.5260
5. Peringalkuthu	32.0	172.0	212.1969
6. Sabarigiri	300.0	1253.0*	962.9900
7. Sholayar	54.0	233.0	202.8088
8. Kuttiyadi	75.0	245.0	244.2485
9. Idukki	780.0	2195.00**	2314.3920
10. Idamalayar	75.0	320.00	49.460
Total	1476.5	5270.0	4641.6009

\* including diversion (part from S.A. Scheme)

\*\* including diversion part from Idukki Stage III.

## APPENDIX 5.7

Cost escalation of Major Power Generation Projects.

(Rs. in lakhs)

Name of Projects	Year of starting	Original estimated cost	Latest estimated cost	Expenditure upto 3/87	Energy potential MU	Expected year of completion	% increase to the original cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Idukki Stage III	1975	410	1459	1285.73	376	12/88	255.8
2. Idukki Stage II-Azutha Diversion	1987	..	300	..	57	1991	120.9
3. Sabarigiri Augmentation	1976	128	856	771.79	125	12/88	568.0
4. Kakkad	1976	1860	5500	2591.10	262	7/90	195.7
5. Kallada	1981	1190	1389	521.63	53	8/89	16.7
6. Lower Periyar	1983	8843	14209	1344.00	493	1990	60.68

## Small Hydro Projects

7. Malampuzha			305		6.4	1989	..
8. Madupetty			292		5.6	1989	..
9. Chimoni			320		11.5	1990	..
10. Peppara			392		6.5	1990	..
11. Malankara			780		36	1990	..

## APPENDIX-5.8

## Pattern of consumption of Power and Revenue collected (internal) 1986-87

Category	No. of consumers as on 31-3-1987	Connected load as on 31-3-1987 MW	Energy (Million units)	Consumed as percentage to total	Revenue Collected (Provisional) (Rs. lakhs)	Revenue as percentage to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Domestic lights, fans heat and small power	19,64,285	1406.7	991.0214	26.81	4297.12	24.26
2. Commercial lights, fans heat and small power	4,29,974	352.52	394.6009	10.67	3209.22	18.12
3. Industrial (Low and Medium voltage)	51,335	568.54	254.24	6.88	1573.95	8.12
4. Industrial (High and Extra High Voltage)	610	595.14	1707.86	46.20	7059.83	39.87
5. Irrigation	1,58,345	383.97	131.0380	3.54	339.44	1.92
6. Public lighting	1,398	28.34	76.0490	2.06	754.31	4.26
7. Water works and sewerage pumping	848	20.46	82.2755	2.23	210.41	1.99
8. Bulk supply to Licensees	5	23.40	59.7807	1.62	264.88	1.50
Total:	26,06,800	3379.07	3696.8733		17709.16	

## APPENDIX-5.9

## Average Rates of Electricity Supply and Electricity Duty for Different Categories of Consumers (Ps Per Unit)

Category of Consumers	Kwh/month	Rate	Duty	Total	With effect from
(1)	(2)	(3)	(4)	(5)	(6)
1. Domestic					
(a) Lights and Fans (single phase)	40	42.8	3.0	45.5	1-4-1986
(b) Heat and Small Power (single phase)	100	35.0	3.0	38.0	"
(c) Combined load (3 phase)	150	36.7	3.00	39.7	"
2. Commercial					
(a) Light and Fans	200	70.0	6.5	76.50	15-8-1982
(b) Heat and Small power	400	67.5	6.5	74.00	"
(c) Combined Load	600	67.5	6.5	74.00	"
3. Agricultural purposes (10HP 15% LF)	817	13.22	1.2	14.42	15-8-1982
4. Small Scale Industries (LT) (10 KW 20% LF)	1450	22.48	1.7	24.18	3-12-1984
5. Medium Industries (50 KW 50% LF(LT))	18250	19.19	1.7	20.89	"
6. Large Industry (HT) 250KW, 40% LF)	73000	30.13	9.04	39.17	1-4-1985
7. Large Industry (HT) 1000KW 50% LF]	365000	28.31	7.89	34.20	"
8. Heavy Industry (5000 KW 60% LF) 110 KV/66KV	2190000	25.19	7.56	32.75	"
9. Public lighting					
(a) 40MW Metal filament lamp (12 hrs.)	14.4	72.22	..	72.22	1-9-1982
(b) 2x40MW fluorescent lamps (12hrs.)	28.8	108.19	..	109.19	"
10. Supplies to consumers outside states.					

## APPENDIX-6.1

*Annual Indices of Industrial production in Kerala*

(Base-1970-71=100)

Year	General Index of Industrial Production
1975-76	121.07
1976-77	130.87
1977-78	139.22
1978-79	154.21
1979-80	160.74
1980-81	187.10
1981-82	180.51
1982-83	158.59
1983-84	139.06
1984-85	183.57
1985-86	200.60
1986-87	209.00
(Provisional)	

Source: Directorate of Economics and Statistics.

## APPENDIX-6.2

*Annual Index of Industrial Production*

Industrial Code Major Group	Item	Weight	1983-84	1984-85	1985-86
(1)	(2)	(3)	(4)	(5)	(6)
	<b>General Index</b>	100.00	139.06	183.57	200.60
20-21	Manufacture of Food products	18.15	128.18	165.07	148.03
23	Manufacture of Cotton Textiles	6.46	109.02	137.90	122.93
24	Manufacture of Wool, Silk, Synthetic Textiles	4.14	66.21	57.93	123.96
26	Manufacture of textile Products	1.57	83.72	105.80	90.81
27	Manufacture of Wood and Wood Products, Furniture and Fixtures.	4.08	113.36	176.31	100.56
28	Manufacture of Paper and Paper Products	12.54	80.79	68.33	69.40
30	Manufacture of Rubber, Plastic, Petroleum and Coal Products.	7.00	174.58	107.69	206.06
31	Manufacture of Chemical and Chemical Products (except products of Petroleum and Coal)	16.50	195.99	294.82	388.25
32	Manufacture of Non metallic mineral products	3.82	185.50	270.50	182.67
33	Manufacture of Basic Metal and Alloys Industries	3.33	80.90	213.40	176.96
34	Manufacture of Metal Products and Parts except Machinery and Transport Equipment	0.69	381.21	235.55	282.56
35	Manufacture of Machinery and Machine Tools (except Electrical Machinery)	0.16	33.93	84.82	64.29
36	Manufacture of Electrical Machinery, apparatus Appliance, Supplies and Parts	2.07	71.26	126.77	114.31
37	Manufacture of Transport Equipment and Parts	0.39	87.84	8.36	30.37
38	Other Manufacturing Industries	0.54	52.59	49.40	43.29
40	Electricity	18.56	187.10	250.91	275.11



## APPENDIX 6.3

*District-wise Distribution of Working Factories and Employment therein by Selected Industries—1985 (Final)*

	Trivandrum		Quilon		Pathanamthitta		Alleppey		Kottayam		Idukki		Ernakulam	
	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)
1. Oil	11	271	16	134	3	15	45	429	9	35	13	53	42	342
2. Tea	5	109	3	89	..	..	..	..	10	136	71	4318	1	65
3. Cashew	12	5241	216	88563	..	..	5	5023	..	..	..	..	2	472
4. Cotton Textiles	14	1866	8	2265	3	24	3	573	4	776	..	..	19	2077
5. Coir	4	60	7	203	..	..	195	2595	4	77	..	..	30	450
6. Plywood Splints and Veneers	21	303	59	1578	..	..	25	412	32	955	8	123	50	1055
7. Sawmill	57	341	98	499	7	27	68	264	112	584	7	26	285	1733
8. Printing and Publishing	60	1941	41	247	10	38	49	263	117	1140	16	84	145	2061
9. Rubber & Rubber Products	43	1368	42	513	22	183	35	441	313	3366	33	297	104	1767
10. Chemicals & Chemical Products	15	1112	14	307	1	3	35	611	26	652	1	12	61	7784
11. Matches	10	87	19	281	1	7	13	102	13	132	2	29	10	176
12. Soap	1	5	3	39	..	..	3	24	3	24	..	..	11	1186
13. Tiles	2	104	51	1833	1	9	4	153	20	198	..	..	37	788
14. General Engineering	74	2457	104	2054	14	80	79	1696	98	699	29	244	434	11044
15. Automobiles	34	3135	23	1250	8	45	36	948	75	723	17	116	117	1657
16. Others	88	2170	216	3934	8	229	167	2755	176	3934	19	413	498	11565
Total	451	20570	920	103789	78	660	762	16289	1012	13431	216	5715	1846	44222

APPENDIX 6.3—Contd.

	Trichur		Palghat		Malappuram		Kozhikode		Wayanad		Cannanore		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
1. Oil	102	578	13	73	11	46	41	246	2	17	27	121	335	2360
2. Tea	1	49	3	161	..	..	1	100	19	851	..	..	114	5878
3. Cashew	4	1938	..	..	..	..	1	463	..	..	3	1044	243	102744
4. Cotton Textiles	16	3887	16	1623	4	941	53	2656	..	..	449	9095	589	25733
5. Coir	2	9	..	..	12	111	32	510	..	..	17	189	303	4204
6. Plywood Splints and Veneers	37	544	94	1535	31	411	99	1105	..	..	54	2059	510	100801
7. Sawmill	182	941	194	794	145	735	177	1436	8	57	142	1178	1482	8615
8. Printing and Publishing	90	1080	43	529	26	118	80	1217	8	31	64	352	749	9101
9. Rubber & Rubber Products	88	1631	42	183	51	345	66	430	1	3	86	403	926	10930
10. Chemicals & Chemical Products	25	586	32	542	9	865	31	498	2	52	20	218	272	13242
11. Matches	28	246	27	332	9	108	23	193	..	..	8	95	163	1788
12. Soap	4	73	..	..	4	22	12	746	..	..	3	80	44	2199
13. Tiles	154	4005	14	508	9	492	33	3291	..	..	10	788	335	12169
14. General Engineering	225	2072	210	3105	47	417	187	1985	6	20	143	1423	1650	27296
15. Automobiles	82	723	56	324	33	458	127	1506	8	37	105	668	721	11590
16. Others	328	5442	452	3911	96	732	354	5765	10	258	249	2701	2661	43809
<b>Total</b>	<b>1368</b>	<b>23804</b>	<b>1196</b>	<b>13620</b>	<b>487</b>	<b>5801</b>	<b>1317</b>	<b>22147</b>	<b>64</b>	<b>1326</b>	<b>1380</b>	<b>20414</b>	<b>11097</b>	<b>291788</b>

A : Number of factories

B: Employment

## District-wise Distribution of working factories and Employment for the year ending 31-12-1986(Provisional)

	Trivandrum		Quilon		Pathanamthitta		Alleppey		Kottayam		Idukky		Ernakulam	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Oil	11	196	16	128	3	16	41	423	9	37	14	61	43	346
Tea	5	111	3	105	..	..	..	..	9	124	70	4259	1	63
Cashew	13	5851	224	87529	1	7	4	5019	..	..	..	..	1	19
Cotton Textiles	14	1755	10	2232	3	26	4	834	3	522	..	..	19	2001
Coir	3	39	7	201	—	—	193	2613	4	81	1	9	28	357
Plywood Splints & Veneers	23	307	63	1566	—	—	26	439	34	930	8	96	49	1035
Saw Mill	55	281	91	460	12	52	70	256	119	631	8	28	287	1770
Printing & Publishing	56	1913	40	252	22	118	53	286	114	1027	18	104	159	2149
Rubber & Rubber Products	41	1082	47	523	42	340	38	459	318	3500	40	322	107	1804
Chemical & Chemical Products	15	1092	13	308	1	3	31	648	25	737	1	9	70	8459
Matches	11	97	19	271	2	16	14	119	12	118	2	34	10	170
Soap	1	5	3	39	..	—	3	24	3	24	..	..	9	1196
Tiles	2	102	51	1806	2	18	4	105	20	186	..	..	40	847
General Engineering	75	2261	105	2174	19	113	87	2086	107	778	31	264	441	10801
Automobiles	38	3163	23	606	13	78	34	949	74	870	20	132	121	1708
Others	91	2268	223	3855	16	724	179	2380	182	3599	22	359	530	11891
<b>Total</b>	<b>454</b>	<b>20523</b>	<b>938</b>	<b>102055</b>	<b>136</b>	<b>1511</b>	<b>781</b>	<b>16640</b>	<b>1033</b>	<b>13164</b>	<b>235</b>	<b>5677</b>	<b>1915</b>	<b>44616</b>

A No. of Factories

B: Employment

## APPENDIX 6.4

*District-wise Distribution of working factories and Employment for the Year Ending 31-12-1986 (Provisional)*

	Trichur		Palghat		Malappuram		Kozhikode		Wayahad		Cannanore		Total	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Oil	103	612	14	83	11	41	44	341	2	17	28	133	339	2484
Tea	1	76	3	183	—	..	..	..	19	829	..	..	111	5750
Cashew	4	1937	—	—	—	..	2	544	..	..	3	926	252	101832
Cotton Textiles	16	3606	17	1607	5	1023	51	2122	..	..	405	8483	547	24211
Coir	3	18	..	..	12	120	31	510	..	..	17	188	299	4136
Plywood Splints & Veneers	34	472	103	1552	29	391	101	1123	..	..	53	1964	523	9875
Saw Mill	181	942	199	812	154	773	182	1354	8	41	152	1188	1518	8588
Printing & Publishing	93	1052	49	553	28	129	84	1396	8	29	65	406	789	9414
Rubber & Rubber Products	99	1820	49	270	57	481	73	466	1	3	91	366	1003	11436
Chemical & Chemical Products	26	722	35	555	13	898	33	558	2	16	25	264	290	14269
Matches	24	236	25	326	10	103	18	147	..	..	8	99	155	1736
Soap	4	83	1	7	4	31	12	667	..	..	2	55	42	2131
Tiles	160	4043	12	493	9	492	33	3227	..	..	11	804	344	12123
General Engineering	234	2115	227	3486	50	628	187	2105	6	17	146	1443	1715	28271
Automobiles	83	751	54	332	37	516	137	1600	7	28	105	669	746	11402
Others	346	5729	466	4249	117	946	383	5822	10	206	251	2642	2816	44670
<b>Total</b>	<b>1411</b>	<b>24214</b>	<b>1254</b>	<b>14508</b>	<b>536</b>	<b>6572</b>	<b>1371</b>	<b>21982</b>	<b>63</b>	<b>1186</b>	<b>1362</b>	<b>19630</b>	<b>11489</b>	<b>292278</b>

## APPENDIX 6.5

*Details of Purchase and Sale of materials by the Kerala State Industrial Products Trading Corporation*

(in M. T.)

Sl. No.	Material	Purchase		Sales	
		1985-86	1986-87	1985-86	1986-87
1	Titanium Dioxide	9690.875	9704.875	9690.966	9704.875
2	Potassium Titanate	8.125	10.950	8.125	10.950
3	Sodium Titanate	0.450	0.400	0.450	0.400
4	Titanium Pulp	0.050	..	0.050	..
5	Ammonium Titanyl Sulphate	0.020	..	0.020	..
6	White Cement (Direct Sale)	90.000	..	90.000	..
7	White Cement (Through Stockists)	2282.300	..	2282.300	..

Source: Annual Report of the KSIPTC Limited.

## APPENDIX 6.6

*Capital Invested and Employment in respect of Government Owned Companies in Kerala, 1985-86 and 1986-87*

Name of Company	Capital Invested (Rs. lakhs)		Employment (Nos.)	
	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)
1. The Kerala Ceramics Limited	1047.82	1101.53	616	592
2. Kerala Soaps and Oils Limited	786.54	927.86	680	672
3. Travancore Plywood Industries Ltd.	242.84	252.72	643	631
4. Kerala Electrical and Allied Engineering Company Limited	602.97	626.77	794	995
5. Kerala State Drugs and Pharmaceuticals Limited	1208.03	1312.06	509	501
6. Kerala State Detergents and Chemicals Limited	636.86	674.21	259	253
7. Kerala State Salicylates and Chemicals Limited	445.00	863.50	..	..
8. Metal Industries Limited	41.55	41.55	113	127
9. Steel Industrials Kerala Limited	1277.90	1277.90	228	280
10. Steel and Industrial Forgings Limited	709.42	709.42	143	143
11. Kerala Minerals and Metals Limited	9829.54	9829.54	1145	1145
12. Malabar Cements Limited	5448.67	5548.12	731	735
13. Trivandrum Spinning Mills Limited	358.49	340.11	552	541
14. Sitaram Textiles Limited	598.70	598.70	989	989
15. Kerala Agro Machinery Corporation Limited	317.37	314.25	336	343
16. Scooters Kerala Limited	110.59	206.56	108	106
17. Astral Watches Limited	14.80	14.80	108	108
18. Kerala Automobiles Limited	627.44	736.58	289	308
19. Kerala Premo-pipe Factory Limited	171.48	177.22	305	298
20. Kerala Clays and Ceramic Products Limited	24.20	27.31	545	406
21. Kerala State Wood Industries Limited	540.00	540.00	166	167
22. Meat Products of India Limited	145.97	145.97	97	97
23. Trivandrum Rubber Works Limited	860.60	908.70	445	433
24. Kerala State Engineering Works Limited	Under orders of Winding up			
25. Foam Mattings (India) Limited	Under lock out since 16-6-1984.			
<b>Total</b>	<b>26046.78</b>	<b>27175.38</b>	<b>9801</b>	<b>9870</b>

*Performance of Government Owned Companies in terms of Value of Production and Sales Turnover 1985-86 and 1986-87*

(Rs. in lakhs)

Name of Company (1)	Value of Production		Sales Turnover	
	1985-86 (2)	1986-87 (3)	1985-86 (4)	1986-87 (5)
<i>K.S.I.E. Group</i>				
1. Kerala Ceramics Limited	139.00	41.00	156.00	51.00
2. Kerala Soaps and Oils Limited	699.00	776.00	705.00	763.00
3. Travancore Plywood Industries Ltd.	226.00	191.00	240.00	216.00
4. Kerala Electrical and Allied Engineering Company Ltd.	936.00	1148.00	814.00	1167.00
5. Kerala State Drugs and Pharmaceuticals Limited	761.00	736.00	878.00	1243.00
6. Kerala State Detergents and Chemicals Ltd.	67.00	15.00	93.00	31.00
7. Kerala State Salicylates and Chemicals Limited	Production yet to be started			
<i>Iron and Steel</i>				
8. Metal Industries Limited	52.00	55.00	60.35	68.91
9. Steel Industrials Kerala Limited	296.82	719.49	346.08	727.63
10. Steel and Industrial Forgings Ltd.	88.49	N.A.	73.48	N.A.
<i>Chemical</i>				
11. Kerala Minerals and Metals Ltd.	1779.20	N.A.	1905.00	N.A.
12. Malabar Cements Ltd.	2426.60	2376.40	2771.28	3055.17
13. Trivandrum Rubber Works Ltd.	127.24	153.35	127.24	153.35
<i>Textiles</i>				
14. Trivandrum Spinning Mills Ltd.	257.27	254.68	275.10	236.56
15. Sitaram Textiles Limited	152.13	N.A.	157.65	N.A.
<i>Engineering</i>				
16. Kerala Agro Machinery Corporation Ltd.	629.91	497.00	563.77	597.31
17. Scooters Kerala Limited	17.00	39.72	13.73	38.85
18. Astral Watches Limited	22.42	24.30	22.42	24.30
19. Kerala Automobiles Ltd.	306.00	388.41	308.00	224.00
<i>Ceramics and Refractories</i>				
20. Kerala Premopipe Factory Limited	113.77	69.00	91.71	118.70
21. Kerala Clays and Ceramic Products Ltd.	50.16	51.77	53.82	57.09
<i>Wood based Industries</i>				
22. Kerala State Wood Industries Ltd.	185.92	90.33	89.87	113.80
<i>Agro-based Industries</i>				
23. Meat Products of India Limited	50.28	52.62	50.28	52.62

## APPENDIX 6.8

Installed Capacity and Capacity Utilisation of the Government owned Companies during  
1985-86 and 1986-87

Name of Company	Name of Product	Unit	Installed capacity		Production		Capacity Utilisation (in percentage)	
			1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Kerala Ceramics Limited	(i) Porcelain	M.T.	NA	NA	NA	NA	..	..
	(ii) Kaolin	"	"	"	"	..	..	..
	(iii) China Clay	"	"	"	"	..	..	..
Kerala Soaps and Oils Limited	(i) Soaps	"	9000	9000	4443	4579	49.37	50.88
	(ii) Glycerine	"	260	260	26	65	10.00	25.00
	(iii) Shark Liver Oil Products	"	300	300	34	34	11.33	11.33
	(iv) Vanaspati, Refined Oil	"	3000	3000	6	291	0.20	9.70
Travancore Plywood Industries Limited	Plywood and Allied Products	Lakh sq. metres (4 mm basis)	27.38	27.38	NA	4.68	..	17.09
Kerala Electrical and Allied Engineering Company Limited	(i) Distribution Transformers	KVA	120000	120000	102595	131107	85.50	109.26
	(ii) C.I. Specials	M.T.	..	1500	174.73	362.29	..	24.15
	(iii) Steel Structures	"	1200	1200	816.07	398.53	68.01	33.21
	(iv) Galvanised Structures	"	6000	6000	901.74	633.82	15.03	10.56
	(v) Brushless Alternators	Nos.	1500	1500	1171	1149	78.07	76.60
	(vi) HRC Fuses	"	120000	120000	7536	359	6.28	0.30
	(vii) Electrical Wiring Accessories	"	133000	133000	188310	125173	141.57	94.12
3. Kerala State Drugs and Pharmaceuticals Limited	(i) Tablets	Lakh Nos.	NA	2514	NA	3119	..	124.07
	(ii) Granules	Kg.	..	20000	..	8302	..	41.51
	(iii) Powders	Lakh Kg.	..	..	..	12762	..	..
	(iv) Capsules	Lakh Nos.	..	149	..	89	..	59.73
	(v) Liquids	Lakh Litres	NA	2.25	..	1.21	..	53.78
	(vi) Injectibles							
	(a) Bottles	Lakh Nos.	..	4.50	..	8.04	..	178.67
(b) Vials	"	..	15.00	..	9.67	..	64.67	
(c) Ampoules	"	..	60.00	..	24.87	..	41.45	
(vii) Vitamin 'A'	MMU	..	30.00	..	6.69	..	22.30	
6. Kerala State Detergents and Chemicals Ltd.	Synthetic Detergents							
	(i) Cake/Bar	M.T.	NA	NA	NA	NA	..	..
	(ii) Powder	"	..	..	..	..	..	..
7. Metal Industries Limited	Agricultural Implements, Estate and Garden Tools	M.T.	400	300	348	380	87.00	126.00
8. Steel Industrials, Kerala Limited	(i) Fabricated steel structurals	"	3000	3000	1895	2167	63.17	72.23
	(ii) Ferrous Scrap	"	10000	10000	890	6796	8.90	67.96

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. Steel and Industrial Forgings Limited	Forgings	„	4250	N.A.	416	N.A.	9.80	..
10. Kerala Minerals and Metals Limited	(i) Titanium Dioxide Pigment	„	22000	N.A.	4443	N.A.	20.20	..
	(ii) Ilmenite	„	29740	..	22716	..	76.38	..
	(iii) Rutile	„						
	(iv) Zircon	„						
	(v) Leucoxene	„						
	(vi) Monazite	„						
11. Malabar Cements Limited	Portland Cement	Lakh Tonnes	4.20	4.20	2.48	2.76	59.05	65.71
12. Trivandrum Spinning Mills Limited	Cotton yarn	Lakh kg.	25200	25200	6.27	4.94	..	..
			800	800				
			double spindles	double spindles				
13. Sitaram Textiles Limited	(i) Cotton yarn	Lakh kg.	12064	12064	3.69	NA	..	..
			spindles	spindles				
	(ii) Cotton Fabrics	Lakh metres	336	336	17.73	..	..	..
			looms	looms				
14. Kerala Agro Machinery Corporation Limited	(i) Power Tillers	Nos.	3000	3000	1411	1400	47.03	46.67
15. Scooters Kerala Limited	Scooters (Assembly)	Nos.	24000	NA	79	NA	0.33	..
16. Astral Watches Limited	Watches (Assembly)	Lakh Nos.	2.5	NA	2.92	NA	116.80	..
17. Kerala Automobiles Limited	Three Wheelers	Nos.	3000	3000	1350	1001	43.00	33.37
18. Kerala Premopipe Factory Limited	Cement Concrete Pipes and Collars	Nos.	Not assessed	Not assessed	5351	6377	..	..
19. Kerala Clays and Ceramic Products Limited	China Clay	M.T.	Not applicable	Not applicable	9455	9875	..	..
20. Kerala State Wood Industries Limited	(i) Veneers	Lakh sq. Mtrs.	37.5	30.00	2.13	0.87	5.68	2.90
	(ii) Doors, Windows etc.	Nos.	100000	82500	7043	6659	7.04	8.07
	(iii) Sawn sizes	cub Mtr.	..	..	835	1668	..	..



