



GOVERNMENT OF KERALA

**DRAFT**  
**SEVENTH FIVE YEAR PLAN 1985-90**  
**AND**  
**ANNUAL PLAN 1985-86**

**VOLUME I**

**STATE PLANNING BOARD**  
**TRIVANDRUM**  
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DRAFT  
SEVENTH FIVE YEAR PLAN 1985-90  
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VOLUME—I

STATE PLANNING BOARD  
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Sub. National Systems Unit,  
National Institute of Educational  
Planning and Administration  
1713 21st St. N.W., Washington, D.C. 20037  
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## CHAPTER-I

### INTRODUCTION

The prospects of the Kerala's future economic development are closely linked with the structure and content of the planning process hitherto adopted and the special features of the State's economy. Successive Governments in the State have laid emphasis on the spread of education and health services, social welfare measures and infrastructure such as roads, water supply and electricity. As a consequence of this pattern of investment, it is generally recognised that social consumption of the people at all levels of income in Kerala is the highest in the country. Yet the twin problems of poverty and acute unemployment continue to defy solution. In fact Kerala has the highest rate of unemployment in the country today. In regard to matters like food deficit and regional disparities also it has not been able to create any worth-while impact so far. These are the problems which should engage the attention of the State Government in the coming years.

1.2. The pattern of development followed by the erstwhile princely States and largely followed by the State during the plan era has contributed to several positive as well as negative aspects in the lives of the people of Kerala.

1.3. Kerala today has the highest literacy in the country viz. 70.42% as against an all-India rate of 36.03%. Female literacy is also the highest in Kerala. But for a few isolated pockets, Kerala has fulfilled the constitutional requirement of universal primary education for children up to the age of 14. The growth of medical facilities in the State has been quite high compared to other States and this is exemplified by the fact that there is at least one dispensary in each panchayat. The number of beds per lakh of population at 124 in 1982-83 in Kerala is the highest in the country. The death rate in the State is 6.6 per 1000 and this is virtually the lowest that can be achieved. Infant mortality rate at 36 per thousand is also the lowest compared to other States. The life expectancy of a Keralite is 62 years compared to the all India average of 53 years. The birth rate has been steadily declining during the last few decades and is now about 25 per 1000 as against 33 for all India. The rate of growth of population is only 1.8% and the growth of population was only 19% in the decade 1971-81 compared to 25% for India as a whole.

1.4. The settlement pattern in the State is quite different from that in other States. Homesteads in Kerala are spread throughout the State, and as a result, a wide network of roads has been developed. Other types of communication facilities are also fairly well developed in the State. By the end of the Sixth Plan period water supply would have been extended to all the "problem" villages in the State. Electricity has been taken to all the villages in the State.

1.5. The pattern of development followed by the State has certain negative aspects also. Owing to the lower emphasis given to productive sectors, the general rate of growth of the State's economy has been slow. The record of development of both the industrial and agricultural sectors has been unimpressive. As a

single occupation, agriculture in Kerala does not generate sufficient income for an average family owing mainly to the extreme fragmentation of holdings and low productivity. Attempts at overcoming these drawbacks have not been successful. The State continues to be deficit in food and produces only 42% of the rice and 10% of the pulses it needs. This has resulted in an annual outflow of about Rs. 400 crores, to other food producing States in India. Again, as a result of this food deficiency there is a tendency for prices of food products to be higher in Kerala. The inflow of gulf remittances adds to the price rise and owing, among other things, to the centralised saving system through commercial banks, Kerala has not been able to get much of these remittances for productive investment. Industrial development is yet to pick up in the State in a big way. The traditional industries like coir, cashew and handloom have been facing innumerable problems and as they hold a large section of the industrial labour force, a significant share of the outlay for the industrial sector has to be earmarked for supporting them.

1.6 Thus as a result of a low rate of growth in both agriculture and industry, employment generation in the State has been low. The State today has the largest number of unemployed in the country compared to the population. The Employment Exchange figures reveal that there are about 23 lakhs of people openly seeking employment. Nearly half of these belong to the category of educated unemployed.

1.7 The overall growth rate of Kerala's economy is lagging behind that of the national economy to a significant extent. This has been so because of differences in the sectoral growth rates between the State's economy and the national economy. Because of the growth of social services the State's expenditure on 'Social and Community Services' is over 50% of the total non-plan expenditure. Under Plan expenditure also a significant share is appropriated by the social services sector in which the State has made considerable strides. The larger expenditure in this sector is mainly needed for the proper maintenance of these services.

1.8 In the Seventh Plan for Kerala, priority is given to programmes for employment generation, special programmes for the poor, agricultural and industrial programmes. Priority is also to be given to improvement in the quality of the social services and the increased use of physical infrastructure that has already been built. The scope and potential of sectors such as fisheries, forestry and animal husbandry have been gone into greater detail as these are employment generating sectors. The Planning Commission's guidelines regarding anti-poverty programmes have been taken note of in drawing up the Draft Plan for the State. Special programmes such as the New Twenty Point Programme have also been taken note of in drawing up the plan.

Table 1.1 shows Plan wise outlay and expenditure in Kerala from the First Plan to Sixth Plan.

TABLE  
Plan-wise Outlay and Expenditure in

Sector	I Five Year Plan		II Five Year Plan		III Five Year Plan		Three Annual Plans 1966-67 to 68-69	
	Outlay	Expendi- ture	Outlay	Expendi- ture	Outlay	Expendi- ture	Outlay	Expendi- ture
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>I. AGRICULTURE AND ALLIED SERVICES</b>								
1.1 Agriculture ..	545	234	250	271	1434	1076	1111	1300
1.2 Land Reforms ..	..	..	..	..	..	..	..	..
1.3 Minor Irrigation ..	..	..	237	226	572	565	650	653
1.4 Soil and Water Conservation ..	..	..	25	18	120	108	128	207
1.5 Special Area Programme for Rural Development ..	..	..	..	..	..	..	..	..
1.6 Food ..	..	..	..	..	..	..	..	..
1.7 Command Area Development ..	..	..	..	..	..	..	..	..
1.8 Animal Husbandry ..	2	8	112	83	153	186	186	154
1.9 Dairy Development ..	..	..	..	..	60	83	58	79
1.10 Fisheries ..	15	3	93	65	450	335	18	703
1.11 Forests ..	..	..	128	66	339	212	322	188
1.12 Investment in Agrl. Financial Institutions ..	..	..	..	..	..	..	..	..
1.13 Community Development ..	..	..	548	477	877	891	476	508
1.14 Colonisation ..	..	..	59	62	..	..	..	..
1.15 Others ..	..	..	6	4	..	..	..	..
1.16 Warehousing and Marketing ..	..	..	..	..	44	21	15	6
Total—I ..	562	245	1438	1272	4049	3477	3664	3798
<b>II. CO-OPERATION</b>								
..	8	4	121	64	246	206	106	92
<b>III. IRRIGATION, FLOOD CONTROL, ANTI SEA EROSION AND POWER</b>								
3.1 Major and Medium Irrigation ..	578	511	864	893	1142	1032	1073	1111
3.2 Flood Control and Anti-Sea Erosion ..	..	..	185	189	421	519	191	138
3.3 Power ..	1185	1060	2345	2192	4356	6084	4691	4193
Total III ..	1763	1571	3394	3274	5919	7635	5955	5442
<b>IV. INDUSTRY &amp; MINERALS</b>								
4.1 Village and Small Scale Industries ..	112	50	582	425	800	630	512	551
4.2 Medium and Large Scale Industries ..	..	..	102	179	454	760	485	781
4.3 Mining ..	..	..	..	..	..	3	17	2
4.4 Plantation ..	..	..	..	..	465	44	..	..
Total IV ..	112	50	684	604	1719	1437	1014	1334
<b>V. TRANSPORT AND COMMUNICATIONS</b>								
5.1 Ports, Light Houses and Shipping ..	41	30	..	..	25	28	89	83
5.2 Roads and Bridges ..	175	258	478	550	900	1107	537	568
5.3 Road Transport ..	42	48	66	160	63	..	204	361
5.4 Water Transport ..	..	..	..	..	50	39	55	36
5.5 Tourism ..	..	..	13	8	50	22	31	19
Total V ..	258	336	557	718	1088	1196	916	1067

## 1.1

**Kerala from I Plan to VI Plan***(Rs. in lakhs)*

IV Five Year Plan		V Five Year Plan 1978-83		Annual Plans (1978-79 & 1979-80)		VI Five Year Plan		Total I to VI Plan	
Outlay	Expendi- ture	Outlay	Expendi- ture	Outlay	Expendi- ture	Outlay	Expendi- ture	Outlay	Expendi- ture
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
910	1144	1677	1493	1330	1419	10464	6822	17721	13759
600	689	2788	2051	1718	1100	3070	3015	8176	6855
930	1133	1667	1224	1029	1108	4000	3080	9085	7989
300	170	345	258	251	345	1029	966	2198	2073
..	..	17	1	95	333	5160	6885	5272	7219
..	..	..	..	200	1	500	41	700	42
..	..	24	4	..	..	725	221	749	225
338	269	500	253	293	306	1517	1631	3101	2890
132	75	345	210	205	238	721	810	1521	1495
1100	540	1160	783	683	624	2000	2087	6219	5140
446	314	846	531	475	340	1862	1755	4418	3406
..	..	317	210	280	176	1100	615	1697	1001
569	561	627	512	350	477	1740	3050	5187	6476
..	..	..	..	..	..	..	..	59	62
110	69	362	28	..	..	..	..	478	101
23	17	70	26	..	..	..	..	152	70
5458	4981	10745	7584	6909	6467	33888	30979	66733	58803
155	638	739	544	570	511	2200	2920	4145	4979
2675	2891	8363	7693	7200	7235	25605	25953	47500	47319
653	698	867	688	500	682	2500	1698	5317	4612
7625	10740	12990	11057	8378	7060	31273	31473	72843	3859
10953	14329	22220	19438	16078	14977	59378	59124	125660	125790
1022	1015	1604	1825	891	2529	4980	4488	10503	11513
1181	1484	4471	3545	3285	4153	10546	11488	20524	22390
5	3	79	36	51	25	150	171	302	240
..	..	..	..	..	..	..	..	465	44
2208	2502	6154	5406	4227	6707	15676	16147	31794	34187
210	260	512	312	287	181	825	787	1989	1681
..	..	2282	2395	1604	2356	6600	7227	12576	14461
1675	2687	1163	934	542	542	2000	1650	5755	6382
30	73	75	68	71	86	575	467	856	770
50	55	71	79	130	132	675	635	1020	949
1965	3075	4103	3788	2634	3297	10675	10766	22196	24243

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>VI. SOCIAL &amp; COMMUNITY SERVICES</b>									
6.1 General Education ..	24	24	1033	1114	1469	1622	981	1325	
6.2 Art & Culture ..	..	..	..	..	..	..	26	15	
6.3 Technical Education ..	..	..	..	..	378	391	237	146	
6.4 Scientific Services and Research ..	..	..	..	..	..	..	..	..	
6.5 Health ..	192	259	848	467	1350	1589	787	495	
6.6 Sewerage & Water Supply ..	..	..	..	..	..	..	223	474	
6.7 Housing ..	10	36	207	138	310	189	108	108	
6.8 Urban Development ..	..	..	..	..	..	..	..	..	
6.9 Information & Publicity ..	..	..	10	5	13	8	10	10	
6.10 Labour and Labour Welfare ..	..	..	42	29	80	82	71	60	
6.11 Welfare of SC&ST ..	74	65	221	258	195	255	86	21	
6.12 Social Welfare ..	..	..	30	13	39	41	22	15	
6.13 Nutrition ..	..	..	..	..	..	..	..	..	
6.14 Others ..	..	..	..	..	5	1	2	2	
<b>Total—VI</b> ..	<b>300</b>	<b>384</b>	<b>2391</b>	<b>2024</b>	<b>3839</b>	<b>4178</b>	<b>2553</b>	<b>2671</b>	
<b>VII. ECONOMIC SERVICES</b>									
7.1 General Economic Services ..	..	..	..	..	..	..	..	..	
7.2 Economic Advice and Statistics ..	..	..	16	5	15	15	11	6	
7.3 Other General Economic Services ..	..	..	..	..	..	..	..	..	
Local Bodies ..	..	..	75	57	120	81	14	..	
Others ..	..	..	5	4	5	6	21	27	
<b>Total VII</b> ..	<b>..</b>	<b>..</b>	<b>96</b>	<b>66</b>	<b>140</b>	<b>102</b>	<b>46</b>	<b>33</b>	
<b>VIII. GENERAL SERVICES</b>									
8.1 Stationery & Printing ..	..	..	..	..	..	..	..	..	
8.2 Public Works ..	..	..	..	..	..	..	..	..	
<b>Total VIII</b> ..	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	
<b>Total State Plan</b> ..	<b>3003</b>	<b>2590</b>	<b>8701</b>	<b>8022</b>	<b>17000</b>	<b>18231</b>	<b>14254</b>	<b>14437</b>	

(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1654	2891	2053	2816	1515	2675	4120	6758	12849	19225
39	44	91	73	63	43	200	317	419	492
232	122	236	163	155	189	700	967	1938	1978
..	..	798	592	580	609	1200	1665	2578	2866
1044	849	1249	942	853	903	3655	4313	9978	9817
1225	2977	3923	3374	1923	2039	9050	8669	16344	17533
410	439	1914	1726	1463	2261	4800	5958	9222	10855
34	166	722	532	362	410	1900	1802	3118	2910
23	14	41	24	25	45	90	214	212	320
90	103	137	94	595	511	297	794	1312	1673
165	154	485	362	370	360	2500	2014	4096	3489
52	21	53	32	58	52	467	521	721	695
..	..	457	293	198	203	1700	1489	2355	1985
..	..	..	..	..	..	..	..	7	3
5068	7780	12159	11023	8160	10300	30679	35481	65149	73841
..	..	59	42	74	44	309	253	442	339
13	13	35	13	20	45	266	295	376	392
..	..	..	..	..	4	50	54	50	58
..	..	..	..	..	..	..	..	209	138
20	17	126	63	..	..	..	..	177	117
33	30	220	118	94	93	625	602	1254	1044
..	..	260	292	160	123	400	274	820	689
..	..	296	369	464	395	1520	2027	2280	2791
..	..	556	661	624	518	1920	2301	3100	3480
25840	33335	56896	48562	39296	42870	155041	158320	320031	326367



## SIXTH PLAN PERFORMANCE—A REVIEW

The total investment in the State's Sixth Plan (1980-85) is expected to be about Rs. 4,200 crores. The size of the State sector plan was fixed at Rs. 1550 crores, after the discussions with the Planning Commission. The contribution expected from the private sector was Rs. 1800 crores. Taking into account the central projects which were considered likely to come up and also the needs of the existing central sector units in the State, the total central sector investment during the Sixth Plan period was expected to be about Rs. 850 crores. The Plan aimed at achieving an annual growth rate of 5.2 % as in the case of the National Plan.

2.2 The broad objectives of the Plan are maximisation of production in industry and agriculture, optimum utilisation of existing capacity and infrastructure, enhancement of employment opportunities, utilisation of local level material and manpower resources, bringing about balanced regional development, strengthening of the public distribution system, amelioration of the living conditions of the poor and distribution of benefits of development to the weaker sections. These objectives were sought to be achieved through sectoral objectives, targets and strategies indicated in the Plan.

2.3 The State Plan of Rs. 1550 crores was proposed to be financed through the State's own resources of Rs. 1120 crores (of which Rs. 311 crores was the expected additional resource mobilisation) and Central assistance of Rs. 430 crores. The actual plan expenditure during the first four years (1980-81, 1981-82, 1982-83 and 1983-84) has been in excess of the outlays provided in the plan budgets. In the Mid-term Review of the Sixth Plan prepared in 1982 in the context of the Annual Plan for 1983-84, it was found that the State had made additional commitments on some schemes not originally planned for. Hence the expenditure for the Plan years of 1980-81, 1981-82, 1982-83 and 1983-84 exceeded the original targeted outlays. The Mid-term Review indicated that a total outlay of Rs. 1700 crores will be necessary for achieving the various targets proposed in the Sixth Plan. Owing to the difficult financial position of the State, especially during the plan years of 1983-84 and 1984-85 the total expenditure in the plan may be only about Rs. 1583 crores by the end of the plan. Even this will be Rs. 33 crores more than the original plan outlay of Rs. 1550 crores. Kerala will be one of the few States in the Indian Union which will be exceeding the original financial outlay in the Sixth Plan.

#### Central Assistance and the Sixth Plan

2.4 The Central assistance agreed to by the Planning Commission for the original outlay of Rs. 1550 crores was Rs. 430.16 crores, made up of Rs. 380.04 crores normal assistance and Rs. 50.12 crores assistance for externally aided projects. During the course of the plan period the provision under central assistance went up. The annual provision under central assistance was as provided in Table 2.1.

TABLE 2.1

Year	Approved (Rs. Crores)	Actuals (Rs. Crores)
(1)	(2)	(3)
1980-81	82.75	78.46
1981-82	112.35	104.04
1982-83	94.08	96.37
1983-84 (R.E.)	94.12	105.27
1984-85 (B.E.)	111.27	..

2.5. The total central assistance for the State's Sixth Plan would now work out to Rs. 495.41 crores. In addition to this, an amount of Rs. 42 crores was sanctioned in 1983-84 as drought relief assistance. Thus the total assistance during the plan period will be Rs. 537.41 crores i. e. nearly Rs. 107 crores more than what was agreed to when the Plan outlay was finalised in 1980-81.

#### Performance in General

2.6 Despite the development in social services and industrial infrastructure, Kerala is still be among the less developed States in the Indian Union. The spread of education and health services started by the earlier princely States was continued during the Plan era and was intensified during the Sixth Plan period. As a result of the many welfare measures and development of social services the social consumption of the people measured by literacy, education, health services and water supply is quite high in Kerala compared to the rest of the country. The State is well ahead of the country in infrastructure for development, in terms of availability of electric power, communications and an educated work force with varied skills. Growth in agriculture has been slow if not stagnant despite the structural changes that have been brought about through land reforms on the one hand and large investments in agriculture and irrigation. The production and productivity of coconut, the principal cash crop in the State, has even fallen in some districts. In the industrial sphere, the technologically and managerially backward traditional industries have been struggling to survive in the face of rising wages and costs. The growth of modern industry has been sluggish and therefore it has been unable to absorb even a small fraction of the growing number of the unemployed. Not only has priority to be assigned to sectors like agriculture, fisheries, irrigation, power, road development and industries during the coming years, steps should be taken to make them more productive.

2.7 The expenditure of about Rs 902 crores in the first three years of the Sixth Plan (58% of the total) is satisfactory. As stated earlier, the anticipated expenditure during the five years of the Plan period, viz., Rs. 1583 crores, exceeds the original outlay by Rs. 33 crores. However there has been considerable



imbalance between the growth in different sectors. Much more than the outlay has been spent in the case of the social services heads like education, medical and public health, housing, labour and labour welfare and scientific services and research. On agriculture and allied services as a whole there has been a drop in spending during the Plan period. The expenditure under Co-operation has been more than the original outlay by about Rs. 7 crores. This is mainly due to the greater emphasis on programmes for Scheduled Castes and Scheduled Tribes.

2.8 Though, as stated above, the expenditure on agricultural and allied services shows a shortfall, the different components of the agriculture sector reveal varying pattern of expenditure. There is a shortfall in expenditure in crop husbandry and research and education, minor irrigation, soil and water conservation, command area development and forests.

2.9 Under special area programmes for rural development there will be increase in expenditure during the Plan period. This is mainly due to the implementation of the centrally sponsored programmes of Integrated Rural Development Programme (IRDP) and the National Rural Employment Programme (NREP). A sharp increase is anticipated in the expenditure on Community Development Programmes also. The increase in expenditure under 'Panchayat' is mainly due to the implementation of the Seven Point Programme.

2.10 The expenditure under major and medium irrigation and power has been more or less proportionate to the State Plan outlay. However there will be a shortfall in expenditure in the case of flood control and anti-sea erosion. The excess of expenditure anticipated under large and medium industries is mainly due to the higher provision made in the case of projects like Kerala Minerals and Metals Limited and Malabar Cements which had to be commissioned during the Plan period itself.

2.11 Physical targets will be exceeded in the case of education, medical and public health, family planning, social forestry, electricity connections etc. However in agriculture, irrigation, construction of power projects, industries, roads, command area development etc. there will be considerable shortfall in achievements. This is due *inter alia* to the provision of inadequate outlays in the Plan budgets, diversion in the course of the Plan period and cost escalations.

2.12. The sector-wise performance in the Sixth Plan is depicted in the following paragraphs.

#### Agriculture and Allied Services Agriculture.

2.13 The head of development agriculture includes crop husbandry and research and education. The outlay for agriculture in the Sixth Plan has been Rs. 104.64 crores. As against this, the budgeted outlay has only been Rs. 72.88 crores. The anticipated expenditure for the Plan period works out to about Rs. 68.21 crores. The percentage of expenditure compared to the original outlay is 65.21. There has been a shortfall of over 35% in expenditure during the plan period.

2.14 The Sixth Plan laid emphasis on improving the productivity of crops through appropriate changes in cropping pattern and through the adoption of improved agricultural practices. However this could not be achieved in most of the crops. What is disturbing is that, the productivity of most of the commercial crops is declining. The position at the end of the Plan would be much worse in view of the severe drought experienced in 1983-1984.

2.15 The target in rice production aimed at was 16 lakh tonnes against which the peak reached was 13.39 lakh tonnes in 1981-1982. The anticipated production in 1984-1985 is 14 lakh tonnes.

2.16 Coconut rejuvenation and re-planting programmes are accorded high priority in the Plan (See Table 2.2 below).

TABLE 2.2

Item	Unit	Sixth Plan Target	Achievement				
			1980-81	1981-82	1982-83	1983-84	Target 1984-85
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trees sprayed	No. lakhs	5000	81	42	19	4	40
Palms cut and removed	,,	15	2.17	1.45	0.70	0.09	0.79
Seedlings replanted	,,	15	0.41	1.85	0.70	0.06	0.79
Irrigation units established	Nos.	50,000	6385	4360	3310	1454	..

2.17 As seen in Table 2.2 the coconut development programmes have not fared well. More attention will be given to this scheme in the future.

2.18 The cashew development programme under the multi-state cashew development is a major project with the aim of bringing 10,000 hectares more under cashew with World Bank assistance. This scheme is progressing well. Till the end of 1983-84 a total of 5951 hectares have been covered.

2.19 With a view to take technology to the field on the basis of Training and Visit system of extension, the Kerala Agricultural Extension Project was introduced with assistance from the World Bank in 1980-81 in three districts viz., Trivandrum, Quilon and Alleppey. The scheme was later extended throughout the State. The project has been for over two years in the entire State and it may be somewhat premature to make an assessment of the impact of the scheme.

2.20 There are about 74 schemes in Agriculture in the State Sector with the result that the outlay earmarked for agriculture is thinly spread.

### Minor Irrigation

2.21 During the Sixth Plan it was estimated, that an additional area of 56955 hectares (gross) would come under irrigation through the various Minor Irrigation Schemes like Class I Minor Irrigation Scheme, Class II Minor Irrigation Scheme, Lift Irrigation Scheme etc., by the Irrigation Department utilising a total plan outlay of Rs. 3300 lakhs. The budgeted outlay for the five year period has been Rs. 3330 lakhs. During the first four years of the plan 41634 hectares (gross) was brought under minor irrigation schemes at a cost of Rs. 1981 lakhs. The break up of the physical achievement is as shown in Table 2.3.

TABLE 2.3

Sector	Hectares (Net)	Hectares (Gross)
(1)	(2)	(3)
1. Minor Irrigation Class I	8141	12212
2. Minor Irrigation Class II	8520	8520
3. Lift Irrigation	8037	12207
4. I.P.D. Yelah	6897	6897
5. Others	1798	1798
<b>Total</b>	<b>33393</b>	<b>41634</b>

2.22 The outlay for minor irrigation for 1984-85 is Rs. 603 lakhs. The following physical achievement is anticipated. (vide Table 2.4)

TABLE 2.4

Sector	1984-85	1984-85	
	(BE) (Rs. lakhs)	Hectares (Net)	Hectares (Gross)
(1)	(2)	(3)	(4)
1. Minor Irrigation Class I	225.00	2012	2893
2. Minor Irrigation Class II	95.00	816	816
3. Lift Irrigation	183.00	1708	2437
4. I.P.D. Yelah	20.00	190	190
5. Others	80.00	1334	1334
<b>Total</b>	<b>603.00</b>	<b>6060</b>	<b>7670</b>

2.23 The physical achievement under Minor Irrigation during the Sixth Plan period is expected to be 49304 hectares (gross). In percentage terms the physical achievement is 86.6. Against the budgeted outlay of Rs. 3330 lakhs, the anticipated expenditure is Rs. 3079 lakhs or 93%.

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2.24 the State Ground Water Department is also engaged in the exploration and exploitation of ground water for irrigation and water supply for industrial purposes. The programme of the department in the early years of the Sixth Plan gave emphasis to exploration and resource evaluation. At present the department has little control on the development programmes. Presently development programmes are implemented by individual beneficiaries. Considering the risk in sinking wells the response of farmers for that programme is not always encouraging.

### Soil and Water Conservation

2.25 Though the original plan outlay for soil and water conservation was Rs. 1029 lakhs, only Rs. 940 lakhs was provided in the annual budgets for the five year period. It is expected that the expenditure during the plan period would be about Rs. 967 lakhs. The various soil conservation programmes in arable lands are being undertaken according to the availability of plan funds in the budget. Detailed soil surveys and reconnaissance surveys are being conducted and works are now being taken up on a watershed basis.

2.26 In the Sixth Plan it was proposed to step up the scale of efforts in soil survey and soil conservation and to improve the co ordination between the State Land Use Board and Department of Soil Conservation. During this period, reconnaissance surveys in the Districts of Alleppey, Quilon and Malappuram were completed by the Land Use Board and Soil Survey Department. The Land Use Board has prepared a Land Use Plan for Idukki. Reports and maps pertaining to only a few projects have been published based on soil surveys. Other soil conservation works included are soil and water conservation in arable lands, reclamation of water logged areas, soil conservation on the catchment of river valley project, Idukki Pilot Scheme for river training and control of stream bank erosion etc. The physical achievement under schemes like soil conservation in irrigated lands, soil conservation and integrated development of land on watershed basis using institutional finance etc. is not satisfactory.

### Special Programmes for Rural Development

2.27 Under the Command Area Development Programme it was planned to construct field channels to bring 10,000 hectares under irrigation. The target under irrigation is 10,000 hectares. The progress in this has been very poor. Hence the provision of KLD Act, 1964 are being utilised to construct field channels, pending the sanction of the Command Area Development Bill, 1983, by the Government of India. The farmers reluctance to agree to the construction of channels through their fields has bedevilled the work. Progress in this important scheme will continue to be tardy, unless suitable legislation is passed.

2.28 The performance of the Integrated Rural Development Programme has been impressive. More than 4.04 lakh families were helped in the first four years of the Sixth Plan of which more than 25% were SC/ST beneficiaries. The average amount of subsidy per family amounted to Rs. 809 and the

average credit per family amounted to Rs. 2192. The principal beneficiaries of IRDP are small and marginal farmers and members of SC/ST. Generally the emphasis has been on agriculture and allied sectors. Though the target has been exceeded, it is doubtful whether the original objective of "raising the poorest above the poverty line" has been achieved.

2.29 The large number of dropouts, unsuitable training programmes, improper selection of trainees, defective training facilities, non settlement of the trained are the important drawbacks in the implementation of TRYSEM. Since TRYSEM is implemented as part of IRDP, it is not given proper attention by the different agencies involved in the programme. During the period 1980-84 as against a target of 23320 trainees, 14795 youths were trained. The youths who were able to get self employed number 4486.

2.30 The National Rural Employment Programme has also shown some progress. The programmes for development of backward areas generally suffered for want of adequate budget provision.

2.31 As against a plan provision of Rs. 5160 lakhs, the likely financial achievement for the five year period is Rs. 6875 lakhs.

### **Animal Husbandry**

2.32 The Sixth Plan programmes under animal husbandry include the establishment of more veterinary hospitals and upgradation of veterinary dispensaries in addition to continuance of the existing activities of veterinary services and animal health. Progress has been generally satisfactory in this sector. As against the Plan provision of Rs. 1517 lakhs the anticipated expenditure is Rs. 1631 lakhs.

### **Fisheries**

2.33 Through the implementation of the Sixth Plan schemes in the fisheries sector fish production of the State was targeted to increase to 5.38 lakh tonnes by the end of the Plan period from 3.54 lakh tonnes in the base year 1979-80. Against the outlay of Rs. 2000 lakhs the anticipated expenditure at the end of the Plan would be Rs. 2087 lakhs. A major change brought in the Plan is the introduction of welfare activities for fishermen at the district level. Each fishermen's habitat is to be a co-operative unit. Although Fishermen Welfare Societies have come into existence in all the marine villages in the beginning of the Plan period itself, steps to operate them effectively would be initiated only during the terminal year of the Plan. The emphasis appears to have been more on welfare than on economic development in this sector. Four deep sea trawlers were bought by the Kerala Fisheries Corporation.

2.34 There is an Inland Fisheries Development Corporation, but the immense fish potential in the inland sector remains unexploited. The experimental projects taken up for developing mariculture have not been successful.

2.35 Under the provisions of the Kerala Fishermen Welfare Societies Act, 1980, altogether 222 Fishermen Welfare Societies were formed. In order to co-ordinate the activities in the fisheries sector an Apex Federation has been set up. This Federation will

utilise institutional finance from National Co-operative Development Corporation (NCDC) for funding the development programmes of the Fishermen Welfare Societies. It will also take over the functions of the State public sector undertakings in the fisheries sector, viz; the Kerala Fisheries Corporation, the Kerala Fishermen Welfare Corporation and the Kerala Inland Fisheries Corporation. More benefits are expected to accrue to traditional fishermen in the State in the coming years. A welfare scheme to benefit the fishermen community in the form of "Fishermen Welfare Fund" is proposed to be launched soon.

### **Co-operation**

2.36 The broad objectives of the State's Sixth Five Year Plan under the co-operative sector has been the consolidation and strengthening of the co-operatives as a democratic and viable structure. Consumer co-operatives have shown little improvement in better business practices, in the selection of commodities, procurement, supply, management, processing, sales promotion, etc. to increase their share in the retail sales of consumer goods in rural or urban areas.

2.37 Credit co-operatives have to be strengthened to meet the credit requirements in agriculture as well as in industrial sector.

2.38 Housing co-operatives have been sanctioned managerial subsidy. Consumer co-operatives have been revitalised and loan cum-subsidy has been sanctioned to lead societies.

2.39 Against the Plan provision of Rs. 2,200 lakhs the expenditure is expected to be Rs. 2910 lakhs. The increase in expenditure compared to outlay is mainly due to larger allocation to co-operatives of Harijans and Girijans. In view of the large amounts that are being made available under the special component plan and special central assistance for economic development of scheduled castes, the revitalisation of Harijan and Girijan Co-operative Societies has become a necessity. The anticipated expenditure provided above excludes an outlay of Rs. 1000 lakhs provided in 1983-84 for the grant of interest subsidy on agricultural loans.

### **Irrigation, Flood Control, Anti-sea Erosion and Power**

#### *Irrigation*

2.40 The main objective of the Sixth Plan under irrigation was completion of the on-going projects viz; Pamba, Periyar Valley, Chitturpuzha, Kanhirapuzha, Kuttiady and Pazhassi. During the Plan period the target was to create additional potential area of 2,07,800 hectares. The financial outlay in the Plan was Rs. 256.05 crores. Owing to the escalation of costs the physical target for the Plan was brought down to 1,70,728 hectares. The likely achievement is however only 1,30,598 hectares.

#### *Pamba*

2.41 Major part of the work of the project is over. The main work remaining is part of the system of distributories at the tail end. By the end of June 1985 an area of 48870 hectares (20885 hectares net) can be commissioned. The only work that will spill over is the Kaupoor distributory of R. B. canal which is an extension, kept in abeyance for some time, and taken up recently.

**Kallada**

2.42 This World Bank assisted project is a composite project to irrigate a variety of crops, food crops, cash crops and tree crops. A minor conveyance below the pipe outlets which will convey water to each individual cultivator is also included in this project. By the end of this year, about 10,000 hectares net will have their distribution system ready.

**Periyar Valley**

2.43 During the Sixth Plan period modification work of the barrage and the high level canal system is being completed. Since enough water from Idamalayar will be available by then, the entire ayacut of 32,800 hectares net (85600 hectares gross) can be commissioned, bringing an additional area of 14510 hectares under irrigation.

**Chimony**

2.44 It was planned to complete 2,16,000m<sup>3</sup> of masonry and 5,50,000 m<sup>3</sup> of earth work by the end of March 1984. The achievement up to February 1984 is only 88,567 m<sup>3</sup> of masonry and 1,36,000 m<sup>3</sup> of earth work. The main reason attributed is lack of funds and machinery. Against the requirement of Rs. 13.5 crores to achieve the target, the fund allotted was Rs. 6.6 crores.

**Chitturpuzha**

2.45 This project aims at improving and extending an existing system of anicuts. The target fixed is to irrigate an area of 16678 hectares net (32550 hectares gross), the work remaining to be done includes a lift irrigation from the canal, improving the capacity of two tanks by raising their bunds and some portion of the canal and distribution system.

**Kanhirapuzha**

2.46 The dam (except for spill way shutters) and the entire R. B. canal system has been completed. An ayacut of 4194 hectares (gross) was already commissioned at the beginning of the Plan taking the total to about 19200 hectares (gross) against the project total of 21854 hectares.

**Kuttiady**

2.47. The total ayacut commissioned at the beginning of the Plan was 11100 hectares, with the completion of the project the full ayacut that should be 311160 hectares and during the Plan period will be 12096 hectares (gross). It is expected that the project will be completed by the end of June 1985.

**Pazhassi**

2.48. The Plan target is to complete this project during the Sixth Plan period. However, the works relating to two lane road bridge across the Valapattanam river was started only in 1983-84. The total ayacut area achieved works out to 7900 hectares net (15800 hectares gross).

**Industry and Minerals****Small Scale Industries**

2.49. The Sixth Plan set a target of starting 3500 modern small scale industrial units per annum. During the first four years of the Plan (1980-84) 12143 small units were registered. The target for 1984-85 is 5000 units. Thus it is hoped that 17143 units would be started during the Plan period and if this materialises the target set would be nearly achieved. The total investment of the 12143 units registered is Rs. 85.79 crores and the employment potential 1,06,315. The investment target in 1984-85 for 5000 units is Rs. 26.29 crores and the employment potential 37,800.

2.50. The emphasis in the Plan is on distribution of developed plots for setting up industrial units than on expansion and development of conventional type of industrial estates. As against a budgeted outlay of Rs. 1675 lakhs for small scale industries, the anticipated achievement is Rs. 1773 lakhs. Considerable emphasis is being laid on the provision of state investment subsidy to industrial units started in the districts which are not eligible for central investment subsidy.

**Handloom**

2.51. In tune with the national programmes for the development of handloom industry, the strategy adopted by the State Government during the Sixth Plan period are (i) co-operativisation of weavers to ensure better wages, improved productivity, easy marketing of products and (ii) diversification of production and promotion of sales of handloom goods both in domestic and foreign market.

2.52. The total number of handlooms increased from 94971 to 94990 during 1980-84. The number of looms brought into co-operative fold showed a significant increase from 33,997 to 49,094. A statement of the physical achievement during the Sixth Five Year Plan is given in Table 2.5.

TABLE 2.5

**Handloom Industry***Physical Achievements During Sixth Five Year Plan (1980-85)*

Item/Scheme/Programme	Position as on 31-3-1980	Sixth Plan (1980-85) Target	Achievement as on 31-3-1984	Target for 1984-85	Likely achievement at the end of 1984-85
(1)	(2)	(3)	(4)	(5)	(6)
1. Total number of handlooms (No. cumulative)	94,971	..	94,990	95,000	95,000
2. Looms brought into the co-operative fold (No. cumulative)	33,997	22,000*	49,094	5,000*	54,000
3. Total number of handloom weavers' co-operative societies (No. cumulative)	510	..	569	..	..

	(1)	(2)	(3)	(4)	(5)	(6)
4. Out of (3) No. of viable societies (No. cumulative)		233	..	317	..	..
5. No. of members in weavers' co-operative societies (No. cumulative)		35,832	..	52,771	..	..
6. Out of (5) No. of weavers (No. cumulative)		34,136	..	49,108	..	..
7. Production of handloom cloth in the co-operative sector during the year						
(a) Quantity (million metres)		28.90	..	37.30	40.00	40.00
(b) Value (Rs. crores)		12.80	..	22.42	25.00	25.00
8. Factory type weavers' co-operative societies organised (No. cumulative)		73	40*	101	10	..
9. Looms modernised (No. cumulative)		613	..	7647	1200*	1200
10. Warehouses constructed (No. cumulative)		8	..	29	5*	5
11. Worksheds constructed (No. cumulative)		..	..	38	25*	25
12. Dye houses constructed (No. cumulative)		86	..	88	..	..
13. No. of handloom societies in which Government have share participation (No. cumulative)		231	150*	353	10*	..
14. No. of weavers to whom Government have issued share capital loan (No. cumulative)		9480	6000*	13710	1500*	..
15. No. of weavers trained (No. cumulative)		506	..	1086	150*	..
16. Marketing depots opened by primary societies (No. cumulative)		135	..	163	..	..
17. Mobile van and trucks distributed to primary societies (No. cumulative)		8	..	10	..	..
18. No. of looms purchased and distributed to loomless weavers (No. cumulative)		..	..	1250	530*	..
19. No. of weavers' houses renovated (No. cumulative)		89	..	912	175*	..

\* Additional

### Coir Industry

2.53. Coir industry provides sustenance to about four lakh workers and brings in valuable foreign exchange. The emphasis in the Sixth Plan is to bring more coir workers into the co-operative fold. Today the industry faces severe problems like lack of demand for coir products in the external as well as internal market. These problems have to be tackled by the Coir Board, Coir Marketing Federation and Coir Development Corporation through measures like common marketing strategy and opening of sales promotion counters.

2.54 In the Sixth Plan a provision of Rs. 1261 lakhs has been made for coir development. The different programmes taken up during this Plan period include welfare measures, interest subsidy programmes, opening of sales depots, expansion of coir co-operatives and schemes of the Coir Board and Coir Corporation. It is estimated that about Rs. 1315 lakhs will be spent by the end of the Sixth Plan period.

### Transport and Communications

#### Ports

2.55. Kerala has a major port at Cochin, four intermediate ports at Vizhinjam, Neendakara, Alleppey and Calicut/Beypore and nine minor ports at Trivandrum, Quilon, Kodungalloor, Ponnani, Badagara, Tellicherry, Cannanore, Azhikkal and Kasargod spread along the long coast line of about 580 km. Out of the 13 minor and intermediate ports only Neendakara, Calicut/Beypore and Azhikkal handled any significant traffic during the past few years. There has been a steep decline both in the arrival of ships and in the export and import of merchantise through minor/intermediate ports. The traffic handled declined from 6.9 lakh tonnes during 1958-59 to 1.9 lakh tonnes during 1980-81. These ports can be operated successfully only if ships of significant tonnage can be brought to the ports. At present loading and unloading of cargo is done with the help of lighters of small capacities which alone can be berthed along side the open piers at these ports. Such an operation increases the number of handlings resulting in higher labour cost. Facilities

are also not available for the supply of fuel, oil and fresh water to ships. These ports are not operational during monsoon periods. Due to these reasons the number of ships calling at these ports have steadily declined over the years. Further the depth available in the approach channels at these port has been progressively declining due to siltation making navigation difficult. Development of road transport facilities with door to door delivery system for cargo has also been a major factor for the decline in traffic through these ports.

2.56 The main items of import/export cargo handled at the minor ports in the Sixties included coir yarn, pepper, coir mat and mattings, coir fibre, coconuts, copra, ginger, tapioca chips, coconut oil, wood, rice, sugar, salt, raw-cashew, cashew, kernels, bamboos and foodgrains. There has however been a significant decline during 1975-84 in the transport of coir yarn and mattings, pepper, ginger, coir fibre, coconut, timber, sugar and salt through these ports despite the fact that the hinterland generated demand for the import and export of higher volumes and new commodities as a result of economic development during these years. The main reasons for this are lack of facilities available in minor ports, the development of road transport system and the development of railway facilities in the State. The cargo which were going to Mangalore, Bombay and to the east coast from these ports by sailing vessels, were progressively moved by road transport. Door to door delivery facility which ensured speedy and safe delivery of cargo offered by road transport was a major attraction. Most of Kerala's trade items in bulk such as copra, coconut and tapioca chips are now being transported to other States by road.

2.57 Another important factor for the decline in traditional cargo through minor ports was the development of major ports at Cochin, Mangalore and Tuticorin. Traditional cargo such as raw cashew, cashew kernel, coir mattings and other industrial goods are now exported through major ports only. Coir and coir mattings are now transported through containers. Container terminals are available in major ports and this facility is resorted to increasingly for many more items.

2.58 The main item of import through minor ports in the past was foodgrains. The import of wheat and rice for public distribution is almost entirely done through the railways now. One of the main items of export through these ports in past was timber. In this case also the quantity of timber exported from various ports dwindled because of certain restrictions imposed by the Government against the export of certain types of woods. Tiles exported to Madras, Gujarat coast and Bombay through sailing vessels in the past have also taken to lorries. Road transport has replaced the sailing vessels even for the movement of salt from Tuticorin and Gujarat ports to Kerala.

2.59 Even though more than Rs. 2 crores will be spent during the Sixth Plan period for the development works at Neendakara and Beypore adequate facilities will not have been created at these ports. A sizeable portion of the funds for Neendakara ports had to be diverted to other schemes such as Capital repairs and major additions to piers and structures. The proposal in the Plan was to concentrate on two ports viz. Neendakara and Beypore. Even though

a transit shed and roads to the port were completed at Neendakara during the plan period, the construction of wharf could not be taken up. Wharf with crane facilities are essential to handle the industrial goods and other general cargo. Apart from ilmenite which is the traditional item of export through this port, no other cargo could be attracted to this port. The hinterland of Neendakara has many tile and cashew factories. Major industries such as Aluminium industries, Kerala Ceramics and the United Electrical Industries are situated in the hinterland of this port. The products of these units are handled at Cochin and Tuticorin ports because modern port facilities are not available at Neendakara. The situation is more or less the same at Beypore. The construction of breakwaters, essential for maintaining an approach channel with minimum maintenance dredging, could not be completed. Out of the total length of 1870 metro of breakwaters envisaged at the Beypore harbour only 475 metres on the northern side and 460 metres on the southern side were completed. It has not been possible therefore to provide an approach channel with 4.5 metre draft through out the season. So this port is also unable to attract the industrial goods from the hinterland. No development work of significance could be taken up at Azhikkal. Repairs to the existing work and platform were the work done at this harbour. Investigation, planning and engineering studies were carried out as planned, at Chomtal, Thangasserry, Kayamkulam, Thalai and Mopla Bay. Almost all the works envisaged under capital repairs and major additions to piers were completed. These include maintenance of pier and special repairs to office building at Valiathura, repairs to the wharf at Asramom and Neendakara and renewal of girders and special repairs to the pier at Alleppey.

2.60 In spite of inadequacies, new items of cargo such as potteries, cement, fertilizers, vanaspathy, frozen cargo, fish manure and handicrafts are handled at the minor ports in recent years. This is mainly because they can be handled with the existing facilities. If essential facilities such as a navigable approach channel round the year, whares, cranes, godowns, and forklifts, and the supply of fresh water and fuel to ships are provided it should be possible to attract traditional cargo as well as other industrial goods to these ports.

2.61 An outlay of Rs. 8.25 crores was provided in the Sixth Plan for Ports and Pilotage. The expenditure during the five year period 1980-85 will be about Rs. 7.87 crores. A major difficulty in implementation has been the lower budget provision (total budgeted outlay being Rs. 6.50 crores) during the Sixth Plan period.

2.62 The minor ports of Kerala are still inadequately equipped. A substantial amount has been spent on construction of breakwaters at Beypore. But the work is incomplete and therefore included as a spill over scheme in the Seventh Plan. The Spillover commitment for this work is about Rs. 1.70 crores. At Neendakara port, the construction of transit shed is complete, but the construction of additional transit shed and the wharf spillover to the Seventh Plan. This financial requirement is Rs. 100 lakhs. Other essential schemes for the purchase of supplementary equipments for ports, the setting up of central workshop and stores organisation and capital repairs and major addition to floating crafts are also continuing schemes.

## Roads and Bridges

2.63 Kerala has a fairly extensive network of 16,569 kms. of Public Works Department roads (out of a total road network of over 93,000 Km.) at the beginning of the Sixth Plan period. The main thrust in the Plan was to give emphasis to development and improvement of the P. W. D. road network. The investment made in the Sixth Plan for roads and bridges was aimed at straightening the existing road network and develop link and lateral roads in the State.

2.64 Traffic intensity on roads and the demand for transportation have risen sharply in the State during the past two decades. There has not been a commensurate increase in the length of roads or in the quality of the road network. While motor vehicle density, with respect to area, increased over seven fold, the length of P. W. D. roads increased only by 47% during this period. The condition of many roads in the State is unsatisfactory. They do not, by and large, conform to accepted standards, even though they are declared as State Highway, major district roads or other district roads as the case may be.

2.65 Against the total outlay of Rs. 66 crores for roads in the Plan, the total expenditure for the five years 1980-85 would be about Rs. 72.2 crores. There was considerable departure from the outlay proposed for different category of schemes every year, almost always to the disadvantage of major road schemes. The cumulative effect of these departures can be seen from Table. 2.6

TABLE 2.6  
Sixth Plan—Outlay and Expenditure

Category	(Rs. crores)	
	Outlay proposed for the Plan 1980-85	Expenditure 1980-85
State Highways	9.00	5.08
Major District Roads } Other District Roads }	18.10	6.22 11.40
Village Roads	13.00	21.64
Roads in Harijan Settlements } and Tribal Areas }	6.60	9.09
Roads in Backward Hilly Areas	10.00	10.15
Others	9.30	7.13
Total	66.00	70.71

2.66 Important schemes such as road works planned for the municipal towns and cities, railway safety works and the construction of bridges to provide access to islands, coming under the category "others", also suffered on account of this shift. The expenditure on village roads and on roads in harijan settlements, tribal areas and in backward hilly areas is higher than planned. Among this, except village roads, the other road schemes do not add to the Public Works Department network. In their case the Public Works Department is acting only as an agent of the Panchayats. During 1980-84, 2831km. of new roads

including 546 km. in harijan settlements and tribal areas were constructed by P. W. D. Also a total length of 795 km. is expected to be completed in 1984-85.

2.67 The Sixth Plan for the State Public Works Department started with a back log of 1069 works at an estimated cost of about Rs. 44 crores. During the first four years of the Plan 1673 works were added, estimated cost of these works being Rs. 73 crores. The annual budget provision was around Rs. 14 crores only. Therefore at the beginning of 1984-85, the last year of the Plan, the Department had a spillover of 1,290 works at an estimated cost of Rs. 82 crores. Over 1,500 works are added this year which would require about Rs. 139 crores. The Sixth Plan for the Public Works Department is therefore likely to end up with a huge spillover commitment of over Rs. 200 crores. It is quite obvious that funds of such magnitude may be difficult to come by for spillover works. It is therefore necessary to review the list of works and decide on a workable programme for the Department.

2.68 The outlays on roads and bridges in the Plan have always been inadequate. Moreover a large number of works are taken up every year without any increase in allocation. The cost of road construction has been going up. Yet the yearly increase in Plan allocation one has been inadequate to cover the cost escalation. While the increased provision for village roads might have improved the rural road network, this has been at the expense of major roads.

## Inland Water Transport

2.69 The role of inland navigation as a mode of transport has been declining due to the long neglect and the severe competition from other modes of transport, particularly road transport. A study conducted in the four districts of Quilon, Alleppey, Kottayam and Ernakulam however shows that despite severe competition from road transport, waterways in these districts carried as much as 12 million passengers and 13 million tonnes of cargo. This study also indicated the important role played by inland water transport in the movement of raw materials to the large and medium industries located in these districts. The State is yet to recognise the importance of water transport especially in the context of fuel crisis facing the country.

2.70 The State's inland water transport system includes 1895 km. of waterways consisting of navigable rivers and coastal and cross canals. The 41 west-flowing rivers together with the backwaters and artificial canals form an integral part of the inland navigation system. The total length of the west coast canal which inter-connects all the minor ports with Cochin Port is about 560 km. The 83 km. Vembanad lake constitute the centre of these inland waterways. This network of waterways suffer from certain deficiencies. The waterways are shallow in certain reaches even for traditional type of vessels. Lack of proper maintenance has aggravated side erosion and silting of canals. The west coast canal requires renovation. Even basic amenities and essential landing facilities are absent in many places. The main bottleneck south of Quilon is the Varkala Canal (tunnel) which requires reconstruction. The width of the artificial canals is not adequate for power tugging. These canals have an average width of only 20 ft. and a depth of 2 ft.



The primitive nature of country crafts has also contributed to the decline in traffic. The State Water Transport Department runs passenger boats, many of which are old, and unsafe. The Department was unable to introduce adequate number of new boats due to financial constraints. The investment made in this sector so far has been grossly inadequate to solve any of these problems comprehensively.

2.71 Water transport has certain inherent advantages particularly in the use of petroleum fuel. Steps are also underway to integrate the operations of inland water transport services under a single agency. Today Plan programmes under this head are handled by three agencies, viz., Public Works Department (Irrigation), State Water Transport Department and the Kerala Inland Navigation Corporation.

2.72 Inland canal schemes implemented by the P.W.D. (Irrigation) under two categories are (a) Central Sector Schemes and (b) State Sector Schemes. Schemes such as Champakaru Canal, Neendakara-Cheriyazhickal Canal, Udyozamandal Canal and the Quilon-Cochin section of the West Coast Canal taken up under the Central Sector had Central assistance in the form of loan. Only up to the beginning of the Sixth Plan hundred per cent loan assistance was given by the Centre for these schemes. The assistance was reduced to 50 per cent in the Sixth Plan, the State Government providing the matching contribution. Schemes for the improvement and construction of important inland canals were taken up under Central sector with the prior approval of the Government of India. Construction of foot bridges across existing canals, petty improvements to existing canals by providing side protection, desilting of shallow portions and improvements to cross canals extending to about 960 kms. were taken up under the State sector with State funds.

2.73 Outlay for inland canal schemes in the State Sector in the Sixth Plan was Rs. 185 lakhs. The main scheme proposed under this sector was the Badagara-Miahe Canal, a spillover scheme from the Third Plan. The completion of this scheme alone would require Rs. 450 lakhs. This scheme was not resumed for want of finance.

2.74 Dredging of boat route canals and navigable routes should be accorded top priority in the coming years. Preference should also be given to side protection works of those canals where width is narrow. Constant deepening is also necessary for navigation.

2.75 The State Water Transport Department is concerned with passenger transport operations. Presently the department is operating services in over 60 routes covering a route distance of about 1640 km. per day in the four districts of Alleppey, Quilon, Kottayam and Ernakulam. One of the Sixth Plan schemes is construction and maintenance of jetty buildings and the transfer of jetty offices owned by the Irrigation Wing of the Public Works Department to the State Water Transport Department. The jetty buildings of Alleppey, Kottayam, Vaikom, Changanacherry, Muhamma, and Pulikeezhu have already been transferred to the State Water Transport Department. Action is under way for the transfer of buildings at Changanur, Quilon and Cochin. It is expected that the construction of buildings at Alleppey, Kottayam and Vaikom will be completed in the Sixth

Plan while several remaining works have to be carried out during the Seventh Plan. There are 310 jetties in use by the department. Not all of them are approved by the P.W.D. Out of the 104 jetties approved by the P.W.D. the Water Transport Department is using only 71. Proposals have been sent for approval of 94 jetties additionally.

2.76 The State Water Transport Department initiated a scheme to acquire 20 new boats for augmenting ferry services. Four boats were built during the Fifth Plan. Thirteen boats have been built since then and the remaining three are being built. Sanction has also been accorded for construction of 7 new boats to replace old boats.

2.77 The Department owns a workshop at Alleppey which requires considerable improvement. Only 14 boats on an average are repaired here annually. Since the SWTD fleet is fairly old the demand for repair is much higher.

2.78 The main difficulty facing the Water Transport Department is the lack of sufficient number of good boats for the operation of passenger services. Large number of old boats in possession of the Department needs replacement. Adequate provision is necessary for the construction of boats.

2.79 The Kerala Inland Navigation Corporation was set up in December 1975 with the object of transporting goods and passengers through inland waterways. Commercial operation of the corporation commenced only in August 1977. At the beginning of the Sixth Plan the Corporation had three passenger boats and one dump barge. The paid up capital of the Corporation at the beginning of the Plan was Rs. 22 lakhs. The Sixth Plan proposals included the purchase of four 250-300 tonne barges, conversion of one of the dump barges into power barge and the construction of one 100 M.T. barge. It was also proposed to introduce pusher barges for moving bulk cargo. The Corporation acquired three higher capacity barges, converted one dump barge into power barge and acquired a new power barge. With this the fleet strength at the end of 1983-84 was 5 mechanised barges and one dump barge. The Corporation was concerned mainly with the transportation of raw materials for FACT, Cochin Division. In addition, specific contracts were also executed for Indian Rare Earths, Cochin Refineries and other organisations. It transported 1.5 lakh tonnes of cargo in 1982-83. Bulk of this was for FACT, Cochin Division. Out of the 2.28 lakh tonnes of cargo transported to FACT, Cochin Division during 1982-83, 1.28 lakh tonnes (56%) was handled by KINCO. However during 1983-84, only 52,000 tonnes (26%) of cargo was carried by KINCO out of 1.95 lakh tonnes transported to FACT. While the total cargo transported to Cochin Division of FACT decreased by 14% during 1983-84, the tonnage by KINCO decreased 61%. Against this, transport by lorries increased from one lakh tonnes in 1982-83 to 1.43 lakh tonnes in 1983-84. In 1984-85 it is proposed to acquire at least two more barges. FACT is proposing to transport phosphoric acid and liquid ammonia through waterways and for this purpose separate tanks have to be mounted on the barges. Annually 2 lakh tonnes will be available for transport. The question is whether KINCO will be able to exploit the potential and wean this bulk movement away from road transport.



2.80 At the beginning of the Sixth Plan the Corporation had three passenger boats. In addition to constructing 5 passenger boats at a cost of Rs. 14.24 lakhs it was proposed to take over along with assets, the ferry services run by KSRTC in Ernakulam area and for this purpose a provision of Rs. 51 lakhs was made in the Plan. Ferry services are not taken over yet. KINCO started augmenting its fleet and by the end of 1983-84 a total of six boats were added to the fleet. Order is placed for the construction of one more boat which is expected to be commissioned in 1984-85. Minimum facilities for the repair of boats and barges were also proposed in the Plan. A provision of Rs. 125 lakhs was made as contribution towards the capital of KINCO in the Sixth Plan. Government contribution for investment in the Sixth Plan period however is limited to Rs. 80 lakhs against Rs. 125 lakhs envisaged in the Plan. It has not been possible to take over the ferry services of the K. S. R. T. C. in Cochin by KINCO as envisaged in the Sixth Plan. In the interest of efficient operation of services and economy it is necessary to have a single organisation in this field. Also, considering the vast potential that exists for the movement of bulk cargo in the Cochin region, KINCO should equip itself and devise methods to attract more cargo. Kerala is expected to spend Rs. 4.68 crores on Inland water transport against the budgeted outlay of Rs. 4.55 lakhs in the Sixth Plan.

### Tourism

2.81 The strategy for tourism development in the Sixth Plan was to develop travel circuits connecting important tourist centres catering to varied tourist interests. The aim is to provide a package of facilities of tourist interests, both domestic and foreign, along pre-determined centres of interest. The following two primary travel circuits were proposed : (i) Trivandrum-Veli-Kovalam-Ponmudi-Varkala-Quilon-Aranmula-Kottayam-Kumarakom-Thekkady Munnar-Cochin (ii) Cochin-Trichur-Guruvayoor-Cheruthuruthy-Malampuzha-Kottakkal-Kozhikode-Sultan Battery-Ezhmalai.

2.82 For the effective planning and execution of programmes under tourism (which include additional facilities for tourists, cultural programmes, publicity etc. it is essential that the functioning of the Department of Tourism be streamlined. In addition to operation of schemes aimed at promoting tourism, the department also functions as the hospitality wing of the Government and performs estate office duties. The purely commercial aspects of tourism like the provision of accommodation, catering and entertainment facilities in hotels and motels, operation of conducted and package tours, tourist transport and publicity relating to commercial activities will be the concern of the State Tourism Development Corporation.

2.83 The major part of the budget provision for the Tourist Department is earmarked for the setting up of new Guest Houses or expansion of the existing ones. Except in the case of dormitories in selected states the guest houses cannot meet the requirements of tourists, since they are mostly in demand in connection with the visits of VIPs and Touring Officers.

### Road Transport

2.84 In the road transport sector the State's direct participation in investment is only in respect of the Kerala State Road Transport Corporation. Though an outlay of Rs. 20 crores was earmarked for Kerala State Road Transport Corporation in the Sixth Plan, the budget provision was limited to Rs. 16 crores. The Corporation has been incurring losses year by year and finding it difficult to render efficient service. The main problem of K. S. R. T. C. is paucity of funds for replacing over-aged vehicles. Detailed microlevel studies and introduction of management methods are yet to be adopted. During the Sixth Plan period the Corporation Commissioned 992 buses till the end of 1983-84. Also 350 buses more are proposed to be commissioned. About 617 new schedules have been introduced, cancelling 254 uneconomic schedules during the plan period.

### Higher Education

2.85 A striking feature of Plan programmes under higher education has been the concentration of expenditure on salary and allowances. Hand-in-hand with this a tendency to allocate inadequate funds to schemes aimed at improving the physical facilities in Government Colleges and the quality of education is also evident even old and established colleges suffer from a chronic shortage of basic furniture and library and laboratory equipment. In the newly set up colleges the situation is still worse. The combined effect of all these has been the devaluation of the quality of education in Government Colleges in contrast to that in private colleges.

2.86 There is also a neglect of extra curricular activities, especially sports and games. Very few colleges have adequate facilities for sports and fewer still have a vigorous programme for promoting physical education.

2.87 The high salary component under 'higher education' is due (i) starting of new courses, (ii) starting of new colleges, (iii) introduction of the shift system and (iv) payment of salary to private college staff. Other programmes which are more development-oriented have been relegated to the background during the Plan period.

#### Vocationalisation at Plus 2 Stage

2.88 The purpose of vocationalisation at plus 2 stage is to start vocational courses at Pre-Degree level in Government and Private Colleges. As part of this programme vocational subjects have been introduced in five colleges under Kerala University during the Fifth Plan period.

2.89 The target fixed for the Sixth Plan was to extend the scheme to six Colleges under the Calicut University. The courses offered are Pharmacology, Insurance, Salesmanship, Agro-Chemistry (including fertilizers) and applied nutrition, food technology and workshop. However, these vocational courses could not be started during the first four years of the Sixth Plan period.

#### Upgradation of Colleges

2.90 The aim was to upgrade at least 6 colleges during the Plan period. However, only one college, viz., V.K.K.M.M. Government Women's College,

Gannanore, has been upgraded so far, in the year 1980-81. In 1984-85, applications have been forwarded for the upgradation of two Colleges, namely, Government College, Mananthody and Government College, Manmalakunnu. There has been a tendency in earlier years to go in for upgradation and the addition of science courses without first producing the necessary infrastructure. This has led to deterioration in standards.

#### *Planning Forums*

2.91 At present the allotment for Planning Forums is distributed thinly over a large number of Colleges. There is no feed-back and it is also not clear how the funds provided for Planning Forums in individual Colleges are utilised. In order to effectively utilise the funds provided under this scheme, adequate funds should be made available to Planning Forums in selected Colleges. Planning Forums need be organised only in Colleges conducting Post-Graduate courses. It is desirable to associate the Planning Forums in the conduct of localised studies undertaken by institutions like the State Planning Board, the Department of Economics and Statistics, Centre for Development Studies and other agencies.

#### *Strengthening of Directorate of Collegiate Education*

2.92 At the end of the Fifth Plan there were only 219 Government and 105 Private Colleges under the control of the Directorate. During the Sixth Plan period 13 new Government and 27 new Private Colleges were started. However, the Audit and P. F. and Scholarship and Pension sections remain understaffed. The audit of accounts in most of the institutions has been pending for years. Fifteen different types of Scholarships are being processed by the existing sections in the Directorate. Most of the Scholarships have to be renewed every year on time. Three new scholarships were added during the Sixth Plan period. The management of endowments instituted in Private Colleges is also dealt with in this section. Adequate Strengthening of the Directorate is necessary during the Seventh Plan period.

#### *New Government Colleges*

2.93 Twelve new Colleges were started during 1980-84 in addition to one evening College. Besides 12 posts of Principal, and 157 posts of Lecturers, other supporting staff have also been sanctioned for these Colleges. Also thirty three new courses have been started since the beginning of the Sixth Plan.

#### *Shift System in Government Colleges*

2.94 The shift system was introduced in Colleges as a temporary measure to accommodate the rush of a large number of students seeking admission to the University Classes. It was introduced in 22 Government Colleges with 65 batches in 1979-80. This system has led to a deterioration in the quality of education. It has also contributed to the feeling that higher education is a matter of right for every student passing S.S.L.C. No attempt has been made to restrict higher education to students who attains a reasonably high level of performance. The shift system has contributed to over-crowding in Colleges and has seriously affected extracurricular activities. A gradual phasing out of the shift system is therefore required.

#### *Implementation of U. G. C. Assisted Schemes*

2.95 As against the Sixth Plan outlay of Rs. 4.69 crores, the expected expenditure under this head is Rs. 12.07 crores. The starting of 27 new Colleges, introduction of the shift system in 38 more Colleges and the starting of new courses have been responsible for this high increase in expenditure.

#### *Faculty Development and Research*

2.96 The schemes in operation under this head are: (a) Research facilities in University College. (b) Guest Lecturers for Post-Graduate students, and (c) Workshop for Teachers. No expenditure was sanctioned under the first scheme other than for the purchase of laboratory equipment. The second scheme was started only in March 1984 and draw good response from students and teachers. It will be continued during 1984-85. A Mathematics Workshop was successfully conducted in collaboration with the CAMET. Actually, it is only in 1983-84 that the scheme attained good progress and something concrete was achieved.

#### *Technical Education*

2.97 The major emphasis under Technical Education in the Sixth Five Year Plan has been on consolidation of infrastructure facilities in existing institutions and qualitative improvement in the standards of instruction and training. However, considering the high demand and need for Technical Education, provision was also made for starting one Engineering College and a few institutions at diploma and certificate levels. Funds were also provided for diversification of courses at degree, diploma and certificate levels to meet the demand in areas of emerging technology.

2.98 In the Sixth Five Year Plan (1980-85) an outlay of Rs. 700 lakhs was provided for Technical Education. The anticipated expenditure during the Plan period is Rs. 967 lakhs.

2.99 The achievements during the Sixth Plan period include the formation of a Technical Examination Wing, establishment of two Regional Offices of the Directorate, starting of 7 Polytechnics, one Women's Polytechnic, 13 Junior Technical Schools, 6 Pre-Vocational Training Centres, 6 Commercial Institutes 9 Tailoring and Garment Making Training Centres, 2 Extension Centres of the Food Craft Institute, 4 post-graduate courses in engineering 7 degree courses in engineering, 6 diploma courses, 2 post diploma courses and 6 post-matriculate certificate courses. Besides, a Central Technical Library and Documentation Centre, a Centre for Fundamental and Applied Research, a Centre for Quality Improvement and a Central Instrumentation Workshop were established at the College of Engineering, Trivandrum. A Science and Technology Museum was started at Trivandrum. Vocational courses were introduced in 8 Junior Technical Schools. As a result, money was not available for the major objectives of consolidation of infrastructure facilities in the existing institutions.

#### *Health*

2.100 The main programme under health in the Sixth Plan is correction of regional imbalances, improvement of the quality of medical services

through phased implementation of the Pai Committee's recommendations and laying of greater emphasis on preventive aspects. The clinical facilities presently available at the taluk hospitals will be improved by providing necessary equipments and other accessories.

2.101 The Sixth Plan target was to start 37 Primary Health Centres. As on 1-4-1984, 29 new Primary Health Centres were started. Casualty services have been started in all the district hospitals and expanded by providing additional facilities and staff wherever necessary. Trivandrum Medical College has been converted into a referral institution and additional staff sanctioned to the peripheral institutions.

2.102 Though there was no programme to start any new medical college in the State during the Plan period, a new Medical College was started at Trichur.

2.103 Other schemes implemented are (i) Immunisations Programme (2) Training and Employment of Multipurpose Workers (3) National Leprosy Control Programme (4) National Programme for the Control of Blindness.

2.104 The mobile dispensaries started under ISM are found to be useful to people living in rural areas. Apart from the effort shown in opening of new dispensaries, no attempt has been made for strengthening the infrastructure during the first four years of the Plan period.

2.105 As against the Sixth Plan outlay of Rs. 3625 lakhs for the sector, Medical, Public Health and Sanitation, the anticipated expenditure for the five year period is Rs. 4292 lakhs.

### Family Welfare

2.106 This programme is implemented in the State with 100% central assistance. In rural areas the programme is further extended through the minimum needs programme through a network of primary health centres and sub centres. The target was to reduce birth rate, which stood at 25.5 in 1980 against 33 for all India. The death rate is also lower in Kerala, i.e., 6.9 compared 14 at the all India level.

2.107 The major activities undertaken to lower the birth rates are sterilisation operations, I.U.D., Oral Pill programme, Conventional Contraceptive, Medical Termination of Pregnancy etc.

2.108 At the commencement of the Sixth Plan period, there were only 402 sterilisation beds available in various hospitals. It has reached 600 by the end of 1983-84.

2.109 The India Population Project III begun with World Bank assistance in Malappuram, Wynad, Palghat and Idukki districts from 1-4-1984 onwards is an important one. The total cost of the project is estimated at Rs. 48 crores. 60% of the provision under this scheme is for the visible inputs like dispensary, buildings, maternity wards, operation theatres, ambulance etc.

### Medical Education

2.110 During the Sixth Plan period a Medical Education Directorate was formed and the Medical College at Trichur was started. The five Medical Colleges and the Dental Colleges in the State will come under the Medical Education Directorate. The construction work of buildings undertaken for some of these institutions has

been completed and others are in different stages of implementation. The specialities of neurology and gastro-enterology proposed in the Sixth Plan at the Trivandrum Medical College have been started. The Centre for Respiratory Allergy and Antigen Manufacture also started functioning at the Trivandrum Medical College.

2.111 The Ayurveda Colleges were strengthened in Trivandrum and Thripunithura during the first four years of the Plan period. Financial assistance was given to private Ayurveda Colleges at Shoranur, Ollur and Kottakkal. A new scheme for the direct payment of salaries to the teaching and non-teaching staff of the Kottakkal Ayurveda College has been included in the 1984-85 Annual Plan.

2.112 The second Homoeopathy College offering B.H.M.S. Course was started at Trivandrum in 1982 and this institution is now temporarily housed in the homoeopathic hospital, Trivandrum.

### Sewerage and Water Supply

2.113 Over the years Kerala has provided safe drinking water to 71 per cent of urban population residing in the three corporations, two townships and thirty-five municipalities and 42 per cent of the rural population residing in 988 villages. The coverage under urban sewerage is 15 percent and in Trivandrum 30 per cent. Sewerage works were started in Quilon, Trichur and Kozhikode in 1982-83.

2.114 The programme for providing water supply gained momentum with the introduction of 100 per cent Centrally Sponsored Accelerated Rural Water Supply Programmes from 1977-78 and inclusion of the scheme "Supply of drinking water to problem villages" in the New 20 Point Programme. In 1982-83 a record assistance of Rs. 1121 lakhs under Accelerated Rural Water Supply Programmes and a further sum of Rs. 394 lakhs under 'Bonus Schemes' was received for water supply from Government of India. This enabled the Department to complete 1987 Rural Water Supply Schemes and 33 Urban Water Supply Schemes. Two Urban Sewerage Schemes were also in operation. LIC continues to assist the Sewerage and water supply schemes in the State.

2.115 Efforts are being made to realise the targets set for the International Decade for Water Supply and Sanitation (1981-90) and achieve the target of providing protected water supply to all problem villages by the end of 1984-85. Negotiations for loans from the World Bank for six Rural Water Supply Schemes are at an advanced stage. Besides, the Governments of Netherlands and Denmark are expected to aid eight schemes.

2.116 The State had to face an unprecedented drought in 1983, but the situation was effectively handled by provision of extensions and improvements to existing Water Supply Schemes, digging of additional tube wells with hand pumps in collaboration with the Ground Water Department and quick completion of projects which were in progress. These efforts benefited about 40 lakhs of people.

2.117 Generally the maintenance of the assets does not get priority. Therefore the maintenance wing of the Department needs strengthening. It is also found that there is difficulty in obtaining land required for all works, especially for sewerage treatment plants

For example, the construction of the treatment plant for Guruvayoor sewerage is delayed due to difficulty in getting the required land through acquisition.

2.118 As against a Plan provision of Rs. 9050 lakhs the anticipated expenditure on sewerage and water supply is Rs. 8670 lakhs. The Budget provision has been only Rs. 7724 lakhs. One of the main problems in this sector has been insufficient budget provision though there are schemes such as LIC aided and bilateral assistance schemes.

### Housing

2.119 A large number of agencies are involved in the housing programmes in the State. The original outlay in the Sixth Plan for housing is Rs. 4800 lakhs. The physical achievements under housing programmes are quite low due mainly to deviation from the Sixth Plan policies. The main object of the Plan was to provide the needs of the economically weaker sections of the society. But in most of the development programmes this is not achieved. Secondly the Housing Board and other agencies deviated from their activities as envisaged in the original Plan. The emphasis of the Housing Board has been mainly on provision of houses to the high income groups.

2.120 Over the years, the State has built up an elaborate machinery for the financing and execution of housing schemes. But the Government funds that could be made available for housing have been very limited. It had been hoped that larger funds could be availed of from financing institutions. However, in view of the limitations on ceilings, costs etc. and the relatively high cost of house construction in the State, the flow of institutional finance has also been limited. As a result the machinery remains underutilised and the problem of housing continues to grow more and more acute.

2.121 The situation can be improved only if savings mobilised compulsorily through provident fund etc. could be earmarked to a greater extent for housing purposes. This is however a matter of national policy. Larger funds have to be earmarked in the meantime, by LIC/GIC for housing. With the constraints, it appears that the available funds could be better utilised if the number of agencies is reduced. The State Housing Board could do much more if it could follow a policy by which the higher income groups are charged a higher price for land and higher interest rates and the low income groups and weaker sections are suitably subsidised through a policy of cross-subsidisation.

2.122 The anticipated expenditure for housing programmes in the plan is Rs. 5968 lakhs as against the original outlay of Rs. 4800 lakhs and the budgeted outlay of Rs. 5296 lakhs. In physical terms, the achievement is inadequate.

### Urban Development

2.123 The Sixth Plan outlay for urban development was Rs. 1900 lakhs. The budgeted outlay for the five year period however was only Rs. 1742 lakhs. Thus this field has suffered due to want of funds. It is expected that the expenditure under this head at the end of the Plan period will be Rs. 1802 lakhs.

2.124 Urban development authorities have been created in form but have been able to do little. The scattered schemes undertaken by them could well have been implemented by the local bodies themselves. The amount of funds available with the Urban Development Finance Corporation is also limited. The functions and role of urban development authorities are now being clearly defined to make clear that their primary function is to undertake the planning for the urban agglomeration giving due consideration to physical, economic, social environmental and ecological aspects. They should have the powers to co-ordinate the work of all agencies in the urban region in accordance with the plan. Their own implementation will be limited to a few critical areas.

### Labour and Labour Welfare

2.125 Though the Plan outlay under this head is only Rs. 297 lakhs, the anticipated expenditure is Rs. 795 lakhs. The other major programmes under this head are running of employment exchanges and establishment of Industrial Training Institutes. The funds available for I. T. Is. have been severely curtailed owing to the emphasis on employment generation programmes. There is urgent need to improve the physical facilities and equipment etc. in the I. T. Is.

### Special Component Plan

2.126 From the beginning of the Sixth Plan the schemes for the economic uplift of the scheduled castes have been brought under the frame work of the Special Component Plan, earmarking about 10% of the Plan outlay. This has been done by specifically allocating a part of the outlay on schemes of the development departments which are implemented at the rural level.

2.127 In the Sixth Plan special attention for providing maximum funds from general sector programmes for Special Component Plan was given by the State Government. In order to ensure effective implementation of Special Component Plan a medium term Plan for the development of Scheduled Castes in each district was prepared in 1982. Under this exercise, clusters of Scheduled Caste families of 10 or more concentrated in an area had to be identified and information regarding their occupational characteristics, development needs, infrastructure facilities available, housing condition etc. were to be collected. Accordingly in all nearly 5000 habitats were identified in the State. Steps are being taken to identify more habitat to implement the programmes drawn up at the district level. From the year 1983-84 onwards the flow of funds for Special Component Plan from the various head of development have been budgeted in lump. These outlays have been distributed among the districts. Working-Groups have been constituted in each district with District Collector as Chairman and the district officers of various departments as members for formulating schemes under Special Component Plan relating to the district. This new arrangement would help to achieve better progress and local initiative in the implementation of Special Component Plan.

2.128 The terminal year of the Sixth Plan, 1984-85, has been declared as the "Year of the Scheduled Castes and Scheduled Tribes" by the Government of Kerala. The objectives of this are to:

- (i) Stimulate new ideas on the development of Scheduled Castes and Scheduled Tribes which would inspire future policy decisions.
- (ii) Give a fillip to development without deprivation and consolidate the gains of development for the benefit of Scheduled Castes and Scheduled Tribes.

(iii) Make sustained efforts at "Conscientisation" so as to make society realise the true position of Scheduled Castes/Scheduled Tribes as contributors to and not just the beneficiaries of development.

(iv) Instil in the Scheduled Castes and Scheduled Tribes youth a new sensitivity which would prompt them to realise their innate potentials and accelerate the process of their merger in the mainstream of national life.

TABLE 2.7

## Special Component Plan—Physical Targets and Achievements (1980-85)

Sl. No.	Item	Units	Five year Plan 1980-85 Projected Target	1980-81 Achievements	1981-82 Achievements	1982-83 Achievements	1983-84 Achievements	1984-85 Target
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Agriculture	No. of families	25000	105582	65192	80600	55579	8221
2.	Land Reforms	No. of beneficiaries	6900	361	15000	..	842	651
3.	Minor Irrigation	No. of works	780	16	10	8	109	86
4.	Soil and Water Conservation	No. of beneficiary families	350	76	525	1284	1897	4109
5.	Special Area Programme							
	(i) Development of backward areas	No. of families	1500	..	250	100	148	..
	(ii) I. R. D. P.	do.	142350	108117	18594	34471	20885	42731
6.	Animal Husbandry	do.	58951	39209	26335	27415	13473	10236
	(i) Poultry distribution	do.	100000	31580	41233	5121	5300	
	(ii) Distribution of goats	do.	7000	614	1198	400	1273	
	(iii) Distribution of cross breed cows/heifers	do.	1500	75	904	581	600	
7.	Dairy development	do.	52000	850	3200	14950	2276	1902
8.	Fisheries	do.	1800	198	221	110	2720	2483
9.	Forests	do.	2500	1500	..	..	5540	9259
10.	Community Development (including N. R. E. P.)							
	(a) Community Development	do.	165000	39000	54210	30160	50000	12764
	(b) Panchayat	do.	..	..	..	..	..	5875
11.	Co-operation							
	(i) Harijan Societies	Nos.	257	132	377	258	327	282
	(ii) Families	do.	90650	17114	6611	62398	75000	21197
12.	Power Development-colonies/settlements electrified	do.	651	239	448	284	382	689
13.	Village & Small Scale Industries	No. of beneficiaries	39600	637	1372	1698	2381	2779

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14.	Harijan entrepreneurs assisted	Nos.	1500	1450	486	260	300	..
15.	Roads & Bridges	No. of works	650	140	132	237	455	269
16.	General Education	No. of beneficiaries	25000	19000	3000	..	13022	..
17.	Technical Education	do.	400	496	700	1150	651	..
18.	Medical, Public Health & Sanitation	Hospitals/Dispensaries	155	7	18	4	18	..
19.	Sewerage and Water Supply	No. of colonies/settlements	950	35	60	152	193	343
	Water supply to colonies/E. S. P.	No. of families	75000	4500	4300	12160	18000	5882
20.	Housing	do.	15000	2300	3850	633	4172	..
21.	Labour & Welfare	do.	1500	150	250	38	37	..
22.	Welfare of S. Gs./S. Ts. and O. B. Cs.							
	(i) Education	No. of beneficiaries	131756	22429	25528	252900	25000	..
	(ii) Economic uplift	do.	15000	24550	1088	1504	7005	24556
	(iii) Others	do.	25500	5300	1041	400	400	..

2.129 It is seen that during the Plan years 1980-81, 1981-82 and 1982-83 the expenditure incurred on Special Component Plan comes to Rs.13.36 crores, Rs.16.16 crores and Rs.15.55 crores respectively. In the fourth year of the Plan viz. 1983-84, it is expected that an amount of Rs.23 crores will be spent for the welfare of Scheduled Castes. The targeted outlay for 1984-85 is Rs.28.74 crores.

### Tribal Sub plan

2.130 The five integrated Tribal Development projects identified based on the relaxed norms adopting a population threshold of 10,000 in contiguous forest ranges having more than 50 per cent tribal population in the State are (1) Punalur (2) Idukki (3) Nilambur (4) Manantody and (5) Attappady.

2.131 The integrated development project at Attappady has been functioning for sometime. Project reports have been prepared for the other areas also. The tribal development effort with an integrated approach were carried out in these areas with the existing administrative machinery under the Tribal Welfare Department.

2.132 The idea of integrated efforts of tribal development was accepted and sufficient funds provided under different sectors till 1982-83. However these were not reflected in the State Budget. These defects were rectified in the later years.

2.133 During the Sixth Plan period (1980-84) over 15,000 families were given assistance in the agriculture sector. Irrigation works numbering 74 have been carried out for the benefit of Scheduled Tribes. Under animal husbandry sector, cows and goats were distributed to deserving families. Also a large number of co-operative societies of tribals were organised during the above period.

2.134 The basic objectives in respect of tribal development in the Sixth Plan have been (i) to cover the entire tribal population whether living in areas of

tribal concentration or outside by suitable development programmes and (ii) to bridge the gap between the level of development in tribal area and the surrounding areas by the end of the Sixth Plan. In the case of Sub-Plan the area development approach is accepted and in the case of dispersed tribal people family oriented programmes are being implemented. The development programme chalked out accordingly did not show considerable progress in solving the problems facing the tribal people. The important question is whether it is possible to integrate forest development and forest management with the development of tribal communities. In the cleared extensive valleys of forest land there is potential for development in agriculture and horticulture. Most of the tribal families possess land suitable for cultivation and long term improvement on these lands will have to be made. The Kerala State Harijan and Girijan Development Co-operative Federation will assist the tribal people for M.F.P. collection. This Federation will eliminate exploitation of Scheduled Tribes by purchasing and selling their agricultural and forest produce.

2.135 During the Sixth Plan period project reports for the five Integrated Tribal Development Projects were prepared and necessary staff support was given. Separate programmes for the dispersed tribes were drawn and implemented. Maximum possible funds were made available for tribal development from the general sector programmes of various development departments. Under the programme 'Rehabilitation of Bonded Labour' all the 829 persons identified so far have been rehabilitated.

### Social Welfare

2.136 In any community, there will be some disabled people like the blind, deaf, orthopaedically handicapped, mentally retarded, destitutes etc. who are unable to participate in economic activities and are in need of community support. The Government

involvement in social welfare activities steadily expanded as reflected in the trend of plan outlay on social welfare during successive five year plans. Till the end of the Fourth Plan most of the social welfare services were curative or ameliorative in nature. The preventive and developmental aspects of social welfare, which are most effective and economical in the long run, could not receive adequate attention. The Planning Commission therefore proposed a new approach in the Fifth Plan aimed at an integration of welfare and developmental services, giving major thrust on the expansion of preventive and developmental programmes of social welfare.

2.137 Schemes for the welfare and development of children and women received higher priority in Sixth Plan with increased bias towards preventive and developmental services. The state plan outlay for social welfare under the Sixth Plan was Rs.4.67 crores. The anticipated expenditure under this head is Rs.5.21 crores. The Sixth Plan schemes are broadly grouped into (i) strengthening of Social Welfare Services (ii) education, employment and welfare of the handicapped (iii) child welfare (iv) women's welfare (v) welfare of the poor and destitutes (vi) correctional services and (vii) probation and after care services. The target groups of these welfare schemes are physically and mentally disabled persons, orphans, children women destitutes, aged, probationers and ex-convicts, juvenile delinquents etc. The most important scheme under Social Welfare is the Integrated Child Development Services (ICDS). This is a scheme for providing a package of services to women and children like supplementary feeding, health education, immunisation, medical check up and referral services. Nearly Rs.1.5 crores was provided for the scheme in the Sixth Plan for the continuance of State sector ICDS projects and also for starting new projects. Another major scheme was the provision of pre-matric scholarships for physically handicapped students. The physical target fixed for the

Sixth Plan was to award scholarships to 22000 students in 15000 schools in the State. Till the end of March 1984, 17500 students benefited by the Scheme.

### Nutrition

2.138 In addition to the noon day meals in schools considerable attention is laid on nutrition of pre-school children. A number of schemes have been introduced in this sector. The ANP and the one meal a day programme are introduced by the Community Development Department. The Special Nutrition Programme, the programmes under the World Food Programme and the Integrated Child Development Services (ICDS) are implemented by the Social Welfare Department. The Health Services Department is in charge of the health-based nutrition programme. The target group is the same in all the cases—but the content of the programmes is different. The introduction of various supplementary nutrition programmes on various occasions for the benefit of the same target group viz., the pre-school children and pregnant and lactating mothers on an unplanned basis under various Departments and agencies has resulted in serious overlapping of operations, duplication of beneficiaries, wastage of resources and the neglect of some backward areas. Sanctioning of more feeding centres and the extension of ICDS to more blocks without simultaneous managing of feeding centres under programmes in ICDS have aggravated the problem in recent years. It is therefore necessary to properly integrate and streamline the various programmes under the head of development, nutrition. Against the Sixth Plan outlay of Rs. 1700 lakhs for nutrition, an amount of Rs. 1489 is expected to be spent during the Plan period.