## APPENDIX 6.9

*Capital Invested and Employment in respect of Government Majority Companies in Kerala 1985-86 and 1986-87*

Name of Company (1)	Capital Invested (Rs. in lakhs)		Employment (Numbers)	
	As on 31-3-1986 (2)	As on 31-3-1987 (3)	As on 31-3-1986 (4)	As on 31-3-1987 (5)
1. Keltron Counters Limited	460.34	521.39	308	308
2. Keltron Electro Ceramics Ltd.	210.57	331.51	101	101
3. Keltron Crystals Limited	194.06	218.14	119	123
4. Keltron Magnetics Limited	72.18	76.89	31	32
5. Keltron Resistors Limited	178.41	194.36	49	50
6. Keltron Power Devices Limited	530.00	609.66	169	182
7. Keltron Rectifiers Limited	412.38	475.24	113	111
8. Keltron Component Complex Ltd.	954.92	911.76	359	364
9. Steel Complex Limited	379.31	356.78	645	646
10. Travancore Titanium Products Ltd.	638.00	554.25	1425	1457
11. Travancore Cochin Chemicals Ltd.	1350.77	1354.20	1217	1207
12. Travancore Cements Limited	418.42	418.42	521	521
13. Metropolitan Engineering Co. Ltd.	196.08	196.08	186	186
14. United Electrical Industries Limited	219.83	301.58	543	536
15. Traco Cable Company Limited	343.06	433.06	234	284
16. Transformers and Electricals Kerala Limited	2496.81	2469.05	1361	1554
17. Kerala Construction Components Limited	N.A.	N.A.	N.A.	N.A.
18. Chalakudy Refractories Limited	239.49	249.21	142	138
19. Travancore Sugars and Chemicals Limited	74.24	51.00	601	567
20. Forest Industries (Travancore) Limited	31.40	31.27	138	144

*Performance of Government Majority Companies in terms of Value of Production and Sales Turn-over 1985-86 and 1986-87*

(Amount in Rs. lakhs)

Name of Company (1)	Value of Production		Sales Turnover	
	1985-86 (2)	1986-87 (3)	1985-86 (4)	1986-87 (5)
<i>Keltron Group</i>				
1. Keltron Counters Limited	173.00	238.84	200.66	286.96
2. Keltron Electro Ceramics Ltd.	63.00	53.76	53.87	55.50
3. Keltron Crystals Limited	61.40	86.98	59.04	93.69
4. Keltron Magnetics Limited	83.48	55.19	79.38	73.99
5. Keltron Resistors Limited	27.58	27.47	23.42	24.64
6. Keltron Power Devices Limited	103.21	131.52	116.13	119.25
7. Keltron Rectifiers Limited	44.36	69.10	48.44	69.90
8. Keltron Component Complex Ltd.	486.05	586.72	632.29	610.68
<i>Iron and Steel</i>				
9. Steel Complex Limited	2745.53	1841.48	2614.65	2388.96
<i>Chemical</i>				
10. Travancore Titanium Products Limited	2137.17	2549.56	2080.84	2583.48
11. Travancore Cochin Chemicals Limited	2366.51	1552.00	2328.14	1538.28
12. Travancore Cements Limited	878.87	N.A.	873.85	N.A.
<i>Electrical and Cables</i>				
13. Metropolitan Engineering Co. Limited	20.03	N.A.	18.34	N.A.
14. United Electrical Industries Limited	247.20	195.38	248.64	194.22
15. Traco Cable Company Limited	N.A.	N.A.	N.A.	N.A.
16. Transformers and Electricals Kerala Limited	2011.66	1775.14	1900.35	1775.14
<i>Ceramics and Refractories</i>				
17. Kerala Construction Components Limited	31.29	N.A.	21.52	N.A.
18. Chalakudy Refractories Limited	8.50	12.00	6.70	11.61
<i>Agrobased Industries</i>				
19. Travancore Sugars and Chemicals Limited	300.04	481.77	486.44	482.44
<i>Wood based Industries</i>				
20. Forest Industries (Travancore) Limited	81.00	55.00	65.61	59.68

## APPENDIX 6.11

*Installed Capacity and Capacity Utilisation of the Government Majority Companies  
in Kerala 1985-86 and 1986-87*

Name of Company	Name of Product	Unit	Installed Capacity			Production		Capacity Utilisation (in percentage)	
			1985-86	1986-87	1985-87	19886-87	1985-86	1986-87	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1. Keltron Counters Limited	Counting devices, Registering Mechanisms and electronic Products	Nos.	10,00,000	10,00,000	2,38,400	2,62,000	23.84	26.20	
2. Keltron Electro Ceramics Limited	Ceramic Capacitors	Million pieces	50	50	2.45	1.92	4.90	3.84	
3. Keltron Crystals Limited	(i) Communication Crystals and watch crystals	Lakh Nos.	20.84	20.84	6.10	11.84	29.27	56.81	
	(ii) Digital Electronic Watches	Nos.	45000	45000	5478	14792	12.17	32.87	
4. Keltron Magnetics Limited	(i) Colour TV Relay Lines	Lakh Nos.	275	275	0.19	0.07	0.07	0.03	
	(ii) Servo controlled Voltage Stabilizers	Nos.	5000	5000	1003	1422	20.16	28.44	
	(iii) Power Supply Units	"	..	..	10050	2357	..	..	
5. Keltron Resistors Limited	(i) Carbon Film Resistors	Million Nos.	120	120	3.43	3.52	2.86	2.93	
	(ii) Metal Film Resistors	"	22	22	0.36	0.64	1.64	2.91	
6. Keltron Power Devices Limited	Semiconductor Devices	Lakh Nos.	10	10	9.34	11.16	93.40	111.60	
7. Keltron Rectifiers Limited	(i) Silicon Power Rectifiers and Diodes below 30 Amps	Nos.	3,00,000	3,00,000	147152	137104	49.05	45.70	
	(ii) Silicon Power Rectifiers and Diodes above 30 Amps	"	20,000	20,000	38767	46125	193.84	230.63	
8. Keltron Component Complex Limited	Capacitors	Million Nos.	4.30	6.00	3.42	4.51	71.25	75.17	
9. Steel Complex Limited	Steel Billets	Tonnes	55000	55000	47607	41148	86.56	74.81	
10. Travancore Titanium Products Limited	Titanium Dioxide	MT	24500	24500	9702	9749	39.60	39.79	
11. Travancore Cochin Chemicals Limited	(i) Caustic Soda	"	59400	59400	39057	27449	65.75	46.21	
	(ii) Sodium Sulphide	"	2100	2100	646	227	30.76	10.81	
	(iii) Hydro sulphite of Soda	"	2100	2100	..	..	..	..	
	(iv) Chlorine	"	52272	52272	34370	24155	65.75	46.21	
12. Travancore Cements Limited	(i) White Cement	Tonnes	30000	NA	NA	..	NA	..	
	(ii) Grey Cement	"	50800	"	45239	"	89.05	..	
	(iii) Cement Paint	"	600	"	781	"	130.17	..	
13. Metropolitan Engineering Company Limited	Switches, Fuses, Fire Extinguishers etc.	Nos.	10000	"	861	"	8.61	..	
14. United Electrical Industries Limited	(i) KWA Metres	"	2,50,000	2,50,000	1,45,302	1,18,587	58.12	47.43	
	(ii) Motor Control Gears	"	4500	4500	1617	1537	35.93	35.27	

(1)	(2)	(3)	(4)	(5)				
	(iii) L. T. Switch Gears	"	600	600	18	3	3.00	0.50
	(iv) 11 KV Switch Gears	"	Not fixed	Not fixed	8	..	..	..
	(v) Plastic Film Capacitors	Million Nos.	15	15	0.37	2.35	2.47	15.67
	(vi) Carbon Film Resistors	"	25	50	0.29	0.41	1.16	0.82
	(vii) Other Products	Nos.	Not fixed	Not fixed	2347	258	..	..
15.	Traco Cable Company Limited	(i) A.A.C. and A. C. S. R.	MT	NA	NA	NA	NA	..
		(ii) P.V.C. covered conductors and bare copper conductors	Million Core metres	"	NA	NA	NA	..
		(iii) Telephone cables	L.K.M.	"	"	"	"	..
16.	Transformers and Electricals Kerala Limited	(i) Power Transformers	MVA	4500	4500	2910	2461	64.67
		(ii) Current and Potential Transformers	Nos.	1000	1000	626	444	62.60
		(iii) Circuit Breakers	"	Not fixed	Not fixed	..	64	..
		(iv) Gas Circuit Breakers	"	100	100	25	17	25.00
		(v) Shunt Reactors	MVA	500	500	79.5	54.5	15.90
		(vi) Isolated Phase Busducts	Nos.	Not fixed	Not fixed	1	..	..
17.	Kerala Construction Com- ponents Limited	Sandlime Bricks	Lakh Nos.	120	NA	46.71	NA	38.93
18.	Chalakudy Refractories Ltd.	Refractory Items	MT	Not fixed	Not fixed	600	602	..
19.	Travancore Sugars and Chemicals Limited	(i) Sugar	..	900 tonnes of cane/day	900 tonnes of cane/day	1168 tonnes bagged	1763 tonnes bagged	..
		(ii) Spirit	Lakh Proof Litres	27	46.53	18.17	28.95	67.36
		(iii) Molasses	Tonnes					62.22
20.	Forest Industries (Travancore) Limited	Benches, desks, black board, tables, doors etc.	Cu. M	1500	1500	..	..	..

## APPENDIX—6.12

*Capital Invested and Employment in respect of Government of India Companies functioning in Kerala*

Name of Company	Capital Invested (Rs. in lakhs)		Persons Employed (Numbers)	
	As on 31-3-1986	As on 31-3-1987	As on 31-3-1986	As on 31-3-1987
(1)	(2)	(3)	(4)	(5)
1. Cochin Refineries Limited, Cochin	25285.07	21921.57	925	980
2. Cochin Shipyard Limited, Cochin	14539.32	NA	2540	NA
3. Fertilizers and Chemicals Travancore Limited, Alwaye	23964.27	NA	7817	NA
4. Hindustan Latex Limited, Trivandrum	1470.64	2413.02	818	913
5. Hindustan Newsprint Limited, Mavelloor, Kottayam.	14582.00	14050.00	1725	1721
6. Indian Rare Earths Limited				
(a) Rare Earths Division, Alwaye			554	593
(b) Minerals Division, Chavara	410.25	456.25	1020	1076
7. Indian Telephone Industries Ltd., Kanjikode, Palghat	Separate figures not available.		367	NA
8. Hindustan Insecticides Ltd., Alwaye	..	..	880	872
9. Instrumentation Ltd., Kanjiokode, Palghat	..	..	394	436
10. Modern Food Industries (India) Limited, Edappally, Cochin	..	..	172	206
11. HMT Limited, Kalamassery, Alwaye	..	..	NA	3073
12. Balmer Lawrie and Co. Ltd., Aroor	..	..	..	287

## APPENDIX - 6.13

*Performance of Government of India Companies functioning in Kerala in terms of Value of Production and Sales Turnover, 1985-86 & 1986-87*

(Amount in Rs. lakhs)

Name of Company	Value of Production		Sales Turnover		Export	
	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Cochin Refineries Limited, Cochin	54433.18	81353.26	54860.14	81602.12	..	..
2. Cochin Shipyard Limited, Cochin	3075.28	N.A.	3026.61	N.A.	..	..
3. Fertilisers and Chemicals Travancore Ltd. Alwaye and Cochin	16694.87	N.A.	18891.94	N.A.	..	..
4. Hindustan Latex Limited, Trivandrum	807.78	727.45	811.16	1129.28	..	..
5. Hindustan Insecticides Ltd., Alwaye	1232.79	1297.20	472.72	583.53	..	..
6. Hindustan Newsprint Limited, Kottayam	6527.00	6143.00	6573.76	6063.00	..	..
7. Indian Rare Earths Limited:						
(a) Rare Earths Division, Alwaye	742.73	756.10	894.44	977.04	571.36	652.84
(b) Minerals Division, Chavara	946.89	1177.68	899.56	1243.73	526.54	535.55
8. Instrumentation Limited, Palghat.	1102.89	1131.05	1102.73	1633.79	..	1.07
9. Modern Food Industries, (India) Limited, Cochin	400.98	451.60	400.98	451.60	..	..
10. Indian Telephone Industries Limited, Palghat.	738.48	N.A.	400.68	N.A.	..	..
11. H.M.T. Limited, Kalamassery	N.A.	2782.31	N.A.	3607.00	..	369.00
12. Balmer Lawrie and Co. Ltd., Aroor,	N.A.	825.52	N.A.	843.73	..	125.01

APPENDIX 6.14

Government of India Companies functioning in Kerala—Main features

(Amount in Rs. lakhs)

Name of Company	Paid up Capital		Share of Government and Public Sector Financing Institutions in the Paid up Capital as on 31-3-1987	Total Loans outstanding and Interest Accrued as on 31-3-1987	Loans availed during 1986-87		Gross Block		Net fixed Assets as on 31-3-1987	value of Major Raw materials consumed during 1986-87	Net Profit(+)/ Net Loss (-)	
	As on 31-3-1986	As on 31-3-1987			From Government of India	From Others	As on 31-3-1986	As on 31-3-1987			1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Cochin Refineries Limited, Cochin	700.00	700.00	427.00	21573.39	Nil	1741.22	18621.74	21687.98	17251.80	74219.16	(+)37.82	(+)709.02
2. Cochin Shipyard Limited, Cochin	6321.00	N.A.	N.A.	N.A.	N.A.	N.A.	11131.54	N.A.	N.A.	N.A.	(-)863.67	N.A.
3. Fertilisers and Chemicals Travancore Limited, Alwaye	18777.20	..	..	..	..	..	18414.05	..	..	..	(+)1123.45	..
4. Hindustan Latex Limited, Trivandrum	807.50	1248.00	1248.00	1368.40	512.00	199.69	396.99	2675.23	2257.29	410.12	(+)94.23	(+)53.40
5. Hindustan Newsprint Limited, Mavelloor, Kottayam	8157.99	8157.99	8157.99	6445.19	Nil	Nil	15755.93	15888.17	10462.17	1556.00	(-)99.96	(-)492.85
6. Indian Rare Earths Ltd.** (i) Rare Earths Division, Alwaye (ii) Mineral Division, Chavara	198.50	198.50	198.50	257.75	Nil	Nil	1398.04	1729.17	1371.17	368.92	+638.40	(+)697.90
7. Hindustan Insecticides Limited	Separate figures not available			..	..	..	..	..	1873.23	280.00	(-)118.11	(-)1.34
8. Instrumentation Ltd.	..	do.	..	..	Nil	819.95	592.47	662.28	380.41	706.36	(+)103.05	@(+100.82
9. Modern Food Industries (India) Limited	..	do.	..	..	..	..	..	..	59.35	233.47	(+)67.93*	(+)53.00*
10. Indian Telephone Industries Limited	..	do.	..	..	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	(+)59.35	N.A.
11. HMT Limited Kalamassery	..	do.	..	..	Nil	20.48	..	..	999.00	1221.00	N.A.	(+)18.00
12. Balmer Lawrie & Co., Limited, Aroor	..	do.	..	..	Nil	Nil	..	..	106.90	440.75	N.A.	(+)121.82

\*\*Figures relate to the Southern units of the Company as a whole. £ Relates to Alwaye and Chavara Units.

@Profit before tax

\*Operating profit.

## Production and Capacity Utilisation of Government of India Companies functioning in Kerala 1985-86 and 1986-87

Name of Company	Name of Product	Unit	Installed Capacity		Production		Capacity Utilisation (Percentage)	
			1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Cochin Refineries Limited	Petroleum Products	Million M.T.	4.50	4.50	2.56	4.17	56.89	92.67
2. Cochin Shipyard Limited	(i) Ocean going vessels	DWT	1,50,000	N.A.	46,113	N.A.	30.74	..
	(ii) Ship Repair	Lakh GRT	100	..	4.31	..	4.31	..
3. Fertilisers and Chemicals Travancore Limited								
(a) Udyogamandal Division	(i) Ammonium Sulphate	M.T.	1,98,000	N.A.	1,26,671	N.A.	63.98	..
	(ii) Ammonium Phosphate 20:20	..	1,48,500	N.A.	1,49,132	..	100.43	-
	(iii) Ammonium Chloride	..	24,750	..	10,239	..	41.37	-
	(iv) Super Phosphate	..	49,500	..	12,234	..	24.72	-
(b) Cochin Division	(i) Urea	..	3,30,000	..	1,22,612	..	37.16	-
	(ii) Complex Fertilisers	..	4,85,000	..	3,23,979	..	66.80	-
4. Hindustan Latex Limited	(i) Contraceptive Condoms	Million pieces	288	448	281.95	357.58	97.90	79.82
	(ii) Meteorological Balloons	No.	..	..	..	..	-	-
5. Hindustan Newsprint Limited	Newsprint	MT.	80,000	80,000	78,635	68,557	98.29	85.70
6. Indian Rare Earths Limited								
(a) Alwaye Division	(i) Rare Earths Chloride	..	5,000	5,000	4,000	3,967	80.00	79.34
	(ii) Trisodium Phosphate	..	5,600	5,600	5,063	5,286	90.41	94.39
	(iii) Rare Earths Flouride	..	180	180	216	221	120.00	122.78
	(iv) Rare Earths Oxide	..	60	60	27	43	45.00	71.67
(b) Chavara Division	(i) Ilmenite	..	1,44,000	1,44,000	76,802	74,690	53.33	51.87
	(ii) Monazite	..	240	240	72	29	30.00	12.08
	(iii) Zircon	..	8,460	8,460	5,653	5,457	66.82	64.50
	(iv) Rutile	..	7,200	7,200	5,291	5,151	73.49	71.54
	(v) Sillimanite	..	1,600	1,600	6,246	1,849	390.38	115.56
	(vi) Zirfloor	..	7,200	7,200	2,923	3,685	40.60	51.18

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. Hindustan Insecticides Limited Udyogamandal, Alwaye	(i) Technical DDT	Tonnes	1,344	1,344	792	1,011	58.93	75.22
	(ii) Formulated DDT	„	2,688	2,688	1,250	1,951	46.50	72.58
	(iii) Technical BHC	„	3,000	3,000	2,520	1,555	84.00	51.83
	(iv) Formulated BHC	„	3,000	3,000	2,022	2,952	67.40	98.40
	(v) Endosulfan	„	800	800	190	62	23.75	7.75
	(vi) Hildan 35 EC	} Kilolitre	1,910	1,910	287	288	15.03	15.08
	(vii) Hildit 25 EC							
	(viii) Hilthion 50 EC							
	(ix) Plantavax 20 EC							
8. Instrumentation Limited, Kanjikode, Palghat	(i) Process Control Valves	Nos.	..	..	2,408	2,395	..	..
	(ii) Safety Relief valves and pressure reducing valves	„	..	..	184	433	..	..
	(iii) Miscellaneous items and accessaries	„	..	..	3,237	2,747	..	..
	(iv) Orifice plate/flow measuring devices	„	..	..	168	356	..	..
9. Modern Food Industries (India) Limited, Edappally, Cochin	(i) Modern Bread	} Lakh Nos of 400 gms Lakh Nos. of 59 gms	170.66	218.32	193.38	199.50	113.31	91.38
	(ii) Modern Bun							
10. Indian Telephone Industries Limited, Kanjikode, Palghat	Electronic Switching Equipment	Lines	Not assessed	N.A.	33,883	N.A.	..	..
11. HMT Limited, Kalamassery	(i) Machine Tools	Nos.	..	476	..	434	..	91.18
	(ii) Printing Machines	„	115	69	77	72	66.96	104.35
12. Balmer Lawrie and Co. Ltd., Aroor	Marine Freight and special containers	„	1,800	1,800	1,237	965	68.72	53.61



## APPENDIX 6.16

District-wise Number of Registered Small Scale Units as on 31-3-1987

District	Number of the Small Scale units registered during 31-3-1987			Total Number of registered units as on 31-3-87	Number of units started by women entrepreneurs	Number of Units started by SC/ST entrepreneurs	Number of sick units as on 31-3-87	Number of units closed down as on 31-3-87	Number of sick units revived during 1986-87
	1984-85	1985-86	1986-87						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Trivandrum	188	336	457	3779	116	41	245	747	..
2. Qilon	353	369	517	4088	110	219	398	703	7
3. Pathanamthitta	60	110	160	359	35	55	43	29	..
4. Alleppey	226	251	452	3638	100	41	227	298	2
5. Kottayam	457	350	371	3672	103	41	185	417	6
6. Idukki	72	132	138	855	45	113	97	8	4
7. Ernakulam	431	475	495	5527	152	144	163	643	4
8. Trichur	373	524	450	4534	171	165	151	572	..
9. Palghat	216	214	400	2557	51	163	74	12	..
10. Malappuram	262	305	303	2391	65	62	86	185	1
11. Kozhikode	249	375	392	3523	92	126	121	184	3
12. Wayanad	56	152	130	462	10	28	22	69	..
13. Cannanore	399	181	567	4680	81	109	48	553	6
14. Kasaragode	40	92	145	277	12	10	14	74	1
<b>Total</b>	<b>3382</b>	<b>3866</b>	<b>4977</b>	<b>40342</b>	<b>1143</b>	<b>1317</b>	<b>1874</b>	<b>4494</b>	<b>34</b>

Source: Directorate of Industries and Commerce.