2.139 Table 2.8 provides the sub sector wise details relating to expenditure during the Sixth Plan period.

TABLE—2.8

### Sixth Five Year Plan—Outlays and Expenditure—Abstract (1980-85)

Head of Development	1980-85		1980-81 Accounts	1981-82 Accounts	1982-83 Accounts	1983-84 Revised Estimate	1984-85 Budget Estimate	Total (4+5+6+7+8)
	Proposed Outlay	Budgeted Outlay						
	(1)	(2)						
<b>I. Agriculture and Allied Services :</b>								
<b>1.1 Agriculture</b>								
(a) Research and Education	1300.00	925.00	185.12	313.96	125.31	200.00	275.00	1099.39
(b) Crop Husbandry	9164.00	6362.90	831.83	1136.98	981.20	1265.00	1507.00	5722.01
1.2 Land Reforms	3070.00	3000.00	581.23	649.57	628.03	556.00	600.00	3014.83
1.3 Minor Irrigation	4000.00	3330.00	536.97	631.17	521.29	690.00	700.00	3079.43
1.4 Soil and Water Conservation	1023.00	940.00	199.51	200.17	172.21	195.00	200.00	966.89

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1..5 Special Area Programme for Rural Development		5160.00	5948.00	637.23	1405.72	1424.04	1506.50	1902.00	6875.49
1..6 Food		500.00	75.003	23.00	18.30	..	..	..	41.30
1..7 Commercial Area Development		725.00	190.00	30.04	..	30.54	84.50	85.00	230.08
1..8 Animal Husbandry		1517.00	1556.90	287.19	321.82	286.37	340.00	396.00	1631.38
1..9 Dairy Development		721.00	920.00	111.54	147.36	161.32	180.00	210.00	810.22
1..10 Fisheries		2000.00	2352.10	380.96	353.88	323.54	500.00	529.00	2087.38
1..11 Forests		1862.00	1674.00	289.61	339.03	307.73	350.00	469.00	1755.37
1..12 Investments in Agricultural Financial Institutions		1100.00	750.00	111.42	94.38	108.97	150.00	150.00	614.77
1..13 Community Development and Panchayats		1740.00	2295.00	1220.90	268.60	335.63	775.00	450.00	3050.13
Total—I		33888.00	30318.903	5426.55	5880.94	5406.18	6792.00	7473.00	30978.67
II. Co-operation		2200.00	1956.72	844.91	910.56	354.44	405.00	405.00	2919.91
II.1. Irrigation, Flood Control & Anti sea Erosion and Power :									
3.1 Major and Medium Irrigation		25605.00	26069.01	4156.47	4630.76	4975.59	5970.00	6220.00	25952.82
3.2 Flood Control and Anti-sea Erosion		2500.00	1350.00	412.79	446.58	239.10	300.00	300.00	1698.47
3.3 Power		31273.00	28007.00	6940.00	7009.00	4523.52	6250.00	6750.00	31472.52
Total—III		59378.00	55426.01	11509.26	12086.34	9738.21	12520.00	13270.00	59123.81
IV. Industry & Minerals :									
4.1 Village and Small Industries		4980.00	4450.068	748.25	1028.07	707.37	902.00	1102.00	4487.69
4.2 Medium & Large Industries		10545.50	11877.037	2290.10	2279.38	2017.99	2448.00	2453.00	11488.47
4.3 Mining		150.00	168.00	26.99	26.34	24.38	50.00	43.00	170.71
Total—IV		15675.50	16495.105	3065.34	3333.79	2999.74	3400.00	3598.00	16146.87
V. Transport and Communications :									
5.1 Ports, Light houses and Shipping		825.00	650.00	118.60	141.04	152.12	175.00	200.00	786.76
5.2 Roads and Bridges		6600.00	6675.002	1322.90	1468.53	1385.37	1651.00	1500.00	7226.80
5.3 Road Transport		2000.00	1600.00	250.00	300.00	250.00	350.00	500.00	1650.00
5.4 Water Transport		575.00	455.00	89.37	96.07	67.53	100.00	115.00	467.97
5.5 Tourism		675.00	672.00	103.03	151.00	78.56	150.00	152.00	634.59
Total—V		10675.00	10052.002	1883.90	2156.64	1933.53	2325.00	2467.00	10766.12



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>VI. Social and Community Services</b>									
6.1 General Education	4120.00	4707.00	1057.54	1694.27	1959.05	925.00	1122.00	6757.86	
6.2 Art and Culture	200.00	238.00	38.41	40.39	25.90	145.00	67.00	216.70	
6.3 Technical Education	700.00	1019.00	169.03	192.03	157.08	215.00	234.00	967.34	
6.4 Scientific Services and Research	1200.00	1715.00	329.70	338.00	262.11	350.00	385.00	1664.81	
6.5 Medical, Public Health and Sanitation (Excluding ESI)	3625.00	4155.725	624.34	871.57	815.93	945.70	1034.00	4291.54	
Employees State Insurance Scheme	30.00	21.28	3.38	4.30	4.30	4.30	5.00	21.28	
6.6 Sewerage and Water Supply	9050.00	7724.001	1497.61	1682.79	1914.14	1650.00	1925.00	8669.54	
6.7 Housing	4800.00	5296.00	1415.76	1233.16	991.98	1087.32	1230.00	5958.22	
6.8 Urban Development	1900.00	1742.002	284.70	293.74	343.67	390.00	490.00	1802.11	
6.9 Information and Publicity	90.00	138.00	19.62	44.03	51.34	38.00	61.00	213.97	
6.10 Labour and Labour Welfare	297.00	903.013	439.70	70.05	58.76	110.00	116.00	794.51	
6.11 Welfare of Scheduled Castes, Scheduled Tribes and Other Backward Classes	2500.00	1945.01	355.85	462.48	310.80	435.00	450.00	2014.13	
6.12 Social Welfare	467.00	439.552	78.82	107.47	116.55	100.00	118.00	520.84	
6.13 Nutrition	1700.00	1772.999	246.77	287.44	276.59	316.00	362.00	1488.80	
<b>Total—VI</b>	<b>30679.00</b>	<b>31816.582</b>	<b>6561.23</b>	<b>7321.72</b>	<b>7288.20</b>	<b>6611.32</b>	<b>7599.00</b>	<b>35381.47</b>	
<b>VII. Economic Services:</b>									
7.1 General Economic Services	309.00	394.00	37.42	25.28	35.86	75.00	79.00	252.56	
7.2 Economic Advice and Statistics	266.00	285.00	49.51	54.69	56.89	55.00	79.00	295.09	
7.3 Other General Economic Services	50.00	56.00	5.96	8.99	9.27	15.00	15.00	54.22	
<b>Total—VII</b>	<b>625.00</b>	<b>735.00</b>	<b>92.89</b>	<b>88.96</b>	<b>102.02</b>	<b>145.00</b>	<b>173.00</b>	<b>601.87</b>	
<b>VIII. General Services:</b>									
8.1 Stationery and Printing	400.00	425.00	14.41	14.66	15.37	65.00	165.00	274.44	
8.2 Public Works	1520.00	1566.001	432.71	628.73	315.63	300.00	350.00	2027.07	
<b>Total—VIII</b>	<b>1920.00</b>	<b>1991.001</b>	<b>447.12</b>	<b>643.39</b>	<b>331.00</b>	<b>365.00</b>	<b>515.00</b>	<b>2301.51</b>	
<b>Grand Total</b>	<b>155040.50</b>	<b>148791.324</b>	<b>29831.20</b>	<b>32422.34</b>	<b>27903.37</b>	<b>32663.32</b>	<b>35500.00</b>	<b>158320.300</b>	

*Note.* —1. The Accounts for 1980-81 as given in the "Fifth Year's Programme (1984-85)" is Rs. 31131.20 lakhs. Here in the present Table an amount of Rs. 1300 lakhs intended as unemployment assistance is excluded under the Plan as this scheme was not approved by Planning Commission for inclusion under the Plan.

2. The RE for 1983-84 provided in the "Fifth Year's Programme (1984-85)" is Rs. 37933.28 lakhs. This is inclusive of the amount for drought relief programmes in 1983-84. In this Table this item is excluded.

## HIGH LEVEL COMMITTEES AND THE SEVENTH PLAN

One of the major functions entrusted by Government to the Kerala State Planning Board, was to study in depth, the different aspects of the State's economy and on the basis of the assessment of the progress made in the past and in the context of the special problems facing the State, suggest the objectives and profiles of development for the future. To assist the Planning Board in this work, Government constituted five High Level Committees to cover the various sectors of the State's economy. These committees were asked to "study the development so far made in their respective areas and assess the progress and in the context of the experience and special problems facing the State, suggest the objectives and profiles of development up to 2000 A. D. and also indicate the priorities to be followed and the major programmes to be undertaken during the remaining period of this decade". The Committees have made detailed studies and have submitted their reports. They have given a number of specific recommendations relating to the Seventh Plan which have also been considered by the Planning Board. In this chapter those recommendations which are relevant for the Seventh Plan period are presented with the modifications made by the State Planning Board.

### 1. Land and Water Resources

3.2. The High Level Committee on Land and Water Resources has made a number of recommendations relating to crop production, organisational aspects of agriculture development, water resources, soil and water conservation, dairy development, animal husbandry, fisheries, credit, forests, agricultural marketing and agricultural education and research.

3.3. Lack of irrigation facilities is a major constraint to agricultural development and therefore conjunctive use of ground water with surface water is essential for rice cultivation. There is also need for optimum utilisation of fertilizers and promotion of fertilizer application and development and spread of suitable high yielding varieties. More area needs to be brought under rice cultivation under the third crop. No strategies are needed to increase the productivity and production of rice, especially in the small holdings. Pulses production should receive greater attention. In the summer rice fallows, pulses cultivation should be encouraged on a massive scale. The State should endeavour to increase the productivity of tapioca through the use of high yielding varieties and adoption of scientific package of practices. To achieve this there should be a massive seed multiplication and distribution programme. A massive programme for the removal of root (wilt) disease-affected coconut trees and replanting the area with hybrid seedlings is advocated under coconut cultivation. Irrigation of coconut gardens should be promoted by the provision of long-term credit for digging wells, installing pumps etc. It will be necessary to continue the present programmes for rubber cultivation. A vigorous programme is needed for increasing the productivity of cashew.

3.4. A thorough investigation into the causes of disuse of several minor irrigation works is essential in order to revitalise these works on a time-bound basis. Effective utilisation of irrigation water is also called for. The State should consider greater utilisation of the ground water resources through a battery of public tube wells.

3.5. In order to increase milk production in the State, a phased time-bound programme for increasing the number of crossbred cows in the total breedable stock should be implemented. The entire State should be brought under Intensive Livestock Development Projects. Emphasis should also be placed on fodder development and marketing of milk. In order to exploit energy from cattle manure, setting up of gobar-gas plants should be encouraged. Optimum utilisation of biomass sources needs attention. Intensive poultry development especially in the suburban areas under well-organised industrial poultry complexes should be attempted. Traditional poultry keeping should also be encouraged and developed to suit local conditions. Modernisation of slaughter houses in the State should be given priority. A well planned breeding, feeding and management programme to increase the milk yield of the milch animals, both 'desi' and cross-bred, has to be implemented.

3.6. Under fisheries, the supply of inputs to the fishermen and the marketing of fish should be done through the Fishermen Welfare Societies. The activities of the Kerala Fishermen Welfare Corporation should be integrated with the Fishermen Welfare Societies at the village level to ensure that the full benefits of the programme reach fishermen. Brackish-water prawn and fish culture, fresh water fish and reservoir fisheries need to be developed systematically to increase inland fish production. Priority should also be given selectively for the development of the existing fishing harbours.

3.7. Marketing of agricultural produce should be organised on a large scale. Marketing societies should also undertake services like supply of inputs, custom hiring etc. Well trained professionals such as cost accountants, chartered accountants and MBAs should be inducted into the service in the co-operative system. Regulated markets may be started in the State for commodities like coconut, pepper, cashew, arecanut, ginger and other spices. The co-operative system may be revitalised so that it can handle at least one third of the marketable surplus of agricultural produce of the State.

3.8. Under forestry the main emphasis will be on preserving our forests. The future strategy under forestry should be intensive production-cum-rational utilisation of forest produce. Social forestry schemes should also be implemented vigorously ensuring that there are not too many leakages.

3.9 It is necessary to streamline research, education and training in the agriculture Sector in order to provide support to development efforts. To make extension effective, the field level Officers of the Department of Agriculture have to be adequately trained. Research should aim at increasing the total biomass production, and also bringing out high yielding varieties of seeds suited to different local conditions. Production technologies for low cost livestock feed have to be developed urgently. Fish culture and processing also need research support.

## 2. Industry Trade and Power

3.10 The subject covered by High Level Committee on Industry, Trade and Power are :

(i) Level of industrialisation in the State, measures for removing deficiencies and constraints, development of local resource-based industries, problems of and future approach to traditional industries, development of footloose industries with emphasis on electronics, inter-industry linkages, problems of productivity and competitiveness in the public and private sectors and measures to overcome them and industrial relations,

(ii) Internal and external trade and measures for the promotion of exports ; and

(iii) Development of electricity and other sources of energy.

3.11 The Committee has recommended the development of small scale industries as one of the most important strategies for development of industries in Kerala along with the promotion of large scale industries which can create ancillary industries. The tendency to promote projects with low and obsolete technology must be discouraged. The State should concentrate more on industries requiring high skills and manufacturing high value-added products such as service industries and knowledge-based industries. Construction of more industrial estates is one of the important suggestions of the Committee. Promotion of functional industrial complexes is also recommended. However, extreme care should be taken in selection of location. For the implementation of these schemes, further strengthening of Department of Industries with qualified and experienced personnel in different technical disciplines may become necessary. Employees' participation in ownership and management may be experimented in the corporate small scale sector.

3.12 The Kerala State Small Scale Industries Development and Employment Corporation (SIDECO) has at present 12 divisions. It may be examined whether some of these divisions can be wound up while some strengthened properly. Supply of scarce raw materials and development of infrastructure are important functions and the Corporation should continue to discharge these. It may divest its responsibility of owning and maintaining the production units. A few of them could be handed over to Government Companies in the related fields wherever possible. In respect of others handing them over to private sector may be considered.

3.13 The number of units assisted by the Kerala Financial Corporation (KFC) and the total volume of loans disbursed during the last decade are not adequate. Building up of an Appraisal Wing adequately staffed by competent technical personnel and a Data Bank is one of the high priorities for the Corporation. It should take special efforts to promote units by technocrats under seed capital assistance scheme. The Corporation ought to take effective steps to collect the large amount of overdues from borrowers.

3.14 The Bureau of Public Enterprises has undertaken systematic monitoring in finalising the accounts of the Government companies in Kerala with good results. Annual accounts of all Government companies should be finalised and brought up to date.

3.15 Government has also constituted the Public Enterprises Board. For the effective discharge of the growing responsibility of the Board, professionally trained people should be appointed. In order to improve efficiency, public undertakings engaged in similar activities should be brought together. Formation of holding companies may also be considered.

3.16 The State should claim a larger share of industrial investment by Centre especially in basic and key industries. The State may press Government of India to locate the headquarters of at least one nationalised bank and also one of the proposed five L. I. Cs in the State.

3.17 In the Seventh Plan promotional agencies like K.S.I.D.C. and K.S.E.D.C. will adequately be funded. The K.S.I.D.C. should be encouraged to act as a catalyst in establishing a far greater number of joint sector projects in the State in the coming years.

3.18 The activities of Keltron may be functionally bifurcated so that the manufacturing activities may be undertaken by one Corporation and the work related to providing promotional assistance to the joint sector and private sector units may be undertaken by another.

3.19 In the case of illegal strikes there should be prompt enforcement of the law. The Labour Courts should properly redress the grievance of workers wherever there is victimisation by management.

3.20 Entrepreneurial training should be intensified. Proper attention to management development should also be given.

3.21 For the revival of sick units in the large and medium sector a cell may be created in the Industries Department.

3.22 Before starting new industries, careful pre-investment survey, market research and selection of proper technology should be ensured. Government should take action to implement a policy of "Single Window Clearance".

3.23 Electronics industry may be identified as the 'Key Sector' and it is suggested that necessary steps may be taken to accelerate the growth of this industry in the Seventh and subsequent plans. It is necessary to attempt decentralisation of the electronics sector by promoting independent companies for consumer electronics and for the manufacture of high technology equipments.

3.24 A Research and Development Organisation could be set up to cater to the existing and potential agro-based industries in the State. Research on forest-based industries, studies on forest resources, use of different species of wood, etc. may be started in the Kerala Forest Research Institute as Pilot Project.

3.25 A detailed survey of forest resources can be undertaken using satellite imagery. A cess may be levied on industries based on timber and other forest produce. The revenue obtained may be used for development of new forests for the supply of industrial raw materials. Extraction, logging and classification of timber should be done scientifically in order to maximise the use of timber. Existing wood-based industries should diversify to manufacture high value-added items. Most of these industries use obsolete technology and need to be modernised.

3.26 The slaughter houses in the State should be modernised with facilities for hygienic recovery of meat and fuller utilisation of carcass. Industries using leather, bone and other animal wastes should be started.

3.27 There is scope for starting one more solvent extraction unit in the southern part of Kerala based on coconut oil cake. The State should encourage food processing units which use fruits like jack fruits, banana, pineapple, orange and cashew apple.

3.28 Master plan for developing a 'Rubber Valley' in Central Kerala region on the lines of Silicon Valley in U. S. A. may be prepared. Several units based on rubber should be promoted in the State including a large tyre factory in North Kerala.

3.29 There is considerable scope for setting up a number of engineering industries in Kerala based on aluminium and steel. There is also scope for setting up units for manufacturing machine tools, printing machinery and machines and components for dairy industry, tea industry, biscuit industry, cement, chemicals, fertilizers, agro-based industries, etc. There is good scope for expansion and diversification of existing electrical industries.

3.30 It is necessary to lay emphasis on the development of more chemical industries. There is scope for setting up of petroleum based and petrochemical units in Kerala in addition and related to units under implementation. The scope for pharmaceutical industry is yet to be fully tapped. Chemicals required as raw materials in the area of space research, electronics, petroleum exploration, etc. should be manufactured within the State. Technology may be imported if necessary by seeking foreign collaboration.

3.31 Under traditional industries, coir supports about four lacs of workers. The industry can survive only if the spinning sector is modernised and the manufacturing sector mechanised in phases. By mixing coir with man made fibres a variety of items could be manufactured. There should be standardisation of yarn and the varieties should be limited to three or four standards. It is also necessary to develop a long term strategy for the marketing of coir and coir products within the country by the Coir Board, Coir Corporation and Coir Marketing Federation together.

3.32 The High Level Committee feels that there is a strong case for re-examination of the policy of conversion of handlooms into powerlooms and recommends Government of Kerala to support such a policy. In order to increase productivity and reduce physical strain on the weavers, modernisation of the looms is necessary. This should be done in a phased manner during the Seventh Plan period. A programme may be formulated for bringing all the looms under the co-operative network before the end of the Seventh Plan.

3.33 The Cashew industry faces a major problem in the low availability of raw nuts. In addition to planning some long-term measures, short-term measures like systematic spraying of cashew trees, application of appropriate doses of fertilizers, introduction of hybrid varieties, etc. may be taken up.

3.34 Under the power sector a fresh look at the tariff policy is necessary. The policy of lower tariff to agricultural consumers compared to other consumers needs a review. There is no case for providing power at subsidised rate to affluent farmers. The State Electricity Board may consider the setting up of a Tariff Committee or appointing a Tariff Expert.

3.35 Theft of electricity may be treated as a cognisable offence and a system of rewards to people who help the detection of theft should be instituted. A thermal station should be set up in the State as a Central Sector Project. The State should make adequate provision for the development of alternate sources of energy.

3.36 If normal rainfall is available, power generation that is possible with schemes completed so far is 4730 million units. Assuming a growth rate of 10 per cent the State's requirement by 1989-90 would be 6400 million units. It is estimated that over 6900 million units would become available at the end of the Seventh Plan period if there is normal rainfall. As the failure of the monsoon is fraught with grave consequences for the power sector, it is very essential that the State goes in for a thermal plant of two units of 200 MW capacity. The gestation period for a thermal plant will be about 4½ years. This scheme as stated above is to be taken up under the Central Sector and should be given the utmost priority so that work is started in 1985-86 itself. Power will be come available from atleast one unit at the end of the Seventh Plan period.

### 3. Social Infrastructure and Services

3.37 The High Level Committee on Social Infrastructure and Services, has made wide-ranging recommendations relating health, water supply, urban development, housing, harijan and tribal development, social welfare, nutrition and science and technology.

3.38 A comprehensive programme of health education will have to be integrated into the school system. Stress should be laid on the importance of maintaining a dynamic balance of individuals, families and social groups. The emphasis, will have to be shifted from hospital based curative medicine to preventive medicine, sanitary improvements, nutritional support, etc. For this the medical system, the entire curriculum and training of doctors have to be re-oriented. The concept of prevention should pervade the entire health services.

3.39 The W. H. O. has declared that less than 200 preparations of drugs alone are necessary to safeguard the health of the public. But unfortunately there are more than 45,000 preparations in the Indian market. Many of them are only duplications and combinations of no special value. Therefore the Health Department should take administrative and legal steps to intervene and stop the highly injurious proliferation of drugs manufacture and marketing that is freely allowed in this State. At least in the Government hospitals the purchase of drugs should be controlled by prescribing a "Medical Vocabulary" so that the doctors will not prescribe costly medicines when cheaper substitutes are available. The situation in the area of medical care has become so complex and wasteful that there is an urgent need to re-examine the infrastructural policy framework. It should be considered whether a detailed State Health policy be issued.

3.40 The approach to water resources development has been largely fragmentary and departmental. This has resulted in unused capacity and lop-sided development. It may therefore be necessary to set up an expert group to formulate a Policy for Water Resources Development in the State.

3.41 In order to provide drinking water facilities to the entire population of the State by 1990 it is estimated that an amount of Rs. 640 crores would be required. At the present level of investment on water supply schemes it may take 30 more years to give protected water supply to the entire population. Alternate and less expensive strategies need to be considered. In this context, associating panchayats in the execution and maintenance of water supply schemes should also be considered. Panchayats should be encouraged to mobilise resources for the programme. Reduction of the cost of construction of houses should attract the attention of our engineers and technologists. It is necessary to evolve a socially relevant and economically feasible policy in the field of housing and construction activities in general. Possible methods of lowering cost of construction should be applied to Government buildings, office buildings, schools, hospitals and similar public institutions. This would involve revising building norms prescribed in PWD code and bringing changes in the administrative procedures. There is necessity for streamlining the various housing schemes in the State during the Seventh Plan period.

3.42 Recently serious concern is noticed at the high increase in the urban land values. At present there is no systematic arrangement to document the actual movements in land values. Reliable data on land values would help in the assessment of property taxes, capital gains and wealth tax. Such data collection will also help to reduce the evasion of stamp duties. Urban development authorities may be vested with sufficient powers to carry out price regulatory function as well. This would also facilitate land acquisition for development purposes.

3.43 IRDP is unlikely to make a deep impact on the level of over all development, production, employment and income in the rural sector of the State. As for alleviation of poverty the proportion of rural families covered and the quantum of assistance

received by the beneficiaries are too small to make perceptible dent into the problem. Therefore a more constructive and comprehensive approach to the basic problems is called for.

3.44 The basic weakness of the nutrition programmes in the State is that they are essentially food supplementation schemes. The way these programmes are implemented through a multiplicity of schemes, by several Government departments resulting in duplication waste and leakages, leaves very much to be desired. The State Government have now taken steps to streamline the various nutrition schemes in the State.

3.45 There should be a centralised agency for monitoring water pollution control schemes, for studying air pollution and drawing up guidelines and for advising steps to control noise pollution. Whenever a new project is taken up by Government or a private agency an environmental impact study should be done by the above centralised agency and no project should be cleared without their consent.

3.46 Scheduled Caste and Scheduled Tribe students studying in primary and secondary levels are exempted from payment of tuition fees and are also given lumpsum grants for text books, uniforms etc. An incentive allowance is given to parents of scheduled tribe students. It is necessary that similar incentive allowances are given to parents of scheduled caste students who are very poor.

3.47. In the implementation of IRDP the quantum of investment per family is much less in respect of Scheduled Castes and Scheduled Tribes as compared with the general population. These defects should be rectified. The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes should continue to take up large housing schemes for Scheduled Castes and Scheduled Tribes using more institutional finance. The Corporation should provide supplementary economic programmes to augment the income of the rural sections. As land values have gone up, the Corporation may raise the upper limit in the scheme of distribution of the agricultural land to Scheduled Castes and Scheduled Tribes to 30% of the cost of the land. In the supply of autorikshaws by hire purchase, regions of high beneficiary concentrations should be identified before hand and the beneficiaries should be organised into co-operative societies. The Corporation should take the lead in organising suitable training programmes in the development of entrepreneurs among the Scheduled Caste and Scheduled Tribe youths. The District Collectors should be informed of all the activities in each District so that they will be able to coordinate the activities of the Corporation with Development Departments.

3.48. There are a number of agencies implementing housing schemes for Scheduled Castes and Scheduled Tribes with no coordination or uniformity in the implementation of these schemes. Government proposes to take steps for streamlining the various programmes and agencies in the housing sector. In the case of individual family housing scheme Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes or the Housing Board may be entrusted with the implementation and coordination. The housing programmes

for Tribals should as far as possible be taken up in clusters so that they can pool the local resources and do the work according to a clearly drawn up time schedule.

3.49. The various art forms which are unique to Kerala, need to be preserved. For this purpose, the exponents of these various art forms need to be supported, as they are in dire financial straits. Therefore artistes practising arts such as Kathakali, Mohiniattam, Panchavadyam etc., should be provided adequate emoluments. Special emphasis will therefore be given in the Seventh Plan for increasing the grants to institutions like Kerala Kalamandalam for this purpose.

3.50. The total expenditure in an year on science and technology in the State Government Budget would be around 0.2% of the State income. As against this, the Government of India is spending 0.6% of the National Income for their R&D Institutions. Even by national standards the allotment in our State is rather low. During the Seventh Plan the objective should be to spend around 0.4% of the State income on science and technology. In addition to direct expenditure on sponsored R&D Institutions all the Government Departments dealing with development activities should be persuaded to see the critical importance of providing for their own R&D inputs. Each such Department should have an R&D component in its budget. The State Department of Science and Technology should introduce a system of giving incentive grants to private sector R&D efforts.

3.51. There is a serious imbalance in the budgetary allocation under social services sector which calls for immediate corrective measures. The level of expenditure in social services, particularly on education and health, has grown rapidly in recent years. It is doubtful whether the increase is commensurate with the increase in the volume of activity (reflected in the number of students enrolled, patients treated etc). It is also seen that the allocation of expenditure within each of these sectors is getting increasingly unbalanced with staff salaries and construction of buildings absorbing more and more of the resources, thus leaving less and less for other essential inputs (equipment, drugs supplies etc). This is a major reason for the steady deterioration in the quality of public services. It is, therefore, necessary that an in-depth objective study of the growth in the level and composition of expenditure in relation to volume of activity and changes in the costs of inputs in education and health sectors is undertaken.

#### 4. Physical Infrastructure and Transport

3.52. The traffic density in the roads in Kerala has become very high because roads constitute the main mode of transport in the State. The Railway's share of the freight traffic in other parts of India is normally of the order of 60 per cent as against 17 per cent in Kerala. This is due to the fact that on several interstate routes between Kerala and other states there are no rail lines and roads have to bear the brunt of the traffic. The High Level Committee on Physical Infrastructure and Transport has recommended that the State Government should place greater emphasis on improvement and strengthening of the existing roads, which will otherwise deteriorate very fast.

The Committee has suggested that the following stretches should be taken over as National Highways: (a) Trivandrum-Muvattupuzha (b) Muvattupuzha-Angamali and (c) Muvattupuzha-Cochin.

3.53. In spite of the emphasis given to state highways and other major roads, in the earlier plans their condition has sharply deteriorated. Hence it is essential that more attention is paid to such roads in the Seventh Plan. Village roads will be taken care of by rural development programmes and employment generation schemes in the rural sector.

3.54. The High Level Committee is of the view that the waterway system, irrespective of its economics, should be developed. Conservation of energy, development of an alternative mode to the saturated roads, all these are tangible advantages of waterways. The West Coast Canal should be taken over by the Centre and converted into a National Waterway and a phased programme of implementation worked out with Quilon-Alwaye as the first phase. Once this Canal is declared as a national waterway, it will become necessary to set up a Water Transport Authority, since today a number of departments are concerned with waterways. Minor ports could also be brought under this Authority, which can be organised on the same pattern as the Cochin Port Authority.

3.55. Regarding minor ports, greater attention has to be given to Neendakara and Bepore ports. The other ports are mainly fishing ports. Developments of Vizhinjam harbour has to be considered for another important reason. It has a 30 feet draft which can be properly used for bringing coal and cement. It is, therefore, ideal as a site for a thermal plant. Vizhinjam can be a port which is both sea based and rail-based. Since availability of coal from Singareni Collieries is limited, a port-based thermal station will be better. Moreover the possibility of setting up a nuclear power station in Kerala is remote and total dependence on hydro resource is not wise.

3.56. Shifting of the Cochin Airport is essential for the development and functioning of the Cochin port. Containers are useful not only for international but also for inland transport of goods. This mode of transport is also pilferage-free. An Inland Container Depot could be set up at Calicut in collaboration with Railways and Shipping.

3.57. The K. S. R. T. C. may be reorganised on a regional pattern, the entire staff in a region being brought under the Regional Manager in charge. The economics and viability of the operations of the K. S. R. T. C. depends upon fleet utilisation which is low at present. This is mainly due to the high percentage of over-aged buses. Priority has to be given to the replacement of old buses and minimisation of uneconomic services. For the promotion of Tourism, among other things, the airport at Trivandrum should be developed as an international airport. Vaydoot services could be developed between Trivandrum-Peermade-Thekkady and Cochin.

3.58. The high density of traffic, both goods, passenger and commuter on the route from Trichur to Trivandrum points to the need of electrifying this sector and introducing more trains. The Alleppey—

Kayamkulam Railway should be completed early and doubling extended right up to Trivandrum. There is need for improvement of rail service from Shoranur to Cannanore also and increase of facilities. There is urgent need for constructing the Trichur—Guruvayoor—Kuttipuram Railway line. Similarly the construction of the Mangalore—Bombay Railway line will provide an alternate route and ease the present saturated Bombay route. Quilon-Punalur Metre gauge should be converted to Broad Gauge. A proper servicing yard for the Udyogamandal Industrial area is necessary. Tourism development in the State should revolve round the beaches, backwaters and Wild Life of Kerala. The High Level Committee has emphasised the need for large scale investment on tourist infrastructure. In order to implement a comprehensive tourism development plan an integrated organisational set up is required under which the hospitality function of the State Government will be kept separate from the tourist development function. This calls for a restructuring of the present Tourist Department.

## 5. Education & Employment

### (a) General Education

3.59 The High Level Committee on Education and Employment (General Education) observed that "the systems of direct payment of salary to private school teachers has made the establishment of schools a very profitable and commercial enterprise in Kerala". It suggested that "sanctioning of aided schools should be stopped forthwith in order to free the Government from increasing financial burden". In line with this recommendation no more aided schools will be sanctioned during the course of the Seventh Plan period.

3.60 The Committee pointed out that the problem of protected teachers is a serious one involving heavy financial drain on the Government. Government have already taken necessary decisions to solve this problem. However care should be taken to ensure that such a problem does not recur during the Seventh Plan period.

3.61 In the pre-primary sector, Government have already taken steps to upgrade the skills of teachers and standardise the programmes in Pre-primary schools by issuing general guidelines and establishing 'model' schools. The possibility of developing the existing 2611 balawadies and 6200 Anganawadis as pre-primary education centres may be seriously explored. Pre-primary education should not be put in the strait jacket of a prescribed syllabus.

3.62 In elementary education the State has achieved universal coverage of the age group 6-11 and attained a high percentage of enrolment within the age group 11-14. The main aim of the Seventh Plan should be to fill up the existing gap by raising the enrolment ratio to 100 per cent in the age group 6-14. The enrolment ratio of the Scheduled Caste and Scheduled Tribe population should also be raised to that of the general level.

3.63 The High Level Committee felt that extension of vocationalisation of secondary education in phases should get due priority in the Seventh Plan. It is suggested that there should be five such schools in each C. D. Block at the end of the Plan period.

3.64 Quality improvement programmes should be given very high priority in the Seventh Plan period. Attempts should be made to reduce the disparities in the quality of education between the rural and urban areas. It will be necessary to form a team of subject supervisors for evaluating the plus and minus points of teaching in schools. Intensive coaching for the weaker sections of the community should be emphasised. Also, priority should be given to improvement of physical facilities in schools.

3.65 The centralisation of all work connected with public examination at one place involves waste of time and resources. It would be advantageous to start three regional offices of the Examination Wing. There should be stringent inspections for the fixation of teaching staff.

3.66 During the first year of the Seventh Plan (1985-86) no new Government schools should be started. Government schools many be started in the remaining period of the plan only in pockets with inadequate schooling facilities. This should however be based on the findings of an intensive survey on educational facilities in the State.

### (b) Higher Education

3.67 The High Level Committee on Education and Employment (Higher Education) has made a number of recommendations regarding qualitative improvement, pre-degree examination, enhancement of fees, starting of new colleges and appointment of Vice-Chancellors. Those recommendations which are relevant for the formulation of schemes relating to the Seventh Plan are discussed in the following paragraphs.

3.68 The evergrowing demand for higher education in Kerala persuaded the State Government to seek new ways to meet the demands of student population. The last few years witnessed great changes in educational efforts and policies. This led to opening of more colleges, introduction of the shift system, sanctioning of more seats, starting of new courses, introduction of correspondence courses, private registration etc. In spite of the increased facilities as a result of the introduction of the shift system, the existing colleges can absorb only about 40 per cent of the matriculates coming out annually. The remaining 60 per cent of matriculates who aspire for higher studies have to find some other alternatives. This situation favoured the mushroom growth of parallel colleges in the State.

3.69 The state of higher education in Kerala today leaves much to be desired. The standards of academic excellence which marked the college teaching community in by gone days have considerably deteriorated. Many colleges present a sorry picture with empty classrooms but crowded quadrangles during working hours. The products turned out by these institutions of higher learning are of a poor quality and the university degrees of Kerala have lost the prestige which they commanded outside the State in university circles and the employment market. At present about half the number of applicants are able to get admission to colleges due to the increase in the number of colleges and the introduction of the shift system. We have however to realise that it is neither possible nor desirable



to give admission to all applicants who have passed out of High School (SSLC). Ways and means have to be found to absorb a large number of applicants in vocational training courses, self employment programmes and the like. Only those with the required competence and aptitude should be admitted to the colleges. It is imperative that a minimum standard is fixed for students being considered for admission to colleges. Other supplementary criteria may also be adopted for specialised courses. If such a system is adopted it will be possible to restrict admission to colleges to candidates who are really fit to undergo higher education.

3.70 Another factor which has been responsible for swelling the number of students who seek to college is the low level of tuition and other fees for professional as well as general higher education. Fees should be raised but there should be a liberal provision of scholarships to deserving poor students.

3.71 The improvement in the quality of higher education depends largely on the teaching community. The improvement in the pay scales of teachers is a matter which should receive the attention of the Government. The quality of teaching depends also on the equipment of the teachers. It is therefore necessary that college teachers are provided with ample opportunities to improve their academic equipment in their subjects and monetary incentives should be given to those who acquire research qualification. There is need for a regular programme of inservice training to teachers, the absence of which has been strongly felt in the past few years. The conduct of private tuition by college teachers is rampant today even though it is unlawful. This is highly detrimental to teaching in colleges. Strong steps have therefore to be taken to stop this practice. The traditional pattern of examining students at the end of a course is increasingly being dispensed with in modern universities. The semester system which is prevalent in most universities today enables periodic evaluation. It is beneficial to the student community also since the tempo of their studies will be kept up from the beginning to the end of the course and they will be able to concentrate on different parts of the curriculum rather than skip the hard portions of the curriculum for the final examination in the hope that the wide choice given in question papers will enable them to do well. The semester system has been introduced in several professional courses. It was tried and given up in the Calicut University, but the rejection of the system was not on its merits but due to extraneous factors. The Academic Councils of Universities should give their attention to this matter and examine the feasibility of introducing the semester system for general courses. The complaint about the semester system in professional courses, especially in Engineering is that it leads to the lengthening of the courses for beyond the prescribed period, due to the delays in the conduct of the examinations. It should be ensured that the examinations are held within the stipulated period so that the courses are not unduly elongated.

3.72 A unified syllabus for the pre-degree course is highly desirable in the Universities in Kerala as the Pre-degree examination is a preparatory course for

all Degree courses in arts, science and several professions. A uniform standard at the pre-degree level, for the whole State would make comparison and choice of students for further education easier. The case for entrusting the conduct of the pre-degree examination to a separate inter-university Board is very strong. The conduct of university and other examinations in the colleges is a source of great dislocation to the teaching work in the colleges. Therefore one large examination hall should be constructed in each of the principal examination centres as early as possible.

3.73 The emphasis in the Seventh Plan in this sector should be improvement in the quality of education and in the improvement of physical facilities like buildings, libraries, laboratories and residential quarters. No new college should be started during the Seventh Plan period. If in exceptional cases new courses are to be started, the norms prescribed for the purpose must be strictly insisted on. The emphasis on non-formal education should be further stressed during the plan period.

#### (c) Technical Education

3.74 The development of technical education in Kerala has been to a large extent guided by the policies and guidelines set at the national level by the All India Council of Technical Education. During the earlier plan periods direct Central assistance for the establishment of the technical institutions in the public and private sector was available. The quantum of such finances has dwindled of late and hence expansion in this area has to be curtailed. The creation of new institutions should go hand in hand with qualitative improvements as also expansion of facilities in existing institutions.

3.75 The major technical institutions in the country are the Indian institutes of Technology and Technical Universities, Regional Engineering Colleges, State Engineering Colleges, Colleges in the private sector, the Polytechnics and other institutions. The increasing demand for admission to Engineering Colleges has paved the way for overcrowding in the existing institutions and inadequacy of facilities. The quality improvement programmes that were started during the Fifth Five Year Plan and Sixth Five Year Plan helped to improve the academic attainments of some of the faculty members. However much greater emphasis on this aspect has to be laid in the coming years. Collaboration between technical institutions and Industries/ Departments constitutes one method of updating the technology through a two way flow of theoretical knowledge and practical experience in the field and workshop floor. A beginning in this direction should be made in the Seventh Plan.

3.76 Such practical experience gained by students in factories or plants will stand them in good stead. Their employability will be heightened if the training programme is sandwiched and the academic programme and teaching and training go hand in hand, one supplementing the other.

3.77 A perspective plan for technical education should have the objective—direct and indirect of an Education system benefiting not only the educated but the larger masses outside also.



Technologies are fast changing with increasing specialisation and newly emerging technologies in the frontier areas such as communication, productivity improving technologies, new energy systems, biotechnology, remote sensing, environment and ecology, impact assessment studies etc. The educational system should be flexible and respond to these changing and emerging patterns.

3.78 The priority areas under Technical Education include :

- (a) Consolidation of the existing institutions with respect to physical facilities and modernisation of laboratories and workshops,
- (b) Quality improvement programmes for the faculty
- (c) Vocational Education
- (d) Apprenticeship and other training programmes for students
- (e) Starting of a few Centres in the Engineering Colleges to create the expertise and conduct of special studies in areas of importance.
- (f) Science and Technology Museum
- (g) Quantitative Development in need based areas by starting new institutions, taking into consideration the social demand advantages of job-oriented education etc.

3.79 In addition to the above, proposals for the establishment of certain special institutions may also be contemplated. To provide formal and non-formal education to those who have not had an opportunity for technical education in established institutions and for updating technology for inservice technical personnel and faculty.

3.80 To reiterate, the accent in the Seventh Plan under technical education should be on qualitative improvement. As there is demand for engineering personnel in the State there exist the possibility of opening one or two Engineering Colleges in the Government sector during the plan period. At the same time there is no necessity to increase the present intake capacity at the Diploma and Certificate levels. Here again the emphasis should be on improvement of facilities in the existing polytechnics. The Trivandrum Engineering College would have to be developed as a Centre of Excellence specialising in certain selected fields of engineering. The School of Arts in Trivandrum needs to be upgraded and revamped with the induction of top ranking men of arts and crafts. The Cochin University may be upgraded into a Technological University during the Plan period. Also a Science and Technology Park could be set up in the State. Another institution which needs to be expanded and properly equipped is the Food Craft Institute at Kalamassery. In addition to these programmes, consolidation and modernisation of facilities in the I. T. Is could be attempted during the Plan period.

#### (f) Medical Education

3.81 The High Level Committee on Education and Employment (Medical Education) observed that "emphasis has to be given to the conduct of more paramedical courses and the development of new specialities in all medical colleges in the State". There is considerable demand for paramedical personnel. This is an area where training facilities have to be expanded further. The demand for such personnel should therefore be assessed and a project for such training prepared during the Seventh Plan period. Though only courses run by the medical colleges are recognised by the State, there is a proliferation of private institutions conducting training courses and also undertaking pathological tests. There is need for exercising control over the services rendered by such institutions. Steps will have to be taken in the plan period to control the activities of such institutions.

3.82 In the past considerable emphasis was placed on Medical Education in Kerala. There is, therefore, no need to start any more medical colleges in the State during the Seventh Plan period. "A large number of medical institutions in the State are now badly in need of specialities, paramedical staff as well as medical equipments". Therefore, the Seventh Plan should lay greater emphasis on improvement of facilities in the medical college hospitals and on quality improvement. It is also necessary to encourage medical research in the State. A fund for research can be created. A research unit may be organised in each medical college. These units may function under the guidance and supervision of a State Board for Medical Research.

3.83 Specialities such as gastroenterology, may be developed in the medical colleges. Each medical college may fully develop one speciality in the plan period.

#### (g) Employment

3.84 The sub group on employment has critically assessed the employment oriented development programmes including self-employment programmes being implemented in the State. It came to the conclusion that there were snags in the conception of the different employment programmes and lags in their implementation. Employment generation programmes should be integrated with the other programmes and should not be carried out in isolation. With regard to self-employment programmes the Committee has recommended that entrepreneurial training, provision of technical and financial assistance and marketing arrangements should all form part of the programme and be provided under the aegis of a single agency. The Committee has stressed the urgency of undertaking entrepreneurship development programmes in a co-ordinated manner. Continual appraisal and regular monitoring of employment generation programmes such as NREP, IRDP, TRYSEM and Khadi and Village Industries were also emphasised by the Committee.

## CHAPTER 4

### PLAN OBJECTIVES AND INVESTMENT PATTERN

#### Approach to All Indian Plan (1985-90)

The guiding principles of the Seventh Plan will be growth, equity and social justice, self reliance, improved efficiency and productivity. There will be sharper focus on employment and poverty alleviation. The strategy of the plan will be to generate productive employment through increases in cropping intensity, extension of new agricultural technologies to low productivity regions and to small farmers, through expansion of labour intensive construction activities for providing housing, urban amenities, roads and social infrastructure and through changes in the level and pattern of industrial growth.

4.2 The emphasis on rural employment through NREP, RIEGP and IRDP will continue with better planning and closer monitoring. The IRDP which is now largely individual oriented will be given a wider base through the organisation of beneficiaries into clusters or groups in order to improve the viability of the programme.