## APPENDIX 6.17

Investment production and Employment in SSI Units registered during 1986-87

District	Number of units	Investment (Rs. lakhs)	Estimated Production capacity in (Rs. lakhs)	Employment Number
(1)	(2)	(3)	(4)	(5)
1. Trivandrum	457	612.38	1736.60	2742
2. Qilon	517	692.78	2119.70	3102
3. Pathanamthitta	160	214.40	656.00	960
4. Alleppey	452	605.68	1853.20	2712
5. Kottayam	371	497.14	1521.10	2226
6. Idukki	138	184.92	565.80	828
7. Ernakulam	495	663.30	2029.50	2970
8. Trichur	450	603.00	1845.00	2700
9. Palghat	400	536.00	1640.00	2400
10. Malappuram	303	406.00	1242.30	1818
11. Kozhikode	392	525.28	1607.20	2352
12. Wayanad	130	174.20	533.00	780
13. Cannanore	567	759.78	2324.70	3402
14. Kasaragode	145	194.30	594.50	870
<b>Total</b>	<b>4977</b>	<b>6669.16</b>	<b>20268.60</b>	<b>29862</b>

Source: Directorate of Industries &amp; Commerce.

## APPENDIX 6.18

## Details of Entrepreneur Development Training during 1986-87

Name of District	Number of Entrepreneurs Trained during 1986-87			Out of the trained entrepreneurs number who have started Industrial Units during 1986-87
	General Category	SC/ST	Total Number	
(1)	(2)	(3)	(4)	(5)
1. Trivandrum	53		53	21
2. Quilon	30		30	2
3. Pathanamthitta	28		28	1
4. Alleppey	27	30	57	11
5. Kottayam	53		53	4
6. Idukki	28	21	49	7
7. Ernakulam	54		54	12
8. Trichur	50	27	77	15
9. Palghat	22	23	45	4
10. Malappuram	21		21	3
11. Kozhikode	45		45	9
12. Wayanad	25		25	2
13. Cannanore	53		53	17
14. Kasaragode	17		17	3
Total	506	101	607	111

Source: Directorate of Industries and commerce.

## APPENDIX 6.19

## District Industries Centres-Artisan Units Established during 1986-87

Sl. No.	Name of the District Industries Centre	Artisan Oriented units										
		Number of New Units established in 1986-87 by Location & Classes of Entrepreneurs										
		Rural Areas					Urban Areas					Total Artisan units (Rural & Urban (7+12))
S.C	S.T.	Women	other than SC/ST	Total (3+4+6)	S.C.	S.T.	women	Oth-er than SC/ST	Total (8+9+11)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.	Trivandrum	214	32	297	108	354	..	..	..	6	6	360
2.	Quilon	278	..	70	141	419	10	..	30	21	31	450
3.	Alleppey	61	8	42	71	140	..	..	..	..	..	147
4.	Pathanamthitta	64	8	32	110	182	..	..	..	..	..	180
5.	Kottayam	2	..	8	57	59	..	..	..	..	..	59
6.	Idukki	60	22	212	421	503	..	..	..	..	..	503
7.	Ernakulam	19	..	20	148	167	..	..	..	..	..	162
8.	Trichur	1663	..	2125	2754	4417	..	..	..	..	..	4417
9.	Palghat	1364	55	1480	2005	3424	..	..	..	..	..	3424
10.	Malappuram	36	..	..	88	124	..	..	..	..	..	124
11.	Calicut	..	..	7	72	72	..	..	..	..	..	72
12.	Wayanad	65	95	98	299	459	..	..	..	..	..	459
13.	Cannanore	110	68	123	129	307	..	..	..	..	..	307
14.	Kasaragode	48	15	20	155	218	..	..	..	..	..	218
Total:		3984	303	4534	6558	10845	10	..	30	27	37	10882

Source: Directorate of Industries and Commerce.

## Self Employment Programme—Achievements for 1984-85, 1985-86 and 1986-87

(Amount Rs. lakhs)

Sl.No.	Name of District Industries Centres	1984-85				1985-86				1986-87			
		Applications sanctioned		Disbursed		Applications sanctioned		Disbursed		Applications sanctioned		Disbursed	
		No.	Amount	No.	Amount	No.	Amount (revised)	No.	Amount	No.	Amount	No.	Amount
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Trivandrum	675	113.07	305	45.50	783	122.87	505	80.25	1646	323.18	1025	148.45
2.	Quilon	891	181.38	607	93.80	791	164.59	725	131.55	1709	367.82	1300	191.57
3.	Pathanamthitta	681	119.02	359	56.75	772	156.39	698	115.59	1025	356.52	577	102.51
4.	Alleppey	916	130.03	795	96.15	973	200.73	882	182.80	1655	222.70	1008	208.22
5.	Kottayam	948	228.24	828	89.78	1047	225.25	948	197.40	1858	427.25	1384	227.61
6.	Idukki	899	146.66	780	78.00	944	182.27	681	106.66	1015	207.95	525	74.10
7.	Eraakulam	1473	284.71	1190	309.08	1314	246.40	884	172.33	1961	401.16	836	174.02
8.	Trichur	990	171.21	903	141.00	982	183.93	529	98.36	1604	282.19	1239	189.97
9.	Palghat	710	111.31	506	72.96	807	126.67	363	67.75	1248	183.27	641	89.44
10.	Malappuram	810	140.01	596	110.94	1087	183.17	671	101.15	1210	236.73	641	99.08
11.	Kozhikode	1002	195.60	666	105.50	1024	197.02	786	133.62	1370	283.60	698	108.40
12.	Wayanad	650	127.60	364	51.84	605	104.81	590	105.76	481	71.62	346	43.24
13.	Cannanore	989	186.46	306	46.89	1143	209.05	638	116.04	1315	250.92	620	100.70
14.	Kasaragode	587	145.69	554	101.28	761	164.31	659	119.99	948	190.74	616	109.92
Total:		12221	2280.99	8759	1399.47	13033	2467.46	9559	1729.25	19015	3805.65	11456	1867.23

Source: Directorate of Industries &amp; Commerce.

## APPENDIX—6.21

## Industrial Co-operative Societies as on 30-6-1986

District	Total Number of Societies as on 30-6-1986				Societies by			Total Number
	Beedi Industrial Societies		Women's Industrial Societies	S.C.	S.T.	Others		
	Primary	Central						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Trivandrum	3	..	9	11	2	242	267	
Quilon	..	..	27	1	1	132	161	
Pathanamthitta	..	..	9	7	3	50	69	
Alleppey	2	..	27	13	1	121	164	
Kottayam	2	..	12	6	2	69	91	
Idukki	2	..	10	7	3	16	38	
Ernakulam	2	..	17	6	..	54	79	
Trichur	3	..	40	6	2	176	227	
Palghat	4	1	10	8	4	37	64	
Malappuram	3	..	15	8	..	55	81	
Kozhikode	2	..	10	4	..	75	91	
Wayanad	..	..	7	1	6	15	29	
Cannanore	16	1	24	13	1	72	127	
Kasaragode	5	..	4	2	..	16	27	
<b>Total</b>	<b>44</b>	<b>2</b>	<b>221</b>	<b>93</b>	<b>25</b>	<b>1130</b>	<b>1515</b>	

Source: Directorate of Industries and Commerce

## APPENDIX 6.22

## District-wise Details on the Condition of SSI Units as on 31-3-1987

Sl. No.	District	Green		Yellow		Red		Total
		No.	%	No.	%	No.	%	
1	Trivandrum	2688	90.75	237	8.00	37	1.25	2962
2	Quilon	2868	81.92	393	11.23	240	6.85	3501
3	Pathanamthitta	649	95.58	23	3.39	7	1.03	679
4	Alleppey	2739	91.00	214	7.11	57	1.89	3010
5	Kottayam	3035	93.30	176	5.41	42	1.29	3253
6	Idukki	639	97.41	17	2.59	..	..	656
7	Ernakulam	4810	87.66	152	2.77	525	9.57	5487
8	Trichur	3641	93.24	139	3.56	125	3.20	3905
9	Palghat	2419	95.16	68	2.68	55	2.16	2542
10	Malappuram	1942	95.81	85	4.19	..	..	2027
11	Calicut	2933	95.07	108	3.50	44	1.43	3085
12	Wayanad	528	100.00	..	..	..	..	528
13	Cannanore	2550	67.25	45	1.19	1197	31.56	3792
14	Kasaragode	673	96.01	9	1.28	19	2.71	701
	<b>Total.</b>	<b>32114</b>	<b>88.89</b>	<b>1666</b>	<b>4.61</b>	<b>2348</b>	<b>6.50</b>	<b>36128</b>

- Note: (1) Green indicates units working satisfactorily  
(2) Yellow—indicates units working but likely to become sick  
(3) Red—indicates sick/closed and non-existent units.  
(4) De-registered units are not included in this.

Source: Directorate of Industries & Commerce.

## APPENDIX 6.23

## Khadi and Village Industries

Production, Sales, Employment and Wages during 1986-87

Sl. No.	Industry	Production Value (Rs. lakhs)	Sales Value (Rs. lakhs)	Employment (Nos.)				Wages (Rs. lakhs)			
				Full Time	Part time	Casual	Total	Full time	Part time	Casual	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A.	Khadi	235.81	291.15	14941	..	..	14941	158.84	..	..	158.84
B.	Village Industries†										
1.	Village Oil	1334.56	1421.58	1301	1896	..	3197	59.28	17.04	..	76.32
2.	Village Pottery	458.74	493.97	13334	2292	..	15626	213.82	25.05	..	238.87
3.	Fibre & Screwpine	461.33	489.48	55737	2082	..	57819	331.35	9.33	..	340.68
4.	Carpentry & Blacksmithy	381.71	384.23	3142	406	..	3548	215.50	24.92	..	240.42
5.	Handmade paper	24.05	20.61	309	..	..	309	5.90	..	..	5.90
6.	Gurkhandasari	91.57	105.83	890	425	213	1528	20.66	6.71	1.66	29.03
7.	Palmgur	86.00	89.00	618	21950	..	22568	@	..	..	14.23
8.	Beckeping	518.85	481.83	4255	15150	..	19405	@	..	..	481.83
9.	Village leather	258.20	286.70	1107	735	..	1842	50.89	16.77	..	67.66
10.	Lime	211.28	231.62	2173	795	..	2968	73.62	11.11	..	84.73
11.	Non Edible Oil and Soap	78.35	83.67	174	172	165	511	7.05	2.42	0.84	10.31
12.	Cottage Match	210.28	212.37	1744	3210	..	4954	21.05	21.64	..	42.69
13.	Cane & Bamboo	63.41	67.08	2767	1916	..	4683	29.03	7.23	..	36.26
14.	Processing of cereals and pulses	204.57	235.47	3092	2584	..	5676	79.63	26.34	..	105.97
15.	Medicinal Plants	6.33	7.46	67	155	..	222	0.48	0.49	..	0.97
16.	Fruit processing and preservation	120.83	147.55	620	433	..	1053	6.39	3.75	..	10.14
17.	Aluminium	53.61	49.71	127	150	..	277	@	..	..	7.72
18.	Polivastra	1.68	2.97	16	..	..	16	0.36	..	..	0.36
19.	Agarbathi	13.81	14.40	104	74	..	178	1.54	0.32	..	1.86
20.	Gobar Gas	No. of plants constructed—405									
Total—B		4606.16	4825.53	91577	54425	378	146380	1116.55	173.12	2.50	1795.95
Total A+B		4841.97	5116.68	106518	54425	378	161321	1275.39	173.12	2.50	1954.79

@ Break up not available. Source: Khadi Board, Trivandrum.

## APPENDIX 6.24

## Coir Co-operative Societies in Kerala

Type of society	Number of societies as on	
	31-3-1986	31-3-1987
1. Primary coir co-operative societies (in the spinning sector)	555	577
2. Manufacturing societies	47	43
3. Small scale producers co-operative societies	6	6
4. Husk procurement and distribution societies	3	3
5. Co-operative coir marketing federation	1	1
Total number of societies (including dormant and those not in production and excluding societies under liquidation)	612	630
6. Dormant societies	40	59
7. Societies under liquidation	192	191
8. Societies which have not started production	N.A.	116

Source:-- Directorate of coir development.

## APPENDIX 6.25

## Activities of the Coir Co-operative Societies

## (a) Primary Coir co-operative Societies

Year	No. of societies	No. of members '000	Husk purchased		Yarn produced		Wages paid	
			No. (lakhs)	Value (Rs. lakhs)	Quantity (tonnes)	Value (Rs. lakhs)	Workers ('000)	Amount (Rs. lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1980-81	415	198	1609	183	12473	523	69	283
1981-82	462	215	1900	189	16016	721	89	299
1982-83	464	218	1786	179	15860	750	89	301
1983-84	464	218	1139	125	11501	495	85	281
1984-85	544	231	1667	208	10797	699	102	340
1985-86	555	246	2170	260	9589	796	103	351
1986-87	429 (only working)	222	1264	152	9587	663	75	*375

\* including wages paid in manufacturing societies

## (b) Manufacturing Societies.

Year	No. of societies	No. of Members	Value of production (Rs. lakhs)	Workers benefited (No.)	Wages (Rs. lakhs)	Value of export (Rs. lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1980-81	13	1849	189	1421	29	39
1981-82	18	2344	140	1285	32	15
1982-83	23	3280	160	1310	29	81
1983-84	29	4512	251	1278	44	36
1984-85	47	5348	217	1515	52	144
1985-86	47	5348	241	1515	55	138
1986-87	23 (only working)	3522	610	2348	N.A.	534

Source: Directorate of Coir Development

## APPENDIX 6.26

## Export of Coir and Coir Products from India during 1986-87

(Quantity in tonnes, Value Rs. lakhs)

Item	1985-86		1986-87	
	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)
1. Coir Fibre	--	--	1	0.09
2. Coir yarn	13398	1519.62	12105	1207.73
3. Coir Mats	7433	1118.21	7924	1354.70
4. Coir Matting	3299	558.62	2892	534.16
5. Coir Rugs and Carpets	465	77.39	236	40.13
6. Coir other sorts	15	2.50	21	3.31
7. Coir Rope	53	6.73	30	3.13
8. Rubberised Coir Goods	9	1.60	5	1.21
Total	24672	3284.67	23214	3144.46

Source: Directorate of Coir Development.

## APPENDIX 6.27

## Production and Productivity—Handloom Industry

Item	For the years			
	1985-86	1986-87		
1. Estimated total number of handlooms in the State	95,000	95,000		
2. Number of looms in the Co-operative sector	57,000	58,000		
3. Percentage of (2) to (1)	60%	61%		
4. Number of handloom co-operative societies	580	580		
5. Co-operative Sector				
(i) Production of handloom cloth (million metre)	42.55	50.40		
(ii) Value of production (Rs. crores)	30.00	31.49		
(iii) Productivity (metre/loom)	746	689		
6. Unorganised Sector				
(i) Production of handloom cloth (million metre)	40.51	41.02		
(ii) Value of Production (Rs. crores)	39.24	40.50		
(iii) Productivity (metre/loom)	1066	1108		
7. Total (Co-operative and Unorganised sector)				
(i) Production of handloom cloth (million metre)	83.06	91.42		
(ii) Value of production (Rs. crores)	69.24	71.99		
(iii) Productivity (metre/loom)	874	962		
8. (a) Assistance extended by loan, subsidy and others for the Handloom Department during 1985-86 (Rs. lakhs)		State	Central	Total
(i) loan		26.28	49.19	75.47
(ii) Subsidy		38.93	4.46	43.39
(b) Amount spent as rebate on the sale of handloom cloths during 1986-87 (Rs. lakhs)		344.68	69.48	414.16
9. Value of unsold stock		1985-86	1986-87	
(a) in the Co-operative sector (Rs. crores)		25.35	24.30	
(b) in the Unorganised sector (Rs. crores)		N.A.	N.A.	

Source: Directorate of Handloom

## APPENDIX 6.28 (a)

*Working Results of Handloom Apex Society*

(Hantex)

Particulars	For the Years	
	1985-86	1986-87
(1)	(2)	(3)
1. Sales turnover (Rs. crores)	8.29	8.77
2. Procurement of cloth (Rs. crores)	6.96	7.82
3. Purchase of Yarn (Rs. Crores)	2.69	2.19
4. Distribution of Yarn (Rs. crores)	2.79	2.41
5. Garments sold (Rs lakhs)	4.89	7.35
6. Janatha Production (Rs. lakhs)	17.99	19.36
7. Polyester shirting, saree, double veshty, single veshty— Production (Rs. lakhs)	25.43	30.50
8. Processed goods—Production (metres)	6,22,000	73,787
Value (Rs. lakhs)	104.00	40.99
9. Number of exhibitions conducted	74	57

*Source:* Directorate of Handloom.

## APPENDIX 6.28(b)

*Working results of the Kerala Handloom Development Corporation, Cannanore*

(Amount Rs. lakhs)

Sl. No.	Particulars	1985-86	1986-87 (Provl. figures)
1.	Paid up capital	156.92	162.25
2.	Borrowings	518.13	549.21
3.	Gross Block	62.44	75.34
4.	Value of production	743.34	1046.92
5.	Income through revenue receipts	47.77	58.47
6.	Income through sale of production (G/P)	97.63	762.00
7.	Total expenditure (total administration expense)	136.49	160.28
8.	Expenditure for raw materials consumed	85.56	90.23
9.	do. personal payments	34.99	39.50
10.	do. Depreciation	1.54	1.90
11.	do. interest and bank charge	14.40	16.20
12.	Net profit (+)/Net loss (—)	8.91	9.74
13.	Accumulated loss if any	Nil	Nil

*Source:* Directorate of Handlooms.



## APPENDIX 6.29

*Production and Productivity—powerloom Industry*

Item	1985-86	1986-87
1. Estimated number of powerlooms in the State	4200	4300
2. Number of looms in the Co-operative Sector	522	700
3. Percentage of (2) to (1)	12.42	16.28
4. Number of powerloom co-operative societies	17	18
5. Number of members in these societies	700	720
6. Co-operative sector		
(i) Production of cloth (lakh metres)	30.00	35.00
(ii) Value of production (Rs. lakhs)	180.00	220.00
(iii) Productivity (metre/loom)	5434	5000
7. Unorganised sector		
(i) Production of cloth (lakh metres)	145.00	148.00
(ii) Value of production (Rs. lakhs)	890.00	898.00
(iii) Productivity (metre/loom)	3974	4111
B. Total (Co-operative and unorganised sector)		
(i) Production (lakh metres)	175.00	183.00
(ii) Value of production (Rs. lakhs)	1070.00	1118.00
(iii) Productivity (metre/loom)	4166	4255

Source: Directorate of Handloom

## APPENDIX 6.3

(Value Rs. in Crores)

*Foreign Exchange Earnings of India from Cashew Industry*

Year	Export Value of		Total	Import Value of Raw nuts	Net Foreign Exchange Earned
	Cashew Kernels	Cashew shell Liquid			
(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	1.96	152.23	22.12	130.11
1984-85	179.68	2.03	181.71	36.49	145.22
1985-86	215.27	1.25	216.52	25.88	190.64
1986-87	334.11	1.46	335.57	69.46	266.11

Source: The Cashew Export Promotion Council, Cochin-16.

## APPENDIX 6.31

*Import of Raw Cashewnuts into India*

Year	Quantity in MT	Index	Value in (Rs. Crores)	Index
(1)	(2)	(3)	(4)	(5)
1976-77	75122	100.0	18.33	100.00
1977-78	56299	74.94	17.98	98.09
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	33215	44.21	36.49	199.07
1985-86	23310	31.03	25.88	141.19
1986-87	49045	65.29	69.46	378.94

Source: The Cashew Export Promotion Council, Cochin—16

## Group-wise Working Results of State Public Sector Industrial Undertakings

(Amount in Rs. lakhs)

Group	No. of Companies on which details are available	Paid up Capital		Borrowings		Gross Block		Profit during 1986-87		Net loss during 1986-87		Accumulated loss as on 31-3-1987	
		As on 31-3-1986	As on 31-3-1987	As on 31-3-1986	As on 31-3-1987	As on 31-3-1986	As on 31-3-1987	No. of Companies	Amount	No. of Companies	Amount	No. of Companies	Amount
1. Modern Manufacturing and Development Industries													
(i) KELTRON Group	9	2706.51	2930.73	7916.98	8056.48	4043.66	4080.27	4	60.54	5*	253.86	6*	1640.30
(ii) Kerala State Industrial Enterprises Group	8	3001.48	3186.98	5513.09	6310.03	3108.42	3622.86	2	2.49	6	692.94	5	3258.94
(iii) Iron and Steel	3	1395.74	1394.75	534.83	652.88	784.56	786.53	3	125.87	..	..	1	12.51
(iv) Chemicals	4	2581.50	2581.50	6278.60	6452.98	9315.31	9556.67	1	143.09	3	792.38	2	2772.19
(v) Textiles	2	906.76	911.21	513.42	628.72	667.76	962.76	..	..	2	158.06	2	557.01
(vi) Electricals and Cables	2	645.82	649.49	2533.85	3704.73	1745.31	1745.41	..	..	2	1039.48	2	3833.79
(vii) Engineering	3	458.76	564.73	796.50	846.33	751.50	849.07	1	49.33	2	136.42	3	544.53
(viii) Ceramics and Refractories	3	170.79	170.79	357.47	366.33	172.27	175.20	..	..	3	39.48	3	198.81
2. Traditional Industries	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Agro based Industries	2	175.10	175.10	23.33	45.11	236.22	221.58	1	22.59	1	20.08	2	119.35
4. Wood based Industries	2	187.71	187.71	524.00	591.78	434.70	434.70	..	..	2	88.91	2	343.67
5. Financing, Consultancy and Service Institutions	2	1274.67	1690.09	2644.64	3310.89	37.72	46.15	2	34.74	..	..	..	..
6. Trading and Infrastructural Development Institution	1	11.30	11.30	..	..	2.00	3.26	1	11.46	..	..	..	..
<b>Total</b>	<b>41</b>	<b>13516.14</b>	<b>14454.38</b>	<b>27636.71</b>	<b>30966.26</b>	<b>21299.43</b>	<b>22484.46</b>	<b>15</b>	<b>450.11</b>	<b>26</b>	<b>3221.61</b>	<b>28</b>	<b>13281.10</b>

\*Excluding the loss of KSEDC Ltd.

## APPENDIX 6.33

*Kerala Financial Corporation—Particulars of Loan Transactions*

(Rs. in lakhs)

<i>Particulars</i>	1984-85		1985-86		1986-87	
	<i>Numbers</i>	<i>Amount</i>	<i>Numbers</i>	<i>Amount</i>	<i>Numbers</i>	<i>Amount</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Applications Received	722	2279	1171	5083	1372	5956
Applications sanctioned (Gross)	596	1979	884	3562	1234	4751
Applications sanctioned (Effective)	590	1971	857	3509	1209	4647
Loan disbursed	545	1200	720	1951	944	2952

Source: Kerala Financial Corporation.

## Kerala Financial Corporation—Summary of Loan Operations as on 31-3-1987

(Rs. in lakhs)

Sl. No.	During the year 1986-87						Since inception upto 31-3-1987						
	Small Scale		Others		Total		Small Scale		Others		Total		
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Applications pending as on 1-4-1986	324	1012.13	6	312.03	330	1324.16	..	..	..	..	..	..	..
2. Applications received	1330	4328.52	42	1127.81	1372	5956.33	10864	24608.13	673	8661.41	11537	33269.54	
3. Total applications for consideration	1654	5840.65	48	1439.84	1702	7280.49	10864	24608.13	673	8661.41	11537	33269.54	
4. Applications withdrawn/rejected or other-wise disposed off	247	1096.39	8	188.85	255	1285.24	2330	6883.64	178	2523.78	2508	9407.42	
5. Applications sanctioned (gross)	1497	3883.41	37	867.83	1234	4751.24	8324	16482.09	492	5924.47	8816	22406.56	
6 A. Applications cancelled/reduced out of during the year of sanction	25	104.71	—	—	25	104.71	—	—	—	—	—	—	
B. Applications cancelled/reduced out of previous year of sanction	54	206.39	1	7.50	55	213.89	—	—	—	—	—	—	
C. Total cancellations and reductions (6A+6B)	79	311.10	1	7.50	80	318.60	1224	3138.72	64	941.14	1288	4079.86	
7. Applications sanctioned effectively (5—6A)	1172	3778.70	37	867.83	1209	4646.53	..	..	..	..	..	..	
8. Net sanction (5—6C)	1118	3572.31	36	860.33	1154	4432.64	7100	13343.37	428	4983.33	7528	18326.70	
9. Amount disbursed along with number of newly assisted units.	924	2289.79	20	662.43	944	2952.22	6619	10263.04	371	3358.59	6990	13621.63	
10. Applications pending sanction at the end of the period	..	..	..	..	..	..	..	210	932.57	3	85.00	213	1017.57

Source: Kerala Financial Corporation.

## APPENDIX 6.35

*District-wise Sanction and Disbursement of Loans and Advances by Kerala Financial Corporation as on 31-3-1987.*

(Rs. in lakhs)

District (1)	Effective Sanction		Disbursement	
	Number (2)	Amount (3)	Number (4)	Amount (5)
<b>I. Backward Districts:</b>				
<i>No Industry Districts: (Category A)</i>				
1. Idukki	189	871.79	153	499.43
2. Wayanad	142	354.53	129	206.86
<b>II. Backward District: (Category B)</b>				
1. Alleppey	467	1346.40	443	1125.95
2. Malappuram	291	857.64	259	572.24
3. Cannanore	714	1524.67	663	1019.44
4. Kasaragode	51	185.82	24	62.48
<i>Backward District: (Category C)</i>				
1. Trivandrum	872	2348.26	812	1866.33
2. Trichur	675	1966.61	608	1581.18
<b>Total for Backward Districts</b>	<b>3401</b>	<b>9455.72</b>	<b>3091</b>	<b>6933.91</b>
<i>Non-Backward Districts:</i>				
1. Pathanamthitta	99	352.30	84	215.65
2. Quilon	812	1299.88	792	1120.95
3. Kottayam	745	1541.16	717	1234.79
4. Ernakulam	1384	3405.92	1298	2451.08
5. Palghat	389	1037.51	355	725.76
6. Calicut	692	1229.18	647	934.46
7. Union Territory of Lakshadweep	6	5.03	6	5.03
<b>Total for Non-Backward District:</b>	<b>4127</b>	<b>8870.98</b>	<b>3899</b>	<b>6687.72</b>
<b>Grand Total</b>	<b>7528</b>	<b>18326.70</b>	<b>6990</b>	<b>13621.63</b>

Source: Kerala Financial Corporation.

## APPENDIX 6.36

*Industry-wise Classification of Loans and Advances Sanctioned and Disbursed to Small Scale Industries by the K.F.C. as on 31-3-1987.*

(Rs. in lakhs)

Sl.No.	Type of Industry	Amount sanctioned	Percentage to total loan sanctioned	Amount disbursed	Percentage to total loan disbursed
(1)	(2)	(3)	(4)	(5)	(6)
1.	Stone quarrying	237.98	1.78	71.59	0.70
2.	Food Manufacturing	1452.78	10.89	1072.84	10.45
3.	Beverage Units	59.03	0.44	48.19	0.47
4.	Tobacco Manufacturing	0.42	0.003	0.42	0.004
5.	Textiles	504.48	3.78	370.09	3.61
6.	Foot-wear and other wearing apparels	47.32	0.35	47.92	0.47
7.	Wood work except furniture	332.99	2.50	217.79	2.12
8.	Furniture and fixtures	497.31	3.73	404.54	3.94
9.	Paper products	372.99	2.80	272.78	2.66
10.	Printing, publishing and other allied industries	525.23	3.94	484.19	4.72
11.	Leather goods	4.55	0.03	0.71	0.006
12.	Rubber goods	1484.00	11.12	1125.95	10.97
13.	Chemical and chemical products	1008.24	7.56	783.16	7.63
14.	Petroleum products	9.37	0.07	9.37	0.09
15.	Non-metal industries	711.98	5.34	476.67	4.64
16.	Basic metal industries	173.79	1.30	180.65	1.76
17.	Metallic products	1126.63	8.44	724.22	7.06
18.	Machinery except electrical machinery	242.63	1.82	209.41	2.04
19.	Electrical machinery	247.47	1.85	172.14	1.68
20.	Transport equipments	291.32	2.18	230.85	2.25
21.	Motion pictures	71.34	0.53	59.55	0.58
22.	Fishing boats	225.97	1.69	225.64	2.20
23.	Transport	2096.02	15.72	1852.69	18.05
24.	Miscellaneous industries	1619.53	12.14	1221.67	11.90
Total:		13343.37	100.00	10263.03	100.00

Source: Kerala Financial Corporation.

## APPENDIX 6.37

*Progress of the Working of Kerala Financial Corporation at a glance*

(Rs. in lakhs)

Year	Loan Sanctioned (Cumulative)	Loan Disbursed (cumulative)	Loans outstanding (cumulative)	Profit Before Taxation	Profit After Taxation
(1)	(2)	(3)	(4)	(5)	(6)
1980-81	8020.02	5521.18	5023.60	70.10	40.40
1981-82	8421.13	6106.32	5644.58	158.58	105.04
1982-83	9440.61	6861.58	6097.09	(—)27.44	(—)27.44
1983-84	10261.72	7518.69	6318.21	(—)118.94	(—)118.94
1984-85	10867.45	8718.73	6883.70	36.48	36.48
1985-86	13894.06	10669.41	8113.35	50.58	50.58
1986-87	18326.70	13621.63	11668.35	71.97	71.97

Source: Kerala Financial Corporation

## APPENDIX 6.38

*State-wise Value of Property (Gross Block) Under Central Public Sector Enterprises*

(Amount in Rs. Crores)

State/Union Territory	As on 31st March 1985		As on 31st March 1986	
	Value of Property	Percentage to Total	Value of Property	Percentage to Total
(1)	(2)	(3)	(4)	(5)
1. Andhra Pradesh	4059	8.58	5271	9.30
2. Assam	2451	5.18	3011	5.31
3. Bihar	5834	12.33	6309	11.13
4. Gujarat	1772	3.74	2400	4.23
5. Haryana	412	0.87	543	0.96
6. Himachal Pradesh	211	0.45	326	0.57
7. Jammu and Kashmir	48	0.10	84	0.15
8. Karnataka	1328	2.81	1542	2.72
9. Kerala	831	1.76	920	1.62
10. Madhya Pradesh	5396	11.40	6833	12.05
11. Maharashtra	7602	16.06	8961	15.81
12. Orissa	2998	6.33	4071	7.18
13. Punjab	564	1.19	594	1.05
14. Rajasthan	648	1.37	715	1.26
15. Tamil Nadu	2549	5.39	2943	5.19
16. Uttar Pradesh	2533	5.35	3292	5.81
17. West Bengal	3345	7.07	3992	7.04
18. Delhi	1239	2.62	1538	2.71
19. Goa	18	0.04	28	0.05
20. Other States/Union Territories	317	0.67	389	0.69
21. Unallocated	3168	6.69	2953	5.17
Total	47323	100.00	56695	100.00

Source: A Statistical Review of Central Government Enterprises 1985-86, Centre for Monitoring Indian Economy.



## APPENDIX 6.39

## Production and Sale of Mineral Sands in Kerala

(Quantity in MT; Value in Rs. lakhs)

Mineral (1)	1985-86			1986-87		
	Quantity of Production (2)	Sales		Quantity of Production (5)	Sales	
		Quantity (3)	Value (4)		Quantity (6)	Value (7)
1. Ilmenite	94723	90167	624.84	90201	99017	686.19
2. Brown Ilmenite	16	52	1.04	..	..	..
3. Rutile	6970	6986	440.44	6723	8302	523.44
4. Monazite	42	..	..	10	..	..
5. Sillimanite	6246	2590	32.38	1847	3293	41.16
6. Zircon	6725	5557	72.07	6498	5447	70.65
<b>Total</b>	<b>114722</b>	<b>105352</b>	<b>1170.77</b>	<b>105279</b>	<b>116059</b>	<b>1321.44</b>

Source: Department of Mining and Geology, Trivandrum.

## APPENDIX 6.40

## Production and Sale of Major Minerals (Other than Mineral Sands)

(Quantity in MT; Value in Rs. lakhs)

Mineral (1)	1985-86						1986-87					
	Sales						Sales					
	Production		Raw		Processed		Production		Raw		Processed	
	Raw	Processed	Quantity	Value	Quantity	Value	Raw	Processed	Quantity	Value	Quantity	Value
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1. Glass and White Quartz sand	61723	25683	57435	20.68	27481	14.57	51746	31778	51821	18.66	33335	17.68
2. China Clay	80424	31937	85662	102.79	30924	129.88	98163	32517	14889	17.87	31513	132.35
3. Fire Clay	..	..	..	..	..	..	..	..	..	..	..	..
4. Ball Clay	266	..	319	0.38	..	..	500	..	578	0.69	..	..
5. Limeshell	155985	..	173190	337.72	..	..	127493	..	139608	272.24	..	..
6. Limestone	288993	..	251465	502.93*	..	..	272228	..	267506	535.01*	..	..

\* Consumption

Source: Department of Mining and Geology, Trivandrum.

## APPENDIX 7.1

*District-wise Public Works Department Roads Improved/Developed/Taken over during 1986-87*

Name of District	Developed/Improved (kms.)					Taken over (kms.) (Village roads)	
	State High ways	Major District Roads	Other District Roads	Village Roads	Total	Number	kms.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Trivandrum	..	..	39	14	53	Nil	NA
2. Quilon	..	..	..	27	27	7	40
3. Pathanamthitta	2	..	..	2	4	2	8
4. Alleppey	..	..	4	3	7	7	23
5. Kottayam	..	..	5	38	43	4	19
6. Idukki	5	11	..	..	16	NA	NA
7. Ernakulam	1	8	23	4	36	3	10
8. Trichur	..	..	..	5	5	4	13
9. Palghat	..	..	..	5	5	NA	NA
10. Malappuram	..	..	13	151	164	5	24
11. Calicut	..	..	23	105	128	3	4
12. Wayanad	..	..	7	15	22	NA	NA
13. Cannanore	1	11	4	29	45	NA	NA
14. Kasaragode	..	..	..	..	..	..	..
<b>Total:</b>	<b>9</b>	<b>30</b>	<b>118</b>	<b>398</b>	<b>555</b>	<b>35</b>	<b>141</b>

## APPENDIX 7.2

*Division-wise and Surface-wise length of Roads maintained by Public Works Department as on 1-4-1987*

Sl. No.	Name of Division	(in kms.)					Total
		Cement Concrete	Black topped	Water bound Macadam	Others		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1.	Trivandrum	..	1528	65	89	1682	
2.	Quilon	..	1349	217	174	1740	
3.	Pathanamthitta	1	1212	61	151	1425	
4.	Alleppey	1	774	30	141	946	
5.	Kottayam	16	1759	53	153	1981	
6.	Idukki	..	976	117	536	1629	
7.	Moovattupuzha	..	970	74	98	1142	
8.	Ernakulam	..	720	34	24	778	
9.	Trichur	3	1371	20	86	1480	
10.	Palghat	..	1201	77	178	1456	
11.	Manjeri	..	1071	39	385	1495	
12.	Calicut	..	828	63	313	1204	
13.	Wayanad	..	496	17	69	582	
14.	Cannanore	4	1000	3	393	1400	
15.	Kasaragode	..	562	15	235	812	
	<b>Total</b>	<b>25</b>	<b>15817</b>	<b>885</b>	<b>3025</b>	<b>19752</b>	

Source Public Works Department.

## APPENDIX 7.3

Distribution of Public Works Department Roads (Division-wise) as on 1-4-1987

(in kms.)

Sl.No.	Division	State Highways	Major District Roads	Other Department Roads	Village Roads	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Trivandrum	117	293	1176	96	1682
2.	Quilon	167	418	1155	..	1740
3.	Pathanamthitta	173	458	656	138	1425
4.	Alleppey	111	122	605	107	945
5.	Kottayam	259	678	918	126	1981
6.	Idukki	337	541	373	378	1629
7.	Moovattupuzha	121	485	500	36	1142
8.	Ernakulam	41	311	427	..	779
9.	Trichur	186	501	696	97	1480
10.	Palghat	155	713	422	166	1456
11.	Manjery	162	400	395	538	1495
12.	Calicut	68	310	220	607	1205
13.	Wayanad	40	328	141	73	582
14.	Cannanore	55	296	634	414	1399
15.	Kasaragode	29	85	332	366	812
	Total	2021	5939	8630	3142	19752

Source: Public Works Department.

## APPENDIX 7.4

Type-wise length of roads under Panchayat as on 1-4-1987

(in kms.)

Sl. No.	District	Black topped and metalled	Gravelled	Earthen	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
* 1.	Trivandrum	255	2030	6131	--	8416
* 2.	Quilon	310	4123	7555	--	11988
* 3.	Pathanamthitta	136	1555	3304	--	4995
4.	Alleppey	48	2379	2139	--	4566
5.	Kottayam	367	1140	2931	--	4438
* 6.	Idukki	42	418	4288	--	4748
7.	Ernakulam	305	1567	3475	--	5347
* 8.	Trichur	352	4019	3799	--	8170
* 9.	Palghat	751	1194	3233	--	5178
10.	Malappuram	295	1407	3931	--	5633
11.	Kozhikode	959	2400	2073	--	5432
12.	Wayanad	428	556	1486	--	2470
* 13.	Cannanore	174	2909	3856	--	6939
* 14.	Kasaragode	828	1957	1808	--	4593
	Total	5250	27654	50009	..	82913

\* Figures are provisional.

## APPENDIX 7.5

## Growth of Motor Vehicles in Kerala since 1975

Sl. No.	Type of Vehicle	1975	1980	1981	1982	1983	1984	1985	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Goods Vehicles		20182	22896	25696	29153	30966	36699	40398	45144
	(i) Four Wheelers and above	} 15875	993	1786	2038	2532	2392	4170	4927	6140
	(ii) Three Wheelers including Tempos									
2.	Buses									
	(i) Stage Carriages		8705	9159	9765	10781	11735	12910	13497	13102
	(ii) Contract carriages/Omni buses 7828		842	1041	1265	1539	1912	2324	2652	3602
3.	Cars and Station Wagons									
	(i) Car		54381	56802	60412	64147	68511	75731	82222	89023
	(ii) Station Wagons	44497	196	236	302	370	484	507	664	682
	(iii) Taxi car	11525	17780	18960	21569	23763	25597	28189	30201	32458
	(iv) Jeep	5859	7023	7834	9030	10110	11839	12971	14721	17012
4.	Three Wheelers									
	(i) Autorickshaw		7397	9640	12727	15045	17724	24383	30537	35838
	(ii) Motorised cycle/Rickshaw	3125	38	42	44	49	52	54	55	58
5.	Two Wheelers									
	(i) Motorised Cycle	..	58	70	74	70	71	73	73	73
	(ii) Scooter/Motor cycle	25769	50943	59531	70498	81838	96478	111629	130992	159863
6.	Trailers, Tractors Articulated	..	18604	1853	1946	1975	2006	2104	2236	2409
7.	Tractor	..	1892	2140	2266	2344	2641	3089	3268	3457
8.	Tiller		469	680	793	827	964	1418	1214	1379
9.	Trailer	2735	260	285	328	334	369	426	441	498
10.	Others	2507	1735	1786	2050	2046	2339	2891	3219	3572
	<b>Total</b>	<b>78168</b>	<b>174704</b>	<b>194597</b>	<b>220733</b>	<b>246923</b>	<b>276981</b>	<b>319259</b>	<b>361617</b>	<b>414310</b>
	Percentage of increase over previous year	..	13.01	11.39	11.47	11.87	12.17	15.26	13.27	14.57

Number of motor vehicles having valid Registration as on 31-3-1987

Sl. No.	District	Goods vehicles		Buses	Cars and Station Wagons				Three wheelers	
		Four Wheelers & above	Three wheelers including Tempo	Stage Carriage	Contract carriage/ Omni bus	Car	Station Wagon	Taxicar	Jeep	Autorickshaw
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Trivandrum	3514	1035	205	1074	17234	94	2537	2822	5793
2	Quilon	5449	124	676	249	10707	39	4719	983	1464
3	Pathanamthitta	3637	110	417	61	5043	16	1842	440	885
4	Alleppey	1810	856	531	319	6747	10	2835	344	1840
5	Kottayam	3360	493	810	216	4635	..	2155	1470	2791
6	Idukki	1780	118	320	78	1965	9	1474	1081	202
7	Ernakulam	6766	1889	1419	299	15017	57	2990	583	4135
8	Trichur	4850	130	1441	458	6838	21	4877	191	4173
9	Palghat	2192	51	746	270	4264	15	1261	645	1816
10	Malappuram	2658	93	809	62	3883	6	3044	1845	2462
11	Kozhikode	3861	434	1121	226	6185	115	1674	2565	2631
12	Wayanad	859	116	88	17	289	19	675	930	535
13	Cannanore	3118	491	1092	213	4770	279	1852	1358	4990
14	Kasaragode	1281	200	307	59	1438	..	493	419	2121
	KSRTC (RTO Nos.)	6	..	3120	1	8	2	..	33	..
	<b>Total</b>	<b>45144</b>	<b>6140</b>	<b>13102</b>	<b>3602</b>	<b>89023</b>	<b>682</b>	<b>32458</b>	<b>12012</b>	<b>35838</b>