4.3 The growth in employment will be non-inflationary only if agricultural production, particularly food production, is augmented significantly. The thrust will be on rapid increase in productivity in low productivity areas and crops such as rice, coarse grains, oil seeds and pulses. As water is the most crucial input for agriculture, full utilisation of irrigation potential already created and the maximum possible addition of irrigation facilities will be made.

4.4 With the removal of constraints in agriculture, it should be possible to plan for higher rates of industrial growth. In order to economise on resources, industrialisation will be based on better utilisation and low-cost expansion of existing capacity. Emphasis will be laid on modernisation and upgradation of industrial technology and induction of new technologies.

4.5 In order to improve the physical well being of the people and environment in which they live emphasis will be given to nutritional support for vulnerable groups, expansion in health care, fertility control, provision of clean drinking water, sanitation and housing.

4.6 The plan should ensure relative price stability through judicious macro-economic policies and adequate availability of food and raw materials.

4.7 The plan must identify precise and concrete measures to change our management and administrative systems for the better.

4.8 The fulfilment of the Seventh Plan objectives requires growth rate of a little over 5 per cent.

4.9 The plan can be based on assumption of a 26 per cent savings rate which has already been achieved. Over the five years, aggregate investment at 1984-85 prices may be of the order of Rs. 3,20,000 crores of which public investment would be about Rs. 1,50,000 crores. The public sector outlay in the Seventh Plan would be of the order of Rs. 1,80,000 crores at 1984-85

prices. The public sector will have to generate more internal resources through improvements in efficiency and productivity.

4.10 It would be necessary to depend largely on faster growth in exports, or on import substitution. In the field of exports, the potential for export of engineering goods and non-traditional items should be fully exploited. It would be necessary to lay down strict priority in the matter of imports.

4.11 Greater priority will be given to attaining self sufficiency and self reliance in areas such as oil seeds, petroleum and petroleum products. Special programmes need to be formulated and implemented during the plan period for effecting a break-through in rice output, especially in the eastern region and in some of the southern states.

4.12 Package of poverty alleviation programmes will continue at an accelerated pace in the Seventh Plan. The core of the anti poverty programmes lies in the endowment of income generating assets on those who have little or none of these. Women, who constitute half of the work force in rural areas, have to be given much greater recognition than hitherto, and equipped with and trained for appropriate skills to operate such productive assets which would contribute to raising their own and households' incomes. The flow of credit through banking infrastructure will have to be more effective and easy so as to reach the beneficiaries and the target groups.

4.13 The generation of gainful employment through integration of the sectoral production plans with employment plans and enlargement of on-going employment programmes under a National Employment Programme to cover specific target groups will be emphasized in the Seventh Plan.

4.14 Measures for the protection of scheduled castes and scheduled tribes and other weaker sections from inequitable practices leading to the alienation of their land will have to be strengthened. The strategy of the special component plan for development of scheduled castes aiming at economic and educational development and bringing about improvement in their working and living conditions launched in the Sixth Plan period has given a clear direction to the economic and social advancement of scheduled castes. The pace and quality of its implementation need to be geared up and intensified.

4.15 The public distribution of essential commodities like foodgrains and cloth should serve as an essential complement to the programmes for employment and income generation.

4.16 One of the primary tasks of the Seventh Plan has been the harnessing of the country's abundant human resources and improving their capabilities for development with equity. In the field of social services major advances are needed in the expansion of elementary and secondary education with a vocational basis. A significant increase in the level of literacy

and the provision of clean drinking water all over the country must be among programmes of top most importance.

4.17 Management of the energy sector is a key task for the Seventh Plan and beyond. Systematic attention must be paid to energy conservation. The establishment of a competent National Power Grid by 1990 and a modern and efficient communication system in the power sector must be provided for.

4.18 A national housing plan for rural and urban areas especially focused on the needs of the weaker sections is absolutely necessary, especially because investment in housing is highly labour intensive.

4.19 All future development programmes must take environmental considerations fully into account. The attempt in the Seventh Plan will be to ensure that the bulk of Science and Technology effort is an integral part of all economic and strategic sectors.

4.20 Planning should be increasingly concerned with the appropriate administrative arrangements and personnel policies, especially in the less developed and remote areas and in the implementation of the programmes for the weaker sections.

4.21 The important features of the national plan for 1985-90 are the following:

- (i) Decentralisation of planning and full public participation in development.
- (ii) The maximum possible generation of productive employment.
- (iii) Alleviation of poverty and a reduction in inter class, inter-regional and rural urban disparities.
- (iv) Attainment of self-sufficiency in food at higher levels of consumption.
- (v) A higher level of social consumption, particularly in education, health, nutrition, sanitation and housing.
- (vi) An enhancement in the degree of self-reliance through export promotion and import substitution.
- (vii) The acceleration of the voluntary adoption of a small family norm and a positive role for women in economic and social activity.
- (viii) A reduction in infrastructural bottlenecks and shortages and improved capacity utilisation and productivity throughout the economy.
- (ix) Efficiency, modernisation and competition in industry.
- (x) Conservation of energy and promotion of non-conventional energy sources.
- (xi) The integration of science and technology into the mainstream of development planning.
- (xii) Ecological and environmental conservation.

#### Kerala's Seventh Plan (1985-90)

4.22 Kerala's Seventh Plan aims at deriving maximum gains from the extensive infrastructure facilities already created as a result of investment made in the past plans by judiciously pursuing a rational policy of investment allocations and adopting an efficient management of development activities.

4.23. The per capita income of Kerala was Rs. 259 in 1960-61 as against the per capita national income of Rs. 306. The national per capita income rose to Rs. 1891 in 1982-83 whereas the per capita State income had increased to only Rs. 1521. Thus the gap between the per capita national income and per capita State income increased sharply from Rs. 47 in 1960-61 to Rs. 270 in 1982-83. It may be difficult to eliminate this gap within a short period of five years. But Kerala's Seventh Plan should aim at reducing the gap between the per capita State income and per capita national income substantially so that by 2000 AD the per capita income will catch up with the per capita national income. In order to achieve this, a higher rate of growth of 5.4% per year is aimed at during the Seventh Plan period (1985-90) as against around 5% targeted at the national level. Taking into account the growth potentials of the different sectors and the inter sectoral linkages as well as the need to promote the diversification of the State's economy, sectoral rates of growth have been proposed which will also ensure an overall rate of growth of 5.4%. These rates are given below:

Sector	Projected Growth Rate (%)
1. Agriculture and Allied Sectors	3.9
2. Manufacturing	6.6
3. Electricity, Gas and Water Supply	8.4
4. Transport and Communications	6.1
5. Housing	6.6
6. Other Social Services	5.8
All Sectors	5.4

4.24. In the projected pattern of growth by sectors, the tertiary sector will continue to retain a dominant position in the economy. The relevant figures are given in table below. In the case of primary sector, while the absolute amount of State Domestic Product generated will continue to increase, its share in the total State Income will fall from 38% in 1984-85 to 34% in 1989-90. On the other hand, the share of secondary sector in the total product will increase from 22% to 25% during the plan period. The envisaged pattern of growth will lead to diversification in the economy during the Seventh Plan period.

Sector	Structural Composition (%)	
	1984-85	1989-90
Primary	38	34
Secondary	22	25
Tertiary	40	41
All Sectors	100	100

4.25. In order to bring about the envisaged structural changes in the economy during the Plan period there has to be a change in the past pattern of investments. The five High Level Committees set up in the State Planning Board have critically assessed the development that has taken place in different sectors of the State's economy during more than three decades of planning. The reports of the High Level Committee have indicated the correctives and changes that are necessary in the coming years for strengthening the economy. Taking into account these recommendations as well as the basic objectives, the strategy and policy

framework envisaged for the national plan the following objectives are laid down for the Seventh Plan (1985-90) of Kerala :—

- (i) achieving an overall growth rate of 5.4% per annum in order to reduce the gap between per capita National Income and per capita State Income.
- (ii) reducing the population below the poverty line to 25% by the end of the Seventh Plan period, through specific poverty alleviation programmes for the poor, especially the marginal farmers and agricultural labourers, rural artisans and those engaged in traditional industries, fisherman and educated unemployed.
- (iii) laying emphasis on employment generation with a view to progressively reducing the backlog of unemployed, especially the educated unemployed, through growth of industry and rural development and special employment programmes.
- (iv) taking steps to decentralise planning to the district and block level especially rural development and household oriented schemes, and to ensure integration of schemes and co-ordinated implementation in the field.
- (v) bringing about a structural change in the economy, through a gradual shift in investment policy towards strengthening the more promising spheres of the industrial sector.
- (vi) fully utilising the existing capacities and increasing production efficiency through better management ;
- (vii) increasing the share of Scheduled Castes and Scheduled Tribes in economic development schemes which will give them a higher and more stable income.
- (viii) accelerating the development of identified backward regions through special programmes.
- (ix) laying greater emphasis on family welfare programmes, preventive health care and improving quality of health care facilities.
- (x) improving measures to assist vulnerable groups such as children and women, by improving health and feeding programmes.
- (xi) containing any further expansion of general education at the school and college level to backward areas and laying greater emphasis on improvement of quality and on technical and vocational education.
- (xii) promoting Science and Technology in all development sectors and integrating it in the process of development planning with special emphasis on environmental planning, and
- (xiii) undertaking integrated development of urban areas.

4.26. In order to estimate the investment requirements for the envisaged growth of the State's economy

during the Seventh Plan period certain assumptions have to be made regarding the investment-income coefficients for the different sectors. In the absence of adequate data relevant to the Kerala economy, the incremental capital output ratios (ICOR) of the national economy are assumed to hold good for the State also. Applying the sectoral incremental capital-output ratios to the envisaged sectoral incremental incomes, estimates of investment requirements of different sectors have been worked out. If the State income is to register an increase of 5.4% per annum during the period 1985-90, then it should increase from Rs. 4367 crores in 1984-85 to Rs. 5677 crores in 1989-90, showing an increase of Rs. 1310 crores at 1984-85 prices. This would call for an investment of Rs. 8900 crores during the five year period.

4.27. The total investment outlay of Rs. 8900 crores comprises state sector investment, central sector investment and private sector investment. To work out the State Plan investment, it is necessary to work out sector-wise investment possibilities during the plan period. It may be mentioned that a number of centrally sponsored programmes which are considered to be of national importance are formulated and approved by the Government of India and funds are allotted either wholly or on a matching basis to the States. There should be adequate funds in the State Plan for meeting the State's share in respect of the Centrally Sponsored Schemes like IRDP, NREP etc. In some of the sectors like Agriculture, Forests, Major Irrigation and Water Supply the State has to continue implement major on-going programmes with assistance from World Bank and other bilateral or international agencies during the Seventh Plan Period. A few projects have been poised for financing. Therefore, sufficient funds will have to be provided in the State Plan for taking up such externally aided projects. During the Seventh Plan period it is proposed to give a big push to the activities of the Urban Development Authorities of Trivandrum, Cochin and Calicut as well as that of institutions like Housing Board and for this purpose their market borrowings will have to be considerably stepped up. Necessary funds are therefore, included under the State Plan. Under major and medium irrigation, as top priority is proposed to be given to completing as many of the 'on-going' projects as possible during the plan period, sufficient funds have to be provided for the completion of 8 out of the 13 on-going schemes during the Seventh Plan. Thus a 'requirement analysis' has been made in respect of each sector and the size of the State Plan has been arrived at accordingly. It is seen that out of the total investment outlay of Rs. 8900 crores the State Sector outlay would be of the order of Rs. 3300 crores.

4.28. Private Sector investment in Kerala has all along been much less than the national average of 45 to 50% assumed in the National Plan documents. A study of the increases in real income during the seventies and the investments under the Public Sector during the same period shows that the private sector investment in Kerala was only around 35%. On this basis, out of the total investment of Rs. 8900 crores envisaged for the Seventh Plan, the private sector investment would be of the order of Rs. 3000 crores. If the State Sector outlay is fixed at Rs. 3300 crores then the balance of Rs. 2600 crores would be the share of the Central Sector investment during this period.

4.29. The Sectoral distribution of the State Plan Outlay of Rs. 3300 crores is presented below:

**Seventh Plan Sectoral Outlays—Percentages**

Sector	Outlay (Rs. crores)	Percentage to Total
1. Agriculture and Allied Services	496.00	15.03
2. Rural Development	159.50	4.84
3. Co-operation	38.00	1.15
4. Irrigation and Flood Control	584.00	17.70
5. Power	650.00	19.70
6. Industry and Minerals	325.00	9.85
7. Transport and Communications	293.00	8.88
8. Scientific Services and Research	30.50	0.92
9. Social and Community Services	651.00	19.73
10. Economic Services	15.00	0.45
11. General Services	58.00	1.75
Total (1 to 11)	3300.00	100.00

## CENTRAL SECTOR AND THE SEVENTH PLAN

**(a) Industrial Sector**

Kerala has not been a large beneficiary of Central investments. In order to accelerate the pace of development in the State, it is necessary that the Central Government establish an adequate number of productive enterprises in the industrial field. The few industrial undertakings set up by the Central Government in Kerala include F. A. C. T., Cochin Refineries, Cochin Shipyard, Hindustan Insecticides, Indian Rare Earths, I. T. I., H. M. T. and Instrumentation Limited. Except, perhaps, for F. A. C. T., Cochin Refineries and the Cochin Shipyard, all other projects set up by the Central Government are relatively small accounting for only minor investments and employment. Among the Sixth Plan projects, investment decisions have so far been taken only for setting up a caprolactum plant at Udyogamandal and a phenol Project at Cochin. A proposal which is still pending for an investment decision is the aromatic extraction project, notwithstanding the fact that this is already included in the Sixth Five Year Plan.

5.2. Central investments in Kerala in the Seventh Plan can be considered in two parts:

- (a) Expansion of existing units.
- (b) Establishment of new units.

Taking the first group to begin with, the potentialities are discussed below:

*Expansion of H. M. T. (Ministry of Industry)*

5.3. The H. M. T. unit in Kerala is currently engaged in the manufacture of machine tools and printing machines. There has been no worthwhile expansion of this unit for some time. H. M. T. is understood to have major expansion and diversification programmes during the Seventh Plan period. Hence it is time the modernisation and expansion of the H. M. T. unit at Kalamassery is taken up. The diversification of the printing machinery units and the introduction of C. N. C. machines would be appropriate.

*Instrumentation Ltd. (Ministry of Industry)*

5.4 This unit is engaged in the manufacture of valves. Instrumentation Limited has major expansion programmes in the field of instrumentation. Again, major investments are contemplated outside Kerala State. It should be possible to build up the unit in Kerala and increase the capacity for the manufacture of valves, particularly those required for the petroleum industry and also branch out into the manufacture of instruments. The possibility of undertaking manufacture of other types of equipments for exploration and production of oil will also merit examination. It is suggested that Instrumentation Limited put up a

tool room in Kerala. There is sufficient land available for expansion.

*I. T. I. (Ministry of Communications)*

5.5 Communications represent major field for expansion during the Seventh Plan period. It is learnt that investment decisions have already been taken for the expansion of I. T. I. at Bangalore and to set up another large unit in U. P. Only a minor expansion of I. T. I. at Palghat is conceived. A larger expansion programme for the Palghat Unit particularly for the manufacture of electronic exchanges, components, telephone instruments, etc. is therefore necessary.

*Cochin Shipyard (Ministry of Transport)*

5.6 When the Cochin Shipyard was originally conceived, it was intended to be implemented in two phases. So far only the first phase of the project has been undertaken. With a relatively small investment, it is possible to nearly double the output of the Cochin Shipyard. In fact, this expansion was a part of the Sixth Five Year Plan. No decision has, however, been taken on the expansion programme.

*Cochin Refineries (Ministry of Petroleum)*

5.7 A major Project of Cochin Refineries which is still pending is the establishment of an aromatic complex. Two alternative proposals, a larger complex for 1,55,000 tonnes of benzene and a smaller project of about 80,000 tonnes of benzene have been under consideration. A decision in favour of the larger sized unit is sought as the demand for benzene in the Southern region would justify a larger project. Further, the scope of the project has been kept limited only to the extraction of benzene. There are many other important products like toluene and zylones which could also be recovered at the aromatic complex. An early decision on the project and increase in the scope of the project to provide other raw materials which would help in the development of many chemical industries in Kerala is necessary.

*Indian Rare Earths (Department of Atomic Energy)*

5.8 There is a small Rare Earth Plant at Alwaye under the Department of Atomic Energy. Over the last two decades, this plant has received little attention, though it is highly profitable. Modernisation and expansion of the Alwaye unit is overdue. The raw-materials for such expansion will be available from Kerala Minerals and Metals Ltd., a public sector undertaking of the State Government.

*F. A. C. T. (Ministry of Chemicals and Fertilizers)*

5.9 The Central Government has recently cleared the establishment of a caprolactum project at Udyogamandal. This however would not adequately deal

with the problem of F. A. C. T. particularly the Udyogamandal Unit, as it is the oldest unit in the fertilizer industry and is largely obsolete.

5.10 Preliminary studies on the fertilizer demand in the Southern region indicate that there is need for expansion of capacity for the manufacture of both nitrogenous and phosphatic fertilizers. Cochin Refineries will have large surplus of naphtha which is a raw-material for the manufacture of nitrogenous fertilizers. Steps should be taken for (a) a 1350 tonne ammonia plant with equivalent production of urea at Udyogamandal (b) a D. A. P. project at Ambalamedu. There is scope for both these units to meet the anticipated fertilizer demand. The approach to the Seventh Five Year Plan lays great stress on achieving self sufficiency in fertilizers. The establishment of these units should also help to modernise the facilities at Udyogamandal.

*Export Processing Zone (Ministry of Commerce)*

5.11 A decision has already been taken to set up an Export Processing Zone in Kerala. The Ministry of Commerce is requested to speed up the implementation of the project.

5.12 Coming to possible new projects in the Seventh Plan period, the suggestions are as follows:—

*B. H. E. L. (Ministry of Industry)*

5.13 B. H. E. L. has set up a number of units in various states. It has however not established any unit in Kerala taking into the account the major expansion in the power sector in the Seventh Plan, it should be possible for B. H. E. L. to set up a unit in Kerala in any of the specialised lines of their activities. For example, a unit could be set up for the manufacture of rotating equipment like motors (AC and DC) or set up facilities for the manufacture of transformers and switch gears. In the alternative they could set up a unit to produce a variety of components which are required for their boiler and generating equipments.

*National Institute of Design (Ministry of Industry)*

5.14 The National Institute of Design has considerable expertise in providing modern designs for a variety of small scale and cottage industries. Kerala has not had the support of the National Institute of Design in improving the existing and traditional designs in a variety of our small scale and traditional industries like handlooms, furniture, potteries, bamboo products etc. The State Government has recently taken over a pottery unit and is organising production on a decentralised basis through small scale units. As designs are extremely important from the point of view of consumer acceptability and marketing, the State requests the Ministry of Industry either to establish an extension wing of the National Institute of Design in Kerala or, at any rate, to commission them to make a detailed study of our small scale and cottage industries with a view to modernise their existing designs to improve the marketability of the products.

*Ordnance Factory (Ministry of Defence)*

5.15 No production facility has so far been set up by the Ministry of Defence in Kerala. It is understood that major investments are contemplated by the Defence Ministry during the Seventh Plan period. The nature of these expansion programmes is not clearly known. The Defence Ministry requested to set

up an Ordnance Factory or any other similar production establishment such as for the manufacture of aircraft parts or radars in Kerala. Hindustan Aeronautics Limited and Bharat Electronics Limited could conceivably set up major facilities in the context of their expansion programmes. An investment of at least Rs. 500 crores may be made by the Defence Ministry in Kerala.

*Integral Coach Factory (Ministry of Railways)*

5.16 The Ministry of Railways is to set up a large integral coach factory as a part of the Seventh Plan programme and the State Government has made a specific proposal for the location of this factory in Palghat. The Indian Railways have not set up any facilities so far in Kerala. This would be an appropriate production facility for location in the State.

*Indian Petro-Chemicals Limited (Ministry of Petroleum)*

5.17 I. P. C. L. is located in Baroda and produces a variety of petro-chemicals particularly plastics, fibres, detergent intermediates etc. Making use of these basic raw-materials available from I. P. C. L. a number of down stream units for fabricating plastic products, manufacture of mixed fabrics, production of detergents, can be set up. As a matter of fact, there is a very large consumption of these products in Kerala but all these requirements are met from outside the State.

5.18 I. P. C. L. provides technical and promotional assistance for the assessment of market potentialities, identification of viable projects and establishment of down stream units. I. P. C. L. should extend such assistance for the establishment of down stream units in Kerala. This process can be expedited if Ministry of Petroleum asks I. P. C. L. to provide all the necessary assistance to the State Government for the establishment of down stream units on a priority basis.

*Petrofils (Ministry of Petroleum)*

5.19 Petrofils is an undertaking under the Ministry of Petroleum engaged in the manufacture of polyester filament. This new synthetic material has made a significant impact in the textile industry. Petrofils has specialised the knowledge and provides technical assistance for the use of polyester filament in the handloom and powerloom sector. There is a very large consumption of synthetic fabrics in Kerala all of which is obtained from outside the State. At the same time, the handloom and powerloom industries in Kerala is unable to market their products. The introduction of polyester filament in the handloom and powerloom sector will not only help to produce a more acceptable and profitable consumer product but will also substantially improve the income of the weavers.

5.20 Petrofils have extended technical assistance for the modernisation of the handloom and powerloom industry to other states. Such assistance may be extended to Kerala also.

5.21 Petrofils have also a project under contemplation for the establishment of a nylon project. There is no synthetic fibre project in Kerala. Hence this project may be set up in Kerala.

*Oil Exploration (Ministry of Petroleum)*

5.22 Although a decision has been taken to start offshore exploration activities off the Kerala coast, the implementation is yet to begin. Kerala has a serious

disadvantage from the point of view of energy sources, being far removed from the locations of coal production. The potential scope for producing oil gas off the Kerala coast will be of help to the economy of Kerala.

### (b) Power Development

5.23 Kerala is far away from sources of fuel. The State has to use a large share of its meagre plan outlays on hydro electric power generation schemes. The severe drought experienced by Kerala in 1983 showed how fragile was its so called "surplus" power position. There is therefore urgent need to set up a thermal plant in the State during the Seventh Plan period and therefore top priority may be assigned in this matter. The envisaged thermal plant for Kerala should be taken up under the Central Sector.

### (c) Roads and Bridges

5.24 The High Level Committee on Physical Infrastructure and Transport has recommended that the following roads be declared as 'National Highways'.

- (i) Gudalur-Calicut Road (via) Manjeri with a link from Manjeri to Palghat.
- (ii) The Main Central route from Trivandrum to Muvattupuzha with the spurs from Muvattupuzha to Angamali and Muvattupuzha to Madurai.

5.25 The total length of these routes is 575 km. and the total estimated cost for converting them will be about Rs. 127 crores. Even with this addition, the total length of National Highways in the State will be only about 3% of the total road length proposed for 2000 A. D.

### (d) Inland Water Transport

5.26 The following sections of waterways should be declared National Waterways and financed entirely by the Centre:

- (i) Quilon-Cochin.
- (ii) Trivandrum-Quilon.
- (iii) Cochin-Badagara.

5.27 As the first stage, the Quilon-Cochin section, a length of 140 km. could be taken up. A uniform draft of 2.5 metres should be provided and canal width maintained at a minimum of 23 metres with retaining wall. Sufficient numbers of properly maintained jetties for containers should also be provided. For this section, the present estimate of about Rs. 6 crores may go up to Rs. 8 to 10 crores when all facilities are fully provided for.

### (e) Trivandrum Air Port

5.28 As a first step to attract more foreign tourists as well as facilitate the Gulf Traffic into Kerala, the Trivandrum Air Port should be upgraded as an 'International Airport'.

### (f) Cochin Port

5.29 Shifting the Airport from Willington Island to a suitable location, either on the mainland east of Tripunithura or an island east of Aroor to which an approach road from the National Highway by-pass can be provided. The airport area at Willington Island can be kept with the Navy for their future needs. Shifting the civil airport and the air activities will release a lot of water frontage for the port activities

especially for developing container traffic. Goods that are now landing at Cochin Port and going to Coimbatore and Bangalore by road can be moved in containers in rail, thus relieving the congestion on the road between Cochin and Trichur, one of the most polluted road sections in Kerala.

### (g) Railways

5.30 The following programmes are suggested under Railways during the Seventh Plan by the High Level Committee on Transport and Physical Infrastructure:

- (1) Ernakulam-Alleppey and Alleppey-Kayamkulam Broadgauge line to be completed and sufficient passenger and freight services introduced by the end of Seventh Plan.
- (2) Construction of Trichur-Guruvayoor-Kuttiappuram railway line could be started in the Seventh Plan.
- (3) Taking up of the extension of Alleppey-Kayamkulam line to Quilon and Trivandrum in the Seventh Plan and completing the same early in the Eighth Plan.
- (4) For the Southern States, a direct link from Mangalore to Bombay is of great importance since, at present, all traffic to Bombay has to take a circuitous route. Taking up of this line in the Seventh Plan and completing it by 2000 A.D. is a great necessity. It will also ease transport bottlenecks on the Grand Trunk route and on the Madras-Bombay route and, therefore, will serve as an alternate route to these two saturated trunk routes.
- (5) Quilon-Punalur meter gauge line could be taken up for Broadgauge conversion in the Seventh Plan and completed in the Eighth Plan.
- (6) The traffic from Eloor is on the increase and no proper yard facilities are available at Alwaye to serve Eloor. The feasibility of extending the railway line to Eloor and providing yard facilities at Eloor to serve all the industries in the area should be explored.
- (7) There is at present no programme to double the railway line from Shoranur to Calicut. By 2000 A. D., the traffic on this sector will require a double line and the railways should plan for this in stages.
- (8) There should be advantages in establishing an I. C. D. at Calicut and possibly at Quilon also. This needs to be investigated.

### (i) Centrally Sponsored Schemes

5.31 As a matter of policy, the number of Centrally Sponsored Schemes should be kept small and they should be decided upon at the time of the launching of the Five Year Plan in consultation with the National Development Council. The programmes suggested for inclusion under the Centrally Sponsored Schemes should be of basic national importance involving sufficiently large outlays and applicable to all parts of the country. If it is considered essential to introduce new Centrally Sponsored Schemes during the course of a Plan period, this must be done in consultation with the National Development Council. It is preferable that the Centrally Sponsored Schemes



that are finally chosen for adoption in a Five Year Plan are financed fully by the Central Government. In any case the schemes introduced during the course of the plan period should be fully financed by the Central Government so that the resources available for the State Plan are not dislocated. Though the schemes adopted may have general relevance to all States, some changes in details may be necessary to suit local conditions. Therefore the Centrally Sponsored Schemes should be so designed that a certain amount of flexibility is allowed to suit local conditions.

**(j) Central Financial Institutions**

5.32 Financial institutions; like the commercial banks and term lending institutions such as the Life Insurance Corporation (LIC), the Industrial Finance Corporation of India (IFCI), the Industrial Development Bank of India (IDBI), the Industrial Credit and Investment Corporation of India (ICICI), the Agricultural Refinance and Development Corporation (ARDC), to mention the major institutions, have a dominant role in promoting balanced regional development. There are also other financing institutions like the Housing and Urban Development Corporation (HUDCO), Industrial Reconstruction Corporation of India (IRCI), Rural Electrification Corporation (REC), and National Co-operative Development Corporation (NCDC) which handle considerable amounts of funds and distribute them for financing development projects. Positive and dynamic lending policies of these institutions will certainly pave the way for all round development of the country.

5.33. The financial institutions do not directly operate in the market, but channelise funds provided by the Government of India and banking system both in terms of domestic currency as well as in foreign exchange, for joint financing of projects in the public and private sectors. The role of institutional finance in the early phase of planned development was not much. At the time of the launching of the First Plan in 1950-51 there were only about 600 banking institutions in India. These together operated a total fund of about Rs. 800 crores. The position today has undergone a sea change. The total number of banking institutions has increased to about 42000. The loans advanced by the commercial banks total over Rs 41,000 crores. The nine major financing institutions also operate funds totalling over Rs. 3000 crores every year. Thus the financial institutions not only mobilise much large savings, but they have also become more innovative and aggressive in mobilising domestic savings. The investments of these institutions have become a very decisive factor in the economic development of the country.

5.34 The Government of India have full control over the large funds of financial institutions. It is therefore quite within the powers of Government of India to lay down appropriate norms and guidelines for the deployment of these funds keeping in view the larger development interests of the country. This will involve reshaping of the policies of these institutions along more progressive lines.

5.35. The role of the major Central financial institutions in stimulating the development of the industrially backward States like Kerala has proved to be neither sufficient nor effective. When one looks at the direction of the flow of their funds it would appear that no conscious or deliberate credit allocation policy exist at present. One of the avowed objectives of the

Government in nationalising the Life Insurance Corporation (and the banking industry) and floating development finance institutions such as IDBI, ICICI, IFGI and ARDC has been to channelise national savings into priority sectors of industry and agriculture as well as to develop the backward regions of the country. Both these objectives have not been successfully pursued so far, more particularly, the second mentioned objective of fostering economic development in the backward regions/States of the country. It is only very recently that certain attempts at development of backward areas has been made.

5.36. The total resources transfers through the nine all India financial institutions, ARDC, LIC, IFCI, IDBI, REC, HUDCO, ICICI, IFCI and NCDC up to 1981-82 were of the order of Rs. 23,388 crores. A major part of these resource transfers has gone to the relatively developed States. Seven States, mainly Gujarat, Haryana, Karnataka, Maharashtra, Punjab, Rajasthan and Tamil Nadu will 36% of all India population have been able to draw more than 53% of the total resources transfers. The States of Gujarat and Maharashtra with only a little more than 14% of the all India population have secured financial assistance to the extent of 25% of the total amount sanctioned. The relatively developed States continued to receive the major portion of the resources transfers from all the Central financial institutions.

5.37. The main objective of institutional funding of projects has been to reduce the development burden on the State Government's budgets. However, due to the uneven spread of institutional credit in the country, only a few States have been benefited. Such States have also been the major beneficiaries of funds transferred from the Central Government sector as well as in the sharing of open market borrowings. This could partly be due to the higher resource-absorptive capacity of the advanced States/regions because of their already well established industrial and institutional infrastructure. The urban bias of many of these States which also generally have the benefit of superior technical expertise and talents may also be an important factor which has enabled them to attract larger funds from financial institutions. All these indicate that the process of economic development in India, in spite of three decades of planned efforts, has tended to be more cumulative rather than equilibrating in character.

5.38. The ostensible objective of nationalisation of banking and insurance and of floating development finance institutions in the public sector has been to curb such a cumulative growth tendency not only by a diversification of both the structure and flow of institutional credit but also by promotional activities such as conceiving development projects and identifying entrepreneurs in backward regions. On the side of credit institutions, there is need to bring about adjustments in their procedures and lending policies which would enable less developed States to avail themselves of much more institutional finance for implementing their projects than they do now. There is also a need to evolve a more rational and deliberate credit allocation policy by the financial institutions to meet the diversified requirements of different regions in the country. The Central financial institutions should play a more positive role and should function as catalytic agents in promoting faster economic development of the industrially backward States like Kerala.

## DECENTRALISED PLANNING

The Mid Term Review of the Sixth Five Year Plan of the State carried out in 1982 revealed that many of the rural development programmes implemented under the State Plan were not yielding their full results. Most of the programmes were found to be implemented through vertical departmental agencies without any institutional or other arrangements for co-ordination at the district or lower levels. The Review also showed that even the beneficiary oriented schemes introduced under the IRDP for economic uplift of the Scheduled Castes, Scheduled Tribes and other weaker sections of the population could not achieve the expected results as these programmes were not properly linked with the development programmes in other sectors. After a critical assessment of the past experience, the State Government took a major decision to gradually introduce decentralised planning in the State for those schemes and programmes which are amenable to district and local level planning. A beginning was made in 1983-84, when the preparation and implementation of programmes under the Special Component Plan and Tribal Sub Plan were taken up at the district level. With effect from 1985-86 (first year of the Seventh Plan), the preparation and implementation of district and local plans and schemes will be decentralised in a gradual manner, during a period of two to three years. For purposes of decentralisation, the unit of planning below the State level will be the district and below the district, it will be the 'block'. The main focus of district and local planning will be 'Rural Planning and Development', even though the implementation of other schemes will also be co-ordinated at these levels. Four types of programmes can be recognised for the purpose viz;

- (i) Local area-based and household based economic development schemes
- (ii) Local infrastructure schemes (land development, minor irrigation, rural roads, rural electrification etc.)
- (iii) Social services including establishment of institutions (education, health etc.) and
- (iv) Social welfare and social security measures.

6.2 A considerable part of the responsibility for planning and implementation of (i) and (ii) above will ultimately rest with the district and block level authorities. In respect of (iii) and (iv), their responsibility will be that of advice and co-ordination of implementation. The phased programme of implementation of decentralised planning will be broadly as follows:—

(i) *Phase I (1985-86)*

6.3 Beneficiary-oriented economic development schemes of all departments to be sanctioned and implemented in the district as in the case of the Special Component Plan. Priority to be fixed and works undertaken under 'infrastructure schemes'.

(ii) *Phase II (1986-87)*

6.4 Beneficiary-oriented and infrastructure district and local schemes to be prepared, sanctioned and implemented at district level in accordance with guidelines. By then, changes necessary for allocating funds to the district level, criteria for district-wise allocation and powers of district agencies for inter-sectoral adjustment will be finalised. Further stages will be decided depending upon the progress made in these years.

6.5 As regards the organisational arrangements for district and local level planning and for implementation in the first stage, planning and co-ordination will be done by the administrative agencies of the Government in consultation with representatives of the people and experts. The second stage will be one in which elected bodies will be set up and will be made responsible for local level planning and implementation.

6.6 The District Development Councils will continue their role of review of performance of the Plan programmes. A District Planning Committee will be constituted in each district to discharge the planning function. This Committee will be entrusted with the responsibility for the formulation, implementation and monitoring of District Plans. It will (a) initiate the work of plan formulation and issue general guidelines to the Sectoral Planning Committees (b) ensure the effective functioning of the Sectoral Planning Committees, (c) scrutinise the sectoral plans prepared by the sectoral planning committees from the point of view of technical feasibility, economic viability, sectoral linkages and district level priority, (d) prepare an integrated district plan based on the proposals of the sectoral planning committees taking into account the availability of financial resources, and (e) undertake regular reviews of the district plan programmes and take corrective measures wherever necessary.

6.7 In order to assist the District Planning Committee, five Sectoral Planning Committees will be constituted in each district for the following sectors of development:

- (a) Agriculture, Minor Irrigation, Forestry, Fishery and Co-operation.
- (b) Animal Husbandry, Dairying and Rural Development
- (c) Village and Small Scale Industries and Rural Electrification.
- (d) Rural Roads and Bridges.
- (e) Education, Health, Housing and other Social Services.

6.8. In each Sectoral Planning Committee in addition to officials there will be Members of the State Legislature or Parliament, not exceeding two in number and one or two professionals or academicians. No Member of the State Legislature or Parliament will be a member of more than two Sectoral Planning Committees. District level officials of the concerned development departments will also be members of these committees.

6.9. The District Collector, as Chairman of the District Planning Committee, will issue administrative sanction for each district sector scheme, chosen by the District Planning Committee, the outlay on which does not exceed Rs. 10 lakhs. Before recommending a scheme for implementation, the District Planning Committee, may wherever it feels necessary, request the Heads of Departments to offer their views on any particular scheme. Necessary changes in the budgeting procedures will be made to enable the district level bodies to operate directly the budget provisions intended for the district sector schemes and programmes. These arrangements for decentralisation will greatly increase the responsibilities of the District

Collector in the field of planning and development. In order to assist the District Collector in this task, the Revenue Divisional Officers and Sub Divisional Officers will be empowered to supervise and inspect the implementation of plan programmes. The District Planning Officers will assist the District Collector in the working of the new arrangement.

6.10. As stated elsewhere, decentralisation will be carried out in stages, Simultaneously equally. gradually, public participation in the process will be increased. Official participation, in the early stages, will be in a consultative/advisory capacity, in sanctioning schemes, in deciding locations and in reviewing progress. Eventually non-official participation will be through an elected body at the district and sub district levels with executive authority.

6.11. A Committee has been constituted to work out the detailed procedures to be followed at the district level in the formulation, implementation and monitoring of local level schemes, suggest changes required in the budgetary procedure etc. Based on the report of the Committee, guidelines for district planning will be formulated and implemented during the first year of the Seventh Plan, viz. 1985-86.

## MINIMUM NEEDS PROGRAMME

The National Minimum Needs Programme is a major poverty alleviation programme built into the planning process since the introduction of the Fifth Plan. This programme aims at providing the minimum requirements of social consumption items such as elementary education, drinking water, medical care, nutrition, house sites for the landless labourers, rural roads, rural electrification and slum clearance. Priority is given to allocation of funds to these programmes in the respective sectors.

7.2 Kerala was ahead of other states in many components of the Minimum Needs Programme when this was launched in the Fifth Plan. Therefore the State had to make marginal deviations from the all India norms under this programme. Today all the villages in the State are electrified and therefore rural electrification is excluded from the Minimum Needs Programme. The total outlay for the schemes under the Minimum Needs Programme during Seventh Five Year Plan (1985-90) total to Rs. 298.66 crores. The scheme-wise details of the programme are given below :—

### 1. Elementary Education

7.3 In the all India Plan for 1985-90, overriding priority is given to universal elementary education so that all children in the age-group 6-14 years are covered by the programme by 1990. The goal of giving free education to all the children in the age-group of 6-14 years is nearly achieved in Kerala. Hence a slight deviation from the all India norms for elementary education is necessary in Kerala. The State's programme envisages improvement in the quality of education, proper accommodation and other infrastructure facilities in the schools. Temporary/thatched sheds and dilapidated school buildings will be replaced by new ones.

An amount of Rs. 15.70 crores is earmarked for elementary education under the Minimum Needs Programme.

### 2. Adult Education

7.4 A large number of people have bypassed the formal system of education and they can be covered by non-formal and adult education. Attempts will be made to cover all illiterates in the age group 15-35 by 1990. However, this can be achieved only on the basis of a mass movement, involving many agencies, including students and voluntary organisations. To promote motivation among adult learners, appropriate and effective post-literacy programmes would be built up with adequate linkages to work and to further education. In Kerala a number of official and non-official agencies are involved in adult education programme. The programme included opening of adult education centres, conduct of training programmes for the resource persons, preparation of resource materials etc. In the Seventh Plan an outlay of Rs. 0.50 crore is set apart for adult education programme in the State.

### 3. Rural Health

7.5 India is committed to the goal of Health for All by 2000 A.D. For developing the country's vast

human resources and for accelerating socio-economic development and attaining an improved quality of life, primary health care has been accepted as the main instrument of action. In the Seventh Plan, emphasis will be laid on preventive and promotive aspects, and on organising effective and efficient health services which are comprehensive in nature, easily and widely available to and affordable by the people. Through the operation of the Minimum Needs Programme for health, stress will be laid on improvement of the quality of services rendered, backed by adequately strengthened infrastructure facilities.

7.6 In Kerala there is at least one medical dispensary (allopathy, ayurveda or homoeo) in every panchayat. On an average there are 124 beds per lakh of population. The death rate is low and the expectation of life at birth high. But the inter-regional disparity in medical facilities existing at present in the State remains to be tackled. This can be achieved by taking care of the lack of medical facilities in hinter lands. In the State Plan a total outlay of Rs. 10.97 crores is earmarked for this programme.

### (4) Rural Water Supply

7.7 The majority of the people of Kerala, depend on well water for drinking. But most of the wells dry up during summer months. There are also drought-prone areas and saline water areas. Most of the cities and towns in the State have piped water supply. But a large number of villages still need protected water supply. During the drought of 1983, deep wells have been dug in important centres in these villages. The strategy for rural water supply under Minimum Needs Programme is complete coverage of villages which do not have protected water supply. A number of rural water supply schemes are implemented as remunerative schemes with assistance from L.I.C. of India. This programme is to be continued depending on the availability of funds from Government and financial institutions. During the Seventh Plan period a sum of Rs. 135.89 crores is set apart for rural water supply under M.N.P.

### (5) Rural Roads

7.8 Kerala has a good network of roads. Most of the hinterlands are connected with district roads and State highways. But there are some places in the high lands and tribal areas which have lagged behind in the matter of communication. Due to the peculiarity of the climate in the State most of the roads become damaged after the rainy season. Hence the provision of all-weather roads is of prime importance in the State. The strategy of connecting all villages having population 1500 and above with all-weather roads will be continued in Seventh Plan also. In the Seventh Plan an outlay of Rs. 41 crores is provided to develop and improve on a priority basis the rural roads in which there is already vehicular traffic. Under M.N.P. the State PWD will undertake improvement of 775 kms. of roads during the Seventh Plan period.

## 6. House Sites and Houses for Landless Labour Households

7.9 Owing to the successful implementation of Land Reforms Act, a large number of labour households have acquired ownership of land suitable as house sites. About four lakhs of households, mostly those of agricultural labourers, have benefited from this. But their huts are too small and insecure. The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes has a large housing programme for rural workers. Besides provision of house sites and houses for landless labour households, the State gives attention to other rural housing programmes such as co-operative housing programme for economically weaker sections, village housing projects etc. An outlay of Rs. 14 crores is earmarked in the plan under the Minimum Needs Programme for allotting 5000 house-sites and providing assistance for construction of 40,000 houses.

## 7. The Environmental Improvement of Slums

7.10 Almost all the urban centres in the State face the problems of urban slums. The components of the programme, environmental improvement of slums are water supply, sewerage, paving of streets and provision of community latrines. The programme of demolition of slums should go hand in hand with the reconstruction and general environmental improvement. During Seventh Plan period, the Slum

Improvement Programme has to be expanded. There is necessity for providing security of tenure to the slum dwellers so that they develop a stake in maintaining and improving their habitat. Provision of infra-structure services of reasonable quality and adequate civic amenities together with widespread green belts would ensure safe and healthy environment. An outlay of Rs. 5 crores is provided in the Seventh Plan for the environmental improvement of urban slums under Minimum Needs Programme.