Sl. No.	District	Three Wheelers Motorised Cycle Rickshaw	Two Wheelers Motorised	Scooter/ Motor cycle	Tractor Trailer Articulated	Tractor	Tiller	Trailer	Others	Total
		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	Trivandrum	6	..	30522	161	114	48	29	963	66151
2	Quilon	9	9	15353	177	48	48	68	230	40352
3	Pathanamthitta	..	3	3467	9	29	20	2	32	16913
4	Alleppey	2	1	12296	26	215	81	33	48	27994
5	Kottayam	5	..	7591	101	261	240	44	184	24356
6	Idukki	1	9	1523	137	124	27	17	99	8964
7	Ernakulam	17	10	32027	495	291	326	122	818	68261
8	Trichur	17	36	17687	304	501	164	13	250	42254
9	Palghat	..	5	10079	333	1530	315	60	77	23659
10	Malappuram	..	..	3429	75	210	27	36	147	18786
11	Kozhikode	..	..	13068	95	103	45	35	450	32608
12	Wayanad	..	..	1383	387	3	18	22	25	5366
13	Cannanore	1	..	8103	109	3	1	5	246	26661
14	Kasaragode	..	..	2431	..	25	19	12	3	8811
	KSRTC (RTO Nos)	..	..	4	..	..	..	..	..	3174
	<b>Total</b>	<b>58</b>	<b>73</b>	<b>159863</b>	<b>2409</b>	<b>3457</b>	<b>1379</b>	<b>498</b>	<b>3572</b>	<b>414310</b>

## APPENDIX 7.7

*District-wise and Category-wise distribution of Motor Vehicles in Kerala and their percentages during 1986-87*

Sl. No.	District	Goods vehicles	Buses	Cars and station wagons including taxi and Jeep	3 wheelers	2 wheelers	others	Total
1.	Trivandrum	4549 (8.9)	1279 (7.7)	22687 (16.3)	5799 (16.16)	30522 (19.08)	1315 (11.62)	66151 (15.97)
2.	Quilon	5573 (10.9)	925 (5.5)	16448 (11.8)	1473 (4.10)	15362 (9.61)	571 (5.05)	40352 (9.74)
3.	Pathanamthitta	3747 (7.3)	178 (2.9)	7341 (5.3)	885 (2.47)	4370 (2.73)	92 (0.81)	16913 (4.08)
4.	Alleppey	2666 (5.2)	850 (5.1)	9936 (7.1)	1842 (5.13)	12297 (7.69)	403 (3.56)	27994 (6.76)
5.	Kottayam	3853 (7.5)	1026 (6.1)	8260 (5.9)	2796 (7.79)	7591 (4.75)	830 (7.34)	24356 (5.88)
6.	Idukki	1898 (3.7)	398 (2.4)	4529 (3.3)	203 (0.57)	1532 (0.96)	404 (3.57)	8964 (2.16)
7.	Ernakulam	8655 (16.9)	1718 (10.3)	19647 (14.1)	4152 (11.57)	32037 (20.03)	2052 (18.14)	68261 (16.48)
8.	Trichur	4980 (9.7)	1899 (11.4)	12320 (8.8)	4190 (11.67)	17723 (11.08)	1232 (10.89)	42254 (10.20)
9.	Palghat	2243 (4.4)	1016 (6.1)	6185 (4.4)	1816 (5.06)	10084 (6.31)	2315 (20.46)	23659 (5.71)
10.	Malappuram	2751 (5.4)	871 (5.2)	8778 (6.3)	2462 (6.86)	3429 (2.14)	475 (4.38)	18785 (4.53)
11.	Kozhikode	4295 (8.4)	1347 (8.1)	10539 (7.6)	2631 (7.33)	13068 (8.17)	728 (6.43)	32608 (7.87)
12.	Wynad	975 (1.9)	105 (0.6)	1913 (1.4)	535 (1.49)	1383 (0.86)	455 (4.02)	5366 (1.30)
13.	Cannanore	3609 (7.0)	1305 (7.8)	8289 (6.0)	4991 (13.90)	8103 (5.07)	364 (3.22)	26661 (6.44)
14.	Kasargode	1484 (2.9)	366 (2.2)	2350 (1.7)	2121 (5.91)	2431 (1.52)	59 (0.52)	8811 (2.13)
	KSRTC RTO (NS)	6 (0.01)	3121 (18.7)	43 (0.03)	..	4 (0.003)	..	3174 (0.77)
	<b>Total</b>	<b>51284 (100)</b>	<b>16704 (100)</b>	<b>139175 (100)</b>	<b>35896 (100)</b>	<b>159936 (100)</b>	<b>11315 (100)</b>	<b>414310 (100)</b>

## APPENDIX 7.8

Number of Vehicles newly registered in the state during the year 1986-87

Sl. No.	District	Goods Vehicles		Buses		Cars and Station wagons			Three wheelers	
		Four Wheelers and above	Three Wheelers including Tempos	Stage Carriage	Contract Carriage/ Omni bus	Car	Station wagons	Taxi	Jeep	Auto-rickshaw
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Trivandrum	276	254	14	294	1277	..	91	454	646
2.	Quilon	433	8	36	39	932	..	518	46	368
3.	Pathanamthitta	352	..	25	30	186	..	130	38	448
4.	Alleppey	200	108	29	118	141	..	200	20	444
5.	Kottayam	187	78	70	28	320	..	43	210	610
6.	Idukki	95	4	24	10	67	2	2	232	49
7.	Ernakulam	863	532	67	13	759	..	137	79	285
8.	Trichur	505	52	122	133	650	..	43	59	772
9.	Palghat	156	7	32	47	221	..	4	57	195
10.	Malappuram	232	18	75	21	185	..	3	301	545
11.	Kozhikode	367	11	67	26	232	3	24	179	265
12.	Wayanad	44	9	30	3	32	..	7	78	43
13.	Cannanore	225	25	99	32	176	12	..	168	341
14.	Kasargode	42	15	22	23	45	..	..	75	188
	KSRTC (RTO NS)	..	..	..	..	..	..	..	..	..
	Total	3977	1121	712	817	5223	17	1202	1996	5219

Sl. No.	District	Three Wheelers		Two Wheelers		Tractor	Filler	Trailer	Others	Total
		Motorised Cycle Rickshaw	Motorised Cycle	Scooter/ Motor Cycle	Tractor Trailer Articulated					
(12)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1.	Trivandrum	..	..	5315	13	..	..	..	18	8632
2.	Quilon	..	..	2815	13	..	..	..	46	5274
3.	Pathanamthitta	..	..	1938	1	3	2	1	8	3162
4.	Alleppey	1	..	1954	16	19	18	10	1	3279
5.	Kottayam	..	..	1787	4	13	7	2	4	3363
6.	Idukki	..	..	312	1	5	8	4	80	895
7.	Ernakulam	..	..	5394	42	5	76	37	47	8336
8.	Trichur	2	..	3111	8	69	46	..	..	5572
9.	Palghat	..	..	1137	7	70	5	..	5	1943
10.	Malappuram	..	..	739	31	24	1	2	4	2181
11.	Kozhikode	..	..	1931	1	4	..	2	6	3118
12.	Wayanad	..	..	187	44	1	2	..	5	485
13.	Cannanore	..	..	949	6	..	1	..	4	2038
14.	Kasargode	..	..	456	..	5	1	..	2	874
	KSRTC (RTO NS)	..	..	..	..	..	..	..	..	..
	Total	3	..	28025	187	218	167	58	230	49172

## APPENDIX 7.9

*Number of Road Accidents in which motor vehicles were involved in Kerala during 1985-86 & 1986-87*

Name of District	No. of road accidents		No. of persons injured		No. of persons killed	
	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Trivandrum City	812	687	744	548	53	52
2. Trivandrum Rura	678	978	758	907	96	94
3. Quilon	657	920	952	121	131	121
4. Pathanamthitta	347	350	608	566	55	66
5. Alleppey	727	1025	847	1249	101	108
6. Kottayam	1002	1153	1230	1062	120	116
7. Idukki	227	278	752	681	54	53
8. Cochin city	722	1064	689	791	81	71
9. Ernakulam Rural	563	716	885	1123	114	139
10. Trichur	737	1052	763	1145	155	156
11. Palghat	776	861	1159	1087	111	119
12. Malappuram	1034	1034	1308	1707	160	135
13. Kozhikode city	598	692	786	961	72	54
14. Kozhikode Rural	555	635	1012	910	60	72
15. Wynad	187	225	287	379	21	21
16. Cannanore	657	666	1145	1239	74	87
17. Kasargode	147	259	222	335	55	39
Total	10426	12595	14147	14811	1513	1503



## APPENDIX 7.10

*Motor Vehicle Accidents in Kerala by Primary Cause of Accidents 1986-87*

District	Fault of driver of motor vehicle	Fault of driver of vehicles other than Motor vehicles.	Fault of cyclist	Fault of Pedestrians	Fault of passengers	Defect in mechanical condition of M.V.	Defective Road surface	Bad weather Condition	Other causes	Causes not known	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Trivandrum City	572	..	15	43	24	4	..	..	8	21	687
2. Trivandrum Rural	771	12	11	9	11	65	6	5	10	78	978
3. Quilon	814	3	13	21	19	13	1	3	8	25	920
4. Pathanamhitta	267	18	4	10	4	22	2	..	16	7	350
5. Alleppey	918	5	5	6	1	1	1	6	16	66	1025
6. Kottayam	941	..	30	21	12	41	..	5	14	..	1064
7. Idukki	259	..	..	8	3	8	..	..	..	..	278
8. Cochin City	649	13	18	27	2	20	42	40	155	187	1153
9. Ernakulam Rural	686	1	3	7	6	6	..	..	4	3	716
10. Trichur	898	..	5	2	1	19	..	..	22	105	1052
11. Palghat	845	..	4	..	..	3	..	1	2	6	861
12. Malappuram	1020	..	2	..	..	10	..	..	2	..	1034
13. Calicut City	609	1	20	27	1	1	..	5	3	25	692
14. Calicut Rural	496	85	2	18	1	8	..	2	..	23	635
15. Wynad	214	..	6	1	..	..	..	..	2	2	225
16. Cannanore	656	..	1	6	..	1	..	..	2	..	666
17. Kasargode	189	..	..	..	2	4	5	1	7	51	259
<b>Total</b>	<b>10804</b>	<b>138</b>	<b>139</b>	<b>206</b>	<b>87</b>	<b>226</b>	<b>57</b>	<b>68</b>	<b>271</b>	<b>599</b>	<b>12595</b>

## APPENDIX 7.11

Road Accidents—Vehicle-wise (1986-87)

District	KSRTC	Other buses	Goods vehicles	Taxi car	Motor car	Auto rick-shaws	Jeep	Miscellaneous vehicles	Class not known	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Trivandrum City	208	50	5	35	30	225	37	66	31	687
2. Trivandrum Rural	248	54	183	180	111	47	34	111	10	978
3. Quilon	77	169	235	107	53	57	35	173	14	920
4. Pathanamthitta	26	71	63	38	39	18	49	44	2	350
5. Alleppey	68	110	192	87	152	121	3	263	29	1025
6. Kottayam	77	213	122	99	91	129	126	257	39	1153
7. Idukki	7	55	36	2	10	9	133	26	..	278
8. Cochin City	51	183	162	76	102	218	55	215	2	1064
9. Ernakulam Rural	50	161	147	38	50	83	55	114	4	716
10. Trichur	47	270	188	106	79	88	29	235	10	1052
11. Palghat	22	202	158	78	55	74	46	220	6	861
12. Malappuram	18	252	153	62	46	95	290	113	5	1034
13. Calicut Rural	22	163	102	29	11	77	130	93	8	635
14. Calicut City	19	221	113	6	53	114	35	121	10	692
15. Wynad	23	7	24	1	9	12	103	45	1	225
16. Cannanore	12	150	90	48	26	135	32	173	..	666
17. Kasargod	15	25	50	40	5	15	30	75	4	259
<b>Total</b>	<b>990</b>	<b>2356</b>	<b>2037</b>	<b>1032</b>	<b>922</b>	<b>1517</b>	<b>1222</b>	<b>2344</b>	<b>175</b>	<b>12595</b>

## APPENDIX 7.12

Kerala State Road Transport Corporation—Operational Statistics 1986-87

Sl. No.	Transport Unit	No. of Buses held as on 31-3-1987	No. of Schedules as on 31-3-1987	No. of Routes as on 31-3-1987	Route Distance in Kms.	Gross Kms. operated (lakhs)	Effective Kms. operated (lakhs)	Passengers carried (lakhs)	Average carrying capacity per bus
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Parassala	50	54	43	1591	50.08	49.49	115.51	57.6
2.	Neyyattinkara	92	119	178	4774	83.77	83.40	269.05	61.0
3.	Poovar	50	54	52	4964	41.50	41.27	116.11	57.1
4.	Vizhinjam	48	61	30	1675	39.04	38.97	181.59	58.2
5.	Kattakkada	54	63	120	3416	38.43	38.19	274.65	56.6
6.	Trivandrum Central	143	141	145	12244	145.55	144.53	448.29	54.3
7.	Pappanamcode	99	120	214	2590	58.31	57.62	406.80	51.2
8.	Trivandrum City	144	169	575	8270	85.02	83.67	580.89	33.1
9.	Vikas Bhavan	75	79	270	1336	46.26	46.16	248.73	51.4
10.	Peroorkada	53	62	219	4085	31.40	31.33	170.36	51.1
11.	Nedumangad	80	95	155	5015	59.81	59.76	265.44	56.5
12.	Attingal	61	71	134	4804	58.33	57.85	176.96	55.2
13.	Quilon	109	138	198	7075	100.92	100.46	276.67	55.4
14.	Kottarakkara	61	78	284	8244	55.45	54.33	181.81	55.5
15.	Punalur	45	52	132	4273	33.07	32.60	99.34	55.1
16.	Pathanamthitta	49	51	103	4952	40.00	39.88	75.93	59.0
17.	Adoor	15	17	39	1084	14.34	14.30	17.92	57.3
18.	Kayankulam	68	83	160	6640	59.70	59.37	202.30	55.3
19.	Harippad	21	20	46	1187	14.61	14.62	24.87	50.9
20.	Alleppey	66	92	120	4075	64.36	63.80	249.77	55.8
21.	Sherthalai	58	71	154	5243	57.25	56.82	183.28	59.0
22.	Chengannur	65	73	163	5917	44.69	44.22	150.07	54.0
23.	Thiruvalla	44	62	158	5986	35.95	35.61	171.95	61.0
24.	Changanasseri	46	54	123	4502	42.83	42.43	159.06	58.4
25.	Kottayam	89	101	170	10829	77.53	76.75	225.72	54.9
26.	Ponkunnam	25	29	23	2515	21.34	21.08	29.90	55.0
27.	Palai	41	49	112	4025	39.28	39.19	101.36	57.5
28.	Erattupetta	27	30	67	3309	24.30	24.25	66.47	54.4
29.	Vaikom	30	33	12	1023	31.02	30.69	65.61	53.3
30.	Movattupuzha	50	54	73	3528	37.27	37.12	137.54	58.0
31.	Thodupuzha	23	22	56	4351	21.63	21.56	40.85	56.9
32.	Kothamangalam	28	27	42	3024	25.77	25.73	46.55	57.3
33.	Ernakulam	57	68	111	8310	61.99	61.42	110.01	55.4
34.	Alwaye	71	75	157	5188	58.43	58.34	196.27	53.5
35.	Perumbavoor	44	44	94	2947	38.63	38.46	122.76	53.0

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
36.	Chalakkudy	48	51	105	4012	52.39	50.37	135.79	53.3
37.	Mala	34	30	45	1184	19.78	19.78	35.00	56.8
38.	Trichur	48	59	77	6556	55.34	54.99	120.25	55.4
39.	Puthukkad	30	13	30	1060	12.31	12.25	98.29	59.3
40.	Guruvayoor	51	48	28	4007	53.89	53.66	61.55	55.1
41.	Pommani	23	19	17	2094	24.69	24.61	25.87	56.0
42.	Perunthamma	23	20	19	3398	22.66	22.44	27.68	56.4
43.	Palghat	77	71	62	10362	82.89	82.35	98.38	54.5
44.	Malappuram	29	29	28	3177	24.82	24.58	30.55	56.6
45.	Kozhikode	93	85	87	6211	72.61	82.54	144.45	57.0
46.	Thamarassery	21	22	36	911	20.52	10.42	35.79	60.0
47.	Sultan Battery	167	186	154	7742	100.83	100.76	320.92	57.5
48.	Cannanore	73	71	80	6558	65.43	65.03	149.77	56.1
49.	Payyannur	41	32	45	2871	34.45	33.78	65.60	53.4
50.	Kasaragode	18	15	22	1976	20.52	20.27	22.27	54.5
51.	Workshops	162	..	..	..	..	..	..	..
Total		3019	3162	3827	171942	2401.23	2303.34	7562.59	55.7

## APPENDIX 7.13

## Kerala State Road Transport Corporation—Operational Ratios—1986-87

Sl. No.	Transport Unit	Average Number of buses held daily	Average Kms run per day per bus	Percentage vehicular utilisation	Average route length	Average distance travelled by a passenger	Average earnings per passenger	Earnings per Km. of Buses operated	Earning per Vehicle on road per day
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Parassala	54.7	348.6	71.1	37.0	18.3	174.6	408	1421
2	Neyyattinkara	93.2	323.6	75.8	26.8	14.8	124.8	403	1303
3	Poovar	51.1	305.6	72.4	25.7	12.6	116.4	328	1001
4	Vizhinjam	56.2	300.8	63.2	58.8	10.0	90.5	422	1268
5	Kattakada	56.7	260.9	70.7	35.6	7.5	68.3	491	1282
6	Trivandrum Central	158.6	331.4	74.7	81.4	16.3	159.5	495	1655
7	Pappanamcode	97.4	186.6	86.9	12.1	6.8	62.5	441	823
8	Trivandrum City	164.1	178.6	78.2	14.4	7.6	61.6	428	764
9	Vikas Bhavan	78.2	199.1	81.2	15.1	8.7	72.5	391	778
10	Peroorkada	57.3	191.6	78.2	15.6	7.8	66.2	371	711
11	Nedumangad	76.7	308.3	69.2	32.4	9.7	106.5	473	1459
12	Attingal	64.7	349.1	70.1	35.9	16.5	154.5	473	1650
13	Quilon	124.1	324.6	68.3	35.7	17.8	172.0	474	1538

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
14	Kottarakara	78.9	288.9	65.5	29.0	14.5	154.4	515	1488
15	Punalur	40.9	328.4	66.5	37.6	16.6	162.7	496	1628
16	Pathanamthitta	53.6	335.1	60.8	48.1	24.8	264.5	504	1688
17	Adoor	18.3	308.4	69.4	27.8	30.6	291.3	365	1126
18	Kayamkulam	83.1	262.2	74.6	41.5	16.8	167.9	572	1501
19	Harippad	19.3	342.4	60.6	25.8	23.6	224.4	381	1307
20	Alleppey	75.4	300.3	77.2	34.0	14.0	134.6	527	1582
21	Sherthalai	63.9	329.1	74.0	34.0	14.9	141.3	456	1500
22	Ghengahur	68.9	264.5	66.4	36.3	16.4	155.9	529	1400
23	Thiruvalla	51.9	271.0	69.3	37.9	11.9	105.7	510	1384
24	Changanassery	47.3	314.1	78.2	36.6	14.1	138.1	518	1626
25	Kottayam	99.2	317.2	66.7	63.7	15.6	154.6	455	1442
26	Ponkunnam	25.9	341.7	65.2	109.0	23.8	324.5	460	1573
27	Palai	47.8	321.5	69.9	35.9	18.4	185.1	479	1539
28	Erattupetta	39.7	303.3	55.1	49.4	17.4	174.7	479	1453
29	Vaikom	32.3	370.4	70.3	85.3	21.9	217.5	465	1722
30	Moovattupuzha	50.2	312.9	64.7	48.3	13.3	159.8	492	1852
31	Thodupuzha	23.3	360.1	70.4	77.7	22.7	244.1	462	1666
32	Kothamangalam	24.6	378.9	75.6	72.0	22.6	272.0	492	1865
33	Ernakulam	65.7	370.6	69.1	74.9	27.0	275.5	493	1828
34	Alwaye	76.1	283.3	74.1	32.9	13.9	133.3	449	1271
35	Perumbavoor	41.9	309.9	78.8	31.3	14.0	136.3	435	1348
36	Chalakkudy	51.4	319.4	79.4	38.2	16.5	156.6	422	1348
37	Mala	28.9	300.4	78.5	26.3	21.4	204.1	361	1328
38	Trichur	63.7	314.5	75.1	72.2	19.7	156.2	507	1606
39	Puttukkad	11.9	297.0	69.1	35.3	14.2	132.4	432	1284
40	Guruvayoor	42.7	465.2	74.0	122.1	33.0	364.6	418	1946
41	Ponnani	24.3	374.5	74.1	158.5	40.2	445.0	468	1752
42	Perinthalmanna	22.1	409.8	67.9	178.8	34.2	368.6	455	1864
43	Palghat	78.3	399.3	72.1	167.2	34.8	371.1	443	1770
44	Malappuram	27.9	358.2	67.3	113.5	33.3	354.7	411	1579
45	Kozhikode	97.6	299.3	68.0	71.4	21.7	250.4	438	1493
46	Thamarassery	23.5	302.6	63.8	25.3	10.9	102.8	353	1212
47	Sultan Battery	174.2	249.5	73.1	53.6	15.4	147.1	469	1016
48	Cannanore	73.2	318.1	76.5	82.0	17.0	174.1	401	1276
49	Payyannur	41.1	328.2	68.6	63.8	20.7	208.9	406	1332
50	Kasaragode	16.4	427.1	79.3	89.8	34.5	347.0	381	1629
Total		3044.1	296.7	72.3	44.1	15.1	145.0	460	1365