## 8. Nutrition

7.11 The problem of malnutrition is acute in Kerala. Malnutrition among children and pregnant and lactating women calls for proper attention in the plan. These sections will be served by supplementary feeding programmes which have to be integrated with health cover, immunisation and provision of potable water. Besides C.A.R.E. feeding programme, a number of other feeding programmes like Special Nutrition Programme, Applied Nutrition Programme, Composite Programme for Women and Pre-School Children, World Food Programme etc. are being implemented in the State. In the State's Seventh Plan, an outlay of Rs. 75 crores is provided for nutrition schemes under Minimum Needs Programme.

7.12 Table 7.1 shows the Seventh Plan outlays and physical targets set under the various programmes under M.N.P.

TABLE—7.1  
Minimum Needs Programme—Kerala, Seventh Plan and Annual Plan (1985-86)

Item	Unit	Target for 1985-90		Target for 1985-86	
		Physical (Quantity/No.)	Financial (Rs. lakhs)	Physical (Quantity/No.)	Financial (Rs. lakhs)
1. Elementary Education	Enrolment ('000 Nos.)	..	1570.00	..	237.00
2. Adult Education	No. of participants ('000) (15-35 years)	1500	50.00	300	8.00
3. Rural Health	No. of Primary Health Centres	50	1097.00	10	191.95
	No. of Subsidiary Health Centres	60		12	
	No. of Community Health Centres	10		2	
4. Rural Water Supply	No. of Villages covered by Piped Water Supply } (a) State Sector (b) Central Sector (A.R.P.)	1158	13589.00	1158	1897.00
		568		328	
5. Rural Roads	Length of Road (K.m.)	775	4100.00	155	620.00
6. House sites and Houses for landless labour households	Allotment of Sites (Nos.)	50000	1400.00	7500	200.00
	Construction Assistance (No.)	40000		5000	
7. Environmental improvement of urban slums	Cities covered (Nos.)	42	500.00	35	75.00
	Persons benefited (Nos.)	162500		37500	
8. Nutrition	Beneficiaries under Special Nutrition Programme ('000 s)				
	(a) ICDS				
	1. Children	470	7500.00	90	1191.50
	2. Women	52		10	
	1. Children	247		50	
	2. Women	28		6	
(b) Outside ICDS					
Total					
			29806.00		4420.45

## DEVELOPMENT OF SCIENCE AND TECHNOLOGY

In a State like Kerala, with a very high percentage of literacy and educated manpower and also high density of population, there is an urgent need for large scale infusion of modern science and technology in every aspect of development, be it in education, agriculture, industry or in environmental management. The State Committee on Science and Technology, set up in 1971, makes a "continuous" review of Science and Technology policies in relation to objectives of the successive Five Year Plans. The Committee is also 'responsible for the promotion of administrative autonomy for research laboratories and research institutions'. In 1977 the State Government formulated a Policy Resolution on Science and Technology which constitutes the philosophy for science and technology planning in the State. As indicated in the Seventh Plan Approach document, Science and Technology efforts should be integrated with the socio-economic development and appropriate linkages established between research laboratories, research in educational institutions, public sector undertakings, industry and other user organisations. It should be ensured that Science and Technology becomes essential and integral part of major sectors like agriculture, irrigation, power, transportation, chemicals, fertilisers, electronics, engineering industries etc. It is in these sectors that major plan investments are made and therefore they have direct effect on income and growth. If Science and Technology aspects in these areas are adequately taken care of, implementation of schemes will become more efficient.

8.2 It will be possible to strengthen the sphere of Science and Technology in Kerala in a three pronged approach:

(i) Strengthening the R&D activities of academic institutions by providing financial assistance from Scientific Research Fund to relevant and worthwhile projects.

(ii) Strengthening the research facilities attached to Governments and other agencies through co-ordinated programmes.

(iii) Development of specialised expertise through already established R&D centres and the starting of new centres in areas of priority.

8.3 'Environmental planning and environmental protection' also forms one of the major science and technology activities for which adequate attention has to be given in the Seventh Plan. This requires special emphasis in Kerala which has the highest density of population among the Indian States.

8.4 There is need for organising R&D studies under the different development sectors. This will facilitate the integration of science and technology into the mainstream of development planning. With this end in view provision is made in the State's Seventh Plan under each head of development for taking up appropriate R&D studies. During the Seventh Plan period the existing centres of excellence will be consolidated

and specialised academic programmes will be encouraged. The linkages between centres and user Departments will be strengthened. Support for basic research will be increased and more stress laid on studies relating to the state's resources. The activities of the centres of the excellence will be co-ordinated and links established with concerned Administrative Departments, Universities and other Institutions.

8.5 The State Committee on Science and Technology will have a programme of ecological and environmental studies and activities in collaboration with Departments and other agencies enlisting people's involvement, in areas and issues that are likely to cause pollution and environmental degradation. It would identify institutes and individuals to work on environmental research projects of direct relevance to the State. During the Plan period the Kerala State Pollution Control Board will be given adequate support to implement the laws in the area of pollution control such as the Water Act, Water Cess Act and Air Act. The Board will function in collaboration with the Centres of excellence such as CWRDM and CESS. Table 8.1 provides the data relating to the outlays set apart for Science, Technology and Research under various development sectors of the economy.

TABLE—8.1  
Seventh Plan (1985-90) & Annual Plan (1985-86)  
Science and Technology Component  
(Rs. crores)

Sector	Seventh Plan (1985-90)	Annual Plan (1985-86)
1. Agriculture	11.91	1.75
2. Marketing (World Bank aided)-Market Research	0.50	0.10
3. Land Use Board	2.96	1.20
4. Fisheries	0.75	0.15
5. Forests	2.15	0.26
6. Major and Medium Irrigation	10.00	2.00
7. Ground Water Board	0.05	0.01
8. Power	7.55	1.02
9. Handloom	0.05	0.01
10. Minerals	0.05	0.01
11. Transport	1.90	0.26
12. General Education and Cochin Technological University	1.05	0.20
13. Health	0.30	0.06
14. Housing	0.10	0.02
15. Urban Development	0.04	0.01
16. Welfare of Scheduled Castes and Scheduled Tribes	1.00	0.15
17. Nutrition	0.11	0.03
18. Scientific Services and Research	30.50	4.78
19. General Economic Services	1.01	0.27
Total	71.98	12.29



## SPECIAL COMPONENT PLAN AND TRIBAL SUB PLAN

**Special Component Plan**

The population of Scheduled Castes in Kerala constituted 8.3% of the total population as per 1971 Census. According to 1981 census they account for 10.02% of the total population. In the earlier plans for the development of Scheduled Castes efforts were concentrated mainly on educational schemes and as a result there have been notable increases in the enrolment of Scheduled Caste students in schools and colleges. The percentage of literacy among them according to 1971 census was 40 against the general literacy figure of 60 in the State as a whole. The corresponding percentages in 1981 are 56 and 70 respectively. But even now most of the Scheduled Caste families are characterised by below-the-poverty-line economic status, poor asset ownership, social backwardness and general dependence on agricultural labour.

**9.2** The Special Component Plan for Scheduled Castes is being prepared in Kerala since 1979-80. Under the Special Component Plan each development department will earmark a certain percentage of its plan outlay for programmes benefiting Scheduled Castes. This is done to ensure adequate flow of funds from the general sector programmes for the socio-economic development of Scheduled Castes in the State. Till 1982-83 the schemes under the Special Component Plan were drawn up and implemented by the different development departments. The schemes which were largely of a routine stereotyped nature were decided at the State level and implemented in the districts. As the programmes were formulated and implemented vertically by different heads of departments without being integrated at the local level, the programmes implemented could not produce the desired results. As a consequence the schemes in the Component Plan did not help to create the kind of sound economic base which is necessary to ensure regular incomes or employment opportunities to the beneficiary families.

**9.3** Since 1983-84 the formulation and implementation of schemes under the Special Component Plan were decentralised at the district level. 1983-84 being the first year of implementation, the concept of decentralisation could not be given effect to in all its aspects. But the implementation during the course of the year helped to throw up many issues. These were sorted out at different forums and detailed clarifications were issued to the departmental officers during the various review meetings. Based on the experience of nearly two years of implementation of the SCP at the district level, operational procedures required for the formulation and implementation of the Special Component Plan schemes will be streamlined during the Seventh Plan period. This will help to create community involvement and participation in the district planning process.

**9.4** One round of Scheduled Caste Habitat Survey was carried out in 1982. This has helped to identify about 4000 Scheduled Caste habitats in the State covering 24% of the Scheduled Caste population. It

is proposed to undertake another round of the survey so as to bring under the purview of Component plan as many Scheduled Caste habitats as possible. In order to enable the Scheduled Caste families to cross the poverty line a package of suitable schemes will be identified for each selected family under different programmes.

**9.5** Under the Habitat Survey, the basic data in respect of each Scheduled Caste habitat will be collected in a prescribed format. Details such as infrastructure facilities available at present, the occupational characteristics of the Scheduled Caste workers, their educational qualifications, etc. would be collected. A package of family oriented programmes will be identified based on discussions with the beneficiary families taking into account the current occupations of the family members representatives of Scheduled Caste Associations, panchayat members, knowledgeable persons in the locality, etc. The programmes will be drawn up with the objective of enabling all the indigent Scheduled Caste families in the habitat cross the poverty line within five years. Simultaneously, programmes for the development of the habitat will also be prepared. Thus it will be possible to formulate composite programmes for the development of the area as well as development of the Scheduled Caste families involving the coordinated efforts of different departments. The programmes identified through this exercise will be generally small and simple ones which do not require extensive feasibility studies or elaborate cost-benefit appraisals.

**9.6** Both in the Seventh Plan and the Annual Plan 1985-86 the outlays for special component plan schemes have been provided in lump under each head of development. These outlays will be distributed among the districts on the basis of selected indicators. In each district a working-group constituted with District Collector as Chairman is responsible for the formulation of schemes under the Special Component Plan. The schemes are broadly classified under three heads viz. (a) Institutions, (b) Infrastructure, and (c) economic development. The District working-groups are not expected to sanction schemes relating to 'institutions' especially when they involve creation of additional staff. Sanction is to be given by the Government or by the Head of the Department as the case may be. But the sanctioning authority is expected to consult the District level working-groups in fixing the locations of the Institutions. Most of the infrastructure development schemes and all economic development schemes are to be sanctioned at the district level. In respect of continuing departmental programmes attempts are being made to club the relevant schemes so as to bring them under a package which would lead to substantial income generation to the beneficiary families. The working-groups can sanction schemes up to Rs. 10 lakhs. It is the responsibility of the working groups to ensure that such schemes are properly co-ordinated with the rest of the Plan as at the habitat level and family level.



The District Annual Plan will be placed before the respective District Advisory Committee for Scheduled Castes before it is approved.

9.7 The responsibility for the implementation rests with the departments. But the responsibility for achieving the targets in different departments rests with the District Collector, the working-group and the development departments. It is proposed to introduce a family card system under which the benefits received by each family from different programmes will be recorded in the family card. A Habitat Register will also be introduced so that the details of the development activities taken up in each habitat could be recorded in the Register.

#### Tribal Area Sub-plan

9.8 According to 1981 census the total tribal population in Kerala is 2.61 lakhs which works out to 1.03 per cent of the total population. The literacy rate of Scheduled Tribes in Kerala is 37.79% against the general literacy rate of 70.42. This shows that though there had been considerable improvement in the literacy rate of Scheduled Tribes in recent years the gap between the general literacy level and the literacy level of Scheduled Tribes is still wide. In spite of several development programmes chalked out for the overall development of tribal communities, certain tribal groups still suffer from poverty, malnutrition and illiteracy on a large scale. Alienation and dispossession of land that had occurred over the past is a serious problem facing the tribal communities.

9.9 The concept of Tribal Sub-Plan was introduced during the Fifth Plan period. But only in the Sixth Plan the I. T. D. projects started functioning in the State. In respect of this State the specified norms for the identification of Tribal Development project have been relaxed so as to cover a reasonable proportion of tribal population under Tribal Sub-Plan.

Accordingly five Tribal Development Projects viz. (1) Punalur (2) Idukki, (3) Nilambur (4) Manantoddy and (5) Attappady were identified covering 76% of the tribal population in Kerala. The I. T. D. Project, Attappady, started functioning in 1976 by the conversion of the Tribal Development Block, Attappady. In the case of other I. T. D. projects development efforts with an integrated approach were carried out with the existing administrative machinery. During the Sixth Plan period project reports for the remaining Integrated Tribal Development Projects were prepared and staff support was provided. Substantial funds were made available for the Tribal Sub-plan from the general sector programmes of various development departments.

9.10 Government have laid down the procedure for implementation of schemes taken up under general sector flow of funds as well as Special Central Assistance. Government have also delegated adequate powers to the project officers of I. T. D. projects. In the Seventh Plan it is expected to provide full staff support to the I. T. D. projects for the effective implementation of programmes. The District Collectors and Project Officers of I. T. D. projects have already been authorised to decide the schemes to be implemented in this Sub-Plan areas. The Project Officers will prepare annual action plans and place it before the Project Advisory Committee for approval. For preparing such action plans priority will be given to family oriented economic development schemes which will enable the tribal families to cross the poverty line before the end of the Plan period. The Seventh Plan programmes are formulated so as to cover the entire tribal population, whether living in Sub-Plan areas or outside, under suitable development programmes which will help to bridge the gap between the level of development of tribal people and general population.

TABLE 9.1

(Rs. in Crores)

Sl. No.	Head of Development	Total Outlay		Flow to S.G.P.		Flow to T.S.P.		Total Flow	
		1985-90	1985-86	1985-90	1985-86	1985-90	1985-86	1985-90	1985-86
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Agriculture and Allied Services	384.00	64.43	30.90	5.52	7.06	1.35	37.96	6.87
2.	Rural Development	122.60	20.89	30.54	5.37	5.81	0.97	36.35	6.34
3.	Co-operation	38.00	6.81	4.60	0.80	0.60	0.09	5.20	0.89
4.	Minor Irrigation	70.00	9.94	5.00	0.75	1.00	0.20	6.00	0.95
5.	Power	650.00	100.00	30.00	5.00	2.40	0.50	32.40	5.50
6.	Village and Small Industries	120.00	18.85	10.85	1.71	1.17	0.20	12.03	1.92
7.	Roads and Bridges	200.00	56.00	25.50	5.10	4.00	0.80	29.50	5.90
8.	Social and Community Services	606.00	95.81	104.30	18.18	21.09	4.15	125.38	22.33
9.	Others (Non-divisible)	1109.40	176.27	..	..	..	..	..	..
Total		3300.00	549.00	241.69	42.43	43.13	8.26	284.82	50.70

## WOMEN AND DEVELOPMENT

Participation of women in economic activity on an increasing scale is the general trend in all parts of the world. The uplift of the status of women and providing them with adequate employment have assumed international importance. Employment opportunities for women in India have considerably expanded since the inception of the Plan era. Urbanisation and modernisation had considerable impact on employment of women in India. The overall participation of women in almost all activities has increased during the past decade. A large percentage of the women workers are however employed in agriculture and allied occupations.

10.2 A study conducted by the Labour and Employment Division of the Planning Commission revealed that definite increase in employment of women has taken place in spheres like coal mining, tobacco, cultivation, basic iron and steel works, printing and related industries and educational services during the past few decades. The nature of the household economy in India compels women workers to seek employment mainly in casual occupations. Women are found suitable for relatively less strenuous agricultural operations like weeding, sowing, harvesting etc. Women are employed mainly as casual workers in seasonal agricultural operations.

10.3 The change in social values, a more liberal outlook towards women and change in the attitudes of women themselves have created a favourable atmosphere for Indian women to assert their rights. The majority of modern women prefer to be employed with the aim of improving their social and economic status. As stated in the Seventh Plan Approach paper, 'an integrated, multi-disciplinary, developmental approach will have to be adopted covering employment, health, family planning, education, nutrition, application of science and technology' for the economic and social development of women. This would require effective co-ordination of the sectoral programmes at the block, district, state and central levels. Rural women can be provided with suitable training on farm technologies, animal husbandry techniques and care and management of poultry. Horticulture is another area in which rural women can be trained. Educated and skilled women could not only get employment in sophisticated industries like electronics, but can be encouraged to run industrial units of their own. Kerala, which has a literate women labour force, will be able to provide more employment opportunities for women during the Seventh Plan period.

10.4 Kerala leads the other Indian States in the matter of education and employment of women folk. Literacy rate among women is as high as 65% in Kerala. The women of Kerala are emerging out of the traditional restrictions imposed by society and customs and are at present working in almost all types of jobs. In Kerala more women are employed in agricultural and industrial sectors as agricultural labourers, casual labourers and industrial workers than in the service sector.

10.5 More than half the number of female workers in the State are working in the agricultural sector, the vast majority of them being employed as agricultural labourers. The data relating to factory employment in the various states in India reveal that Kerala is comparatively better placed as regards employment of women in factory sector. In Kerala nearly 38% of the factory employees are women as against only 9% in the country as a whole. In Andhra the percentage is 30 and in Tamil Nadu and Karnataka it is 15 and 13 respectively. In all the other States in India, the employment of women in the factory sector is below 10%.

10.6 There is disparity in the wage rates for men and women from very early days. Attempts are now being made to bring about equality in the wage levels of the two categories of workers. In Kerala wages for agricultural and construction workers are higher compared to their counterparts in most other States. The wages for women workers in Kerala are also comparatively high. Agricultural wages, especially for women in Kerala, increased at a faster rate during the last few years. In the industrial sector the wage rates for male workers are generally higher than that for female workers. In service groups like teaching, medicine, social welfare etc. female workers have been increasing in their relative strength.

10.7 In the Seventh Plan specific programmes are included for the welfare and development of women in sectors like rural development, community development, co-operation, small scale industries, health, social welfare, labour and labour welfare, welfare of scheduled castes and tribes, fisheries and sports and youth welfare. In the area of large and medium industries also industrial ventures like KELTRON give preference to women workers in their product assembly Divisions and in the precision instruments manufacturing units. Though the Seventh Plan schemes which are specifically earmarked, for the development of women are limited in number most of the general sector's schemes have an indirect impact on employment and welfare of women.



## CHAPTER 11

### SECTORAL PROGRAMMES

#### 11:1 Agriculture and Allied Sectors

##### Agriculture

More than 87% of the operational holdings in the State fall below one hectare in size. Majority of the farmers in the State are therefore marginal farmers. Unemployment, under employment and a high wage structure co-exist in the agricultural sector. All efforts have to be made in the Seventh Plan to increase rice production in the State because it remained more or less stagnant during the Sixth Plan period. Pulses and oilseeds production also needs to be stepped up substantially. A disturbing trend noticed in the matter of the important commercial crops in the State is a decline in their productivity. The unprecedented drought in 1983-84 caused severe damage to the perennial crops. The task of revival of these cash crops especially coconut, arecanut, cashew, pepper and other spices has to be undertaken in the Seventh Plan. The objective should be reversal of the declining trend in productivity of these crops. Conjunctive use of surface water and ground water, establishment of community wells and tanks for irrigation etc., are required so that an optimum cropping pattern could be resorted to for increasing income and employment in the agricultural sector. A micro-water-shed management approach to make maximum use of the available rainfall for agricultural production will be another major objective of the Plan. Adequate and timely availability of inputs of assured quality at stable prices and effective quality control measures especially on fertilizers, pesticides, HYV seeds and other planting materials will receive more emphasis during the Plan period. Proper use of inputs by the economically vulnerable groups like small farmers, marginal farmers and SC/ST farmers needs to be encouraged. Horticulture development, especially fruit and vegetable production needs further exploitation in order to diversify agricultural production as well as employment opportunities.

The major objectives of the Seventh Plan in crop production are:—

(a) increase in rice production through greater coverage of the high yield varieties programme.

(b) increase in pulses production through intercropping as well as bringing larger area of the summer rice follows under pulses cultivation,

(c) increase in the production of seasonal oil seed crops like groundnut and sesamum by bringing more area under these crops, distribution of high yielding varieties of seeds and popularisation of scientific cultivation practices through vigorous extension activities,

(d) arresting the declining trend in production of coconut by short and long range measures and by increasing productivity and production of this crop in a phased manner,

(e) increase in the profitability of tapioca cultivation through increase in productivity and improvement of marketing facilities,

(f) increase in productivity and production of pepper by rejuvenating the existing pepper plantations through gap filling and replanting with improved varieties and scientific management practices, as well as effective plant protection measures,

(g) increase in the area under cashew and improvement in productivity and production of cashew through varietal improvement, plant protection, extensive cultivation, distribution of good quality planting materials and manurial practices,

(h) encouragement of production of horticultural crops especially fruits and vegetables through a comprehensive programme for supply of quality planting materials and other supportive measures,

(i) provision of effective plant protection service through timely supply of plant protection chemicals, plant protection equipment and advice, as well as pesticides and quality control measures,

(j) Promotion of indigenous manurial resources by encouraging compost production, cultivation of green manure crops and recycling of agricultural wastes,

(k) increase in fodder production through intercropping and planting of fodder trees and

(l) strengthening of information and communication service in the agricultural sector with the aid of mass media like the Press, All India Radio and Television.

#### Scheme-wise description is given below:

*Research and Education.*—Investment in agricultural education and research has the objective of making available trained personnel for manning research and development activities. Hence there is need for streamlining research, education and training in the agricultural sector during the Seventh Plan period.

(a) *Education.*—Traditional diploma, graduate, post graduate and research courses in fields such as agricultural and rural engineering and veterinary sciences will be continued in the Kerala Agricultural University. The University also proposes to start new under-graduate courses in home science, forestry and dairy technology and post-graduate

courses in fisheries and co-operation and banking during the Plan period. Improvement of the laboratories and libraries, providing additional, accommodation for the students and staff, students welfare activities and strengthening of the various departments under the College of Agriculture, College of Horticulture and College of Veterinary and Animal Sciences are also envisaged. Establishment of an Institute of Extension Education Technology at Mannuthy and a Training Centre at Thavanur and extension education units in the Regional Agricultural Research Stations to cater to the demands of the affluent cultivators etc., are envisaged as the new programmes under extension education. The Seventh Plan outlay for agricultural education is Rs. 1309 lakhs. The provision in the Annual Plan 1985-86 is Rs. 200 lakhs.

(b) *Research*.—Agricultural research in the Seventh Plan will give particular stress to studies on a system approach to farming with a view to increase the net income per unit area. They will also be directed at bringing out improved agricultural implements designed to increase efficiency and reduce the drudgery. It is proposed to strengthen the research activities in fisheries especially to bring out economically viable technologies for inland fisheries and integrated farming involving crops, animals, birds and fish. Advanced studies in animal breeding and animal diseases, studies on agro-energy, post-harvest technology, socio-economic studies of farming community and cost-benefit analysis of the different research programmes are proposed. Centres of advanced studies in humid tropical trees, plant protection, oil seeds and pulses, research on agronomy, weed control etc., will also be undertaken. A multi-faculty-multi-disciplinary centre for biotechnology research is also proposed to be set up. The outlay for agricultural research in the Seventh Plan is Rs. 1191 lakhs. The provision for 1985-86 is Rs. 175 lakhs.

## CROP HUSBANDRY

### 1. *Direction and Administration*

(a) *Kerala Agricultural Extension Project (KAEP)*.—The Kerala Agricultural Extension Project (KAEP) based on the Training and Visit system of extension with World Bank aid is being implemented in the State. The extension machinery under this system is to be geared to achieve the goal of increased production through rapid dissemination of technology. The outlay is for continuance of the KAEP. Strengthening the infrastructure with additional staff and equipment is also envisaged. The outlay for Seventh Plan is Rs. 2366.15 lakhs. The provision for 1985-86 is Rs. 370 lakhs.

(b) *National Agricultural Extension Project (NAEP)*.—In the implementation of the KAEP certain gaps and deficiencies in the extension system have emerged. A wide ratio between the Village Level Worker and Farm Families (1 : 3000), a reduction in the departmental input supply and service points, inadequacies in in-service training facilities for inculcating basic training to the field

staff etc., are a few of them. In order to take care of these problems, a National Agricultural Extension Project (NAEP) is being conceived at national level to support the States which have adopted the T & V system. The plan provision is to meet the State's share towards the above new project. This also includes expenditure on staff, construction of buildings, vehicle advance to field staff, purchase of audio-visual aids and computer. The provision for the Seventh Plan is Rs. 252.50 lakhs. The outlay for the first year (1985-86) is Rs. 30 lakhs.

### 2. *Multiplication and Distribution of Seeds*

Distribution of high yielding variety of paddy seeds is vital for spreading HYV which is one of the surest short term measures for increasing production of rice. Seeds once supplied have to be replaced once in three years for maintaining purity. In order to achieve this HYV seed supply to at least two lakh hectares every year has to be made. This is sought to be achieved by (i) increasing the cropping intensity in existing seed farms by providing adequate infrastructure facilities (ii) organising registered seed growers in compact areas in the traditional rice tracts around seed farms and (iii) purchase and distribution of HYV seeds from NSC and other authorised agencies. The outlay is meant for improving infrastructure facilities in seed farms, installation of mechanical seed processing units, incentive subsidies and bonus for the seed producers and suppliers, seed treatment, handling and processing charges, compensatory grant for distributing agencies, to make good the loss due to undisposed seed stock as well as subsidy towards sale of seeds to farmers provision of motor cycles to field staff and staff cost. This also includes provision for the maintenance of the existing Seed Testing Laboratory, construction of Seed Testing Laboratory and purchase of equipment and chemicals. Contribution from Centrally Sponsored Scheme towards equipping the Seed Testing Laboratory is also anticipated. The outlay for Seventh Plan is Rs. 1616 lakhs of which the first year (1985-86) provision is Rs. 98.25 lakhs. In addition 50% State share towards the Centrally Sponsored Scheme for Seed Certification and Quality Control is also provided. The outlay for this is Rs. 5.55 lakhs for 1985-90 of which Rs. 1.75 lakhs is for 1985-86.

### 3. *Agricultural Farms*

The 34 state seed farms, 9 district agricultural farms and 5 other farms require improvements of infrastructure facilities, construction of buildings, including staff quarters, on-farm development, fencing, irrigation etc. Intensification of production and distribution of quality seeds and planting materials of fruit plants, spices, vegetables, paddy seeds etc., are envisaged under this programme. The Seventh Plan outlay for this scheme is Rs. 751 lakhs. The provision for first year (1985-86) is Rs. 50 lakhs.

### 4. *Manures and Fertilizers*

Along with emphasis for augmenting local manurial resources a policy of promoting fertilizer input has to be pursued in the Seventh Plan.

A target of two lakh tonnes of fertilizer off-take in terms of nutrients is envisaged in the terminal year of the Plan assuming an annual growth rate of 11% in the fertilizer off-take.

Distribution of mini kits of green manure seeds, at 100% subsidy to a farmer once only during the Plan period covering 12.5 lakh farmers in the State, distribution of soil ameliorants like calcium carbonate at 50% subsidy to the problem rice growing tracts where soil acidity and organic matter content are excessively high, distribution of zinc sulphate at 50% subsidy to ill-drained paddy fields with zinc deficiency, soil sample collection and analysis on a campaign basis as a support for low cost technology as well as to promote judicious fertilizer use, pre-season training camps during the three rice crop seasons in an year to the cultivators to promote fertilizer use, mobile fertilizer shops in collaboration with fertilizer firms to distribute small packets of fertilizers to make fertilizers easily available in time to all rural areas, effective publicity on fertilizer use are the essential components of this programme. In order to advise farmers on micro-nutrient use, to correct thereby the critical constraints on soil fertility, a micro-nutrient laboratory is also to be established. To ensure the quality of the fertilizer distributed by a large net work of agencies in the State and to prevent malpractices and adulteration by enforcing the fertilizer control order, it is necessary to strengthen the quality control measures. The existing two fertilizer testing laboratories can only analyse 2000 samples per year whereas the requirement by the last year of the Plan will be 20000 samples for analysis. To achieve it, the present laboratories have to be strengthened and two more laboratories have to be newly established. The outlay is for meeting the subsidy portion of the cost of green manure seeds, soil ameliorants and expenditure on soil analysis, micro-nutrient analysis, fertilizer promotion programmes, establishment of new laboratories, purchase of vehicles, equipment and chemicals, strengthening the organisational set up for quality control at District and State level, construction of buildings to accommodate laboratories and the cost on additional staff required under these programmes. An amount of Rs. 638.45 lakhs is provided for the Seventh Plan period, of which the first year (1985-86) provision is Rs. 70 lakhs.

### 5. Plant Protection

A comprehensive policy for need based application of plant protection measures guided by exhaustive pest and disease surveillance is envisaged in the Plan. It is aimed at bringing 20 lakh hectares (two third of the gross area) under effective plant protection coverage. The major components of the programme are:

#### (a) Plant Protection Service:—

- (1) Supply of cost subsidised plant protection equipment to farmers,
- (2) Replacement and maintenance of departmental stock of plant protection equipment for extending custom service,
- (3) Replacement of unserviceable vehicles for emergency squad,

- (4) Strengthening of parasite breeding stations,
- (5) Contingency plan to tackle sudden pest and disease outbreaks,

(6) Weed control using modern chemical weed control measures giving 50% subsidy on cost of chemicals used for control of weeds in food crops, and conducting demonstrations at the rate of two demonstrations per agricultural development unit for popularising modern chemical weed control measures,

(7) Training to artisans, agricultural labourers and farmers on plant protection methods, maintenance and repair of plant protection equipments and safe use of poisonous plant protection chemicals,

(8) Popularising the use of storage pesticides by distributing them at 50% subsidised rate.

(9) Replacement of unserviceable mobile plant protection vans and

(10) Periodic remote-sensing of the disease incidence on coconut to study the extent of damage caused to the crop (once in five years). The outlay is for meeting expenditure towards subsidy to farmers, demonstration charges, purchase of vehicles and equipments, construction of buildings and other operational charges inclusive of additional staff cost and training costs.

The outlay for these programmes in Seventh Plan (1985-90) is Rs. 241.15 lakhs. Of this the provision for first year (1985-86) is Rs. 29.03 lakhs.

(b) The following are the Centrally Sponsored Schemes for which State share has been included.

(1) Establishment of Pest and Disease Surveillance units (25% State share). Outlay for Seventh Plan is Rs. 23.90 lakhs. The first year (1985-86) provision is Rs. 5.58 lakhs.

(2) Enforcement of Domestic Quarantine (25% State share). The outlay for Seventh Plan is Rs. 22.80 lakhs. First year (1985-86) provision is Rs. 5 lakhs.

(3) Control of Brown Plant Hopper in Endemic Areas (50% State share) outlay for the Seventh Plan is Rs. 30 lakhs. First Year (1985-86) provision is Rs. 6.00 lakhs.

### 6. Commercial Crops

#### (i) Pulses

In order to increase the total production of pulses in the State it is proposed to (a) increase the total area under pulses and (b) increase the productivity of pulses through better management practices, use of improved varieties of seeds etc. The major components of the programme envisaged are :—

- (i) Laying out demonstration plots,
- (ii) Distribution of improved seeds at subsidised rate to 10% of the traditional area and the entire additional area brought under pulses cultivation every year,

(iii) Supply of plant protection equipments at 50% subsidy to promote plant protection practices among pulses growers.

(iv) Maintenance and strengthening of the microbiological laboratory for production and distribution of rhizobium culture and

(v) Continuance of the Head Quarters Staff under the Centrally Sponsored Scheme.

The outlay for Seventh Plan is Rs. 53.60 lakhs of which the provision for 1985-86 is Rs. 10.72 lakhs. The outlay is the 50% State share towards implementation of the Centrally Sponsored Scheme.

### (ii) Tuber Crops

The production of tuber crops, an important supplementary food in the State, has recently become unstable due to low profitability. These crops have shown good response to fertilizer application even under rainfed conditions. As increase in productivity alone can make the cultivation profitable. The following programmes to improve the productivity of tapioca and other minor tubers are envisaged:—

(a) Multiplication of promising varieties of planting materials in the departmental farms and distribution of the same in free mini-kits, and

(b) Laying out of demonstration plots for popularising the scientific cultivation practices, especially fertilizer use.

Outlay for Seventh Plan is Rs. 54.25 lakhs. An amount of Rs. 10.85 lakhs is provided for 1985-86.

### (iii) Oil Seeds

(a) *Development of Seasonal Oil Seeds—Groundnut and Sesamum—(State Share).*—Area expansion and productivity increase are the two measures envisaged for increasing the production of seasonal oil seed crops like groundnut and sesamum in the State. Laying out demonstration plots to popularise scientific cultivation practices and control of tikka disease are the two programmes for development of groundnut cultivation. Multiplication and procurement of improved varieties of sesamum seeds for distribution under mini-kit programme, laying out demonstration plots, varietal trials to find out adaptability of new varieties are the programmes for sesamum development. The scheme is proposed as a Centrally Sponsored Scheme with 50% Central assistance and the outlay is only the 50% State share required. The amount provided for meeting the State share during the Seventh Plan is Rs. 17 lakhs, of which Rs. 3.40 lakhs is for 1985-86.

(b) *Development of Perennial Oil Seeds—Coconut—(State Share).*—The most important perennial oil seed is coconut which is substantially grown in the small holder sector. For some years now coconut production and productivity have been declining. This adversely affects the economy of not only 2.5 million small holdings but also employment both in the primary and secondary sectors. The recent drought in the State has worsened the already deplorable situation of this crop further. Measures to arrest the

declining trend in production and productivity and improve the performance of this crop in the State therefore need top priority. It has been established that this crop responds well to irrigation, fertilizers and management. The debilitating root (wilt) disease, the major cause attributed for declining trend in productivity for which no remedial measures have so far been found have to be taken particular care of. In the absence of proven remedial measures, programmes to counter it like removal of the diseased trees and replanting with good quality seedlings need be resorted to immediately in the identified disease tracts. It has been estimated that about 1215 crores of trees in the State in six districts have been affected by the disease. These trees, in an advanced stages of disease have to be cut and removed urgently. Seedlings for replanting these vacancies have to be produced and distributed at subsidised rate. A large number of old, senile and uneconomic trees in the State also contribute substantially to the declining trend in productivity. These trees also have to be removed and replanted. Farmers have to be compensated for the trees so cut and removed. Coconut leaf diseases which contribute to the low productivity of this crop could effectively be controlled by proper spraying.

At least 2% of the coconut trees in the State need be replanted every year. About 34 lakhs of coconut seedlings are required for this. The present level of production of coconut seedlings in the departmental nurseries in the State is about 16 lakhs per year. It has to be increased to atleast 25 lakhs per year, the remaining to be produced by private nurseries. Private nurseries have to be brought under effective quality control. The development of indigenous manurial resources, especially growing of green manure crops in coconut gardens and incorporating it *in situ* also requires to be popularised to improve the fertility of soil. A comprehensive programme for the development of coconut with the following components is envisaged in the Seventh Plan.

1. Production and distribution of quality coconut seedlings by strengthening the existing 22 coconut nurseries and also starting new nurseries. This involves additional infrastructure like irrigation units permanent shading, fencing, construction of staff quarters etc. Since this activity brings back a revenue by way of sale proceeds of the seedlings produced, it is proposed to introduce a revolving fund which will take care of the recurring expenditure on seedling production. The difference between the production cost and sale proceeds is borne on the Plan outlay.

2. Removal of diseased/uneconomic trees by cutting and removing them. The farmer will be given compensation of Rs. 150 per tree so cut and a good quality coconut seedling at 50% subsidised cost for replanting.

3. Irrigation and moisture conservation programmes in coconut gardens by providing incentives for installation of irrigation units like filter point tubewells/wells/tanks etc., with pumpsets. On an average Rs. 2,000/per irrigation unit will be given to the farmer as incentive. Conventional moisture conservation methods like burial of husk *in situ* around the coconut, mulching etc., will be popularised under this programme through the extension machinery.

4 Fertilizer promotion by giving free fertilizer minikits for five trees per holding to all the coconut holdings below one ha. in size in the State for three consecutive years during the plan period.

5. Spraying for control of coconut leaf diseases, by giving the fungicide at 50% subsidised cost to the farmers. The plant protection equipment required for spraying will be made available to the farmers by the Department at nominal hire charges.

6. Supply of magnesium sulphate to rectify a deficiency generally noticed in the coconut gardens. The chemical required will be supplied at 50% subsidised cost.

7. Pre-season training to the coconut cultivators on scientific crop management will be given in all the Agricultural Development Units.

The outlay is for meeting the 50% State share towards grants and subsidies to farmers, expenditure on infrastructure development in nurseries, procurement of seednuts, purchase of vehicles, maintenance of vehicles and plant protection equipments, cost of staff of ongoing centrally sponsored schemes and additional staff required for implementation of the above scheme. The state share of the outlay for the Seventh Plan is Rs. 3709.40 lakhs. The first year (1985-86) provision is Rs. 602.18 lakhs.

#### (iv) *Cashew Development*

Area expansion and productivity increase are the two major strategies envisaged to achieve increase in production of cashew in the State. While area expansion will be sought to be achieved under the Multi-State Cashew Project implemented with World Bank Aid, the short term measures aimed at achieving increase in productivity increase will include programmes to promote scientific management, fertilizer use and effective plant protection coverage to control off major pest of cashew viz., tea mosquito. In order to popularise scientific management of cashew plantations, demonstration plots will be laid out in important cashew growing areas. For control of tea mosquito which causes severe damage to cashew production, exhaustive spraying of the cashew trees at the flushing season will be arranged by the Department at a nominal cost to the cultivators, the cost of chemicals and other operational charges being met by the Department. To encourage the use of fertilizers which is a sure means of increasing cashew production, fertilizer subsidies will be extended to small holders. Improving the genetical base of the cultivated varieties of cashew is the long range policy envisaged for increased production. To achieve it the existing stock will be replaced gradually with High Yielding Variety Cashew. Production and distribution of planting materials of proven varieties will be undertaken by the Department, by organising progeny orchards in the District Agricultural Farms. Necessary training for mass production of cashew grafts will also be given to the farm labourers. The programmes include a State Support Scheme to the Multi-State Cashew Project (MSCP) for follow up of MSCP during the post-project period.

(a) *Multi State Cashew Project*—The term of Multi-State Cashew Project is to be completed by the end of 1984-85. It is expected that the Project will be extended by one more year. The spillover target of the area expansion and construction of roads will be undertaken in 1985-86. The outlay for Seventh Plan is Rs. 40 lakhs which will be utilised during the first year (1985-86).

(b) *Support Programme for MSCP*—Though the planting programme under MSCP will be over by 1985-86 follow up activities like disbursement of the further instalments of the loans, watching the utilisation, extension support for the proper maintenance of the plantations etc., have to be continued during the next four years. Minimum organisational support, needed for the above activities will be retained. The services of the staff so retained will be utilised for the implementation of the other centrally sponsored schemes for which no separate staff has been provided. The outlay is Rs. 60 lakhs for the plan period. The programme will start only from the second year (1986-87) of the Plan.

(c) *Comprehensive Programme for Cashew Development*—The ongoing centrally sponsored schemes viz., (i) spraying for the control of tea mosquito (ii) cashew demonstration, and (iii) cashew plantation in private sector will be continued in the Seventh Plan. New component like production and distribution of planting materials of improved varieties of cashew, and training are also proposed under the centrally sponsored schemes. The outlay is for meeting 50% of the State share towards spraying cost, demonstration charges, training and cost of production and distribution of planting materials of improved varieties of cashew. Outlay for Seventh Plan is Rs. 159.14 lakhs of which the first year (1985-86) provision is Rs. 34.14 lakhs.

#### (v) *Areca nut Development*

New improved variety like "Mangala" needs to be popularised and for this seedlings have to be produced in the Departmental Farms. Also, the "Mahali" disease of areca nut has to be effectively controlled to avoid the heavy loss in production due to this disease. The programmes for this crop include:—

(a) Production and distribution of seedlings of improved varieties of Areca nut at nominal cost.

(b) Spraying for the control of Mahali disease. Two rounds of spraying over 5000 hectares per year for which the required chemical will be supplied at 50% cost.

The outlay is for meeting the production cost of seedlings in Departmental farms and 50 % cost of plant protection chemicals. An amount of Rs. 42.50 lakhs is provided for the plan period. The outlay for first year (1985-86) is Rs. 8.50 lakhs.

#### (vi) *Cotton Development*

The programmes for cotton development include distribution of improved varieties of cotton seeds at 50 % subsidy to at least 500 hectares per year. The outlay for Seventh Plan (1985-90) is Rs. 10 lakhs. First year's (1985-86) provision is Rs. 2 lakhs



*(vii) Sugarcane Development*

Dearth of quality planting materials suited to specific locations, inadequate plant protection measures, unscientific agronomic practices, lack of irrigation etc., are major constraints responsible for low productivity of cane in the State. The programmes envisaged include :

(a) Production and distribution of sets of improved varieties of sugarcane in the factory zones. Selected registered growers will be supplied with seed materials of improved varieties free of cost. The seed treatment charges limited to Rs. 30 per tonne of seed and a production bonus at the rate of Rs. 30 per tonne of seed produced and distributed, will also be given to the registered growers. An area of 30 ha. in the 1st year, 60 ha. in the second year and 90 ha. each during 3rd, 4th and 5th year will be brought under the registered seed growers programme.

(b) Effective plant protection has to be popularised especially against the critical pests and diseases by giving an incentive subsidy of Rs. 100 per ha. towards cost of chemicals to the sugarcane growers.

An outlay of Rs. 24.35 lakhs is provided for the Seventh Plan. The provision for first year (1985-86) is Rs. 3.78 lakhs.

*(viii) Cocoa*

Until the cocoa processing factories are established, the activities for cocoa development will be concentrated mainly to extension work to increase the productivity of the existing cocoa gardens in the State. Thereafter, based on the market demand, programmes for expansion of cocoa cultivation as an inter crop in coconut gardens and other suitable areas will be undertaken. The outlay for Seventh Five Year Plan is Rs. 9.20 lakhs. Of this Rs. 0.10 lakh is provided for the first year (1985-86).

*(ix) Development of Spices*

(i) *Pepper*—Pepper, an export oriented crop, has recently shown a declining trend in productivity. Apart from a large number of old and unproductive or damaged vines in pepper gardens, the attack of pollen beetle, slow and quick wilt diseases and poor management contribute substantially to the declining productivity. Increasing the plant population per hectare, replanting progressively with quality pepper vines, gap filling and effective plant protection and application of fertilizer are measures which have to be immediately resorted to for rejuvenating the pepper gardens and stepping up the productivity, and production of pepper, which has suffered severe damages during the recent drought in the State. The following programmes, therefore, are envisaged in the Seventh Plan to achieve the goal :

(a) Production and distribution of rooted pepper cuttings of improved and promising varieties. In order to increase the production of rooted cuttings from about 25 lakh to 40 lakh per year,

through rapid multiplication, the infrastructure facilities in the pepper nurseries have to be increased.

(b) Popularisation of scientific management by organising special training camps in the important pepper growing tracts in the State.

(c) Distribution of free fertilizer minikits to the pepper cultivators to popularise the use of fertilizers in a balanced dose. One minikit per holding to cover 10 standards will be distributed.

(d) Special plant protection efforts for control of Pollu beetle, slow and quick wilt diseases by giving the chemicals required at 50 per cent subsidised rate and organising massive spraying programmes on a campaign basis in the proper season.

The outlay is for meeting the cost of production of rooted pepper cuttings, incentives to farmers, expenditure on infrastructure development in pepper nurseries and other incidentals.

(ii) *Other Spices*.—Development of ginger, turmeric and garlic by distribution of improved varieties of planting materials and giving limited subsidies for plant protection chemicals at subsidised rate to popularise it are envisaged.

The outlay for development of spices (pepper and other spices) during Seventh Plan (1985-90) is Rs. 217.40 lakhs. Of this the provision for the first year (1985-86) is Rs. 43.68 lakhs.

*7. Horticulture*

(i) *Horticultural Development*.—In order to improve the nutritional standard of people, the production of fruits and vegetables has to be stepped up substantially. The horticulture development potential of the State, which is stratified into the high altitude Western Ghat with a sub-tropical climate and the plains with tropical climate will be fully exploited for the production of fruits and vegetables. Fruit crops like acid lime, mandarin orange, lichi etc., and vegetable crops like carrot, raddish, cabbage, cauliflower, Knol-Khol, etc., will be developed on the high altitude areas, for which the Orange and Vegetable Farm, Nelliampathi, and Vegetable Farm, Vandiperiyar, will be treated as the base stations. Similarly development of tropical fruit crops like banana, mango, guava, papaya, bread fruit, jack, sapota, gooseberry, pineapple, jambosa, etc., will be undertaken in other areas for which good quality planting materials will be produced in the departmental farms and distributed to farmers at nominal price. Close planted progeny orchards for this purpose will be established in the Departmental Farms. Necessary training to permanent labourers in the farm will be given in scientific vegetative propagation methods. Training to unemployed youths in various scientific propagation techniques as well as other nursery practices is also envisaged so that they can start private nurseries of their own by availing themselves of institutional finance to promote self-employment. In order to cope with the additional production of planting materials in these farms minimum additional staff has to be provided to these farms. The fruit processing unit at Orange and

Vegetable Farm, Nelliampathi, has to be equipped further to increase its processing capacity for which fruits are already available in the farm. The Present orange trees in Nelliampathi Farm are more than forty years old and cardamom plantations is more than 33 years old. These two plantations require to be replanted in phases.

Vegetable cultivation, which is input intensive as well as labour intensive need to be encouraged in the State to provide additional income and employment to the farming community.

Ornamental plants have a good market in Kerala. There is vast scope for organising private nurseries for such plants in the rural and urban areas and this will provide self-employment opportunities to a large number of unemployed youth. In order to promote this, planting materials of new varieties have to be made available. Programmes for the multiplication and distribution of planting materials of ornamental plants are also envisaged under horticulture development. The following are the major programmes envisaged.

(a) Establishing close planted progeny orchards in departmental farms.

(b) Training to Males and permanent labourers in Departmental Farms in vegetative propagation techniques.

(c) Training to unemployed youth in vegetative propagation techniques and nursery practices for helping them in self-employment projects.

(d) Strengthening of the Departmental Farms to undertake the additional work.

(e) Expansion of fruit processing unit in the Orange and Vegetable Farm, Nelliampathi.

(f) Construction of new labour lines, repairs to existing labour lines and construction of additional staff quarters etc.

(g) Replanting of orange and cardamom plantations.

(h) Production and distribution of vegetable seeds of improved varieties from Departmental Farms.

(i) Participation of students in vegetable production programmes by giving free minikits of vegetable seeds, and other inputs to selected students in school.

(j) Laying out model vegetable gardens in selected schools to train the students in vegetable production. Conduct of district level vegetable gardening competition among the schools will also be organised.

(k) Mini-kit programmes promoting vegetable cultivation in the high altitude areas and other areas by giving free mini-kits containing improved varieties of vegetable seeds and other inputs to cover one acre of land per farmer as an incentive.

(i) Vegetable extension programme in urban areas by giving vegetable seeds/seedlings in packets free of cost. Fertilizers required will be supplied at cost by fertilizer firms in a mobile van. The transport cost of which will also be met by the Department.

(m) Vegetable seed production in private sector by giving vegetable seeds of improved varieties to selected vegetable growers at cost and procuring the seeds produced by them at prevailing market price and also giving 50% price of seed additionally as production bonus as an incentive post production subsidy to ensure production.

(n) Giving aid to Agri-Horti-Societies in District and Municipal Headquarters to promote production and distribution of planting materials of fruits, vegetables and ornamental plants, and other horticultural inputs, as well as for organising fruit, vegetable and flower shows in urban areas. Participation by the Department in such shows also is envisaged.

(o) Production and distribution of ornamental foliage and flower plants including crochids of improved varieties by multiplying the same in selected departmental farms.

The outlay is for meeting the operational costs in the departmental farms, giving incentive subsidies to farmers, grants to Agri-Horti-Societies, construction of additional buildings, labour lines, purchase of equipments and machinery, training charges, cost of mini-kits as well as providing minimum additional staff required for the programmes.

An amount of Rs. 401.85 lakhs is provided for these programmes during Seventh Plan. The outlay for 1985-86 is Rs. 43.02 lakhs.

(ii) *Centrally Sponsored Scheme for Setting up Community Food and Nutrition Centres in the State—State Share.*

To encourage and popularise home scale preservation of perishable fruits and vegetables in peak season for consumption in lean season it is proposed to establish three Community Food and Nutrition Centres attached to the three Farmer's Training Centres in the State. The outlay is for meeting the State share of the Centrally Sponsored Scheme according to norms as follows:

(a) Accommodation — 100% by State

(b) Salary to Staff — 50% during 1st year  
75% during II year  
100% from III year to be met by the State.

(c) Recurring and contingent expenditure will also be at the above proportion.

The state share towards this programme during the plan period is Rs. 16.73 lakhs. The outlay for the first year (1985-86) is Rs. 1.98 lakhs.

### *Rainfed Farming*

1. *Development of Selected Micro-Water Sheds—State Share*—Water-sheds comprising approximately 2,500 hectares in each District will be selected and divided into five blocks for intensive micro-water shed development in a phased manner at the rate of one block annually. Each such block will be delineated into micro-water sheds for development. The Soil Survey, Soil Conservation and Agriculture Departments will simultaneously work in co-ordination on this selected area. The Soil Survey Wing will carry out the base-line survey of the selected area. The Soil Conservation Department will prepare estimates for soil and moisture conservation works and arrange for execution of such works. The Department of Agriculture will assess the pre-project cropping pattern and prepare, based on the Soil Conservation works proposed, location specific schemes for development of the micro-water shed cropping pattern and implement the same. Incentives for improving the cropping intensity, farm forestry etc., will be given to the farmers. The outlay is for meeting 50% of the State share for the above purpose. The state share towards this for the plan period is Rs. 175 lakhs. The outlay for the first year (1985-86) is Rs. 35 lakhs.

2. *Development of Areas outside the Selected Micro-Water Sheds*—Land development works which may not involve major soil conservation structures in individual land holdings in the small farmers sector, not necessarily on water shed basis will be undertaken for increasing the cropping intensity and production per unit area. Two hundred hectares per district will be taken annually for such development. The outlay is for giving aids to the selected small farmers for undertaking land development works. Outlay for Seventh Plan is Rs. 70 lakhs. The provision for first year (1985-86) is Rs. 14 lakhs.

3. *Popularisation of Seed-cum-Fertilizer Drills and Other Improved Implements in Dry Land Areas—State Share*—Seed-cum fertilizer drills for sowing seeds and placement of fertilizer at proper depths and other improved implements for compaction of soil for moisture preservation etc., need to be popularised for better agronomic practices in the dry land areas. Crop demonstrations using improved implements are also envisaged under this programme. The outlay is for giving 50% subsidy on the distribution of seed-cum-fertilizer drills and for meeting the demonstration charges. The outlay towards 50% state share during the plan period is Rs. 60 lakhs. The provision for the first year (1985-86) is Rs. 12 lakhs.

### *Land Stock Improvement*

1. *Reclamation of Alkaline/Saline Areas*—Saline areas like Pokkali, Orumundakan and Kattampally swamps need special care for making use of such lands for cultivation purposes. Distribution of salt resistant varieties of paddy seeds, at subsidised rate, laying out of demonstration plots to popularise the use of slow release nitrogenous fertilizers like coated urea, urea briquettes, etc. construction of bunds and sluices to

control saline inundation by giving incentives grants to meet a portion of the construction cost, etc., are envisaged under this programme. The outlay is for giving grants to the cultivators in saline areas.

An amount of Rs. 7.60 lakhs is provided towards this for the plan period. The outlay for first year (1985-86) is Rs. 1.60 lakhs

### *Development of Coastal Saline/Flood Prone Area*

2. *Kerala Land Development Corporation*—Kerala Land Development Corporation Ltd, has undertaken two massive land development projects, one in Kuttanad and the other in Trichur Kole lands. The Kuttanad Development Project envisages the construction of 2000 kms. of permanent submergible bunds and ancillary works around 51737 ha. of low lying paddy lands for stabilising the existing single crop paddy and also for raising a second crop. Planting of coconut on the constructed bunds which will augment the resources of the cultivators is also envisaged. Having started in 1974, the first and second phase of the programme will be completed by the end of Sixth Plan. The Third phase of the programme will spill over to the Seventh Plan. The Trichur Kole Project envisages the development of about 15,500 hectares of low lying fields which are water logged for more than seven months in an year. The works include improvements of drainage facilities diversion of excess flood discharges from the rivers and streams directly into the sea, construction of bunds, pumping platforms, flood inlets, regulators etc. The work was started in 1978, and is expected to be completed by 1986-87. New schemes, for reclamation at Ponnai, Onattukara, Kuttampally and land improvement at Kottarakkara, Marayoor etc., are also envisaged during the Seventh Plan. The outlay is the state contribution expected over and above the institutional finance anticipated. An amount of Rs. 1200 lakhs is provided for the plan period of which Rs. 365 lakhs is for the first year (1985-86).

3. *Extension and Farmers Training*—Conduct of training camps for farmers, inservice subject matter training and extension training to departmental officers, inclusive of deputation of officers for post-graduate courses during the post-project period of KAEP establishing two Regional Training Institutes, one in South and another in North, attached to District Agricultural farms for giving one year pre-service training to the Village Level Workers as well as inservice-training to untrained Village Level Workers in the Department are the programmes envisaged. The outlay is for meeting the operational charges of the three Farmers' Training Centres in the State (excluding staff cost) training charges, cost of construction of buildings for the training institutes and minimum staff cost for establishing the training institutes. The outlay for the plan period is Rs. 100.25 lakhs of which Rs. 28.55 lakhs is provided for the first year (1985-86)

4. *Agricultural Engineering*—The Agricultural Engineering Wing of the Department of Agriculture need to be revamped and reoriented to undertake enhanced

responsibilities to (i) introduce and popularise improved agricultural implements to increase labour efficiency and remove drudgery, (ii) design and extend programmes to improve the rural water resource exploitation, and water management techniques (iii) render service for repair and maintenance of agricultural machinery, implements and equipments etc. The Agricultural Engineering Workshop in the Districts should function as a custom service centre for hiring out agricultural machinery as well as training centres for imparting skills to the rural unemployed youths in the operation, repair and maintenance of agricultural machinery, implements and equipments, welding, automobile repair, etc., under a self-employment programme. The development of agro-based industries in the rural areas should also be attended to by the qualified engineering personnel available with these District level Agricultural Engineering Workshops. The outlay is for the continuance of the existing Agricultural Engineering Wing both at headquarters and the Districts for meeting the establishment cost, purchase of tractors, other equipments, spare parts, R. & D. efforts, training cost and other operational charges. The outlay for the Plan period is Rs. 142.90 lakhs. The provision for first year 1985-86 is Rs. 28.58 lakhs.

(a) *Centrally Sponsored Scheme for Distribution of Improved Agricultural Implements—State Share.*—The programme is for the popularisation of improved agricultural implements like mould board ploughs, seed drills, hoes, soil compactors, levelling boards, hand tools etc., by giving such implements at 50 per cent subsidised cost. An amount of Rs. 10 lakhs is provided for this during the plan period. The provision for the first year (1985-86) is Rs. 2 lakhs. The outlay is for meeting 50% of the State share.

5. *Small and Marginal Farmers Scheme.*—The programme implemented since 1983-84 aims at improvement in productivity of the landstock of small and marginal farmers. Programmes proposed to be implemented in all the Blocks with an annual financial allotment of Rs. 5 lakhs for every block envisages (i) Provision of assistance for digging wells and setting up of pump-sets (Rs. 3.50 lakhs) (ii) free distribution of mini-kits of seeds and fertilizers for oil seeds and pulses development including land development works (Rs. 1.00 lakh) and (iii) Planting of fuel and fruit trees (0.50 lakh). The outlay is the State share of 50% towards this scheme. An amount of Rs. 1887.50 lakhs is provided towards State share for the Plan period. The provision for first year (1985-86) is Rs. 377.50 lakhs.

#### Others

1. *Development of Rice Cultivation in Low Yield Areas.*—The main thrust in rice production programmes will be on increased coverage of High Yielding Varieties, especially on areas ideally suited for rice cultivation. This is taken care of by programmes under multiplication and distribution of seeds. Problem areas will get special treatment in respect of varietal coverage suited for such areas. A pilot project of minimum yield guarantee in selected compact areas of 10 ha each in the traditionally low yielding Taluks will be undertaken giving special

extension efforts and incentives to farmers for scientific inputs and location specific on-farm development works. It will include 50% subsidy on HYV seeds, fertilizers based on soil test results and plant protection chemicals (need based) as well as incentive for on-farm development at the rate of Rs. 250 per hectare. Similarly, the rice tracts in the high altitude areas (Wynad, Idukki etc.) which face problems of a different nature have to be tackled by providing irrigation and drainage facilities as well as on-farm development works. Adaptive trials with cold tolerant varieties also have to be conducted in these areas to identify promising varieties which could be popularised subsequently through mini-kit programmes.

The outlay is for giving incentives to the rice growers under the "Minimum Yield Guarantee." Programme and expenditure towards adaptive trials and infrastructure development in the high altitude areas.

The outlay proposed for this during the plan period is Rs. 47.75 lakhs. Of this Rs. 10.03 lakhs is for the first year (1985-86).

2. *Pilot Project for Increasing Cropping Intensity through Irrigation.*—There are areas with scope for increasing cropping intensity in the State, both in the traditional rice fields and other garden lands. Lack of supplementary irrigation facilities is the major constraint. Increasing the production of pulses and oil seeds in the State is a major policy of the Government as emphasised under the 20-point programme. Summer rice fallows offer vast potential for expansion of area under these crops, if the moisture stress during summer could be tackled. The Irrigation Commission has also recommended conjunctive use of ground water with surface water for agriculture. The scheme aims at identifying potential areas for exploiting supplementary irrigation sources on a pilot basis and constructing wells/tanks/tube wells and installing pumping units to be operated by the Department for providing supplementary irrigation to raise additional crops. Five such units per district will be attempted during the Seventh Plan period in a phased manner. A total number of 70 units at the rate of one unit per district per year will thus be established. Being a pilot project, operational staff is not included. An outlay of Rs. 145 lakhs is proposed for the Seventh Plan. The provision for the first year (1985-86) is Rs. 29 lakhs.

3. *Adaptive Trials.*—New varieties of seeds, new cropping techniques like relay cropping, intercropping with different crop combinations, new chemicals etc. brought out by research stations have to be tested under field conditions of the cultivators for adaptability as well as acceptability by farmers, before they are recommended for popularisation. The scheme therefore envisages conduct of adaptive trials in the farmers fields on 0.1 ha to 0.2 ha plots.

At the rate of five such trials per sub-division per year, a total number of 900 trials in the State will be conducted during the plan period. This is essentially a support programme for the T&V system

of extension work in the State. An amount of Rs. 300 per trial plot will be given, which includes cost of inputs, additional labour charges, and cost of display boards etc.

Outlay for Seventh Plan is Rs. 2.70 lakhs. Of this Rs. 0.54 lakh is for the first year (1985-86).

4. *Special Component/Tribal Sub Plan.*—Self-employment schemes and schemes for giving assets to S. C./S. T. and conjunctive support from institutional sources of finance are envisaged. A two pronged approach in this regard is conceived at the State level and the District level. Under the State level programme, selected S. C./S. T. youth who have studied upto S. S. L. C. and are unemployed will be given training in the Departmental Farms, Orchards, Agricultural Engineering Workshops etc., based on their aptitudes, in horticultural techniques, nursery practices, and skilled agricultural works etc. These trained youths, it is hoped, will find self-employment in any of the following areas :—

(a) Private nurseries for the production and sale of planting materials of fruit, vegetable and ornamental plants as well as garden tools and other inputs on a commercial scale, by taking loans from S. C./S. T. Corporation or other institutional sources for purchase of land and other capital investment. In order to help them in creating the required capital assets, a capital investment subsidy upto 25% of the capital investment limited to Rs. 5,000 per unit will be given under this scheme.

(b) Agricultural service centres for undertaking agricultural works on contract basis, like ploughing with power tillers/tractors, spraying with hand operated or power sprayers, repairs of agricultural implements, equipments etc. The required capital equipments will be procured by him by taking loans from S. C./S. T. Corporation or other institutional sources. In order to help them in creating the capital assets, a capital investment subsidy upto 25% of the capital investment limited to Rs. 5,000 per unit will be given under this scheme.

In all, five persons per district per year will be selected for this training for skill formation. A stipend at the rate of Rs. 500 per head per month for the nine months of training will be given. Out of a total outlay of Rs. 1920 lakhs for Special Component/Tribal Sub Plan (i.e., 12% of the total outlay) Rs. 19.25 lakhs will be required for the above programme. The remaining outlay of Rs. 1900.75 lakhs will be allocated to the Districts for implementing suitable location specific schemes under the District Plan. The total outlay under this programme for the plan period is Rs. 1920 lakhs. Of this Rs. 384 lakhs is provided for the first year (1985-86).

5. *Farm Information and Communication.*—The farm information and communication service in the agriculture sector has to be geared to increase and improve its information output through mass media like the Press, All India Radio, and Television. In particular the television media has to be exploited to a great extent for the transfer of technology to the farming community. The following programmes are therefore envisaged during the Seventh Plan :

(a) *Farm News Service.*—Preparing farm news bulletins for All India Radio, production of the farm journal "Kerala Karshakan" and Farm Guide, Wall Newspapers and other information materials. Providing telex facilities to the two regional offices, enhancing the production of information materials, and providing two additional printing units and supporting staff for it are involved.

(b) Organising 100 rural exhibitions per year.

(c) Production of instructional films, slides and purchase of audio-visual aids and other photographic equipments etc.

(d) Organising Farm Book Corners in rural libraries at the rate of 50 numbers per year and supply of steel racks at 50 per cent subsidy to these libraries.

(e) Distribution of T. V. Sets at two third subsidised rate to outstanding rural libraries with Farm Book Corners at the rate of one T. V. set per district per year.

(f) Farm feature service through daily news papers, organising four days workshops on farm feature service etc.

(g) Participation in major exhibitions including India International Fair.

(h) Organising Kisan Melas, Maramadi Festival etc.

(i) Providing communication support to Doordarsan Programmes.

(j) Establishing a Central Farm Library.

The outlay for these programmes in the Seventh Plan (1985-90) is Rs. 125.87 lakhs. Of this Rs. 30.79 lakhs is provided for the first year (1985-86).

6. *Crop Insurance.*—The outlay is for meeting the premium subsidy towards crop insurance. An amount of Rs. 25 lakhs is proposed for the Seventh Plan period (1985-90). Of this the outlay for first year (1985-86) is Rs. 5 lakhs.

7. *Establishing a Buffer Stock of Certified and Foundation Seed to Meet Natural Calamities—State Share.*—Building a buffer stock of certified and foundation seed to meet natural calamities is envisaged. The outlay is the State share of 50% towards this Centrally Sponsored Scheme. An amount of Rs. 50 lakhs is provided as State share towards this programme for the plan period. The provision for the first year (1985-86) is Rs. 10 lakhs.

8. *Special Agricultural Development Units (SADU).*—The World Bank Assisted Kerala Agricultural Development Project for tree crop development implemented in the State is to complete its activities by 1984-85. Extension of the programme for one more year is necessary to achieve the objectives. The proposal for the same has already been sent to Government of India. The outlay is for extension of the programme for 1985-86 as well as the continuance of the Project Evaluation unit set up for this purpose under the

**State Planning Board.** This unit is likely to continue beyond 1985-86. The outlay includes 50% State share (Rs. 22.50 lakhs) for the Centrally Sponsored Scheme on package programme for coconut development, hybrid coconut seed garden and development of cashew. The outlay for the plan period is Rs. 237.50 lakhs. It will be utilised during the first year of the plan.

### Soil and Water Conservation

It is estimated that about 15 lakh hectares of arable land is prone to the hazards of soil erosion in the State. So far only 5% of the erosion-prone area has been protected. This problem should be tackled by a two pronged approach, viz., effective conservation measures and scientific land use and management practices. Soil conservation measures in the Seventh Plan will be undertaken on a watershed basis and according to priority taking into account the intensity of the problem in each area. During the Plan period it is proposed to bring an additional 40,000 hectares of land under soil conservation measures. Besides the State and Centrally Sponsored schemes, institutional finance is also proposed to be mobilised. Considerable investment will be made for conservation works under the Western Ghats Development Programme. Hence only supplementary programmes are proposed outside the Western Ghats Programme. Wherever possible inexpensive agrostological and agronomic conservation will be adopted either separately or in combination with engineering methods. To enable scientific land use the detailed Soil Survey in the State will be completed in phases. The efforts towards the preparation of a Land Use Plan for the State will also be intensified during the Seventh Plan period. The different programmes envisaged under Soil and Water Conservation in the Seventh Plan are detailed below:

#### A. The State Land Use Board

The State Land Use Board will act as the apex organisation, co-ordinating the activities of the different State Departments in the field of land management, giving policy directions which have a bearing on land use, forests and soil and water conservation. During Seventh Plan period efforts will be intensified firstly for completing the land use survey of the State and next towards working out optimum land use patterns.

(a) *Land Use Planning of the State Using Remote Sensing Techniques*—During the Sixth Plan period the Land Use Board prepared an optimum Land Use Plan for Idukki District. The work on land use plan for Cannanore is going on. In the Seventh Plan, the Board proposes to complete the land use survey of the remaining districts (28,799 sq. kms.) in phases adopting CIR aerial photography. The CIR aerial photographs will be supplied by NRA, Hyderabad, in stages from January, 1985. The outlay proposed includes allocation for photo Interpretation Laboratory, cost of aerial photographs, outlay for undertaking adhoc studies etc., The provision for this scheme in the Seventh Plan is Rs 220 lakhs.

A sum of Rs. 97 lakhs is proposed for the 1985-86 Annual Plan. Remittance for aerial photographs has to be completed in 1985-86.

(b) *Data Bank*.—To cope with the requirements of User Cell Agency and use of remote sensing techniques it is proposed to strengthen the data bank. The outlay proposed is for purchase of books and periodicals, furniture etc., The Seventh Plan outlay for this scheme is Rs. 6 lakhs. The outlay proposed for 1985-86 is Rs 2 lakhs.

(c) *User Cell Agency*—A User Cell Agency under National Natural Resource Management System (NNRMS), has been established in the Land Use Board. The agency has to gather information scientifically on renewable and non-renewable resources of the State and make it available along with facilities for interpretation and study to various departments and research organisations. The data from the Indian Remote Sensing Satellite to be launched in 1986 will be used for this purpose. The Department of Space is expected to provide the technical know-how and training. The outlay proposed for the five year period is Rs. 5 lakhs at the rate of Rs. 1 lakh for each year.

(d) *Establishment of a Printing Unit*—The outlay of Rs. 15 lakhs proposed is for the setting up of printing unit for printing reports, maps etc., In 1985-86, a sum of Rs. 10 lakhs is proposed for the establishment of the Unit. As the User Cell Agency, Land Use Board will also cater to the requirements of other departments/agencies for printing, supplying, etc., of maps and reports.

(e) *Acquisition of Site and Construction of Office Building Complex*.—The Land Use Board would need a separate office complex and building to accommodate the laboratory and other equipment. The outlay for this scheme in the Seventh Plan is Rs. 50 lakhs. The outlay of Rs. 10 lakhs proposed for 1985-86 is for the acquisition of land and initial construction work.

#### II. Soil Survey and Soil Conservation

1. *Direction and Administration*.—During the Seventh Plan period it is proposed to bring additional 40,000 hectares of erosion-prone areas under soil conservation measures. The major portion of the area in the State will be covered by detailed soil survey with a view to work out suitable soil management and cropping practices. Both the Soil Conservation Unit and the Soil Survey Unit are to be reorganised to cope with the work proposed to be undertaken and to meet the requirements of decentralised planning envisaged in the Seventh Plan. Effective follow up measures are to be adopted for achieving the full benefit of different programmes. The recovery of soil conservation loans which is very slow, needs to be accelerated. Reorganisation will be made by redeploying the present staff. Considering these varied requirements, a sum of Rs. 25 lakhs is proposed for this scheme in the Seventh Plan. In 1985-86 an amount of Rs. 5 lakhs is proposed as outlay for the scheme.

#### A. Soil Survey and Testing

(i) *Reconnaissance Soil Survey*.—It is proposed to prepare small scale soil maps for the purpose of planning and formulation of development programmes at the District or Regional levels. It is estimated that

by the end of Sixth Plan period only about 9.18 lakh hectares of land will have been covered by Reconnaissance Soil Survey. Reconnaissance Soil Survey of the State has to be speeded up so that the area requiring urgent soil conservation measures can be identified on macro watershed basis. This survey will help to identify and codify the watersheds systematically and will be the basis for the preparation of a map showing the watersheds in the State.

During the Seventh Plan period it is proposed to complete the entire unsurveyed area under Reconnaissance Soil Survey. The outlay of Rs. 35 lakhs proposed is to meet the expenditure towards the existing units and for the purchase of equipments etc., During the first year of the Plan (1985-86) 1.30 lakh hectares of land will be brought under Reconnaissance Soil Survey. The outlay proposed for 1985-86 is Rs. 9 lakhs.

(ii) *Detailed Soil Survey*.—It is proposed to gradually cover the whole State by a detailed soil survey programme with a view to obtain basic data for the preparation and implementation of integrated land use planning and prepare and publish large scale village wise soil maps. During the Seventh Plan, Soil Survey will be done in conjunction with land use survey of the Land Use Board so that the same area will be covered by soil survey as well as land use survey together.

The field units attending to the scheme such as (i) Soil Survey in Command Areas and Problem Areas (ii) Soil Survey in Government lands and Forest lands and (iii) Soil Survey in Soil Conservation Areas are proposed to be brought under the Detailed Soil Survey Scheme by redeploying the existing field units. Appropriate measures will be taken to ensure that there is co-ordination at all levels of the activities of different agencies concerned with land and soil use to avoid duplication and overlapping.

It is proposed to cover five lakh hectares of land under detailed soil survey during the Seventh Plan period. Rs. 100 lakhs is suggested for this purpose. For 1985-86, the outlay proposed is Rs. 5 lakhs and the physical target 0.40 lakh hectare.

(iii) *Soil Correlation, Interpretation and Bench mark Study*.—The schemes 'Strengthening of Soil Survey Organisation' and 'Identification and Bench mark Study of Soils' in the Sixth Plan have been clubbed together and titled as "Soil Correlation, Interpretation and Benchmark Study".

During the Plan period, field correlations of all the area surveyed will be undertaken. The mineralogical and micromorphological study on the physical and chemical characteristics of bench mark soils will be carried out in conjunction with CWRDM, KAU and other allied agencies. Studies on soil temperature will be undertaken at different research stations and agricultural farms in association with the Kerala Agricultural University and the State Agricultural Department for fixing soil temperature regime. It is proposed to associate with the Kerala Agricultural University to undertake experiments on cultivators'

fields on identified bench mark soils to find out the optimum inputs required for sustained agriculture production based on particular soil characteristics. This result will be applied to similar soils identified elsewhere. The experimental data under AICARP will be collected and interpreted to suggest the best treatment combinations for paddy soils of the State. An outlay of Rs. 30 lakhs is proposed for this scheme in the Seventh Plan period. For 1985-86 an amount of Rs. 3 lakhs is proposed.

(iv) *Land Use Demonstration*.—Land Use Demonstration plots will be laid in cultivators' fields to convince them of the benefits of adoption of optimum cropping patterns and land management practices based on the results of soil survey. During the Plan period it is proposed to lay out Land Use Demonstration plots on watershed basis in each District. Recommended package of practices based on the soil data will be demonstrated in the micro watersheds selected for intensive development. The results obtained will be correlated with the soils characteristics to predict the response of each type of soil to different management practices. As an incentive a subsidy of Rs. 2000 per hectare is recommended. The yield data before and after the introduction of the scheme will also be collected to assess the impact of the programme.

It is proposed to cover 700 hectares of land under this programme during Seventh Plan period. An outlay of Rs. 14 lakhs is earmarked for the scheme. In 1985-86, the area proposed to be covered by land use demonstration is 150 hectares. The financial requirement will be Rs. 2 lakhs.

(v) *Laboratories*.—It is proposed to set up a Central Soil Analytical Laboratory at Trivandrum to meet the requirements of analysis of soil samples and micro-morphological studies in connection with the bench mark studies of soil and the soil correlation works in the Southern Region. The outlay of Rs. 13 lakhs proposed is to meet the expenses towards the establishment of a Central Laboratory at Trivandrum, strengthening of existing laboratories at Thiruvambadi and Konni, purchase of equipment, chemicals etc. In the first year of the Plan (1985-86) the outlay proposed is Rs. 2 lakhs.

#### *New Schemes*

(i) *Establishment of Soil Museum*.—To appraise the different agencies of the soil heterogeneity, their capabilities, limitations and management requirements through visual aids, it is proposed to establish a soil museum at the Headquarters. Preservation of samples of typical soil profiles in monolith forms is an integral part of soil study which will help future reference and comparison.

The outlay of Rs. 2 lakhs proposed is for the establishment of the soil museum and purchase of visual aids like projector and slides. For 1985-86 Rs. 0.40 lakh is proposed as initial expenses.



(ii) *Deputation of Officers Working in Soil Survey Wing for Post Graduate Degree Course.*—The accuracy and scientific precision with which soil surveys are conducted and the basic skills involved in interpreting the information so gathered for the given objectives are very important in the formulation of projects in the field of agriculture and allied sectors.

During the Seventh Plan period it is proposed to send three officers every year from the Soil Survey branch for the post graduate degree course in Agricultural Chemistry/Soil Science or Agronomy conducted by the Kerala Agricultural University on deputation basis. An amount of Rs. 5 lakhs is proposed for remittance of fees to Kerala Agricultural University, expenditure towards the pay and allowances etc. for 1985-90. An amount of Rs. 0.80 lakh is proposed for 1985-86.

(iii) *Printing and Publishing of Soil Survey Reports and Strengthening of Library.*—There is great demand for soil survey reports from different agencies. The data generated through field soil survey should reach the user agencies in time. It is therefore essential to get the soil survey reports printed for supply to the user agencies. Soil survey work is highly scientific in nature and therefore it is necessary to have a good reference library in the Headquarters with essential reference books. During the Seventh Plan period it is proposed to print and publish 30 soil survey reports. The outlay of Rs. 10 lakhs proposed is to meet the expenditure towards the printing of the soil and land capability maps, cost of paper, printing charges etc. and also for improving the library. For 1985-86 an amount of Rs. 2 lakhs is proposed for this scheme.

#### B. Soil Conservation

(i) *Soil and Water Conservation in Arable Lands.*—Soil Conservation schemes on watershed basis in agricultural lands covering all the districts of the State are taken up on 25 per cent grant and 75 per cent loan basis. In the Seventh Plan, no new schemes will be taken up under Arable Land Scheme. The plan provision is for completion of the schemes already taken up during the previous Plan period. The anticipated benefit from the scheme is 4075 hectares of arable land during the Seventh Plan and 545 hectares during 1985-86.

The scheme also envisages reclamation of 145 ha. of water logged areas. The outlay includes provision for maintenance of Kandakadavu and Maruvakkad Padasekharams in Ernakulam district. Soil Conservation works in the catchment of river valley project, Idukki as envisaged in the VI Plan will be completed during the Seventh Plan. As a pilot demonstration project, agronomic and agrostological measures of conservation, either separately or in combination with engineering methods, will be undertaken in the Bharathapuzha basin of Trichur District. It is also proposed to take up investigation and preparation of a draft plan for soil conservation work in the catchment of Kerala portion of Kabani project as advance action with the intention to include this as a new Centrally Sponsored Scheme.

A total outlay of Rs. 350 lakhs is proposed in the Seventh Plan for the above schemes. The Annual Plan outlay for 1985-86 is Rs. 50 lakhs.

(ii) *Soil Conservation and Integrated Development of Land on Watershed Basis Availing Institutional Finance.*—This scheme contemplates taking up of soil conservation and water management measures in selected water sheds availing institutional finance. The establishment charges and 25% subsidy of the total cost of works are met by Government. At present the scheme is implemented in Kottayam, Idukki, Ernakulam and Cannanore districts. The scheme is also proposed to be extended to other districts. In the Seventh Plan a sum of Rs. 50 lakhs is proposed in order to achieve a physical target of about 2500 hectares. In 1985-86 an amount of Rs. 10 lakhs is provided to cover about 500 hectares of land.

(iii) *Special Component Plan and Tribal Sub Plan.*—During the Seventh Plan period integrated soil and water conservation measures in the selected Harijans/Girijans/Colonies/Settlements will be undertaken on watershed basis on 100 per cent grant basis. The work includes construction of stone pitched contour bunds, trenches etc., along with checkdams and gully plugging. Reclamation of water logged areas by construction of bunds, sluices etc., is also envisaged to benefit Harijans/Girijans. Of the Rs. 250 lakhs proposed in the Seventh Plan Rs. 215 lakhs will be spent on Special Component Plan schemes and Rs. 35 lakhs for Tribal Sub Plan schemes. The physical targets proposed for these plans are 3509 hectares and 636 hectares respectively.

The outlay proposed for 1985-86 for the Special Component Plan is Rs. 25 lakhs and for the Tribal Sub Plan Rs. 5 lakhs. The target proposed for Special Component plan is 410 hectares and for the Tribal Sub Plan 90 hectares.

#### New Soil Conservation Schemes

(i) *Scheme for Follow up Activities of Maintenance and Soil Conservation Extension Service.*—During the Seventh Plan period it is proposed to take up follow up activities of maintenance in the completed soil conservation scheme areas. The scheme proposes to contact the beneficiaries of the completed scheme areas and arrange to take up the required maintenance works. The scheme also envisages soil conservation extension work by rendering necessary information regarding the benefits of adopting soil conservation, land treatment, and other agronomic, agrostologic and farm forestry programme by way of technical guidance, supply of planting materials etc.,

The provision of Rs. 9 lakhs made under the scheme is to meet the cost on establishment, contingencies and planting materials. The outlay proposed for 1985-86 is Rs. 2 lakhs.

(ii) *Soil Conservation Scheme for the Implementation of Integrated Watershed Management Programme in the State.*—Watersheds comprising approximately 2500 hectares in each district will be selected and divided



into five blocks for intensive micro watershed development at the rate of one block annually. The Soil Survey Unit, Soil Conservation Unit, and Agriculture Department will simultaneously work in co-ordination on this selected area. The Soil Survey unit will carry out the baseline survey of the selected area. The Soil Conservation Unit will prepare estimates for soil and moisture conservation works and arrange execution of conservation works. The Department of Agriculture will meanwhile assess the pre-project cropping pattern and prepare, based on the soil conservation works proposed, location-specific schemes and cropping pattern for development of micro watershed and implement the same.

The soil and water conservation measures will also include agronomic, agrostologic and farm forestry programmes suitable to each watershed. The funds for conservation works will be mobilised mainly from financial institutions. Subsidy, at the rate of 25 per cent of the cost of works, will be met by Government. In the case of Harijan/Girijan beneficiary, subsidy will be 100 per cent. If the scheme area comes under the purview of Western Ghats Development Programme, NREP or RLEGP the pattern of subsidy will be as specified in such programmes.

A sum of Rs. 500 per hectare (from eligible subsidy) is proposed to be given to the beneficiaries for adoption of various recommended agronomic measures in their lands. The amount will be disbursed only on the basis of adoption of recommended soil conservation agronomic practices.

The outlay of Rs. 286 lakhs proposed includes the subsidy towards the cost of works. For 1985-86 the outlay proposed is Rs. 7.80 lakhs.

### C. Research, Education and Training

(i) *Research Education and Training*.—The training and education programme will be strengthened during the Seventh Plan period. It is proposed to impart training in Soil Survey and Soil Conservation to Officers and Assistants at Dehradun, Ooty, Nagpur etc., Organisation such as CWRDM and Kerala Agricultural University will also have a dominant role in the research, education and training programme. Training to field staff and farmers will also have to be arranged during the Seventh Plan period. An outlay of Rs. 25 lakhs is proposed for the scheme in the Seventh Plan. The Annual Plan outlay for 1985-86 is Rs. 5 lakhs.

### Animal Husbandry and Dairy Development

There are at present four agencies involved in the area of animal husbandry and dairy development. These are the Department of Animal Husbandry, the Department of Dairy Development, Kerala Live Stock Development and Milk Marketing Board (KLD&MMB) Kerala Co-operative Milk Marketing Federation (KCMMF). The specific functions performed by these agencies are given below:

(a) *Kerala Live Stock Development and Milk Marketing Board (KLD&MMB)*—The KLD&MMB is responsible for providing the inputs to the various agencies for implementing the accepted cross breeding

programme in the State. This will be supplemented by efforts to promote fodder production for economic milk production.

(b) *Department of Animal Husbandry*—The Department of Animal Husbandry is responsible for the cross breeding activities in the field as well as livestock development and Animal Health cover in the State. The Department of Dairy Development is also involved in cross breeding, but this will in future be done only by the Department of Animal Husbandry.

(c) *The Kerala Co-operative Milk Marketing Federation*

(KCMMF)—This agency, though not financed directly by the State, is responsible for implementing the 'Operation Flood II' programme and all the milk marketing activities. Even though the operation Flood II programme now covers only the southern districts of Kerala during the Seventh Plan period the Swiss Aided Dairy Development programme for northern districts of Kerala will commence. Hence the responsibility of milk marketing in the entire State would be looked after by the KCMMF.

(d) *Department of Dairy Development*—The Department of Dairy Development is responsible for dairy extension and farm advisory services and fodder development.

### Animal Husbandry

The total livestock population of the State in 1972 was 49.37 lakhs. In 1982 it rose to 56.45 lakhs registering an overall increase of 11.43%. The cattle population increased from 28.56 lakhs to 30.97 lakhs during this decade. The stock of breedable cows in 1972 was 12.87 lakhs. In 1982 it rose to 14.25 lakhs, the increase being 10.72%. Of this, the improved stock numbered 6.82 lakhs (48%). The population of buffaloes showed a slight decline from 4.72 lakhs in 1972 to 4.09 lakhs in 1982. The population of female stock in 1982 was 1.92 lakhs. The population of goats moved up from 14.68 lakhs to 20.04 lakhs in 1982, an increase of 36.5%. The number of pigs however declined from 1.29 lakhs to 1.27 lakhs during this period. The total poultry population rose from 122.07 lakhs in 1972 to 150.83 lakhs in 1982, an increase of 23.56%.

The milk production in 1973-74 was estimated at 4.10 lakh tonnes. By 1982-83 it reached 10.78 lakh tonnes. The average per capita availability of milk over the years increased from 60 grams per day to 112 grams per day. The production of eggs went up from 80 crores in 1973-74 to 17 crores in 1982-83.

The Animal Husbandry Department is carrying out activities connected with animal health care and Livestock and Poultry Development in the State. This responsibility includes provision of veterinary services and looking after Animal Health, Cattle Development, Poultry Development, Pig Development, Goat Development and other Livestock Development.

The breeding programme of the Animal Husbandry Department is being carried out through the Intensive Cattle Development projects, Artificial Insemination Centres, Veterinary Hospitals, Dispensaries etc. There is one cross breeding centre at

Chalaky. There are six Intensive Cattle Development Projects at Kottarakkara, Alwaye, Palghat, Kozhikode, Cannanore and Trivandrum with 24 Regional Centres and 613 Sub Centres and they aim at crossbreeding of cows with exotic breeds. Besides genetic improvement of cattle through these projects, animal health care, extension work, scientific management and proper feeding of cattle are also done.

In the field of animal health care, the Department launched in 1978-79 the programmes of (i) establishment of Veterinary Polyclinics to ensure a multi-disciplinary approach and provide domiciliary services to control various animal diseases, and (ii) the establishment of Mobile Farm Aid Units to provide veterinary services and extension support to farmers in remote rural areas.

At present there are 479 Veterinary Hospitals manned by qualified veterinarians. Attached to these institutions there are 118 Veterinary Dispensaries under the charge of para-veterinary staff. In addition to these there are 12 Mobile Veterinary Hospitals, 42 Veterinary Polyclinics and 18 Mobile Farm Aid Units. All the Districts except Trichur, Kasaragod, Wynad and Pathanamthitta have a clinical laboratory attached to each of the headquarters Veterinary Hospitals to support and strengthen the animal health care system. A Veterinary Biological Production Complex is functioning at Palode in Trivandrum District.