## APPENDIX 7.14

*Air Traffic (Indian Airlines) from Trivandrum and Cochin 1985-86 and 1986-87*

Sector	Originating Traffic				Terminating		Traffic	
	1985-86		1986-87		1985-86		1986-87	
	Passenger (No.)	Freight (Tonnes)	Passenger (No.)	Freight (Tonnes)	Passenger (No.)	Freight (Tonnes)	Passenger (No.)	Freight (Tonnes)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cochin -Madras	17721	57.90	18199	55.35	17269	169.80	19406	190.48
Cochin -Bangalore	27487	96.30	26081	106.35	28397	235.50	28533	216.41
Cochin -Trivandrum	12084	103.10	9464	61.88	11182	216.50	6765	185.15
Cochin-Madurai	3858	23.00	3496	15.79	3806	206.10	3786	202.18
Cochin -Bombay	120570	720.20	123134	743.79	133677	349.30	135791	422.60
Cochin-Dabolin	3108	42.70	4435	6.20	3054	7.80	3931	21.95
Cochin -Delhi	9649	19.20	11476	37.11	9515	89.00	11218	127.36
Total	194477	1062.40	196285	1026.47	206900	1274.00	209430	1466.13
Trivandrum—Madras	2018	88.90	20442	88.47	22032	300.20	23481	324.14
Trivandrum—Bangalore	2406	3.50	7944	3.61	2275	9.90	7222	22.25
Trivandrum—Cochin	11182	216.50	6765	185.15	12084	103.10	9464	61.88
Trivandrum -Trichy	2532	5.40	2468	5.14	2552	117.20	2502	114.32
Trivandrum—Colombo	7058	106.00	8765	1.17	9538	73.60	8404	23.29
Trivandrum—Male	5717	385.20	9690	414.58	6840	11.20	11102	15.88
Trivandrum- Bombay	73040	324.60	68377	192.42	86523	1420.00	82949	1301.68
Trivandrum—Dabolin	1547	0.30	1612	0.31	1498	0.80	1701	2.97
Trivandrum -Delhi	5878	1.80	7569	1.25	5654	139.50	6802	111.44
Total	129778	1132.20	133572	892.10	149996	2175.50	153627	1977.85
Grand Total	324255	2194.60	329857	1918.57	355896	3449.50	363057	3443.98

## APPENDIX 7.15

*Number of Pass ports issued by the Passport and Emigration Offices of Cochin and Calicut during 1986-87*

Month	No. of fresh applications received			No. of Passport issued			No. of emigration clearance granted		
	Cochin	Calicut	Total	Cochin	Calicut	Total	Cochin	Calicut	Total
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1986									
April	6907	5227	12134	7013	4700	11713	1163	2142	3305
May	6964	4803	11767	6365	5005	11370	1841	4874	6715
June	5688	4046	9734	5795	5020	10815	1594	3460	5054
July	7402	5010	12412	7409	5221	12630	354	1594	1948
August	6047	5236	11283	5010	5401	10411	432	496	928
September	5791	5239	11030	3189	5100	8289	345	178	523
October	3961	5404	9365	9012	6081	15093	392	617	999
November	4786	4786	9277	5016	5501	10517	365	500	865
December	5173	5194	10367	5076	5020	10096	391	469	860
1987									
January	5892	4372	10264	4441	4579	8820	519	500	1019
February	5871	4417	10288	5004	4648	9652	392	482	874
March:	6485	5304	11789	5002	5031	10033	510	649	1159
Total	70672	59038	129710	68332	61307	129639	8288	15961	24249

## APPENDIX 7.16

Number of Ships Called at Cochin Port during 1985-86 & 1986-87 and their Net Registered Tonnage

Type of vessel	No. of ships		Net registered tonnage	
	1985-86	1986-87	1985-86	1986-87
Tankers	167	206	2352444	2955634
Food grain Vessels	..	..	..	..
Fertiliser Vessels	68	83	586301	686355
Container Vessels	227	217	1166945	1138502
Other Vessels	315	285	1293773	994807
Total	777	791	5999463	5775298

Source: Cochin Port Trust

## APPENDIX 7.17

Number and Tonnage of Steamers and Sailing Vessels which called at the Minor and Intermediate Ports of Kerala during 1986-87

Sl. No.	Name of Ports	Coastal/foreign	Steamer		Sailing vessels		Total No. of vessels	Total Tonnage
			No.	Tonnage	No.	Tonnage		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>I. Intermediate Ports.</i>								
1.	Neendakara	G	..	..	..	..	..	..
		F	4	30239	..	..	4	30239
2.	Alleppey	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
3.	Calicut/Beyport	G	1	98	243	28792	244	28890
		F	8	10277	8	1950	11	12227
<i>II. Minor Ports</i>								
4.	Trivandrum	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
5.	Quilon	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
6.	Kodungalloor	C	..	..	..	..	..	..
		F	..	..	..	..	..	..
7.	Ponnani	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
8.	Budagara	C	..	..	..	..	..	..
		F	..	..	..	..	..	..
9.	Azhikkal	G	..	..	85	9323	85	9323
		F	..	..	..	..	..	..
10.	Tellicherry	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
11.	Cannanore	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
12.	Kasaragod	G	..	..	..	..	..	..
		F	..	..	..	..	..	..
13.	Kovalam/Vizhinjam	G	2	804	..	..	2	884
		F	..	..	..	..	..	..
All Ports		G	3	982	329	38195	332	39177
		F	7	40516	8	1950	15	42466
Grand Total 1986-87			10	41,498	337	40145	347	81643
Total 1985-86		G	1	98	245	28324	246	28422
		F	7	47501	0	1424	13	48925
Grand Total 1985-86			8	47599	251	29748	259	77347

Source: Directorate of Ports.

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## APPENDIX 7.18

*Number of Harbour Crafts Registered at the Intermediate and Minor Ports of Kerala during 1986-87*

Sl. No.	Name of ports	Cargo boats including barges	Cannoes including boats	Mechanised fishing vessels	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Port Office, Alleppey	..	..	210	..	210
2.	Calicut	6	1	67	..	74
3.	Neendakara	..	..	464	..	464
4.	Trivandrum	..	..	..	..	..
5.	Kovalam /Vizhinjam	..	..	..	..	..
6.	Kodungalloor	..	..	199	..	199
7.	Ponnani	..	..	..	..	..
8.	Badagara	..	..	..	..	..
9.	Tellicherry	..	..	..	..	..
10.	Cannanore	..	..	19	..	19
11.	Azhikkal	5	..	2	..	7
12.	Kasaragod	..	36	57	..	93
13.	Quilon	..	..	..	..	..
Total		11	37	1018	..	1066

Source: Directorate of Ports

## APPENDIX 7.19

*Dredging Conducted at the Intermediate and Minor Ports of Kerala during 1986-87*

Name of Dredger	Capacity of the Dredger	Ports of Dredging	Quantity Dredged		Dredging done for other Agencies	Dredging done for other (Quantity dredged (M <sup>3</sup> ))
			Time in hour	Quantity of Dredged (M <sup>3</sup> )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
C.S.D. Meena--Kerala	600 M <sup>3</sup> /hour	Cochin Port Trust,	1005.20	389600	Cochin Port Trust	136,000
		New Mangalore,			Mazagan Dock Limited	70000
		Beyport, Cochin Udyogamandal canal				28,800
C.S.D. Neendakara	200 M <sup>3</sup> /hour	Neendakara Cargo Harbour, Neendakara Fisheries Harbour	996	30,000	..	..
				29,500	..	29,500
Grab dredger	50 M <sup>3</sup> /hour	Neendakara port	145	8700	..	..
Total		..	1546.20	457800	..	264300

Source: Directorate of Ports



## APPENDIX 7.20

*Growth of Post Offices in Kerala since 1975*

Category	1975	1980	1981	1982	1983	1984	1985	1986	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Head Offices	29	44	51	51	51	51	51	50	50
Sub Offices and Departmental Sub Offices	1219	1994	2085	2110	2126	2187	2026	2027	1959
Branch Offices and Mobile Post Offices	2774	2474	2440	2486	2501	2511	2674	2671	2725
<b>Total</b>	<b>4022</b>	<b>4512</b>	<b>4576</b>	<b>4647</b>	<b>4678</b>	<b>4749</b>	<b>4751</b>	<b>4748*</b>	<b>4734</b>

\*1985-86 figures include 10 post offices in Lakshadweep and 4 in Mahe

Which is not included in the 1986-87 figures.

## APPENDIX 7.21

*Average Area and Population served by each Post office (District-wise) in Kerala as on 1-4-1987*

Srl. No.	Name of Division	Name of District	Area served by each P.O. (Sq. km.)	Population served by each post office
(1)	(2)	(3)	(4)	(5)
1.	Trivandrum North } " South }	Trivandrum	5.59	6623
2.	Quilon } Pathanamthitta }	Quilon	7.41	6647
3.	Pathanamthitta } Thiruvalla } Mavelikkara }	Pathanamthitta	9.45	4425
4.	Mavelikkara } Thiruvalla }	Alleppey	5.10	6653
5.	Kottayam } Changanassery }	Kottayam	5.30	4080
6.	Idukki	Idukki	10.00	3624
7.	Ernakulam } Alwaye }	Ernakulam	6.60	6946
8.	Trichur } Irinjalakuda }	Trichur	6.25	5030
9.	Palghat } Ottappalam }	Palghat	10.03	4668
10.	Malappuram } Tirur }	Malappuram	9.28	6067
11.	Calicut } Badagara }	Calicut	6.30	5847
12.	Tellicherry, Calicut	Wayanad	14.17	3693
13.	Kasaragod, Tellicherry	Cannanore	8.56	5516
14.	Kasaragod, Cannanore	Kasaragod	9.33	5516
	<b>State:</b>		<b>8.10</b>	<b>5377</b>

## APPENDIX 7.22

## Division-wise Statistics of Post Office as on 1-4-1987—Kerala Circle

Sl. No.	Name of Division	Head Office	Sub Offices	F.D. Sub Offices	Branch Offices	Mobile Offices	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Trivandrum North	2	76	8	105	..	191
2.	Trivandrum South	2	65	16	118	..	201
3.	Quilon	3	83	33	101	..	220
4.	Pathanamthitta	3	62	47	135	..	247
5.	Mavelikara	1	41	21	42	..	105
6.	Kottayam	3	80	44	136	..	263
7.	Alleppey	3	65	44	57	..	169
8.	Thiruvalla	2	58	29	54	..	143
9.	Alwaye	3	67	34	128	..	232
10.	Idukki	2	52	13	202	..	269
11.	Changanassery	2	46	12	92	..	152
12.	Ernakulam	2	70	5	56	..	133
13.	Irinjalakuda	2	62	23	102	..	189
14.	Trichur	3	103	33	157	..	296
15.	Palghat	3	86	21	116	..	226
16.	Ottappalam	1	52	23	136	..	212
17.	Calicut	2	74	14	198	..	288
18.	Malappuram	2	44	21	163	..	230
19.	Tellicherry	1	43	8	136	..	188
20.	Cannanore	2	54	14	97	..	167
21.	Badagara	2	40	35	122	..	199
22.	Kasaragod	2	36	28	182	..	248
23.	Tirur	2	51	23	90	..	166
	Mahe*						
	LMA Island*						
	Total	50	1410	549	2725	..	4734

\*Mahe comes under Badagara Division & LMA Island comes under Ernakulam Division.

## APPENDIX 7.23

Statistics Relating to Telephone Exchanges in Kerala for the year 1986 and 1987

Telephone/ Dist./Dn.	No. of exchanges		Total equip. capacity		Total	Working	Conn.	Total Wait list	Public aCll Offices					
	As on April 1986	As on April 1987	As on April 1986	As on April 1987	As on April 1986	As on April 1987	As on April 1986	As on April 1987	As on April 1986	As on April 1987	PH* persons	Others	PH persons	Others
1. Trivandrum Phones District	3	3	20300	20300	16996	19143	3890	5492	13	141	16	197		
2. Ernakulam Phones District	8	10	20526	22228	19254	20428	7955	9837	37	66	37	66		
3. Calicut Phones District	2	2	10700	11800	10434	11292	4199	4590	11	88	20	86		
4. Kerala Excluding the 3 Telephone Districts	571	584	111193	123393	105097	116451	51097	64437	96	2403	103	2407		
5. Kerala State includ- ing the 3 Telephone Districts (1 + 2 + 3 + 4)	584	599	162724	177721	151761	167814	67181	84356	160	2698	176	2756		

\* Physically Handicapped.

## APPENDIX No. 7.24

Income and Expenditure of the Kerala Tourism Development Corporation and Accommodation Details in the Hotels of KTDC - 1986-87

Name of Hotel units	No. of beds available	Total number of Visitors			Annual Income in lakhs	Annual expenditure in lakhs		
		Domestic	Foreigners	Occupancy Ratio		Adminis- tration	Operating	Total
Mascot Hotel	82	5048	674	34	61.61	29.50	26.30	56.0
Aranya Nivas Hotel	52	3337	3528	42	31.62	11.50	9.50	21.0
Periyar House	77	16475	2219	74	11.36	5.60	4.50	10.10
Garden House	34	6146	..	50	3.40	2.25	1.50	3.75
Guruvayoor Tourist Bungalow	90	11080	3	33	6.22	4.81	2.55	7.36
Mangalya	40	4134	..	33	19.90	7.75	10.81	18.56
Bolgatty Palace Hotel	22	977	130	58	13.59	6.50	7.67	14.17
Kumarakom Tourist Complex	8	1041	57	98	2.36	1.43	0.80	2.23
Airport Restaurant	..	..	..	..	7.28	4.95	3.00	7.95
Hotel Sabala	4	..	N.A.	N.A.	0.83	0.45	0.40	0.85
Hotel Samudra	100	7071	31	..	13.50	6.65	4.00	10.65
Transport Division	..	..	..	..	37.50	12.50	20.02	32.52
Hotel Chaitira	176	..	..	..	..	..	..	..
					209.17	93.89	91.25	185.14

## APPENDIX 8.1

Commodity-wise Distribution of Exports through Cochin Port during 1985-86 &amp; 1986-87

(Tonnes)

Sl. No.	Commodities	1985-86			1986-87		
		Coastal	Foreign	Total	Coastal	Foreign	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Coir products	..	25795	25795	..	24677	24677
2.	Tea	..	26178	26178	..	22307	22307
3.	Rubber & rubber products	..	1246	1246	1	773	774
4.	Coffee	..	46456	46456	..	31056	31056
5.	Coconut	..	..	..	..	..	..
6.	Copra	..	..	..	..	..	..
7.	Cashew kernels	..	36391	36391	..	42685	42685
8.	Chemicals	..	6923	6923	..	6565	6565
9.	Cotton raw & wastes	..	90	90	..	520	520
10.	Cotton piece goods	..	13020	13020	..	8401	8401
11.	Rice & other food grains	150	..	150	833	116	949
12.	Pepper	..	36288	36288	..	36547	36547
13.	Ginger	..	5458	5458	..	2335	2335
14.	Cardamom	..	817	817	..	320	320
15.	Cashew shell liquid	..	1633	1633	..	1888	1888
16.	Turmeric	..	1827	1827	..	2189	2189
17.	Coconut oil	..	..	..	..	..	..
18.	Lemongrass oil	..	12	12	..	13	13
19.	Timber	42	2262	2304	..	2492	2492
20.	Marine Products	..	34947	34947	..	40235	40235
21.	Oil cakes	..	..	..	..	..	..
22.	Machinery	57	1842	1899	77	1832	1909
23.	Iron & steel	7	1382	1389	10	598	608
24.	Mineral sand including granite	..	5569	5569	..	1477	1477
25.	Cement	1635	..	1635	2040	..	2040
26.	P.O.L.	217551	181851	399402	559490	430530	990020
27.	Miscellaneous	2108	67561	69669	1967	61229	63196
<b>Total</b>		<b>221550</b>	<b>497648</b>	<b>719198</b>	<b>564418</b>	<b>718785</b>	<b>1283203</b>

Source: -Cochin Port Trust

## APPENDIX 8.2

Commodity-wise Distribution of Imports through Cochin Ports during 1985-86 &amp; 1986-87

(Tonnes)

Sl. No.	Commodities	1985-86			1986-87		
		Coastal	Foreign	Total	Coastal	Foreign	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Rice and paddy	13	5250	5265	11	..	11
2.	Other grains including pulses and flour	..	..	..	14	315	329
3.	Coal	..	..	..	..	..	..
4.	Cashew nut	..	6959	6959	..	26529	26529
5.	Machinery	81	4315	4396	34	3582	3616
6.	Iron & steel	380	3131	3511	115	5254	5369
7.	Tin plate	..	182	182	..	524	524
8.	Motor vehicles & parts	41	704	745	12	698	710
9.	Chemicals and chemical preparations	..	1671	1671	..	1409	1409
10.	Oilseeds including copra and groundnuts	..	..	..	..	..	..
11.	Drugs & medicines	..	..	..	..	..	..
12.	Paper, old newspaper and stationery	..	29438	29438	..	21445	21445
13.	Cotton raw & waste	..	517	514	..	..	..
14.	Oilman stores, provisions & species	..	334	334	..	..	..
15.	Sulphur	..	175830	175830	..	190570	190570
16.	Rock phosphate	..	193249	193249	..	223030	223030
17.	Fertilisers	..	221328	221328	..	151916	151916
18.	Liquid ammonia	..	92355	92355	..	147705	147705
19.	Phosphoric acid	..	86263	86263	..	172381	172381
20.	Salt	..	..	..	..	..	..
21.	Zinc concentrate	..	23066	23066	..	38605	38605
22.	Calcined bauxite	5895	..	5895	6091	..	6091
23.	Soda	..	3	3	..	..	..
24.	Candle, parafinwax and tallow	..	1030	1030	..	500	500
25.	Cement	..	27561	27561	65	26347	28412
26.	Sugar	..	100072	100072	..	23635	23635
27.	P.O.L.	2748987	714689	3463676	3663424	797189	4460613
28.	Miscellaneous	370	115297	115667	62	98627	98689
Total		2755769	1803244	4559013	3669828	1930261	5600089

Source: Cochin Port Trust

APPENDIX—8.3

Import and Export Tonnage of Cargo Handled and Revenue Collected at Intermediate and Minor Ports of Kerala (1986-87)

Sl. No.	Name of Port	Import (Tonnes)			Export (Tonnes)			Total (Tonnes)			Revenue (Rs. earned.)	
		Coastal	Foreign	Total	Coastal	Foreign	Total	Coastal	Foreign	Total	1985-86	1986-87
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>I. Intermediate Ports:</b>												
1.	Neendakara	..	..	..	..	41124	41124	..	41124	41124	1048663	1362255
2.	Calicut/Beypor	7068	6685	13753	24795	2090	26885	31863	8775	40638	560567	378032
3.	Alleppey	..	..	..	..	..	..	..	..	..	116448	34089
<b>II. Minor Ports:</b>												
4.	Vizhinjam/Kovalam	..	..	..	..	..	..	..	..	..	7199	628
5.	Trivandrum	..	..	..	..	..	..	..	..	..	14155	12170
6.	Quilon	..	..	..	..	..	..	..	..	..	..	..
7.	Kodungalloor	..	-	-	-	-	-	-	-	-	27868	29932
8.	Ponnani	..	..	-	-	..	..	..	..	..	4132	7247
9.	Badagara	..	..	-	-	-	..	-	-	-	7506	6958
10.	Tellichery	..	-	-	-	-	..	..	..	..	8506	8334
11.	Cannanore	..	..	..	..	..	..	-	-	-	4859	4332
12.	Azhikal	1085	..	1085	7243	..	7243	..	8328	8328	50861	55560
13.	Kasaragod	..	-	..	-	-	..	..	..	-	27517	20915
Directorate of Ports											4328707	2324483
Total:		8153	6685	14838	32038	43214	75252	40191	49899	90090	6206988	4246885

Source: Directorate of Ports.

## APPENDIX 8.4

Container Traffic Handled during the year 1985-86 and 1986-87

(Tonnes)

Sl.No.	Commodities	1985-86			1986-87		
		Export	Import	Total	Export	Import	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Cashew kernels	28412	..	28412	37508	..	37508
2.	Chemicals	5719	761	6480	5034	798	5832
3.	Coffee	24435	..	24435	21090	..	21090
4.	Coir products	22182	..	22182	20466	..	20466
5.	Fish	25806	..	25806	27076	..	27076
6.	Ginger	2009	..	2009	1439	..	1439
7.	Pepper	20137	..	20137	18418	..	18418
8.	C.P. goods	11815	..	11815	7300	..	7300
9.	Tea	7388	..	7388	4959	..	4959
10.	Turmeric	1334	..	1334	1718	..	1718
11.	Rubber and rubber products	345	..	345	597	..	597
12.	Wheat	..	2557	2557	..	..	..
13.	Machinery	..	1865	1865	..	1287	1287
14.	Miscellaneous	28880	37333	66213	29294	34590	63884
<b>Total</b>		178462	42516	220978	174899	36675	211574

Source---Cochin Port Trust.