The State has been carrying out a programme for assisting economically weaker sections of farmers to rear crossbred female calves to production stage with the aid of nutritional support and other inputs. About 51,000 calves have been enrolled under the scheme so far. This programme has helped to improve the income of farmers and enhance milk production in the State. It is being implemented as a Centrally Sponsored Scheme in two Districts and as a State Scheme in six other districts of the State. This programme has to be continued and extended to other areas to make full use of the available resources for enhancing milk production.

Poultry production in the State is mainly confined to backyard poultry keeping. In order to achieve a real breakthrough, programmes are to be re-oriented to enhance egg and poultry production. Necessary inputs will have to be provided for promoting egg and poultry meat production in the backyard.

Goat development is one of the promising fields for generating employment opportunities in rural areas. As a part of the Special Component Plan and Tribal Sub Plan, goats were distributed to selected beneficiaries in harijan and tribal colonies. A goat farm has been functioning in the northern part of the State. In order to increase the milk production capability of goats, it is necessary to introduce exotic blood into local goats and to take up a comprehensive goat development programme. It is also necessary to preserve and improve the existing high potential germ plasm of Malabari goats to maintain the purity of the breed.

The Department has been implementing a Pig Development Programme by providing subsidies for upgrading local pigs and distributing weaners for fattening. Much headway could not be made under this programme owing to the non-availability of adequate number of improved pigs.

The scope of livestock development has to be widened further by taking up rabbit, duck and quail production programmes which offer immense scope for development.

Extension support programme aimed at maximising production was not given adequate emphasis in the past. For the optimum utilisation of available resources, extension service has to be provided to the farmers to translate the laboratory gains to the farm level. Extensive use of the media is necessary for speedy dissemination of technology to make the developmental efforts more fruitful.

The crossbred animals are susceptible to diseases. So it is necessary to provide animal health support for the crossbred cattle population and other species of improved stock in the State. A multi-disciplinary approach in combating animal diseases will have to be introduced. Domiciliary animal health service should be made available to ensure timely veterinary aid in the intensive areas of livestock production. Charges will have to be levied for specialised service and drugs. Disease investigation and control measures need strengthening. Disease free zones will have to be established in specific areas to promote the export potential of livestock products.

The main objectives of the animal husbandry programmes included in the Seventh Plan are:—

(i) intensification of efforts for increasing the availability of livestock products.

(ii) augmentation of milk production by increasing the number of crossbred cows and simultaneously reducing the low yielding non-descript/desirabilities and reducing the intercalving period and age at first calving.

(iii) extension of prompt and effective animal health cover.

(iv) improvement of the economic status of the rural poor including harijans and tribals by providing additional employment opportunities and income and by promoting milch/draught cattle, buffalo, poultry, goat, pig and rabbit production.

(v) development of indigenous breeds of goats and

(vi) provision of extension services for maximising livestock production.

The State aims at increasing milk production to 15 lakh tonnes and egg production 1750 million per annum by the end of the Seventh Plan period. Growth rate of 6% for milk and 6.5% for eggs is envisaged in the Seventh Plan as against 5% and 6% growth rates respectively in the Sixth Five Year Plan period.

The animal husbandry development programmes during the Seventh Plan period (1985-90) envisages a total outlay of Rs. 2400 lakhs. A short description of the various schemes proposed is given below:

### *I Co-ordination, Extension and Training:*

(a) *Extension Service*—This is a new scheme which aims at providing extension support to farmers to maximise livestock production. Three extension workers will be appointed in every Taluk to provide extension support to farmers on a Panchayat basis. The activities will be co-ordinated at taluk and district level by technical experts and subject matter specialists. The extension workers will be in close liaison with the Livestock Management Training Centres and the farmers for propagating better cattle management practices. With proper extension service and propaganda the inter-calving period of cross-bred cows and age of first calving could be reduced considerably. A portion of the outlay will be utilised for conducting group discussions, film shows, rallies and seminars for educating farmers. The Seventh Plan outlay for the scheme is Rs. 102 lakhs. In 1985-86, the programme will be implemented in two districts and for this purpose an outlay of Rs. 15 lakhs is earmarked.

(b) *Training Programme*—It is proposed to give training facilities for farmers and extension workers. During the Plan period two Livestock Management Training Centres will be established and the existing training centres will be strengthened. A part of the Plan outlay will be utilised for construction of buildings, purchase of vehicles and creation of other infrastructure facilities. Departmental Officers also will be got trained to improve their technical knowledge. The outlay made for the Training Scheme in Seventh Plan is Rs. 60 lakhs. The Annual Plan provision for 1985-86 is Rs. 10 lakhs.

### *II. Veterinary Services and Animal Health:*

(1) *Veterinary Hospitals and Dispensaries*.—The programme is to improve veterinary aid facilities. At the end of the Sixth Plan period there will be 520 Veterinary Hospitals and 116 Veterinary Dispensaries in the State. Veterinary Hospitals are yet to be opened in 522 panchayats. In accordance with the policy of establishing one veterinary institution in each Panchayat, 80 Veterinary Hospitals will be newly established and 25 dispensaries will be upgraded as Veterinary Hospitals. The programme will be implemented in a phased manner. The existing Hospitals will be strengthened by providing more equipment, medicine and buildings. The Seventh Plan outlay, for this scheme is Rs. 150 lakhs. In 1985-86 sixteen Veterinary Hospitals will be set up and four dispensaries upgraded. For this purpose an outlay of Rs. 20 lakhs is earmarked in the Annual Plan for 1985-86.

(2) *Veterinary Polyclinics*.—Intensification of veterinary aid facilities has become necessary in intensive areas of livestock production (southern districts), where there is a concentration of cross-bred animals. It is proposed to establish 25 Veterinary Polyclinics additionally and to strengthen the existing Veterinary Polyclinics in these areas. These polyclinics will be

equipped with additional equipments, drugs, diagnostic facilities and other infrastructure required for providing emergency domiciliary services to farmers round the clock on payment of prescribed charges. The outlay for the Plan period for this scheme is Rs. 150 lakhs. Four Veterinary Polyclinics will be established in 1985-86 at a cost of Rs. 15 lakhs.

(3) *Establishment of District Veterinary Centres*.—The veterinary aid facilities extended through the Veterinary Polyclinics and Hospitals are of a routine nature which often require fortification with advanced clinical aids in the disciplines of medicine, surgery, gynaecology, parasitology, pathology, microbiology and radiology. To coordinate the animal health activities of the Veterinary Polyclinics and Veterinary Hospitals on a referral basis and to make available clinical and other technical support in their routine activities, District Veterinary Centres are to be established at all district headquarters in a phased programme. The outlay is for providing equipment, medicines, chemicals, diagnostic agents, vehicles, staff and for civil construction. The Seventh Plan outlay for this scheme is Rs. 80 lakhs. The outlay for 1985-86 is Rs. 8 lakhs and two centres will be set up.

(4) *Disease Investigation and Control Programmes*.—Well organised disease investigation units and diagnostic laboratories are the basic requirements to improve the clinical and preventive veterinary medical services. The existing laboratories will be strengthened and a central laboratory will be established to investigate and control various animal diseases. This centre will be equipped with laboratory facilities for tissue culture. There will be a mobile laboratory attached to this and will be supported by Regional Laboratories. A portion of the outlay will be utilised for taking up programmes for controlling rabies, tuberculosis, cattle infertility and Mastitis and for strengthening the livestock and Marine Products-cum-Certification Laboratory. The Seventh Plan outlay for this scheme is Rs. 175 lakhs. The allocation for 1985-86 is Rs. 25 lakhs.

(5) *Biological Production Complex*.—A provision of Rs. 50 lakhs is set apart for the spill over expenditure required for completing the Veterinary Biological Institute at Palode. The construction of buildings will be completed and other infrastructure like equipment, library, vehicle and staff additionally required will be provided during the plan period. The outlay for 1985-86 is Rs. 30 lakhs.

(6) *Systematic Control of Livestock Diseases of National Importance—State Share*.—An amount of Rs. 225 lakhs is provided as the State's share of the centrally sponsored scheme "Systematic Control of Livestock Diseases of National Importance". Establishment of Disease Free Zones in Trivandrum, Quilon and Pathanamthitta Districts, strengthening of the Poultry Diseases Diagnostic Laboratory and the control of canine rabies are the programmes envisaged under the scheme. The outlay for 1985-86 is Rs. 36 lakhs.

(7) *Rinderpest Eradication—State Share*.—The outlay is for meeting the State share of centrally sponsored Rinderpest Eradication Programme. The

mobility of the field staff has to be increased by providing vehicles. Diagnostic facilities will be enhanced by providing counter-immune/electro-phoresis and other equipment. The outlay for this scheme in the Plan is Rs. 12 lakhs. An outlay of Rs. 2.05 lakhs is earmarked as the State share in 1985-86.

8. *Animal Disease Surveillance—State Share.*—An amount of Rs. 6 lakhs is provided as State share of the scheme "Animal Disease Surveillance". The epidemiological unit established under the scheme will be strengthened. Staff and other facilities additionally required will be provided. The unit will collect data on various epidemiological facts of important diseases for dissemination which shall form the basis for developing a disease intelligence system. The outlay proposed for 1985-86 is Rs. 1 lakh.

9. *Cell Culture for Production of Viral Vaccines and Diagnostic Reagents—State Share.*—The outlay is for meeting the State share of expenditure for strengthening the biological production centre by providing modern facilities in latest technique of cell culture for production of viral vaccines. The Plan provision of Rs. 25 lakhs for this new scheme, will also be utilised for producing the required diagnostic reagents. The outlay for 1985-86 is Rs. 2 lakhs.

10. *Indian Veterinary Council—State Share.*—The Plan provision of Rs. 1 lakh for this new scheme is for meeting the State share of expenditure for establishing the State Veterinary Council under the Indian Veterinary Council Act to undertake registration of veterinary practitioners and enforce rules for regulating veterinary practice. The outlay for 1985-86 is Rs. 0.10 lakh.

11. *AICRP on Epidemiological Studies of Foot and Mouth Disease—State Share.*—The provision of Rs. 3 lakhs in the Plan is for meeting the State share of the ICAR Scheme for Epidemiological Studies of Foot and Mouth Disease" and to establish a virus typing laboratory to type the strain of virus responsible for outbreak of F and M Disease so as to adopt immediate control measures against this disease. The provision in the Annual Plan is Rs. 0.75 lakh.

### III Investigation and Statistics

1. *Animal Husbandry Statistics & Sample Survey—State Share.*—The Seventh Plan provision of Rs. 24 lakhs is for continuing the sample surveys on estimation of production of milk, egg and meat and on estimation of cost of production of livestock products. New sample surveys on estimation of area under and production of fodder/grasses and assessment of Animal Husbandry Projects will be taken up under the scheme during the Plan period. The outlay is for meeting the State share of expenditure. The 1985-86 outlay is Rs. 4 lakhs.

2. *Livestock Census.*—The Seventh Plan outlay of Rs. 26 lakhs is for conducting the 14th Quinquennial Livestock Census in 1987.

### IV Cattle Development

1. *Expansion of Cross Breeding Facilities.*—This scheme aims at providing artificial insemination facilities to all breedable cattle at the rate of one centre for every 750 breedable cattle. New Intensive Cattle Development Projects and Regional Artificial Insemination Centres will be established to extend cross breeding facilities in areas not covered by Intensive Cattle Development Projects. About 900 breeding centres will be established additionally during the Seventh Plan period. A portion of the outlay will be utilised for strengthening the existing Intensive Cattle Development Projects. During 1985-86 one hundred and fifty centres will be established. The Outlay for the Seventh Plan is Rs. 174 lakhs and that for 1985-86 Rs. 23 lakhs.

2. *Calf Feed Subsidy Programme.*—The provision of Rs. 154 lakhs is for continuing the Calf Feed Subsidy Programme already being implemented in Quilon, Alleppey, Kottayam, Palghat, Kozhikode and Cannanore districts and extending the programme to two more districts. According to the programme small farmers, marginal farmers and agricultural labourers will be given assistance to rear cross-bred female calves from 4th month to 32nd month by providing necessary package of services and inputs by way of loans and subsidy. Besides continuing the assistance to the calves enrolled in 1984-85, 8000 calves will be additionally enrolled under the scheme during the Seventh Plan. An amount of Rs. 30 lakhs during the plan period and Rs. 6 lakhs in 1985-86 will be earmarked to assist scheduled caste beneficiaries. In 1985-86, about 2000 calves will be enrolled under the scheme for which an allocation of Rs. 40 lakhs is made.

3. *Development of Indigenous Buffaloes.*—The provision is for continuing and strengthening the scheme for development of indigenous buffaloes. Artificial insemination will be provided and the farmers will be assisted by way of feed subsidy and other inputs to rear the female progeny born through artificial insemination. A portion of the outlay will be earmarked for constructing buildings and providing necessary infrastructure at the Buffalo Breeding Farm, Kuriottumala. Besides continuing the assistance to rear buffalo calves enrolled during 1984-85, about 1400 buffalo calves will be enrolled additionally during the Plan period and the programme will be implemented in two districts. A sum of Rs. 5 lakhs will be earmarked to assist harijan beneficiaries. The total Seventh Plan provision for this scheme is Rs. 40 lakhs. Of this the share for 1985-86 is Rs. 3 lakhs including an allocation of Rs. 1 lakh for Scheduled Castes.

4. *Development of Draught Animals.*—Development of draught animals for agricultural work and rural transportation has become a critical need in the rural agricultural farm work. Therefore it is necessary to develop draught variety of cattle by crossing the local cows with draught breeds like Kankayam. A.I. facilities will be provided in potential areas. The outlay is for cost of semen and other inputs, vehicle, staff and civil construction. Out of the total allocation of Rs. 40 lakhs a sum of Rs. 5 lakhs will be earmarked to assist harijan beneficiaries. During 1985-86, the

programme will be taken up in Palghat and Kasaragod districts. The total allotment for 1985-86 is Rs. 3 lakhs of which the SCP share is Rs. 1 lakh.

#### V. Poultry Development:

1. *Backyard Poultry Production*.—This scheme is for assisting the rural farmers take up backyard poultry production as a source of additional income. During the Plan period 100,000 farmers will be assisted to take up poultry production in the backyard. The beneficiaries will be given grown up pullets, feed concentrates, extension support and health cover. The activities will be centered around the existing poultry farms. A part of the outlay will be used for strengthening the infrastructural facilities of the poultry farms. Out of the total outlay of Rs. 60 lakhs, Rs. 5 lakhs will be earmarked to assist harijan beneficiaries. The 1985-86 outlay is Rs. 9 lakhs and of this an amount of Rs. 1 lakh is for scheduled caste beneficiaries.

2. *Broiler Production*.—The scheme envisages enhancement of Broiler Chick production for supply to farmers. The broiler/production capacity of the existing broiler units will be enhanced to 3 lakhs per annum from the present level of 1 lakh. One of the existing broiler farms will be strengthened and the establishment of broiler farm at Mattanoor will be completed during the Plan period. The Seventh Plan outlay for the scheme is Rs. 55 lakhs and the Annual Plan outlay for 1985-86 Rs. 10 lakhs.

3. *Duck Production*.—The scheme envisages production of improved varieties of ducklings for more eggs and meat. One lakh ducklings will be produced additionally during every year. The duck farm at Niranam will be strengthened and the establishment of the duck farm at Thiruvalla will be completed. Health cover and extension support will be given to promote backyard duck production of farmers. Out of the total outlay of Rs. 30 lakhs, a sum of Rs. 5 lakhs will be earmarked to assist harijan beneficiaries. The outlay for 1985-86 is Rs. 8.50 lakhs.

4. *Poultry Estates (Special Component Plan)*.—The scheme aims at providing employment opportunities to harijans and developing entrepreneurial qualities in harijan youth through intensive poultry production by establishing poultry estates in selected areas. Groups of poultry houses will be put up in selected Government land by the Department and will be leased to interested beneficiaries for poultry production. The outlay is for constructing poultry houses/stores etc. Infrastructure, managerial and extension support along with marketing assistance will be provided to sustain the poultry units as an economic activity. During the Plan period two estates will be established and 80 persons will be assisted to take up the activity. Of the total outlay of Rs. 100 lakhs for the scheme, the share for the 1985-86 Annual Plan will be Rs. 16 lakhs.

5. *Poultry Development Agency*.—This new scheme envisages setting up of an agency which can take up all commercial and marketing activities required to augment intensive poultry production in the State. The Agency will obtain funds from Government of

India, NCDC, NABARD and other financing institutions to take up the activities. The outlay of Rs. 100 lakhs is to meet the State's contribution of share capital. The 1985-86 Plan allocation is Rs. 10 lakhs.

6. *Quail Production*.—This new scheme envisages promotion of quail farming as a source of additional income to the farmers. Quail chicks produced will be distributed to farmers. The outlay for establishing a pilot project for quail production in the Seventh Plan is Rs. 3 lakhs. The Annual Plan outlay for 1985-86 is Rs. 0.50 lakh.

7. *Poultry Clubs in Schools*.—The scheme aims at creating enthusiasm and giving vocational exposure to students in poultry production activities. The Plan provision of Rs. 35 lakhs is for establishing 350 poultry clubs in selected schools during the Plan period. In each club 100 students will be enrolled as members and each member will be given 5 chicks of about 2 months age free of cost. Extension support and health cover will be provided and competition among the clubs will be arranged. During 1985-86, 70 clubs will be organised and assisted and the allocation for the year will be Rs. 7 lakhs.

#### VI. Pig Development:

1. *Pig Breeding Farm*.—The provision is for continuing the Pig Breeding Farm for producing high quality piglings required by farmers in the pig belt areas. A portion of the outlay is for constructing the farm buildings, purchase of parent stock, and other infrastructural facilities. The Seventh Plan outlay is Rs. 35 lakhs. The Plan outlay for 1985-86 is Rs. 5 lakhs.

2. *Intensive Pig Development Programme*.—This is a continuing scheme for assisting pig farmers take up pig development activities. Piglings will be distributed to farmers at cost price and financial assistance will be provided for constructing pig styers and grading up local pigs. Exotic boars and sows will be distributed to farmers. The outlay for the Seventh Plan period is Rs. 20 lakhs and that for 1985-86 Rs. 3.50 lakhs.

#### VII. Goat Development:

(1) *Comprehensive Goat Development Programme*.—This new scheme aims at taking up a comprehensive goat development programme in selected compact areas of the State. Two mother farms for producing bucks will be established to take up breeding and production of quality buck of Sannen and Alpine breeds. The bucks produced in these stations will be utilised for breeding local goats in district areas identified as Intensive Goat Development Blocks. Breeding units will be established in the intensive goat development blocks. Alpine and Sannen bucks and does required will be imported. The outlay of Rs. 60 lakhs made in the Plan is for purchase of breeding stock, feeding charges, vehicle staff and for civil construction. The outlay for 1985-86 is Rs. 12 lakhs.

2. *Establishment of Goat Breeding Farm—State Share*—The provision of Rs. 20 lakhs made in the Plan is for meeting the State share of expenditure for establishing a farm for breeding Malabari goats so as to preserve and improve the genetic material. Conservation of this indigenous breed is expected to maintain the purity of the basic genetic material and selection will be made for improvement. A part of the outlay for this new scheme will be utilised for construction of buildings, fencing, silvipastoral development, farm machinery and equipment, vehicles and staff. The outlay for 1985-86 is Rs. 3 lakhs.

### VIII. Other Livestock Development

1. *Special Livestock Production Programme—State Share*—The provision of Rs. 175 lakhs made in the Plan is for the State share of expenditure for continuing the special livestock production programme in Trivandrum, Trichur and Cannanore districts. Under the scheme for rearing of cross-bred heifers 10,000 beneficiaries, under the scheme for establishment of poultry units, 7,500 beneficiaries and under the scheme for establishment of piggery/goat units, 1000 beneficiaries will be assisted during the Plan period. Out of the total provision, a sum of Rs. 50 lakhs will be earmarked for the benefit of harijan beneficiaries. The 1985-86 outlay is Rs. 25 lakhs which includes Rs. 10 lakhs for scheduled caste beneficiaries.

2. *Establishment of Rabbit Breeding Farm—State Share*—The outlay of Rs. 10 lakhs for the new scheme is for the State share of expenditure for establishing a Rabbit Breeding Farm. Quality breeding stock will be produced and distributed to rabbit breeders. The foundation stock will be imported and the rabbitary will be constructed. A portion of the outlay will be utilised for fencing, pasture development, farm machinery and equipments, staff and transport. The Plan allocation for 1985-86 is Rs. 1.50 lakhs.

3. *Fodder Seed Production*—The Seventh Plan outlay of Rs. 5 lakhs is for continuing the fodder seed/slip production programme in the Departmental farms. The outlay is for the provision of wages and other cultivation expenses. The Plan outlay for 1985-86 is Rs. 1 lakh.

4. *Livestock Markets Development Programme—State Share*—The Plan provision of Rs. 5 lakhs is for the State share of expenditure for implementing the proposed Livestock Markets Development Programme under the World Bank assisted Kerala Agricultural Marketing Project. The outlay for 1985-86 is Rs. 0.10 lakh.

5. *Other Livestock Development Schemes for Economic Development of Scheduled Castes (Special Component plan)*—The provision of Rs. 250 lakhs made in the Seventh Plan is for establishing veterinary hospitals and breeding centres in harijan colonies, providing training and extension support to harijans, supporting them to grow cross bred female calves, establishing goat, poultry, rabbit and duck units and for insuring their livestock assets. The programmes will be formulated and implemented at the district level. The allocation for 1985-86 is Rs. 33 lakhs.

6. *Tribal Sub-Plan*—The provision of Rs. 40 lakhs under Tribal Sub-Plan is for establishing veterinary hospitals and breeding centres in tribal colonies, providing training and extension support to tribals, assisting them to establish poultry, goat and rabbit units and for insuring their livestock assets. The programmes will be formulated and implemented at the district level. The Annual Plan outlay for 1985-86 is Rs. 8 lakhs.

### Dairy Development

The total milk production in the State in 1982-83 stood around 10.78 lakh tonnes. The low milk yield of our animals can be attributed to poor breed, feed and management. For the genetic improvement of the desi cattle, cross breeding through artificial insemination has been attempted in the past by the Animal Husbandry Department, Dairy Development Department and the Kerala Livestock Development and Milk Marketing Board. As a result of these activities, genetic improvement of the local stock was made possible by producing 48% cross bred animals in the State's total breedable stock. As part of the self employment programme in 1972-73, the Dairy Development Department launched the massive cross-breeding programme utilising the services of the self-employed lay inseminators designated as "Cattle Improvement Assistants" in almost all the Panchayats. The programme was aimed at intensifying the cross breeding work so as to bring about the upgradation of the genetic potential of the local cows and thereby augmenting milk production in the State. Side by side, the Department focused its attention on strengthening of the Dairy Extension and Farm Advisory Service to deliver the package of technology to the farmsteads. The present activities of the Department include massive cross-breeding programme implemented with the help of self employed cattle improvement assistants, State wide dairy extension and farm advisory service, State wide fodder development and extension activities and administration of dairy co-operatives. In future the Department would be responsible for dairy extension and farm advisory services and will be concentrating primarily on fodder development throughout the State.

To raise the productivity of cross bred cows proper feeding and management practices are essential. The high input costs of cattle feed and the scarcity of fodder is a major problem in dairy farming in the State. The fodder development programmes so far implemented were inadequate and intensive efforts will be made to bring a substantial portion of the cropped land under fodder grass/trees cultivation. Increased production and availability of fodder at a low price is a necessary condition to bring down the cost of production of milk. The Kerala Livestock Development and Milk Marketing Board (KLD&MM Board) and the Dairy Development Department may work in close liaison for achieving the goal of cheap fodder availability in the State. The Rural Dairy Extension Programme also will be intensified to achieve this goal. The dairy co-operatives will be strengthened by providing technical and financial assistance to make them effective.

## KERALA LIVESTOCK DEVELOPMENT & MILK MARKETING BOARD

The crossbreeding of cattle has made impressive progress in Kerala with the introduction of artificial insemination with deep frozen semen. The Indo Swiss Project, through its breeding policy for cattle breeding and implementation using frozen semen technology, has given a sound base for the successful launching of a State-wide cattle development programme in the late Sixties. The artificial insemination programme using deep frozen semen started in a modest way in 1967-68 with an annual total artificial insemination of 3300 has grown to 11.40 lakhs during 1983-84. It is estimated that the total artificial insemination using frozen semen will reach a level of 16 lakhs covering the entire State at the end of the Seventh Plan period. With such an intensive cattle breeding programme, Kerala is now producing more than 20% of the total crossbred calves in the country.

The Board is made responsible for providing input services on cattle breeding and fodder development as an agency function of the State fully supported by State funds. The responsibility of implementing the breeding policy and fodder development of the State on a scientific line is vested with the Board. The cattle breeding and fodder development activities are carried out by the Board in collaboration with the Swiss Government under the Indo-Swiss Project Agreement. Part of the capital investment mainly by way of import of equipment and machinery is being met under the aid programme.

### *Dairy Schemes*

1. *Rural Dairy Extension and Farm Advisory Service—Dairy Development Department.*—The higher productivity in dairy farming can be achieved only through a systematic dissemination of innovative dairy production methods, skills and knowledge among the rural milk producers on cross-breeding, management, feeding for economic and hygienic milk production, fodder production and other related matters. The close contacts through house visits, group discussions, seminars etc. and other communications have to be made by the field extension staff continuously to educate the farmers and make them adopt improved practices. Cattle shows, calf rallies, anti-sterility camps, exhibitions, film shows, distribution of pamphlets, leaflets and posters are also necessary to propagate the message of development in the field. Demonstration of improved cattle management practices and its profitability can be made through the development of model dairy farm units managed by progressive farmers. Training programmes are also required to be organised for the farmers, especially those belonging to weaker sections. About 4800 model cattle sheds will be constructed by giving subsidy under the scheme. About 400 model dairy farm units will be organised. Also, 600 cattle shows and calf rallies and 400 anti-sterility camps will be arranged. Five lakh house visits, 2000 seminars and 20,000 discussion classes will be arranged. Two lakh calves will be dewormed. Mineral and vitamin supplement will be distributed

at subsidised rate to the farmers and mini exhibition units will be organised throughout the State. An outlay of Rs. 48 lakhs has been provided for this scheme during the Seventh Plan period. The provision for 1985-86 is Rs. 9 lakhs.

2. *Operation Flood II Programme and the Swiss Assisted Dairy Development Project for Northern Districts.*—The Operation Flood II Programme is implemented by the Kerala Co-operative Milk Marketing Federation. Land for the project is provided by Government free of cost, according to the agreement entered into between the Government and Indian Dairy Corporation. The outlay made is for meeting the land acquisition charges. Similarly for the proposed Swiss aided project for the northern districts, land acquisition charges will have to be met by Government. The outlay proposed for the Seventh Plan is Rs. 30 lakhs and for the year 1985-86 is Rs. 6 lakhs.

3. *Production and Supply of Inputs for the Cattle Breeding Programmes under the KLD & MM Board.*—This scheme covers production and supply of inputs for the cattle breeding programme which includes the expenditure on cattle breeding farms, bulls stations, central semen banks, regional semen banks and the extension network. Now the Board is operating only 1000 centres. By the end of March 1985, it is planned that 1400 centres will be covered under frozen semen programme. During the Seventh Plan period, 2000 artificial insemination centres will be supplied with frozen semen for which the existing infrastructure facilities are to be strengthened and expansion programmes are to be taken up. It is envisaged that 15 to 18 lakh doses of frozen semen will be required annually for distribution. The bull strength will also have to be proportionately increased. All the seven regional semen banks will function in full swing. The Seventh Plan provision is Rs. 338 lakhs. In 1985-86 Rs. 70 lakhs has been provided for the scheme.

4. *Production of Buffalo Frozen Semen.*—The production of frozen buffalo semen has now reached 1 lakh doses. The annual requirement in the State is 2 lakh doses. There is sharp demand for frozen buffalo semen. Therefore, the scheme is to be strengthened in the Seventh Plan. The programme is to maintain 40-50 bulls under regular semen collection in order to meet the demand. The Seventh Plan provision is Rs. 15 lakhs and Rs. 2 lakhs is set apart for the scheme in 1985-86.

5. *Herd Book Organisation.*—This is complementary to the progeny testing scheme. The programme envisages establishment of a herd book register for field animals and also farm stock. In the Seventh Plan period, the programme is to be strengthened and more number of animals will be included in the herd book registry. An amount of Rs. 5 lakhs is provided for this scheme during Seventh Plan period and the outlay for 1985-86 is Rs. 1 lakh.



### *Education and Training*

1. *Training of Personnel.*—The training of staff including deputation of personnel for higher studies in dairying, refresher training and management training are envisaged under this scheme. The Seventh Plan provision for this scheme is Rs. 15 lakhs. For 1985-86, Rs. 3 lakhs is provided.

2. *Dairy Training Centre.*—There is only one Dairy Training Centre functioning under the Department to impart training to dairy farmers, unemployed youth and co-operative personnel in dairy production practices, management of dairy co-operatives, production of milk products, milk marketing etc. One additional Dairy Training Centre is proposed to be established during the Seventh Plan period. The outlay for the Seventh Plan period is Rs. 15 lakhs and Rs. 10 lakhs is set apart for 1985-86.

### *Others*

1. *Improvement to the Existing Fodder Farm at Valiathura.*—It is proposed to bring the uncultivated area at Valiathura under fodder cultivation for which land development, provision of irrigation channels, underground drainage pipes etc. have to be provided. Also old vehicles including tractors have to be replaced and additional pumpsets and vehicles procured. Internal roads, quarters, office buildings etc. are also required. The Seventh Plan provision is Rs. 15 lakhs and the provision for 1985-86 Rs. 2 lakhs.

2. *Fodder Extension Scheme.*—This on-going scheme aims at producing mixtures of grasses legumes like guinea, setaria, congo-signal stylo santhus, centrosema etc. The seeds will be supplied to the farmers at 50% subsidy. Further, fertilizer worth Rs. 500 per hectare will also be given in kind for the first year of cultivation.

During the Seventh Plan period seeds and fertilizer will be supplied for cultivation in 5000 hectares. In 1985-86 about 750 hectares will be covered by the programme.

It is proposed to cultivate fodder cowpea varieties (C-152, NP-3 and Russian giant varieties) as intercrop and in rice fallows as catch crops. Seeds will be distributed at 50% subsidy and fertilizer worth Rs. 350 per hectare will be given to the farmers under the scheme to cover 10000 hectares under the crop during the Seventh Plan period. During 1985-86 1500 hectares will be brought under cowpea fodder cultivation.

Hybrid maize like African tall, Deccan white and Ganga-3 are quite suitable as short duration and high yielding varieties that can be introduced in crop rotations and in combination with cowpea, both in garden lands and in single crop rice fallows. This

crop is most suited for conservation as silage. About 3000 hectares are proposed to be covered under this programme during the Seventh Plan period. Seeds will be distributed at 50% subsidy and fertilizer worth Rs. 700 per hectare will be given for its cultivation. In 1985-86 200 hectares will be covered by this programme.

High yielding "grasses like hybrid napier and guinea are found to be acceptable to the farmers. Planting materials will be distributed free of cost to the farmers to layout perennial grass cover as intercrop in coconut gardens. Fertilizer worth Rs. 1000 per hectare is also proposed to be given. In the Seventh Plan 3500 hectares will be brought under this programme. In 1985-86, 500 hectares will be brought under perennial grasses.

Surplus fodder produced during the monsoon season can be profitably preserved as silage for feeding the cattle during the lean summer months. Assistance for construction of silo pits and handling charges are given under this on-going scheme at the rate of Rs 125 per tonne of silage produced. It is proposed to give subsidy under this scheme for ensiling 6000 tonnes during the Seventh Plan period. In 1985-86 assistance for ensiling 800 tonnes will be given.

Natural grass lands are developed through reseedling and adding fertilizer during August-September. The grass is cut during November-December and converted into hay. This is found profitable in Wynad and Idukki districts. Assistance at the rate Rs. 500 per hectare towards cost of fertilizer and labour charges will be given. It is proposed to cover 2000 hectares during the Seventh Plan period. In 1985-86, 400 hectares will be brought under this scheme. The Seventh Plan outlay for the scheme is Rs. 50 lakhs. The outlay in 1985-86 is Rs. 7 lakhs.

3. *Fodder Seed Farm and Certified Seed Production.*—In 1983-84, 23.7 tonnes of fodder seeds of selected varieties were produced for distribution among the dairy farmers. The suitable fodder varieties are screened and the selected varieties suitable for Kerala conditions are multiplied and further mass seed production programme is taken up through certified seed growers (selected farmers). During the Seventh Plan period the programme is to produce 40 tonnes of fodder seeds annually for distribution among the dairy farmers in the State. The infrastructure facilities are to be developed and strengthened for processing the seeds and its quality control. The seed farm is to be established in a suitable location for multiplying the basic seeds. The Seventh Plan provision for this scheme is Rs. 33 lakhs and for 1985-86 is Rs. 5 lakhs.



4. *Assistance to Dairy Co-operatives.*—This is an ongoing scheme for assisting dairy co-operatives in the State. The number of milk societies will increase to 2500 by 1990. Most societies need financial and technical help to become viable and effective. For giving assistance to the dairy co-operative societies an amount of Rs. 55 lakhs is provided in the Plan. An amount of Rs. 10 lakhs is set apart for implementing the scheme in 1985-86.

#### *KLD & MM Board*

1. *Investment and Loans to KLD&MM Board.*—Funds provided under the Plan will be utilised for investment of capital nature in the farms and also to meet the expenditure for payment of customs duty for imports etc. In the Seventh Plan period allocation is needed for the replacement of the field refrigerators and containers used for frozen semen programme. The programme of introduction of frozen semen in the State was taken up under a collaborative venture with Swiss assistance. The existing phase of collaboration with Swiss Government will be over by the end of March 1985. In the new phase of collaboration the Swiss side will not be providing funds for the replacement of the field refrigerators/containers etc. Therefore, additional funds will be required under this programme. An amount of Rs. 65 lakhs is provided for the scheme during the Seventh Plan period and Rs. 12 lakhs for 1985-86.

2. *Assistance to KLD & MMB.*—The KLD & MM Board is responsible for making available the frozen semen and liquid nitrogen to all artificial insemination centres in the field manned by the Departments of Animal Husbandry and Dairy Development. This is carried out as an agency function of the Government. Even though Government have fixed a price for the frozen semen and liquid nitrogen supplied to the Departments, Government have not released funds against the supplies made. Therefore it is necessary to provide Plan funds as assistance to the KLD & MM Board towards part of the cost of frozen semen and liquid nitrogen supplied to the field A. I. Centres in the State. The Seventh Plan provision for this scheme is Rs. 110 lakhs and for 1985-86 is Rs. 20 lakhs.

#### 3. *Special Component Plan*

(a) *Establishment of Harijan Dairy Co-operative Societies.*—The assistance proposed to be given to the harijans for taking up dairy farming as their vocation or their subsidiary occupation has to be routed through co-operative societies. The societies will be

provided with production inputs, credit, marketing facilities etc. It is proposed to bring 2250 harijans under the co-operative fold and extend assistance for construction of cattle sheds, supply of cattle feed and assistance to take share and other related contributions to the societies and subsidy to building grant and purchase of milch animals. The harijan members will also be given training in milk production and cattle management. In 1985-86 five hundred harijans members will be covered under this scheme.

(b) *Training of Harijans.*—It is proposed to train the harijan beneficiaries in all aspects of milk production and cattle management in order to equip them to undertake dairy farming in a profitable manner.

Under the same scheme harijan candidates who are qualified will be deputed to undergo Indian Dairy Diploma or degree courses to make them eligible for appointment in the Department.

In 1985-86, 500 harijan farmers will be given training in dairy production and six harijan students will be deputed for I. D. D. Course. An outlay of Rs. 85 lakhs is set apart for this scheme during Seventh Plan period. The provision for 1985-86 is Rs. 17 lakhs.

#### 4. *Tribal Sub Plan*

(a) *Establishment of Girijan/Tribal Dairy Co-operatives.*—On the same lines of bringing harijans under the co-operative fold, the girijan farmers will be also brought under the co-operative fold. This scheme will benefit 1000 girijan farmers who will be given assistance for the purchase of cows, construction of cattle sheds etc., through the co-operative societies. Different types of assistance will be given to them under this scheme. In 1985-86, 100 girijans will be covered under this scheme.

(b) *Training of Girijans.*—It is proposed to train the girijan farmers also in dairy production methods. About 1000 beneficiaries will be trained under the programme. About 50 tribal camps will also be organised in their hamlets to give them practical training. In 1985-86, 200 persons will be given training and 10 tribal camps will be organised. The Seventh Plan provision for Tribal Sub Plan is Rs. 21 lakhs and for 1985-86 is Rs. 5 lakhs.

## Fisheries

### 1. Fish Farms and Hatcheries

The schemes proposed under Fish Farms and Hatcheries are the following:—

#### (1) National Seed Farms—State Share

Under the National Seed Farm Programme, three farms are proposed at Malampuzha, Polachira and Thalakkulathur. The work has already been started in these farms and will be completed during the first two years of the Seventh Plan. The provision of Rs. 30 lakhs made in the Plan is towards 50% State share for this Centrally Sponsored Scheme.

An outlay of Rs. 15 lakhs is provided as State share for the scheme in 1985-86.

#### (2) Brackish Water Fish Farms

##### (i) State Sector

A scheme for setting up brackish water fish farms with 50% assistance from Government of India is in existence. Government of India has sanctioned the setting up of a farm (48 hectares) at Poyya and augmenting the existing farms at Ayiramthemgu, Njarakkal, Malippuram and Palaikari. Besides, it is proposed to cover an additional area of 500 hectares during the Seventh Plan period. For continuing the scheme during the Plan period an outlay of Rs. 150 lakhs is proposed as State share.

Of the total outlay proposed an amount of Rs. 25 lakhs is the State share for 1985-86.

##### (ii) NCDC Assisted Co-operative Sector—State Share

A programme for setting up of fish/prawn farms in 1,000 hectares of brackish water area is proposed to be taken up in the co-operative sector during the Seventh Plan period. Steps have been taken for identifying suitable culturable areas in the State for this purpose. To be sponsored by the Fisheries Federation and the District Societies, this programme will be implemented with the financial support of the NCDC. Of the total estimated cost 20% will have to be contributed by State Government according to the stipulations of the NCDC. An outlay of Rs. 100 lakhs is proposed as State share for implementing the scheme in the Seventh Plan. It is anticipated that the balance outlay required for implementing the scheme will be received from NCDC.

For the year 1985-86, an outlay of Rs. 4 lakhs is provided.

##### (iii) Assistance for Setting up Farms in the Private Sector

It is proposed to promote brackish water culture in the private sector by providing it with necessary incentives like interest subsidy, technical guidance, supply of seed etc. Two types of promotional schemes will be launched during the Seventh Plan period. The first one is for providing assistance to persons seeking self-employment. Underemployed persons possessing culturable areas will be given assistance to set up their own farms. The assistance will be in the form of interest subsidy, training and subsidised supply of seeds. Under the second scheme relatively rich farmers

who come forward for taking up fish culture will be given training and extension support. They will not be eligible for any subsidy. The targeted coverage under the two schemes will be 5000 hectares. The outlay provided in the Seventh Plan for this scheme is Rs. 125 lakhs.

An amount of Rs. 10 lakhs is proposed for taking up the scheme in 1985-86 on a pilot basis.

#### (3) Prawn Hatcheries—State Share

Setting up adequate number of prawn hatcheries is a pre-requisite for promoting large-scale aquaculture in the brackish water area. It is, therefore, proposed to establish three prawn hatcheries under the department at Neendakara, Thottappally and Cannanore. The hatchery at Azhikode will be augmented. Central assistance on 50% basis is available for implementing the scheme. The Seventh Plan outlay for this scheme is Rs. 40 lakhs.

For the Annual Plan 1985-86 a provision of Rs. 7 lakhs is proposed as State share.

#### (4) Establishment of Seed Depot

With the commissioning of the National Seed Farms there will be sharp increase in the production of fish seeds. This will call for timely distribution of seeds. It is, therefore, proposed to establish seed depots at the rate of one in each district. Nursery ponds of about 0.5 hectare will also be set up in each depot. The other facilities to be provided include compressor, feed, seed packing devices, portable hatcheries etc. The outlay in the Seventh Plan is Rs. 25 lakhs. The provision in 1985-86 is Rs. 15 lakhs.

#### (5) Assistance to Farmers for Setting up Nurseries

A major handicap in the production and supply of fish seed in sufficient quantity has been the limitation of nursery area in the existing departmental hatcheries. With the commissioning of the Chinese hatcheries the production of hatchlings will increase manifold. This calls for substantial increase in nursery area. As it is not feasible to provide the required nursery area in the departmental hatcheries in the near future, it is proposed to locate and organise private nurseries by providing necessary inducements to enlightened fish farmers to rear the hatchlings raised in the departmental hatcheries. The outlay of Rs. 10 lakhs provided is for meeting the expenditure incidental to this.

An amount of Rs. 4 lakhs is the Plan provision in 1985-86.

## II. Inland Fisheries

### (1) Fish Farmers Development Agencies—State Share

Under the Centrally Sponsored Scheme for setting up of Fish Farmer's Development Agencies three districts in the State, namely, Quilon, Trichur and Palghat, have been covered. The scheme aims at popularising fresh water aquaculture and motivating the farmers. Incentives by way of subsidy, training, seed, bank finance and extension support will be given. During the Seventh Plan period it is proposed to extend the programme to the remaining areas

of the State through widening the jurisdiction of the existing agencies to the neighbouring districts and also by establishing two new agencies with headquarters at Alleppey and Calicut. It is proposed to set up fish seed farms under the agency in all locations to ensure sufficient supply of seed. The outlay for the expanded programme in the Seventh Plan is Rs. 50 lakhs which represents the 50% share of the State Government.

For the Annual Plan (1985-86) an outlay of Rs. 10 lakhs is provided as State share.