APPENDIX 9.1

Educational Institutions—District wise 1986-87

	L. P. Schools				U. P. Schools				High Schools				Total			
	Govt.	P.A.	PUA	Total	Govt.	P.A.	PUA	Total	Govt.	P.A.	PUA	Total	Govt.	P.A.	PUA	Total
Trivandrum	307	182	17	506	99	105	7	211	115	94	17	226	521	381	41	943
Quilon	283	191	10	484	59	143	8	210	73	125	6	204	415	459	24	898
Pathanamthitta	172	244	15	431	42	84	8	134	47	113	5	165	261	441	28	730
Alleppey	201	199	14	414	68	78	2	148	55	126	4	185	324	403	20	747
Kottayam	177	281	25	483	66	130	3	199	58	166	12	236	301	577	40	918
Idukki	72	142	3	217	45	64	5	114	53	70	5	128	170	276	13	459
Ernakulam	198	280	18	496	88	101	13	202	85	173	23	281	371	554	54	979
Trichur	126	400	10	536	53	167	6	226	74	149	13	236	253	716	29	998
Palghat	197	351	10	558	54	159	6	219	56	74	8	138	307	584	24	815
Malappuram	343	479	4	826	108	225	4	337	81	73	5	159	532	777	13	1322
Kozhikode	188	540	1	729	77	241	6	324	64	94	7	165	329	875	14	1218
Wynad	69	52	5	126	32	40	1	73	33	22	2	57	134	114	8	256
Cannanore	129	623	5	757	67	278	1	345	80	71	1	152	276	972	6	1254
Kasargode	146	115	4	265	68	74	..	142	64	33	1	98	278	222	5	505
Total	2608	4079	141	6828	926	1889	69	2884	938	1383	109	2430	4472	7351	319	12142

P.A.—Private Aided

PUA.—Private Un Aided



APPENDIX 9.2

Standard wise Strength of students 1986-87

	Government Schools			Private aided Schools			Private unaided schools			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Lower Primary												
I	129612	124003	253615	175456	169446	344902	8184	7935	16119	313252	301384	614636
II	143919	135612	279531	200869	189285	390154	8176	7670	15846	352964	332567	685531
III	139538	130094	269632	192805	182011	374816	7344	6667	14011	339687	318772	658459
IV	134718	125805	260523	182157	173660	355817	6099	5926	11965	322914	305391	628305
Total	547787	515514	1063301	751287	714402	1465689	29743	28198	57941	1328817	1258114	2586931
Upper Primary												
V	120218	111077	231295	195157	186436	381593	6001	5037	11038	321376	302550	623926
VI	111778	104097	215875	189214	182778	371992	6210	5015	11225	307202	291890	599092
VII	103622	97263	200885	178707	176484	355191	5773	4832	10605	288102	278579	566681
Total	335618	312437	648055	563078	545698	1108776	17984	14884	32868	916680	873019	1789699
High School												
VIII	108967	102054	211021	156492	153475	309967	5277	4635	9912	270736	260164	530900
IX	95509	93565	189074	144830	146104	290934	4588	4240	8828	244927	243909	488836
X	61946	63295	125241	90413	97901	188314	3875	3661	7536	156234	164857	321091
Total	266422	258914	525336	391735	397480	789215	13710	12536	26276	671897	668930	1340827
Grand Total	1149827	1086865	2236692	1706100	1657580	3363680	61437	55618	117085	2917394	2800063	5717457

## APPENDIX 9.3

*Details of Teachers-Section wise*

Category of school	1985-86			1986-87		
	Trained	Untrained	Total	Trained	Untrained	Total
1. High School section	54736	292	55028	55700	316	56016
2. Upper Primary section	56684	3757	60441	57250	4026*	61276
3. Lower Primary section	69309	2466	71775	70407	2775*	73182
4. <i>Training schools</i>						
Training section	473	..	473	473	..	473
Attached U.P. section	334	3	337	334	3	337
Attached L.P. Section	297	33	300	296	4	300
<b>Grand Total</b>	<b>181833</b>	<b>6521</b>	<b>188354</b>	<b>184460</b>	<b>7124</b>	<b>191584</b>

\*Untrained teachers in U.P. and L.P. section include the language teachers those who do not require training as an essential qualification for the post.

## APPENDIX 9.4

*Number of students appeared and passed in S.S.L.C. Examination from March 1980 to September 1987*

Year	Month	Number of students appeared			Number of students passed			Percentage of pass		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1980	March	196114	186138	382252	79528	83222	162750	40.55	44.71	42.6
	September	25141	18654	43795	2731	2028	4757	10.86	10.87	10.9
1981	March	238249	228828	467077	89736	94705	18444	40.55	41.39	39.5
	September	17564	131343	30707	1991	1393	3384	11.34	10.60	11.0
1982	March	252468	240300	492968	94687	94101	188788	37.50	39.13	38.3
	September	11046	9401	20447	1402	1102	2504	12.69	11.72	12.2
1983	March	270490	248532	519022	101716	98759	200475	37.50	39.73	38.6
	September	9658	7843	17501	3815	2207	6022	39.50	28.14	34.4
1984	March	245252	250603	495855	84016	92794	176810	34.26	37.03	35.7
	September	10948	8246	19194	1947	1615	3562	17.78	19.58	18.6
1985	March	247605	240655	488260	100943	121147	222090	40.77	50.34	45.4
	September	7668	5941	13609	1419	1018	2437	18.51	17.14	17.9
1986	March	256367	241497	497864	114833	117860	232693	44.80	48.80	46.7
1987	March	233158	218273	451831	102339	103257	295596	43.90	47.31	45.5
	September	24137	23205	47342	10218	9141	19359	42.33	40.00	41.8

## APPENDIX 9.5

*Number of Arts and Science Colleges in Kerala 1986-87*

Sl.No.	District	No. of Colleges		
		Government	Private	Total
1.	Trivndrum	7	11	18
2.	Quilon	1	12	13
3.	Pathanamthitta	..	8	8
4.	Alleppey	..	11	11
5.	Ernakulam	4	19	23
6.	Kottayam	1	20	21
7.	Idukki	1	4	5
8.	Trichur	3	16	19
9.	Malappuram	3	7	10
10.	Palghat	3	7	10
11.	Kozhikode	6	7	13
12.	Waynad	2	2	4
13.	Cannanore	2	7	9
14.	Kasargod	3	1	4
Total		36	132	168

## APPENDIX 9.6

*Number of Engineering Colleges, Students and Teachers-1985-86 and 1986-87*

Type of Institution	No. of Institution		Enrolment			Teachers*				
	1985-86	1986-87	1985-86		1986-87		1985-86	1986-87		
			Boys	Girls	Total	Boys	Girls	Total		
Government	2	3	3074	848	3922	3201	889	4090	403	429
Private	3	3	3594	778	4372	3516	758	4274	358	358
Quasi Government	1	1	1044	230	1274	1060	230	1298	154	112
Total	6	7	7712	1856	9568	7777	1885	9662	915	899

\*Excluding skilled Assistants.

## APPENDIX 9.7

*Number of Polytechnics and Technical High Schools in Kerala*

Sl. No.	District	Polytechnics					Technical High Schools		
		1985-86			1986-87		Total	Total	
		Govt.	Private	Total	Govt.	Private			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Trivandrum	2	..	2	2	..	2	3	4
2.	Quilon	..	1	1	..	1	1	2	2
3.	Pathanamthitta	1	1	2	1	1	2	1	1
4.	Alleppey	..	1	1	..	1	1	4	4
5.	Kottayam	2	..	2	2	..	2	6	7
6.	Idukki	1	..	1	1	..	1	2	2
7.	Eruakulam	3	..	3	3	..	3	5	5
8.	Trichur	2	2	4	2	2	4	4	4
9.	Palghat	2	..	2	2	..	2	3	3
10.	Malappuram	1	..	1	1	..	1	4	4
11.	Kozhikode	3	..	3	3	..	3	3	3
12.	Wynad	1	..	1	1	..	1	2	2
13.	Cannanore	1	..	1	1	..	1	4	5
14.	Kasargod	..	1	1	..	1	1	1	1
<b>Total</b>		<b>19</b>	<b>6</b>	<b>25</b>	<b>19</b>	<b>6</b>	<b>25</b>	<b>44</b>	<b>47</b>

## APPENDIX 9.8

*Students and Staff strength in Polytechnics and Technical High Schools 1985-86 and 1986-87*

Institution	Enrolment						Teachers	
	1985-86			1986-87			1985-86	1986-87
	Boys	Girls	Total	Boys	Girls	Total		
<b>Polytechnics</b>	7948	1762	9710	7988	1780	9768	1274	1298
<b>Technical High Schools</b>	7385	1232	8617	7401	1250	8651		

## APPENDIX 9.9

*Intake and Outturn in Engineering Colleges, Polytechnics and Technical High Schools*

Year	Engineering Colleges				Polytechnics				Technical High Schools			
	No. of Institution	Intake		Out-turn	No. of Institution	Intake		Out-turn	No. of Institution	Intake		Out-turn
		Sanctioned	Actual			Sanctioned	Actual			Sanctioned	Actual	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1970-71	6	836	716	602	18	2310	2183	713	21	1230	1010	302
1975-76	6	1027	991	779	18	2751	2765	765	21	1230	1140	391
1980-81	6	1535	1531	854	18	2640	2638	1156	25	1980	1718	685
1981-82	6	1910	1908	959	19	2773	2755	1254	25	2000	1726	691
1982-83	6	1960	1952	1003	20	2806	2796	1519	25	2180	1815	986
1983-84	6	1960	1958	1218	23	3086	3079	1678	34	2180	1941	1065
1984-85	6	1975	1971	760	25	3433	3232	2368	44	2180	1919	1093
1985-86	6	2514	2514	1041	25	3533	3404	2109	44	2480	2310	1074
1986-87	7	2514	2514	2073	25	3533	3404	2200	47	2510	2510	1371

## APPENDIX 9.10

*Course-wise Intake and Out-turn in Engineering Colleges at Degree level*

Name of Course		1984-85		1985-86		1986-87	
		Intake	Out-turn	Intake	Out-turn	Intake	Out-turn
Graduate Course		(2)	(3)	(4)	(5)	(6)	(7)
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1	Civil Engineering	565	204	602	229	602	583
2	Mechanical Engineering	570	170	582	383	582	622
3	Electrical	495	324	550	303	550	533
4	Electronics	115	2	300	49	300	126
5	Chemical Engineering	70	46	80	48	80	113
6	Production-cum-Plant Engineering	25	14	30	9	30	..
7	Instrumentation and Control System	20	..	30	11	30	31
8	Production Engineering	20	..	30	9	30	51
9	Applied Electronics and Instrumentation	20	..	40	..	40	14
10	Architecture	30	..	80	..	80	..
11	Industrial Engineering	15	..	20	..	20	..
12	Electrical Communication	20	..	20	..	20	..
13	Computer Science	30	..	120	..	120	..
14	Production and Management	..	..	..	..	30	..
Total		1995	760	2184	1041	2514	2073

## APPENDIX 9.11

*Course-wise Intake and Out-turn in Engineering Colleges at Post Graduate Level\**

Name of Course Post Graduate	1984-85		1985-86		1986-87	
	Intake	Out-turn	Intake	Out-turn	Intake	Out-t urn
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Civil	34	21	34	29	34	21
2. Mechanical	33	11	33	11	33	11
3. Electrical	30	13	30	16	30	17
4. Electronics and Telecommunication	10	7	10	8	10	5
5. Chemical Engineering	6	..	6	..	6	..
Total	113	52	113	64	113	54

\* excluding Engineering College, Trichur.

## APPENDIX 9.12

*Departments/Schools and academic Programmes of the Cochin University of Science and Technology--1986-87*

Department/School	Year of establishment	Course of study and research	Intake
(1)	(2)	(3)	(4)
1. Applied Chemistry	1976	1. M. Sc. (applied Chemistry)	17
		2. M. Phil	8
		3. M. Sc. Bio-technology	10
2. Applied Economics	1979	1. M. Phil.	10
3. Computer Science	1984	1. M. Tech. (Computer and information Sciences)	15
		2. M. Sc. (Computer Software)	15
4. Electronics	1975	1. M. Tech.	
		(i) Digital Electronics	15
		(ii) Radar & Microwave Electronics	10
5. Foreign languages	1976	1. Certificate in	
		(a) German	25
		(b) Russian	25
		2. Diploma in	
(a) German	25		
(b) Russian	25		
6. Hindi	1963	1. M. A.	20
		2. M. Phil.	8
		3. Post-graduate diploma' in translation, administrative drafting & reporting in Hindi	20
7. Industrial Fisheries	1976	1. M.Sc.	15
8. Law	1962	1. LL.M.	20

(1)	(2)	(3)	(4)
9. Marine Sciences Divisions on:	1983	1. M. Sc. (Marine biology)	16
(a) Marine Biology, Microbiology & Biochemistry		2. M. Sc. (Marine geology)	10
(b) Chemical Oceanography		3. M. Sc. (Oceanography)	10
(c) Physical Oceanography and Meteorology		4. M. Sc. (Meteorology)	10
(d) Marine Geology		5. M. Phil. (Chemical Oceanography)	6
10. Mathematics and Statistics	1976	1. M. Sc. (Mathematics)	15
		2. M. Sc. (Statistics)	10
		3. M. Sc. (Operations research and computer applications)	15
11. Physics	1963	1. M. Sc.	25
		2. M. Phil.	8
12. Polymer Science & Rubber Technology	1976	1. B. Tech.	18
		2. M. Tech.	12
13. Ship Technology	1974	1. B. Tech. (naval architecture and ship building)	20
14. School of Continuing Education (All courses are by correspondence)	1976	(The School is being reorganised)	
15. School of Environmental studies	1978	1. Post-graduate diploma	20
16. School of Management Studies	1964	1. M. B. A. (Full-time)	42
		2. M. B. A. (Part-time)	30
		3. M. Phil. (Commerce)	6
17. School of Technology	1978	1. M. Tech. (Mechanical)	15
		2. M. Tech. (Electrical)	15
		3. M. Tech. (Civil)	15
		4. M. Tech. (Chemical) (All part-time evening programme)	15
18. Central Marine Fisheries (Research Institutes (Recognised Institution))		1. M. Sc. (Mariculture)	10
Total intake			626

## APPENDIX 9.13

## Total and Per Capita State Government Expenditure on Education 1970-71 to 1985-86

Major States	Total Expenditure (Rs. Crores)							Per capita (Rs.)						
	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
<i>Major States</i>														
Kerala	60	217	248	271	314	354	420	28	85	97	106	123	139	165
Punjab	30	139	146	165	191	217	241	22	83	87	98	114	129	144
Gujarat	42	181	206	248	299	418	481	16	53	60	73	88	123	141
Maharashtra	98	382	424	488	570	679	796	20	61	67	78	91	108	127
Haryana	18	73	84	96	112	135	157	19	57	65	74	87	105	122
Assam	25	97	100	116	191	187	236	17	49	50	58	96	94	119
Tamil Nadu	73	242	273	351	385	451	546	18	50	56	73	80	93	113
Karnataka	54	173	199	245	274	331	406	18	47	54	66	74	89	109
Andhra Pradesh	62	231	279	345	432	478	560	14	43	52	64	81	89	105
West Bengal	70	247	324	412	417	449	573	16	45	59	75	76	82	105
Rajasthan	42	146	176	216	250	292	346	16	43	51	63	73	85	101
Orissa	24	108	117	142	160	184	224	11	41	44	54	60	70	85
Madhya Pradesh	49	172	202	241	295	341	402	12	33	39	46	57	65	77
Bihar	48	236	301	361	385	434	507	9	34	43	52	55	62	73
Uttar Pradesh	75	351	395	500	558	684	719	9	32	36	45	50	62	65
<i>Other States</i>														
Sikkim	..	4	5	6	7	10	13	..	133	167	200	239	324	427
Nagland	3	13	14	18	20	23	32	59	163	172	225	248	288	397
Manipur	5	20	22	27	28	33	40	43	143	158	193	202	234	285
Tripura	..	17	20	25	30	33	45	..	81	94	119	144	159	216
Himachal Pradesh	4	45	48	54	62	71	82	11	105	112	126	143	164	191
Meghalaya	2	10	11	12	16	19	24	17	77	87	92	121	133	170
Jammu & Kashmir	9	44	52	61	67	87	93	20	73	88	102	112	133	157
All States	793	3148	3646	4400	5062	5902	6942	15	47	53	64	74	87	103



## APPENDIX 9.14

## Medical Institutions and beds in Kerala—Category-wise—1986-87

District	Hospitals		P.H. Centres including M.C.H. Units		Dispensaries		T.B. Centres/ Clinics		Leprosy Control Units		Grand-in-aid		Total	
	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Trivandrum	19	5823	41	368	38	88	1	28	..	..	2	233	101	6540
Quilon	9	1423	36	322	21	29	3	79	..	..	1	120	70	1973
Alleppey	12	3246	37	198	20	37	2	12	..	..	3	700	74	4193
Pathanamthitta	6	602	31	249	10	24	1	12	..	..	..	..	48	887
Kottayam	14	2471	34	325	15	36	2	48	..	..	5	701	70	3581
Idukki	5	308	12	98	34	93	..	..	..	..	..	..	51	499
Ernakulam	23	2725	48	465	28	98	4	40	..	..	2	531	105	3859
Trichur	21	3460	44	332	33	56	1	..	1	..	1	170	101	4018
Palghat	13	1283	17	169	54	119	1	52	..	..	..	..	85	1623
Malappuram	8	1098	27	126	57	70	2	52	2	..	1	60	97	1406
Kozhikode	10	3943	40	262	18	19	1	..	..	..	..	..	69	4224
Wynad	4	484	11	52	18	54	..	..	..	..	..	..	33	590
Cannanore	11	2077	39	255	33	71	1	..	..	..	..	..	84	2403
Kasargode	4	420	27	183	18	5	1	..	..	..	..	..	50	608
<b>KERALA</b>	<b>159</b>	<b>29363</b>	<b>444</b>	<b>3404</b>	<b>397</b>	<b>799</b>	<b>20</b>	<b>323</b>	<b>3</b>	<b>..</b>	<b>15</b>	<b>2515</b>	<b>1038</b>	<b>36404</b>

Source : D.H.S.

## APPENDIX 9.15

Statement showing the No. of attacks and deaths due to principal diseases during 1986-87

<i>Diseases</i>	<i>Attack</i>	<i>Death</i>
1. Diphtheria	631	2
2. Whooping Cough	16079	2
3. Tetanus	—	..
4. Measles	48094	10
5. Poliomyelitis	143	6
6. Tuberculosis	5804	231
7. Chickenpox	1187	8
8. Influenza	71551	2
9. Viral Encephalities	1810	84
10. Viral Hepatitis	14716	41
11. Dysentery	723113	59
12. Gastro—Enteritis	44074	82
13. guinea Worm		..
14. Dengue Fever	..	..
15. Haemorrhagic Fever	..	..
16. Meningococcal Infections	1656	15
17. Syphilis	1425	..
18. Gonococcal Infections	3073	..
19. Rabies	887	31
20. Enteric Fever	9314	11

Source: D.H.S.

## APPENDIX 9.16

District-wise Distribution of Institutions, Beds and Patients treated—Ayurveda during 1986-87

District	No. of Hospitals	No. of Beds	No. of Dispensaries	Total No. of Institutions	No. of patients treated
(1)	(2)	(3)	(4)	(5)	(6)
Trivandrum	12	225	47	59	1926496
Quilon	8	140	35	43	911537
Pathanamthitta	4	80	22	26	717186
Alleppey	9	170	35	44	1390059
Kottayam	8	150	24	32	923290
Idukki	3	70	21	24	653041
Ernakulam	11	180	45	56	1390152
Trichur	14	223	63	77	1604892
Palghat	5	120	45	50	960588
Malappuram	10	160	49	59	1146203
Kozhikode	4	90	32	36	815436
Wayanad	1	10	15	16	304759
Cannanore	5	11	36	41	780593
Kasargode	3	40	28	31	557326
Total	97	1769	497	394	14081558

Source: I.S.M. Directorate.

## APPENDIX 9.17

*District-wise Distribution of Institutions and Beds—Homoeopathy 1985-86 and 1986-87*

Districts	Hospitals				No. of Dispensaries		Total No. of Institutions		Patients Treated 1986-87	
	No. of Hospitals		No. of Beds		1985-86	1986-87	1985-86	1986-87	Inpatients treated	Out patients treated
	1985-86	1986-87	1985-86	1986-87	(6)	(7)	(8)	(9)	(10)	(11)
1. Trivandrum	4	4	150	150	25	26	29	30	4855	10,56,009
2. Quilon	1	1	25	25	17	19	18	20	689	6,58,326
3. Pathanamthitta	..	..	..	..	7	8	7	8	..	18,196
4. Alleppey	3	3	75	75	18	21	21	24	1125	9,56,101
5. Kottayam	3	3	125	125	19	19	22	22	2445	7,50,307
6. Idukki	2	2	50	50	16	17	18	19	3029	3,97,131
7. Ernakulam	2	2	50	50	27	31	29	33	890	5,73,584
8. Trichur	1	1	25	25	15	20	16	21	675	3,23,505
9. Palghat	1	1	25	25	15	16	16	17	469	2,95,052
10. Malappuram	2	2	50	50	21	25	23	27	455	7,40,356
11. Kozhikode	1	1	25	25	19	21	20	22	..	1,91,626
12. Wayanad	1	1	25	25	3	6	4	7	222	89,535
13. Cannanore	1	1	25	25	18	18	19	19	457	1,99,603
14. Kasaragode	2	2	50	50	7	8	9	10	792	1,37,547
Total	24	24	700	700	227	255	251	279	16101	69,86,831

## APPENDIX 9.18

District-wise Details on Family Welfare Programme in 1986-87

District	P.P.S.					I.U.D.			Nirodh supplied C.C.	O.P.	Induced Abortion
	Vase- ctomy	P.P.S.	Mini- lap	Lapro- scopic	Total (Column 3 to 5)	L.L.	Cuv	Total (Column 7 & 8)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Trivandrum	554	14707	5246	2574	22527	..	8085	8085	1230618	42929	6126
Quilon	123	11525	1523	2601	15649	..	5571	5571	824265	35679	1511
Pathanamthitta	246	3677	1273	2130	7080	233	3124	3357	379411	14068	1125
Alleppey	1252	6317	3029	1664	11010	..	6366	6366	699069	21242	1069
Kottayam	648	9503	617	5640	15760	..	8990	8990	866000	13102	3779
Idukki	185	4195	717	2569	7481	..	3347	3347	370283	8921	..
Ernakulam	894	14323	496	4299	19118	33	8402	8435	1420320	36515	5282
Trichur	1024	12577	2758	4192	19527	..	6606	6606	2766467	26013	2208
Palghat	218	9616	1072	7320	18008	241	5638	5879	968249	29374	2551
Malappuram	132	12145	810	3436	16391	23	6236	6259	974964	49503	619
Kozhikode	1078	16138	3041	2870	22049	3	6024	6027	985153	45235	2307
Wayanad	262	2903	341	1702	4946	..	2464	2464	351367	10338	8
Cannanore	412	9400	731	3020	13151	46	3470	3516	543093	19823	1659
Kasaragode	183	2398	725	1784	4907	..	1262	1262	203004	9417	1020
State Total	7011	129424	22379	45801	197604	579	75585	76164	12582263	362159	29264

Source: D.H.S.

## APPENDIX 9.19

*Target and Achievement of Family Welfare Programme*

Item	Unit	Target for 1986-87	Achievement upto 3/87
(1)	(2)	(3)	(4)
<i>1. Family Welfare Programme</i>			
(a) Sterilisation (Vasectomy-Tubectomy)	Nos.	2,50,000	2,04,611
(b) I.U.D. Insertion	„	70,000	76,004
(c) C.C. Users	„	1,50,000	1,51,468
(d) O. P. Users	„	40,000	27,847
(e) P. H. Centres	„	144	113
(f) Sub Centres	„	600	600
<i>2. National T. B. Control Programme</i>			
(a) No. of T. B. cases detected	Nos.	45,000	36,130
(b) No. of Sputum examination	„	1,07,400	85,057
<i>3. National Leprosy Eradication Programme</i>			
(a) No. of new cases recorded	„	10,000	9,385
(b) No. of cases brought under treatment	„	10,000	8,064
(c) No. of cases detected	„	6,000	6,565
<i>4. National Programme for Control of Blindness</i>			
(a) No. of Cataract Operation	„	50,000	16,730
(b) No. of other operation	„	..	17,775
<i>5. M.C.H. Programmes</i>			
<i>1. Immunisation Programme</i>			
D.P.T.	„	5,00,000	5,01,836
D.T.	„	6,00,000	4,15,813
T.T. (Preguant Women)	„	5,00,000	6,90,671
<i>2. Prophylaxis against Nutritional</i>			
Anaemia Women	„	6,00,000	7,24,369
Children	„	6,50,000	5,64,330
<i>3. Blindness due to Vit 'A' deficiency</i>			
	„	16,00,000	9,74,923

APPENDIX 9.20

Total and Per Capita Government Expenditure on Health 1970-71 to 1985-86  
(Revenue and Capital Accounts Combined)

States	Total Expenditure (Rs. crores)							Per capita (Rs.)						
	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1970-71	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<i>Major States</i>														
Rajasthan	21	114	140	190	205	249	292	9	38	41	55	59	73	85
Maharashtra	36	171	231	281	343	380	483	8	27	37	45	55	61	77
Punjab	10	53	61	64	85	93	125	7	32	36	38	51	56	74
Haryana	7	39	52	59	75	94	95	7	31	40	46	58	73	74
Kerala	15	82	98	102	114	147	160	7	32	39	40	45	58	63
Tamil Nadu	27	111	158	195	280	236	301	7	23	33	40	58	49	52
Gujarat	20	88	108	127	154	185	197	8	26	32	37	45	54	58
Assam	7	40	45	54	46	194	113	5	20	23	27	23	52	57
Andhra Pradesh	26	123	136	157	208	227	283	6	23	26	29	39	43	53
Madhya Pradesh	20	120	136	161	194	210	253	5	23	26	31	37	40	48
Karnataka	16	71	89	112	115	149	175	5	19	24	30	31	40	47
Orissa	11	59	67	87	104	106	123	5	22	26	33	39	40	47
West Bengal	27	141	163	185	208	225	230	6	26	30	34	38	41	42
Uttar Pradesh	28	157	189	246	316	372	252	5	14	17	22	29	34	32
Bihar	16	98	111	129	147	164	210	3	14	16	18	21	24	30
<i>Other States</i>														
Nagaland	2	16	17	19	25	22	32	36	197	207	237	313	276	404
Sikkim	—	2	3	4	4	4	7	—	81	96	133	138	135	231
Meghalaya	1	16	19	21	29	23	32	11	120	142	162	222	166	226
Jammu & Kashmir	5	51	59	65	83	98	114	10	84	98	108	139	165	193
Manipur	1	14	13	11	16	19	23	10	98	71	79	116	135	165
Himachal Pradesh	1	36	46	52	50	59	70	3	84	108	121	116	139	162
Tripura	—	6	8	9	13	14	22	—	31	40	43	63	64	104
All India	299	1,608	1,949	2,330	2,843	3,181	3,690	6	24	28	34	41	47	55

Source: CMIE Basic Statistics relating to the Indian Economy Vol. 2 September, 1987—CMIE.

## APPENDIX 9.21

## Rural Water Supply I April 1984

	Total No. of inhabited Villages: 1981	Problem Villages uncovered as on			1 April 1980	Problem Vill- ages covered during 1980- 85	Problem villages uncovered as on 1 April 1985	Col. 7 as % of col. 1
		Criteria I	Criteria II	Criteria III (2 to 4)	Total			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Major States</i>								
Assam	219950	4467	9740	1536	15743	8654	7089	32.2
West Bengal	38024	12818	9360	3065	25243	15628	9615	25.3
Haryana	6745	952	2488	..	3440	2122	1318	19.5
Rajasthan	34968	9321	7009	3473	19803	16043*	3760	10.8
Punjab	12342	367	1400	..	1767	537	1230	10.0
Gujarat	18114	4219	1099	..	5318	4492*	826	4.6
Orissa	46553	15420	2499	5697	23616	22357*	1259	2.7
Maharashtra	39954	11220	841	874	12935	12016*	919	2.3
Madhya Pradesh	71352	24909	21	14	24944	23845*	1099	1.5
Bihar	67546	11526	3455	213	15194	14172*	1022	1.5
Kerala	1219	1011	122	25	1158	1142*	16	1.3
Uttar Pradesh	112566	19237	1649	7619	28505	27143*	1362	1.2
Andhra Pradesh	27379	5217	2355	634	8206	8094*	112	0.4
Karnataka	27028	13352	1936	168	15456	15443	13	..
Tamil Nadu	15831	3981	1343	1325	6649	6649	..	..
<i>Other States</i>								
Meghalaya	4902	2927	..	..	2927	690	2237	45.6
Jammu & Kashmir	6477	4672	..	26	4698	2028	2670	41.2
Nagaland	1112	570	78	1	649	424	225	20.2
Manipur	2035	1178	..	34	1212	819	393	19.3
Sikkim	440	296	..	..	296	212	84	19.1
Himachal Pradesh	16807	7815	..	..	7815	4997	2818	16.8
Tripura	856(a)	681	1097	1022	2800	2486	314	..
<i>Union Territories</i>								
Mizoram	721	214	..	..	214	127*	87	12.1
Arunachal Pradesh	3257	1239	..	501	1740	1467	273	8.4
Pondicherry	291	74	44	..	118	111	7	2.4
Andaman	491	154	19	..	173	173*	..	..
Delhi	214	..	99	..	99(b)	89	..	..
Goa, Daman & Diu	412	58	8	..	66(c)	64	..	..
Chandigarh	24	..	..	..	..	..	..	..
Dadra & Nagar Haveli	..	..	..	..	..	..	..	..
Lakshadweep	7	..	..	..	..	..	..	..
All India	579132	157895	46662	26227	230784	192024	38748	6.7

\* includes partially covered problem villages.

## APPENDIX 9.22

Percentage of Population covered under potable water supply and sanitation: As on March end 1985

		Potable water supply		Sanitation	
		Rural	Urban	Rural	Urban
<i>Major States</i>					
Andhra Pradesh	71.4	52.1	1.7	10.9	
Assam	71.4	37.5	0.9	15.7	
Bihar	77.8	59.5	3.7	22.9	
Gujarat	79.7	83.2	0.2	38.0	
Haryana	57.8	69.1	..	28.4	
Karnataka	82.9	81.2	0.2	38.4	
Kerala	40.8	64.5	1.6	28.2	
Madhya Pradesh	62.7	79.7	..	7.8	
Maharashtra	51.0	87.1	..	39.8	
Orissa	82.0	38.1	..	9.5	
Punjab	23.8	71.2	..	48.5	
Rajasthan	58.7	56.0	..	9.6	
Tamil Nadu	46.8	83.8	0.2	47.5	
Utter pradesh	28.3	70.1	..	14.1	
West Bengal	52.5	63.7	0.1	19.5	
<i>Other States</i>					
Himachal Pradesh	59.5	89.1	..	13.7	
Jammu & Kashmir	62.7	86.6	0.1	7.7	
Manipur	67.6	51.5	0.1	0.8	
Meghalaya	35.1	22.1	..	..	
Nagaland	65.9	46.7	0.3	..	
Sikkim	43.3	89.0	..	32.9	
Tripura	65.6	51.5	..	13.2	
<i>Union Territories</i>					
Andaman	94.7	100.00	7.7	55.0	
Arunachal pradesh	90.2	88.5	0.2	38.5	
Chandigarh	52.6	100.0	52.6	100.00	
Dadra & Nagar Haveli	84.1	76.5	..	..	
Delhi	100.0	98.1	..	73.4	
Goa, Daman & Diu	44.2	80.9	..	..	
Lakshadweep	45.8	..	..	..	
Mizoram	64.3	7.6	43.7	1.5	
Pondicherry	100.0	76.3	1.0	39.9	
All India	56.2	72.9	0.7	28.4	

Source: CMIE Basic Statistics relating to the Indian Economy Vol. 2 States September-1986



## APPENDIX 9.23

## Expenditure on Sewerage and Water Supply in the State—Plan and Non Plan

(Rs. in lakhs)

Year	Water Supply Schemes						Sewerage/Drainage Schemes				grand Total
	Urban Water Supply			Rural Water Supply			Plan	Non-Plan	Total		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1980-81	918.20	451.27	1369.47	660.95	84.47	745.42	126.29	13.81	140.10	2254.99	
81-82	824.74	564.48	1389.22	1133.25	116.17	1249.42	171.34	21.60	192.94	2831.58	
82-83	651.14	519.88	1171.02	1565.41	136.24	1701.65	189.48	26.89	216.37	3089.04	
83-84	951.69	567.02	1518.71	4227.31	168.84	4396.15	290.85	27.02	317.87	6232.73	
84-85	714.02	855.02	1569.04	1649.28	..	1649.28	261.73	..	261.73	3480.05	
85-86	1284.59	1313.52	2598.11	1628.42	..	1628.42	254.43	..	254.43	4480.96	
86-87 (Provisional)	293.13	1564.59@	1857.72	1414.33	319.40	1733.73	355.52	40.50	396.02	3987.47	
87-88 Anticipated)	410.00(b)	1600.00	2010.00	3278.98	350.00	3628.98	631.57	42.00	673.59	6312.57	

@Inclusive of the Non-Plan expenses on all schemes which are non-divisible.

Total balance Non-plan expenditure under revenue head includes that of R.W.S.S. and urban drainage also

(b) The Anticipated expenses are for committed schemes subject to availability of release of grant from the state Government.

## APPENDIX 10.1

## Disposal of Cases Relating to Tenancy and Kudikidappu

Sl. No.	Item	Tenancy		Kudikidappu	
		As on 30-11-1986	As on 31-11-1987	As on 30-11-1986	As on 30-11-1987
(1)	(2)	(3)	(4)	(5)	(6)
1.	Total Number of applications filed	3846546	3868434	461319	464027
2.	Disposal of Cases				
	(i) Allowed	2565553	2579083	281680	283151
	(ii) Rejected	798409	804441	156831	157957
	(iii) Other disposals	475015	475814	20129	20302
	Total	3838977	3859338	458640	461410
3.	Balance of applications to be disposed of	7569	9096	2679	2617
4.	Number of certificates of purchase issued	254002	255029	281000	281598

Source: Land Board, Kerala.

APPENDIX 10.2  
Distribution of Surplus Land

Sl. No.	Item	Unit	As on 30-11-1986	As on 30-11-1987
1.	Total ceiling returns filed	No.	70193	70332
2.	Total ceiling returns decided	"	69072	69251
3.	Balance to be decided	"	1121	1081
4.	Area ordered to be surrendered	Acres	191715	193317
5.	Area reduced on orders of High Court	"	66615	67122
6.	Net extent of land ordered for surrender	"	125100	126195
7.	Extent of land taken over	"	98925	99948
8.	Area reconveyed on order of High Court	"	10345	10361
9.	Net extent taken over	"	88580	89587
10.	Balance extent to be taken over	"	36520	36608
	(i) Covered by stay against taking possession	"	24786	23709
	(ii) Net to be taken over by gift, dispute, vested forest etc.	"	10015	11701
	(iii) Extent available for taking over	"	1719	1198
11.	Surplus land distributed	"	60644*	59651
12.	Balance extent taken over pending distribution	Acres	27936	29936
	(i) Covered by stay against assignment	"	4003	3916
	(ii) Not distributed due to gift, vested forest etc.	"	4697	4859
	(iii) Reserved for public purposes	"	18278	19959
	(iv) Available for distribution	"	958	1202

Source: Land Board, Kerala.

\* 1818 acres of land distributed to 2 institutions have been included in the extent of land reserved for public purposes as on 30-11-1987.

## APPENDIX 10.3

*Beneficiaries of Surplus Land and Extent Distributed (as on 30-11-1987)*

(Acres)

District	Scheduled Castes		Scheduled Tribes		Others		Total	
	Number	Extent	Number	Extent	Number	Extent	Number	Extent
Kasaragod	3327	3026	762	634	6177	5463	10206	9123
Cannanore	2665	2091	1618	1387	6467	5231	10750	8709
Wayanad	1190	459	2460	1496	2519	1289	6169	3444
Kozhikode	3265	1112	239	101	4228	1142	7732	2355
Malappuram	6041	2956	34	13	5475	3553	11550	6522
Palghat	9613	5150	1089	880	10095	5695	20797	11725
Trichur	5681	1272	50	50	10221	2067	15952	3389
Ernakulam	3252	685	15	4	2049	374	5316	1063
Idukki	2187	2026	353	312	2317	2112	4856	4450
Kottayam	2327	1219	72	57	2753	1216	5152	2492
Alleppey	3555	2049	27	4	3734	2185	7316	4238
Pathanamthitta	330	86	..	..	394	68	724	154
Quilon	3389	778	..	..	3188	814	6577	1592
Trivandrum	2997	327	..	..	2309	268	5306	595
State	49818	23236	6659	4938	61926	31477	118403	59651

## APPENDIX 10.4

*District-wise Distribution of Beneficiaries and Area of Preamble Land Assigned upto 31-12-1986 under Land Reform Measures*

Name of District	Total area assigned in hectares	Of which area (hectares) assigned to SC/ST.	No of families benefited	Of which SC/ST	Percentage of SC/ST beneficiaries
Trivandrum	9207	1563	40477	6663	16.46
Quilon	15968	2262	75089	12021	17.08
Pathanamthitta	9286	937	37973	5741	15.12
Kottayam	3170	848	11582	3771	32.56
Alleppey	1690	194	12037	1762	14.64
Idukki	63556	7794	85843	21097	24.58
Ernakulam	9889	2297	56269	17195	30.56
Trichur	11604	1756	56275	12260	21.79
Palghat	301	71	1811	13	28.33
Malappuram	827	328	4864	479	9.85
Kozhikode	30	15	201	60	29.85
Wayanad	12982	2047	27281	2980	10.92
Cannanore	258	51	1999	350	17.51
Kasaragod	42813	9470	114755	20700	18.04
Total	181581	29633	526456	106392	20.21

## APPENDIX 10.5

## District-wise Distribution of Surplus Land upto 31-12-1987

Sl. No.	District	No. of beneficiaries				Land Distributed (in hectares)			
		Scheduled Castes	Scheduled Tribes	Others	Total	Scheduled Castes	Scheduled Tribes	Others	Total
1.	Trivandrum	2997	..	2309	5306	327	..	268	595
2.	Quilon	3389	..	3188	6577	778	..	814	1592
3.	Pathanamthitta	330	..	394	724	86	..	68	154
4.	Alleppey	3555	27	3734	7316	2049	4	2185	4238
5.	Kottayam	2327	72	2753	5152	1219	57	1216	2492
6.	Idukki	2186	353	2317	4856	2027	312	2112	4450
7.	Ernakulam	3252	15	2049	5316	685	4	384	1073
8.	Trichur	5764	50	10341	16155	1282	50	2080	3412
9.	Palghat	9595	1089	10135	20819	5157	880	5697	11734
10.	Malappuram	6045	34	5478	11557	2957	12	3553	6522
11.	Kozhikode	3302	239	4335	7876	1116	101	1150	2368
12.	Wayanad	1195	2479	2555	6229	461	1502	1298	3261
13.	Cannanore	2687	1622	6486	10795	2098	1389	5240	3727
14.	Kasaragode	3334	702	6184	10220	3029	634	5469	9132
	Total	49958	6682	62258	118898	23271	4945	31534	54750

## APPENDIX 11.1

## Deposits and Credit of the Public Sector Banks (As at June end)

(Rs. Crores)

States	Deposits			Credit			Credit Deposit Ratio(%)		
	1969	1980	1987	1969	1980	1987	1969	1980	1987
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Andhra Pradesh	121	1611	5596	122	1135	4296	100.8	70.5	76.8
2. Assam	33	319	1156	13	126	596	39.4	39.5	51.6
3. Bihar	169	1355	4895	52	561	1709	30.8	41.4	34.9
4. Gujarat	401	2386	6581	195	1234	3612	48.6	51.7	54.9
5. Haryana	49	555	2027	23	365	1221	46.9	65.8	60.2
6. Karnataka	188	1519	4628	143	1195	4195	76.1	78.7	90.6
7. Kerala	117	954	3369	77	652	2152	65.8	68.3	63.9
8. Madhya Pradesh	107	1055	3859	63	542	2324	58.9	51.4	60.2
9. Maharashtra	903	5614	16956	911	4340	13183	100.9	77.3	77.7
10. Orissa	29	344	1227	15	195	1008	51.7	56.7	82.2
11. Punjab	185	1694	5758	50	652	2437	27.0	38.5	42.3
12. Rajasthan	74	647	2447	38	434	1523	51.4	67.1	62.2
13. Tamil Nadu	233	1936	5821	311	1744	5615	133.5	90.1	96.5
14. Uttar Pradesh	337	2919	10289	154	1255	4512	45.7	43.0	43.9
15. West Bengal	456	3287	9549	526	1985	4557	115.4	60.4	47.7
Total—Major States	3402	26195	84158	2693	16415	52940	79.2	62.7	62.9
All India	3897	30245	97663	3035	20236	59410	77.9	66.9	60.8

Source: CMIE, Basic Statistics relating to the Indian Economy Vol. 2; States, Sept. 1987, and Economic Survey 1987, Government of India.

## APPENDIX 11.2

*State-wise Share of Priority Sectors in Bank Credit of Public Sector Banks*

States	Shares of Priority Sectors in Bank Credit (per cent)	
	June 1969	June 1986*
1. Andhra Pradesh	24.4	55.6
2. Assam	10.3	51.4
3. Bihar	9.1	64.5
4. Gujarat	15.9	45.1
5. Haryana	28.2	67.9
6. Karnataka	24.8	51.0
7. Kerala	27.6	54.3
8. Madhya Pradesh	22.3	59.0
9. Maharashtra	12.4	21.1
10. Orissa	11.2	58.9
11. Punjab	27.9	65.5
12. Rajasthan	16.8	60.9
13. Tamil Nadu	25.5	42.7
14. Uttar Pradesh	16.9	59.3
15. West Bengal	4.4	30.9
All India	14.9	43.1

\*Data are Provisional.

## APPENDIX 11.3

Financial Assistance Provided by All India Financial Institutions as at the end of March 1986 (cumulative)

(Rs. crores)

States	IDBI	% to total	IFCI	% to total	ICICI	% to total	NABARD	% to total	NCDC	% to total	LIC (as on 31-3-1987)	% HUDCO (as on 31-5-87)	%	Grand Total	% to total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Andhra Pradesh	1009.6	7.93	198.5	9.39	200.1	6.72	748.2	11.30	73.67	6.83	334.17	5.35	149.18	9.69	2713.42	8.15
2. Assam	126.7	1.00	22.0	1.04	12.6	0.42	62.7	0.95	26.15	2.42	94.66	1.52	5.62	0.37	350.43	1.05
3. Bihar	282.3	2.22	51.9	2.45	107.2	3.60	416.5	6.29	41.15	3.81	313.37	5.02	14.98	0.97	1227.40	3.68
4. Gujarat	609.2	4.78	210.6	9.96	393.4	13.22	358.5	5.42	41.89	3.88	633.47	10.15	153.75	9.99	2400.81	7.21
5. Haryana	401.8	3.15	67.8	3.21	81.6	2.74	483.6	7.31	26.81	2.49	213.67	3.42	60.84	3.95	1336.12	4.01
8. Karnataka	1030.8	8.09	157.2	7.43	215.1	7.23	460.4	6.95	68.41	6.34	334.21	5.35	95.37	6.20	2361.49	7.09
7. Kerala	422.9	3.32	65.5	3.10	48.4	1.63	197.1	2.98	27.88	2.59	322.12	5.16	114.92	7.47	1198.82	3.60
8. Madhya Pradesh	583.3	4.60	92.5	4.37	125.3	4.21	487.6	7.37	117.19	10.86	286.37	4.59	56.98	3.70	1751.24	5.26
9. Maharashtra	1922.1	15.09	333.2	15.76	800.1	26.88	604.3	9.13	135.69	12.58	941.72	15.08	175.16	11.38	4912.27	14.75
10. Orissa	385.8	3.03	63.7	3.01	64.9	2.18	230.0	3.47	53.55	4.96	212.68	3.41	40.20	2.61	1050.83	3.15
11. Punjab	400.4	3.14	90.0	4.26	74.9	2.52	671.7	10.15	75.96	7.04	214.08	3.43	56.87	3.70	1583.91	4.75
12. Rajasthan	596.4	4.68	116.5	5.51	121.6	4.09	328.5	4.96	58.44	5.42	349.38	5.59	142.14	9.24	1712.96	5.14
13. Tamil Nadu	430.0	3.38	191.3	9.05	290.2	9.75	370.6	5.60	64.19	5.95	571.07	9.15	165.58	10.76	2082.94	6.25
14. Uttar Pradesh	1073.1	8.43	266.3	12.59	185.6	6.23	969.1	14.64	192.30	17.82	609.85	9.77	214.54	13.94	3510.79	10.54
15. West Bengal	648.6	5.09	103.6	4.90	148.3	4.98	148.5	2.24	45.09	4.18	481.82	7.72	29.39	1.91	1605.30	4.82
Total	9925.0	77.93	2030.6	96.03	2869.3	96.40	6537.3	98.76	1048.37	97.17	5912.64	94.71	1475.52	95.88	29798.73	89.45
All India Total	12735.4	100.0	2114.5	100.00	2976.5	100.00	6619.08	100.00	1078.92	100.00	6242.85	100.00	1538.97	100.00	33306.22	100.00