## (2) Reservoir Fisheries

The reservoir area available in the State is estimated at 24100 hectares. Of this the area brought under aquaculture constitutes only about 6764 hectares (28%). Owing to inefficient management the level of exploitation in the cultured area has been poor. One factor that stood in the way of expanding the coverage of operation was the reluctance of the Departments—Irrigation, Electricity Board etc.—that exercise control over the reservoirs to permit aquaculture. With the technology evolved in the country it is possible to increase the productivity level sharply. As reservoirs require only low investment, any programme for aquaculture should give first priority to reservoir fisheries. The targeted coverage in the Seventh Plan is 15000 hectares and the outlay Rs. 20 lakhs. The developed areas will be progressively entrusted to co-operatives of scheduled castes and tribes for exploitation on lease.

An outlay of Rs. 5 lakhs is provided in 1985-86.

## (3) Riverine Fish Culture and Cage and Pen Culture

Riverine and cage and pen culture have been tried with success in the other states, notably in Karnataka. There is considerable scope for increasing fresh water fish production by judicious stocking in our rivers, the total area of which is about 85000 hectares. Pen and cage culture also can be resorted to both on individual and collective basis by persons residing close to rivers, canals and waterways. Outlay proposed for these schemes during the Seventh Plan period is Rs. 10 lakhs. For 1985-86 an outlay of Rs. 2 lakhs is proposed.

## (4) Fish Culture in Ponds and Tanks and in Paddy Fields

A scheme for promoting aquaculture in private tanks and ponds has been initiated in 1984-85 with the support of the State Co-operative Bank. The scheme will be continued in the Seventh Plan on a larger scale. Paddy-cum-fish culture is an allied scheme proposed to be promoted during the Plan period. The feasibility of fish culture combined with paddy cultivation has been found successful in the low lying paddy areas of the State. The farmers will be given extension support, free supply of seeds on a tapering basis and interest subsidy against loans raised from the banks for purchase of pumpsets. The Seventh Plan outlay for this scheme is Rs. 10 lakhs.

An outlay of Rs. 3 lakhs is provided for the programme in 1985-86.

## (5) Culture of Air-breathing Fishes

Air-breathing cat fishes are a native species found in the fresh water bodies of the State. There is considerable scope for taking up the culture of these species in such areas as Kuttanad and the Kole lands of the State. The scheme is proposed to cover a targeted area of 2000 hectares during the plan period. An outlay of Rs. 10 lakhs is made in the Plan.

For 1985-86 the outlay is Rs. 2 lakhs for the scheme.

## (6) Trout culture

There is considerable scope for trout and mahseer culture of fishes particularly in the high ranges. Trout and mahseer are high value game fish which, while adding to the value of fish production in the State, can also be put in places of tourist interest. The Seventh Plan outlay for this scheme is Rs. 10 lakhs.

An outlay of Rs. 2 lakhs is suggested for implementing the scheme in 1985-86.

## (7) Mini Kit to Fish Farmers

When large scale inland pisciculture is promoted it may not be possible to ensure timely supply of fingerlings to all prospective farmers. As a solution it is proposed to help farmers to produce the required number of seedlings in their own farms. Mini kits containing the requisites for this will be supplied to the farmers. The extension wing of the Department will also organise a training programme for enabling farmers to properly use the mini kit. During the plan period 500 numbers of mini kits, each costing Rs. 1500 will be given to trained farmers at subsidised (50%) rates. The Seventh Plan outlay for this scheme is Rs. 4 lakhs.

The scheme will be implemented during 1985-86 and an outlay of Rs. 2 lakhs is proposed.

## (8) Insurance Cover to Fish Farmers—State Share

The fish farmers in the inland areas particularly in the F.F.D.A. areas, should be provided insurance cover to the fish and fish seed stocks reared in tanks and ponds. It is proposed that the State bears 50% of the insurance premium, one half of which is likely to be shared by the Centre. The outlay suggested represents the 50% share of the State. The Seventh Plan outlay is Rs. 5 lakhs.

An outlay of Rs. 1 lakh is proposed to implement the scheme in 1985-86.

## (9) Fish Feed Production Unit

A fish feed production unit for formulating cheap nutritive feed for meeting the requirement of the fish farmers and hatcheries is proposed to be established. Presently there is no such unit in the State. The facilities and staff available with the Fisheries Technological Station, Calicut, can be utilized for the purpose. This being a commercial unit, only the initial expenditure required for reconditioning the machinery and equipment at the station and for purchasing other essential accessories need be met from Plan provision of Rs. 3 lakhs.

The scheme will be implemented in 1985-86, and the entire outlay will be spent that year.

(10) *Establishment of Laboratories and Strengthening of the Survey Unit*

A major thrust in the development of inland fish culture covering brackish water and fresh water areas is envisaged in the Seventh Plan. The extension of the F.F.D.As. to cover the entire State, the setting up of farms in brackish water areas, taking up of paddy-cum-fish culture and pond culture in the fresh water areas and intensive stocking of reservoirs will necessitate elaborate testing of water and soil samples in the culture areas. It is, therefore, proposed to set up a central laboratory and two mobile laboratories equipped with water quality analysers and other apparatus. The central laboratory will be created as an adjunct to the existing survey unit at Ernakulam. The survey unit will be strengthened suitably in order to carry out detailed survey of the water areas in the State within a short period. The Seventh Plan provision for this scheme is Rs. 50 lakhs.

An outlay of Rs. 10 lakhs is proposed for implementing the scheme in 1985-86.

(11) *Patrolling of Backwaters*

Removal of stakes and Chinese nets from the estuaries and backwaters is essential for the conservation of the depleting crustacean resources. According to an estimate about 3000 stakes and 2000 Chinese nets are being unauthorisedly operated.

The entire backwater area will have to be surveyed immediately so that such impediments could be removed.

Simultaneously patrolling in the backwaters will have to be intensified in order to prevent illicit fishing in future. The patrolling done at present using three boats operating from Quilon, Ernakulam and Alleppey is not quite effective. It is, therefore, proposed to strengthen the patrolling system with additional patrolling units. Two new boats also will be purchased and patrolling will be done from five centres, namely Saktthikulangara, Alleppey, Ernakulam, Azhikode and Canmanore. The outlay of Rs. 20 lakhs suggested for this scheme is for meeting the cost of boats, operating cost, etc.

An amount of Rs. 5 lakhs is for continuing the scheme in 1985-86.

### III. *Fishing Harbours and Landing Facilities*

The fishing harbours of Vizhinjam and Neendakara and some of the fish landing centres taken up for construction during the Sixth Plan period constitute the spill-over items. Apart from these a few new schemes of minor fishing harbours and landing centres are also proposed for the Seventh Plan. The existing schemes have been implemented as Centrally Sponsored Schemes with 50% Central assistance. The schemes proposed under this head are intended to be implemented as Centrally Sponsored Schemes on the anticipation of a 50% Central assistance.

#### 1. *Vizhinjam Harbour II & III Stages—State Share*

The sanction from Government of India for the second and third stages of the Vizhinjam Harbour Project is expected in 1984-85. It is hoped that the works can be completed by 1987-88. About 2000 fishermen families likely to be displaced by the project will have to be rehabilitated. Construction of about 510 houses taken up already will be completed in 1984-85 and the remaining 1490 houses before 1989-90. A harbour authority will be set up to manage the harbour. The outlay proposed for the project is Rs. 640 lakhs of which State share represents Rs. 320 lakhs (50%). The break-up is as follows.

	<i>Rs. lakhs</i>
1. Rehabilitation of fishermen families	100.00
2. Harbour cost	500.00
3. Setting up harbour authority	40.00
Total	640.00

An outlay of Rs. 30 lakhs is proposed for 1985-86 as the State share for continuing the harbour construction and rehabilitation activities during the year.

#### 2. *Neendakara Fishing Harbour — State Share*

The Neendakara Fishing Harbour, sanctioned by Government of India in 1981, is the second major harbour project under implementation in the State with 50% Central assistance. The project was scheduled to be completed in 1984-85, but owing to labour trouble and stoppage of work it will spill over to the Seventh Plan. The work which is being done directly by the Department is hoped to be completed by 1986-87. The remaining items of the work will require about Rs. 150 lakhs. As at Vizhinjam a harbour authority will have to be set up at Neendakara. The Seventh Plan allocation for the project is Rs. 95 lakhs. As the harbour is intended to be commissioned by 1987, an outlay of Rs. 70 lakhs is proposed as State share for the year, 1985-86.

#### 3. *Fishing Harbour at Mopla Bay—State Share*

The work in this harbour commenced as a 100% Centrally aided scheme with Norwegian assistance. With the construction of the main breakwaters severe siltation was noticed following which the work was stopped, as directed by Government of India, for conducting detailed model study reports. The model studies are being carried out at Kerala Engineering Research Institute, Peechi. Based on the preliminary model study report received a revised project report is being prepared. The cost of remaining items of work is estimated at Rs. 300 lakhs. It is expected that the work can be resumed immediately and hence, the project is proposed as a Central sector scheme with 50% assistance. The total State sector provision in the Seventh Plan is Rs. 60 lakhs. In order to start the construction of harbour in 1985-86, an outlay of Rs. 5 lakhs is proposed.

#### 4. *Fishing Harbour at Puthiappa — State Share*

Puthiappa is an important fishing centre in the State. A project report prepared jointly by the Harbour Engineering Department and Pre-Investment Survey

of Fishing Harbours is pending approval of the Government of India. The project cost is Rs. 800 lakhs. It is proposed to take up the construction works during Seventh Plan with 50% Central assistance. A Seventh Plan provision of Rs. 200 lakhs is earmarked for this harbour in the State sector. An outlay of Rs. 5 lakhs is proposed as State share for commencing the work in 1985-86.

#### 5. *Fishing Harbour at Munambam—State Share*

Munambam is an estuary from where about 500 mechanised boats regularly operate. Mechanised boats face adverse entrance conditions at the bar and several times boats have capsized and lives lost. Detailed investigation and model studies were conducted for the construction of a fishing harbour at Munambam. The Central Water and Power Research Station have recommended the construction of a break-water at Munambam for training the river flow. A detailed project report is being prepared. The total cost of the project is Rs. 400 lakhs. The scheme can be implemented during the second year of the Plan as a Central Sector Scheme with 50% assistance. A total outlay of Rs. 100 lakhs is set apart as State share for the project in the Seventh Plan.

#### 6. *Fishing Harbour at Ponnani—State Share*

Ponnani is an ancient port. There is an old port wharf but due to siltation, the harbour is non-operational. About 300 mechanised boats are operating from this centre. Investigation and model studies were conducted to formulate development proposals. Construction of break-waters at the estuary and dredging would be necessary to maintain the approach channel. The anticipated cost of the proposed project is Rs. 350 lakhs. The project report is under preparation. It is expected that the scheme can be commenced during the second year of the Seventh Plan as Central Sector Scheme. A State sector outlay of Rs. 25 lakhs is set apart for this harbour in the Plan.

#### 7. *Other Fishing Harbours—State Share*

The other mini-fishing harbours for which investigation and model studies are in progress include Chombal, Muthalapozhi, Kayamkulam and Thanakassery. According to present calculations works on these projects can be initiated from the middle of the Seventh Plan. So a total outlay of Rs. 29 lakhs is proposed for these projects as State share during the Plan period.

#### 8. *Landing Centres—State Share*

An outlay of Rs. 75 lakhs is allocated in this Plan for making final payments of the on-going works relating to the landing centres at Kanhangad, Neeleswaram and Munakkakadavu, expected to be completed towards the end of this year. Part of the outlay will be earmarked for taking up the works of landing centres for which sanction has already been given. They are Cheruvathur, Palacode, Dharmadam, South Paravur and Thottappally. The scheme will be continued as a Central Sector one with 50% Central assistance. An outlay of Rs. 20 lakhs is proposed as State share for the year 1985-86.

#### 9. *Landing Centres for Traditional Fishermen—State Share*

Landing centre facilities provided hitherto benefited only the mechanised crafts. In tune with the emphasis given to the traditional sector in the Seventh Plan it is proposed to provide landing facilities in all the 59 major fishermen villages in the State. Investigation has already been started and it is hoped that work relating to 30 landing centres can be completed during the Seventh Plan period. This is proposed as a Central Sector Scheme with 50% Central assistance. An outlay of Rs. 150 lakhs is made in the State sector during the Seventh Plan period.

The scheme will be taken up under Central Sector in 1985-86 and for the purpose an outlay of Rs. 25 lakh<sup>8</sup> is proposed.

#### 10. *Sheltered Basins for Traditional Fishermen—State Share*

In the absence of sheltered basins at the landing places, fishermen in many areas of the coastal belt find it difficult to operate their crafts during the rough seasons. Sheltered basins along the coast, similar to the small craft harbours, are ideally suited under these circumstances. Investigations and model studies for small craft harbours for traditional fishermen are nearing completion. Maintenance dredging in the approaches to the small craft harbours would become necessary. Economy on the construction of breakwaters required for the harbours can be achieved by investigations and model studies. Sheltered basins can be provided at Bekal, Quilandy, Parappanangadi, Andhakaranazhi, Thottappally, Palacode, Chowara etc. It is proposed to take up 4 places during the Plan period, namely, Chombal, Bekal, Thottappally and Quilandy. The anti-sea erosion works can be linked with the construction of sheltered basins thereby avoiding the construction of sea walls where sheltered basins are provided. It is proposed that this be taken up during the Seventh Plan period as Centrally Sponsored Schemes. The total Seventh Plan allocation for this scheme is Rs. 150 lakhs.

The scheme will be implemented in 1985-86 on a pilot basis and therefore an outlay of Rs. 5 lakhs is proposed as State share.

#### 11. *Landing Facilities in Inland Areas—State Share*

The landings in the inland sector are scattered throughout the backwater areas of the State. There are no common landing places for the country canoes operating in the backwaters. It is proposed to select a few places along the backwaters and provide with the facilities such as sandy sloping ground for beaching the crafts, repair facilities for nets and canoes, ice store, water supply, a small auction hall, approach road etc. The approximate cost of each landing centre will be about Rs. 1 lakh. It is proposed to provide 40 landing centres during the Plan period. Total provision included in the Plan is 20 lakhs in the State sector (50% of the cost). The balance outlay is expected as Central assistance.

In 1985-86, 10 landing centres will be constructed and for the purpose an outlay of Rs. 5 lakhs is proposed as State share.

(12) *Fisheries Terminal Authorities*

It is intended to set up fisheries terminal authorities in important fishing harbours such as Vizhinjam, Neemdakara, Beypore, Ponnani, Azheekal etc. The Seventh Plan outlay is Rs. 100 lakhs. An outlay of Rs. 10 lakhs is proposed for 1985-86.

(13) *Guide Lights*

Under this continuing scheme, guide lights have been provided at important fish landing centres as an operational aid to traditional fishermen. The provision of Rs. 4 lakhs is for establishing 20 guide lights, each costing Rs. 20,000 in the Seventh Plan.

It is proposed to construct 10 guide lights during 1985-86 and for that an outlay of Rs. 2 lakhs is necessary.

IV *Deep Sea Fishing*

Deep sea fishing is a highly capital intensive industry requiring sophisticated craft, equipment and high skills. In the absence of these factors this industry has not been picking up in the past. Today there are many favourable factors that make deep sea fishing attractive. With the declaration of the Exclusive Economic Zone, exploration in the deep sea areas have been intensified, with the result there is at present fairly reliable estimate of the resources. Government of India is providing through the Shipping Development Fund Committee (SDFC) soft loan upto 95% of the cost of deep sea fishing travellers. Charter arrangement for fishing vessels with foreign countries is also encouraged.

The proposal in the Seventh Plan is for organising deep sea fishing by the State Co-operative Fisheries Federation through tie-up arrangement with foreign or Indian firms which have proven standing in the field. This, it is hoped, will solve the problem of lack of expertise. As part of this, the available sources of finance, including the Shipping Development Fund Committee will be made use of. The total outlay for this scheme in the Seventh Plan is Rs. 200 lakhs. The scheme is intended to be taken up during the second year of the Seventh Plan.

V. *Processing, Preservation and Marketing*

Fish production in the State is targeted to be around 6 lakh tonnes by the end of the Seventh Plan period. This will be a 50% increase over the present level of production. Commensurate support facilities in the nature of transportation, processing, preservation and marketing will have, therefore, to be provided during the Plan period. The present pattern of disposal of fish in the State is broadly in the form of fresh fish (53%), dry (24%), export (16%) and conversion to fish meal (4%). In the absence of proper handling facilities more than a quarter of the total catch is going waste. Marketing has been a neglected area in the past Plans. Various systems and exploitative practices are prevalent from centre to centre. The formation of the village fishermen societies was aimed at introducing a progressive change in the system. With the recent constitution of the District Societies and the Apex Federation the necessary organisational support

has been brought into being for rationalising and strengthening the marketing system. A number of supportive programmes are proposed to be introduced during the Seventh Plan period. The primary objective of these programmes would be maximisation of the returns of the fishermen. Reducing wastage, improving the quality of the product and ensuring steady and regular supply to the market are the other objectives. Most of these programmes will be implemented with financial assistance from the National Co-operative Development Corporation (NCDC). The financial outlay indicated represents matching assistance from the State Government. The package of programmes proposed are:

(1) *Organisation of Marketing*

As a part of the NCDC schemes, marketing of fish through the co-operative net-work by means of auction, internal distribution and export is envisaged. Introduction of regulated markets by enactment is also under consideration. The outlay of Rs. 300 lakhs proposed in the Plan is for meeting the margin money requirements of the village and district societies, State share of subsidy for marketing infrastructure, establishment of market yards in primary markets, establishment costs and selling costs at the primary level.

For organising of fish marketing, an outlay of Rs. 40 lakhs is proposed in 1985-86.

(2) *Establishment of Cold Chains and Wholesale and Retail Outlets*

The major portion of the marketing of fish is proposed to be progressively brought under the auspices of the co-operative organisation. As part of this, a cold chain for ensuring regular supply of ice and storage facility will be set up in all the important market centres. Required number of insulated vehicles will also be pressed into service. While whole sale marketing will be brought under the control of the co-operative organisation in due course the retail sales will be through a chain of small fish vendors. Working capital and other assistance needed for this will be provided to the fish vendors. Depending on the size of the market, insulated cabinets or fish boxes also will be provided to the retail outlets.

Development of transit and terminal markets of various sizes under the central sector is another component of the scheme. The markets suggested under this scheme include Cochin, Trivandrum, Kottayam, Palghat and Changanacherry. Under this Centrally Sponsored Scheme the State is eligible to get about Rs. 20 lakhs during the Seventh Plan period, provided an equal amount is earmarked in the State Plan.

A total outlay of Rs. 300 lakhs is provided for the marketing programme. This amount will represent the State's matching contribution (Rs. 280 lakhs) against the large-scale assistance anticipated from the National Co-operative Development Corporation and also the State share (Rs. 20 lakhs) under the Centrally sponsored scheme for development of transit and terminal markets.

An outlay of Rs. 20 lakhs is proposed for 1985-86, which includes the State share (Rs. 4 lakhs) for development of transit and terminal markets.

### (3) *Renovation of Existing Ice Plants*

The outlay of Rs. 25 lakhs provided is for making the final payment of the Baliapattom Ice Plant which is in progress and also for replacement of the machinery of the existing ice plants at Vizhinjam, Thalayi, Kanhangad, Blangad etc. As it is intended to complete the scheme during the first year of the Plan, the entire outlay of the scheme is allocated for the year 1985-86.

### (4) *Assistance for Fish Curing*

Curing of fish which include salting, sundrying and smoking is undertaken widely in the unorganised traditional sector of the State. Mostly done during the peak season of production, fish curing and marketing provide employment to a significant segment of fisher-folk. This is an area where the fishermen need substantial support by way of working capital, storage facility etc. A selected number of fishermen co-operatives will be given assistance for setting up and maintaining fish curing yards during the Plan period. Under each District Society one warehouse will be set up for the collection and proper storage of cured fish from the respective village societies.

The scheme will be implemented with financial assistance from NCDC. The outlay of Rs. 25 lakhs proposed is matching provision from the State Government.

An outlay of Rs. 5 lakhs is proposed as matching provision from the State Government for the year 1985-86.

### (5) *Community Peeling Centres*

The outlay of Rs. 10 lakhs made in the Plan is for establishing community peeling centres at important fishing centres like Neendakara, Alleppey, Cochin etc. Water supply and sanitation facilities also will be provided at these centres. The Marine Products Export Development Authority (MPEDA) will reimburse 50% of the cost of establishing these centres. Provision of this facility is a long-felt need for preventing spoilage in handling of the prawn catch at these centres.

For construction of peeling sheds with assistance from MPEDA, an outlay of Rs. 4 lakhs is provided for 1985-86.

### (6) *Auction Halls*

This scheme envisages construction of auction halls in ten major fish landing centres in the State. The present set up in the major landing centres is highly unhygienic in the absence of facility for washing, sorting and auctioning of the fish brought to the shore. Even at such an important fish landing centre as Neendakara there is no auction hall. Improper landing of fish at fishing centres has grown into a health hazard for the local residents. Under the scheme it is proposed to collect a fee from the users of the auction hall. The Seventh Plan outlay is Rs. 25 lakhs.

For implementing the scheme in 1985-86, an outlay of Rs. 5 lakhs is provided.

### (7) *Product Development*

Processing and product development assume great importance in the context of the emphasis given to marketing in the Seventh Plan. Establishment of infrastructure facilities for commercial scale production of value added products has become inevitable. A scheme for this purpose will be taken up by the Fisheries Federation during the Plan period with assistance from financial institutions. The outlay of Rs. 25 lakhs provided is for giving margin money support to the Federation for this purpose. The scheme will be taken up during the second year of the Seventh Plan.

## VI. *Mechanisation and Improvement of Fishing Crafts*

### (1) *Supply of Production Inputs to Traditional Fishermen*

The strategy in the Seventh Plan is oriented to the development of the small scale (traditional) fisheries sector. Motorisation of country crafts and supply of production inputs at subsidised rates to the fishermen are two major schemes included in the Plan for this purpose. The implementation of these schemes will be entrusted to the Fisheries Federation and the Co-operatives with financial assistance from NCDC. The Corporation will provide 80% of the cost of the inputs on condition that the remaining 20% will be contributed by the State Government as subsidy. The outlay provided in respect of each scheme, therefore, forms the assistance (20%) by the State Government. The details of the component schemes are given below:—

#### (i) *Motorisation of Country Crafts*

Fitting of outboard engines raises the working efficiency and productivity level of the country craft and reduces the fatigue of the operators. Since the machines presently in use are imported ones mechanisation has not been picking up as fast as it should have been. Hence the proposal is to import the machines directly by the Federation at the rate of 1500 per year during the Seventh Plan period for distribution to the fishermen at subsidised rates. The total investment for five years will work out to Rs. 900 lakhs. The state sector outlay, representing 20% subsidy component, is Rs. 180 lakhs. For implementing the scheme in 1985-86 an amount of Rs. 36 lakhs is proposed as matching provision.

#### (ii) *Supply of Country Crafts*

There are about 34000 country crafts in operation along the Kerala coast. These consist of 7000 catamarans, 16000 dug-outs and 11000 plank-builts. The estimated number of active fishermen in the marine sector is around 113000. The majority of the fishermen work as labourers for wages. Betterment of their lot is possible only by making them real owners of the means of production. The policy is to be pursued in Seventh Plan is to make available crafts to groups of fishermen. At the rate of 1000 per year, 5000 crafts would be arranged to be supplied to the selected fishermen groups during the Seventh Plan period.

The overall cost is about Rs. 900 lakhs. 20% subsidy component to be provided in the Plan in the State sector is Rs. 180 lakhs. In the annual plan for 1985-86 Rs. 36 lakhs is proposed as matching provision for implementing the scheme.

### (iii) *Supply of Gear*

Along with the supply of outboard engines and craft, the fishermen will be supplied with adequate number of gear of varying type. The cost of this will work out to about Rs. 1000 lakhs per year. An outlay of Rs. 200 lakhs will be necessary as subsidy in the Seventh Plan. For implementing the scheme in 1985-86, an outlay of Rs. 30 lakhs is necessary.

### (2) *Establishment of Service Centres for Outboard Engines*

Motorised crafts presently in operation along the coast of Kerala number about 3000. About 1500 motors will be the annual addition during the Seventh Plan period. The number will be more if the additions in the private sector is also taken into account. Service facility of outboard engines is totally inadequate at present. In view of its critical importance the Fisheries Federation proposes to set up three permanent service stations with all facilities and three mobile workshops attached to it at Neendakara, Beypore, and Ernakulam. The existing boat yards at Neendakara and Beypore will be transferred to the Federation for setting up the servicing facilities there. Arrangement will also be made for supplying the needed spares and accessories through the depots to be attached to these service stations. The mobile workshops visiting different centres will, besides undertaking the repair works, offer short term training to the fishermen for proper maintenance of the machines. The estimated cost of these service stations and mobile workshops is Rs. 30 lakhs. Since assistance is anticipated for this scheme also from the N.C.D.C. government contribution, by way of margin money, the outlay for inclusion in the plan is only Rs. 10 lakhs.

Of the total outlay an amount of Rs. 5 lakhs is proposed for the year 1985-86.

### (3) *Diversification of Fishing*

The schemes proposed under diversification of fishing are the following:—

#### (i) *Introduction of Intermediate Technology Crafts*

The plan proposal is to start a pilot project for introducing twenty 15 meter boats for fishing operation in the off shore areas of depth range between 40 and 100 metre, mainly concentrating on long lining. The scheme will be implemented under the State Co-operative Federation with the assistance from Central Government and the NCDC. The Seventh Plan outlay is Rs. 20 lakhs.

For implementing the scheme in 1985-86, an outlay of Rs. 4 lakhs is proposed.

#### (ii) *Dory Fishing*

A section of the fishermen regularly goes to offshore areas to fish large species like tuna, rock cod, etc. using

long lines and large meshed drift nets. Since the distance covered is considerable the actual fishing time of these fishermen is limited. A method adopted in some other countries for making this kind of fishing more productive and less arduous is using a mechanised mother vessel to tow the country crafts to the fishing grounds and back. This vessel also can do some fishing and carry insulated boxes for storing the catch. During the Seventh Plan period, dory fishing will be taken up as a pilot project starting with two boats. Ten vessels are proposed to be introduced progressively for this purpose during the plan period. This scheme also will be implemented under the aegis of the fishermen co-operatives with N.C.D.C. assistance. The estimated cost is placed at Rs. 40 lakhs out of which Rs. 10 lakhs will be margin money from government. This amount is earmarked as the state sector outlay for the Plan.

An outlay of Rs. 2 lakhs is the plan provision for providing margin money during the year 1985-86.

#### (iii) *Introduction of "Mother Craft"—State Share*

A substantial portion of the by-catches of mechanised boats-trawlers and purse-seiners constitutes low value fish. These catches are mostly thrown back into the sea. If some arrangement is made to collect these catches from the mechanised boats while on fishing they can be converted into fishmeal. Therefore a central sector scheme for introducing mother crafts for the collection of by-catches is proposed. The scheme has great relevance in the Kerala situation where more than 3000 mechanised crafts are in operation. Introduction of about four mother crafts with 50% central assistance is proposed in the plan period. The Seventh Plan State sector outlay is Rs. 5 lakhs.

An amount of Rs. 2 lakhs is proposed as State share for introducing the scheme in 1985-86.

## VII *Research*

### (1) *Setting up of a Resource Management Cell—State Share*

A Resource Management Cell is proposed to be organised as part of the Directorate with the objective of helping the government plan future fishery management strategy. The cell is expected to provide information on the present extent of exploitation, resource potential available for further development with reference to depth, area and time, the type of craft and gear economically suitable for exploitation of these surplus resources, the resources which require conservation and the nature of regulatory measures to be employed. Properly manned this cell will collect and analyse all the relevant data generated by the all India research institutions like the CMFRI, Fishery Survey of India etc. Such factors as the migration of fishes, intensity of exploitation in different regions depth zones in different seasons, impact of the fishing technology evolved and adopted over time will be specifically studied. The remote sensing technique adopting aerial photography of the sea zones is known to be useful in making accurate estimates of the biomass in the sea. The possibility of utilising this facility in association with the Land Use Board will also



be explored under the scheme. The scheme is proposed as centrally sponsored scheme, and an outlay of Rs. 5 lakhs is provided as state share for 1985-86. The total requirement for the Seventh Plan in the State sector is Rs. 25 lakhs.

(2) *Organisation of Craft and Gear*

A unit for conducting adaptive test of the craft and gear technology evolved from time to time by institutions like the Central Institute of Fisheries Technology and the Central Institute of Fisheries and Nautical Engineering Technology will be organised in the Department. This unit will function as the link between the all India institutions and the extension wing of the Department. Besides conducting regular adaptive tests of the improved devices evolved by the research institutes this unit can also furnish useful feed back to the research institutions regarding the requirement of the fishermen. The Seventh Plan provision for this scheme is Rs. 20 lakhs. A provision of Rs. 4 lakhs is given in the annual plan for 1985-86.

(3) *Assistance to Kerala Agricultural University for Research in Inland Fisheries*

Under this scheme financial assistance will be provided to the Kerala Agricultural University for conducting research on inland fish culture.

The identified projects are:—

- (a) investigation on the mass mortality of macrobrachium larvae in hatchery, (b) regulation of reproductive cycles in cultivated carps and (c) techno-economic feasibility studies on culture of air-breathing varieties.

The total outlay for the scheme in the Seventh Plan is Rs. 10 lakhs. An amount of Rs. 2 lakhs is provided in the 1985-86 Plan.

(4) *Programmes for Applied Research*

Apart from the research projects mentioned earlier the Department on its own or in collaboration with other research institutions proposes empirical studies on the following:—

- (a) Study on the problem of acidity in Kari and Kole lands in the State;
- (b) Investigation on the hatchery technique to rear larvae upto PL 15 for stocking cultural ponds for increasing percentage of survival of the stocked juveniles;
- (c) Studies on relative growth and maturity of different species stocked in reservoirs;
- (d) Study on photo periodicity in breeding carps;
- (e) Study on developing a technology for breeding fast growing brackish water species;
- (f) Developing improved feed formulations for hatchery and fish farming;
- (g) Study on the effect of Thottappally Spillway and Thannirmukkom bund on the fishery of South Vembanad Lake; and

- (h) Study on improving the productivity level of prawn filtration.

The Seventh Plan outlay for applied research programmes is Rs. 20 lakhs. The outlay for 1985-86 is Rs. 4 lakhs.

VIII. *Education and Training*

1. *Establishment of Central Fisheries Management Technical Institute*

A Central Fisheries Management Technical Institute is proposed to be established at Ernakulam for undertaking programmes in research, education, training and development. The existing Fishermen Training Institutes at Vizhinjam, Neendakara, Ernakulam, Beypore and Cannanore and the Staff Training Centre, at Ernakulam will be affiliated to this central institute. The Seventh Plan allocation for this scheme is Rs. 25 lakhs. The amount proposed for 1985-86 is Rs. 10 lakhs.

2. *Regional Fisheries Technical High Schools*

The provision of Rs. 225 lakhs in the Seventh Plan is for completing the on-going civil works of schools already sanctioned at Chawghat, Tanur, Beypore and Ernakulam and taking up the works of the newly sanctioned schools at Quilon, Alleppey and Cannanore. An outlay of Rs. 20 lakhs is provided in the Annual plan for 1985-86.

IX. *Others*

(1) *Social Amenities to Fishermen (Housing)*

Among the different occupational segments of the State's population, fishermen are the most backward. Those who have own homesteads are a few among them. Fishermen villages generally lack the minimum sanitary facilities. Keeping in view this hapless situation the following schemes are proposed for implementation during the Seventh Plan period: A subsidised housing programme for fishermen, with the assistance of HUDCO has been under implementation in the State during the Sixth Plan period. Construction of 10,000 houses taken up in the second phase of the programme will spillover to the Seventh Plan. The subsidy due from government towards the cost of this will be Rs. 200 lakhs. During the Seventh Plan period the proposal is to take up construction of another 20,000 houses, the liability of which to the State would be another Rs. 400 lakhs. However, the outlay proposed for the fishermen housing scheme in Seventh Plan is Rs. 500 lakhs. For continuing the housing programme a provision of Rs. 75 lakhs is earmarked for 1985-86.

(2) *Fishermen Welfare Fund—State Share*

The proposed Fishermen Welfare Fund will be a centrally sponsored scheme which can obtain assistance from the centre. While each active fisherman member of the welfare societies will be required to make a regular contribution to the fund, the family will be reckoned as the basic unit for availing of the assistance. The contribution to the fund will be utilised for providing relief to the needy fishermen. The outlay of Rs. 400 lakhs suggested is the State Government contribution to the fund. An amount of Rs. 10 lakhs is suggested for introducing the scheme in 1985-86.

### 3. *Share Capital Contribution and Managerial Subsidy to the Co-operative Federation and the District Societies*

The Kerala State Co-operative Federation for Fisheries Development and the District Societies under it are newly constituted bodies which are intended to play a significant role during the coming years in carrying out the commercial and welfare programmes under fisheries sector. An amount of Rs. 300 lakhs is proposed in the plan for assisting these State sponsored units by way of share capital contribution. Also, managerial subsidy of Rs. 50 lakhs is indicated in the Plan as assistance to the fishermen village societies. The provision in the annual plan is Rs. 100 lakhs which includes share capital contribution to KSCFFD and District Societies (Rs. 90 lakhs) and managerial subsidy (Rs. 10 lakhs) for the fishermen village societies.

### 4. *Dispensaries*

The outlay of Rs. 50 lakhs in the plan is for completing the construction works of dispensaries started during the Sixth Plan period. The provision made for 1985-86 is Rs. 15 lakhs.

### 5. *Kerala Fisheries and Inland Fisheries Development Corporations*

The provision of Rs. 100 lakhs is for continuing the activities taken up under the Kerala Fisheries Corporation and the Kerala Inland Fisheries Development Corporation. The outlay proposed for continuing these Corporations in 1985-86 is Rs. 50 lakhs. During the plan period steps will be taken up to wind up the Corporations as the development activities proposed under the plan would be implemented by the newly formed Federation.

### 6. *Enforcement of Kerala Marine Fishing Regulation Act*

The Kerala Marine Fishing Regulation Act was enacted in 1980 with the intention of regulating the operation of fishing vessels along the Kerala Coast, primarily to protect the interests of the traditional fishermen. Rules framed under the Act subsequently demarcated the area of operations of mechanised and non-mechanised crafts. In the absence of a well-equipped machinery under the Department enforcement of the regulatory measures could not be made as effective as intended in the Act. Regular sea patrolling along the 590 km. sea coast is possible only with adequate number of mechanised boats and staff. Under the proposed scheme an enforcement machinery consisting of 8 units, each headed by an Inspector of Police will be created. These units will operate from the coastal Centres at Vizhinjam, Neendakara, Cochin, Azhikode, Ponnani, Beypore, Cannanore and Kasargode. The operating staff will include patrolling officers and fisheries guards. Altogether nine patrolling boats are proposed to be pressed into service. The outlay of Rs. 150 lakhs is made for purchasing 6 new boats and for meeting the establishment charges. An outlay of Rs. 30 lakhs is earmarked for continuing the scheme in 1985-86.

### 7. *Special Component Plan*

The provision of Rs. 250 lakhs is for the payment of subsidy and loans to the scheduled caste fishermen engaged in fishing, fish processing, fish culture, marketing and allied activities. This provision is also for

assisting harijan co-operatives engaged in fish culture in fresh water, brackish water and reservoir, marketing and distribution of fish and in the production of fishing implements and other fishery requisites.

An outlay of Rs. 40 lakhs is proposed for the Annual Plan 1985-86.

### 8. *Tribal Sub-Plan*

The provision of Rs. 10 lakhs is for meeting the expenditure for the socio-economic development of scheduled tribe fishermen so as to enable them undertake manufacture and supply of fishing implements like craft, gear and other fishing requisites and opening of fish vendor stalls in Girijan habitats. The provision is also intended for assisting co-operative societies for developing fresh water fish culture in selected Girijan habitats. An amount of Rs. 1 lakh is provided in the Annual Plan (1985-86) for the scheme.

#### *New Schemes*

#### 1. *Social Amenities to Fishermen*

##### (a) *Water Supply to Fishermen Villages*

About two-third of the 222 fishermen villages in the marine sector do not have piped water supply. The available sources of drinking water, mostly wells, are mostly unhygienic. In order to solve this critical problem it is proposed to take up a scheme for digging tube wells and installation of public taps in about 100 fishermen villages during the Seventh Plan period. The plan provision proposed for this is Rs. 160 lakhs. An amount of Rs. 10 lakhs is proposed for 1985-86 for providing water supply to fishermen villages.

##### (b) *Sanitation*

Sanitation is a major problem in the fishermen villages. Devoid of the minimum basic sanitary facilities the fishermen living in the thickly populated villages are generally constrained to lead on uncivilized life. Provision of community latrines is therefore included as a priority scheme in the Seventh Plan. The proposal is to construct a total number of 10,000 community latrines covering as many fishermen villages as possible. The outlay provided in the Seventh Plan for this scheme is Rs. 100 lakhs.

In order to implement the scheme a provision of Rs. 10 lakhs is earmarked in the 1985-86 plan.

##### (c) *Electrification*

The provision of Rs. 100 lakhs is for additional light points in villages presently lacking that facility. The target is to electrify 100 villages. This scheme will be implemented with the co-operation of K.S.E.Board. The provision made for 1985-86 is Rs. 10 lakhs.

#### 2. *Creation of Risk Fund*

The proposal is for creating a risk fund as an insurance against the advances the banks are required to give to the fishermen under the various schemes. Government will provide a small fixed contribution to the fund against each loan advanced to fishermen belonging to the low-income group, who are not capable of furnishing any collateral security. The fund will be deposited in the banks. The Seventh Plan outlay for

this scheme is Rs. 60 lakhs. A provision of Rs. 3 lakhs is proposed for constituting the fund in 1985-86.

### 3. *Sea Rescue Scheme for Fishermen*

A scheme entitled sea rescue scheme for fishermen has been introduced in 1984. This scheme is to be implemented by different Departments under the State and Central Governments. The Department of Fisheries proposes to supply life buoys, life jackets and R. flags to the fishermen Villages in the State. Also, two-band radios will be supplied to all the villages as an aid to monitor weather warning and other messages broadcasted over the A.I.R. from time to time. The anticipated expenditure on these items in the Seventh Plan is Rs. 30 lakhs. A sum of Rs. 5 lakhs will be the provision of 1985-86.

### 4. *Bus Service for Women Fish Vendors*

This is a scheme introduced in the Sixth Plan and implemented by the Kerala Fishermen Welfare Corporation. Three buses are presently being operated in Trivandrum district, two in Trivandrum city and one at Vizhinjam, for transporting fisherwomen vendors to the marketing centres and back. There is persistent demand for extending the service to other areas. The proposal in the Seventh Plan is to continue the existing service and also to introduce bus service in more centres. The Seventh Plan outlay for this scheme is Rs. 30 lakhs. In the Annual Plan 1985-86, an outlay of Rs. 10 lakhs is proposed for the scheme.

### 5. *Strengthening of Statistical Unit—State Share*

With the formation of the Resource Management Cell the need for collecting elaborate data on fish catches, on a regular basis assumes great importance. At present the statistical unit in the Department does not have field staff for attending to the collection of field data. The present reporting system is, therefore, inadequate and unreliable. With regard to inland production no attempt could so far been made for conducting a baseline survey in order to evolve a methodology for data collection. The quinquennial census of fishermen families is another major item of work to be attended to by the Statistical Unit. Apart from all these, conduct of problem-oriented studies in the fisheries sector from time to time is inevitable to evolve proper strategies of development. Keeping in view these requirements the statistical unit is to be strengthened during the plan period. The scheme is proposed as a centrally sponsored one with 50% assistance from Central Government. The Seventh Plan outlay for the scheme is Rs. 20 lakhs. For the Annual Plan a provision of Rs. 4 lakhs is proposed as the State share.

### 6. *Strengthening Fisheries Project Cell*

The outlay of Rs. 20 lakhs is for strengthening the existing fisheries project cell under the Department of Public Works, Fisheries and Ports. The proposal is to strengthen the project cell by appointing a team of technical officers belonging to different disciplines in order to enable the cell conduct detailed techno-economic feasibility studies and prepare project reports. The Seventh Plan provision for this scheme is Rs. 20 lakhs. The programme will be undertaken in 1986-87.

### 7. *Roads*

The provision of Rs. 150 lakhs made in this plan is for completing the road works (32 roads) already taken up during the Sixth Plan Period. No new road work is proposed during the Seventh Plan period. An amount of Rs. 30 lakhs is provided for the spillover works in the Annual Plan for 1985-86.

### 8. *Adult Education Programme*

Illiterate persons constitute a significant portion of the fishermen population. While the production oriented programmes proposed in the Plan will bring about improvement in their earnings and employment, an allround improvement in their life style and general outlook, can be attained only through a programme for eliminating the level of illiteracy among the adult fishermen population. A programme for promoting non-formal education with the assistance of KANFED is, therefore, proposed in the plan for implementation with the organisational support of the village societies. The Seventh Plan provision for the scheme is Rs. 10 lakhs. The provision for 1985-86 is Rs. 2 lakhs.

### 9. *Continuance of Package Projects*

The provision of Rs. 220 lakhs made in the Seventh Plan is for the continuance of the package programme at Puthiappa, Tanur, Parappanangadi, Karunagappally, etc., and the Gill Net Scheme at Vizhinjam. The Plan provision for 1985-86 is Rs. 50 lakhs.

## **Forests**

The Plan outlay required for implementing forestry development programmes in the Seventh Plan is Rs. 100 crores. The following are the schemes proposed in the Seventh Plan and Annual Plan for 1985-86.

### 1. *Forest Conservation and Development*

#### (a) *Survey and Demarcation—Erection of Cairns and Belt Planting*

Out of the total forest boundary of about 8300 Km. permanent, cairns have to be erected over a distance of about 6000 km. Owing to the absence of permanent cairns, encroachments into the forests cannot be detected easily. It is proposed to erect permanent cairns along the entire distance of 6000 km. within a period of three years. In highly vulnerable areas masonry walls have to be constructed. As a second line of defence, it is proposed to raise three to four rows of plantations of suitable species like mahogany, silver oak, teak, etc., inside forest boundary.

The target set for the plan period include erection of 1.4 lakh cairns over 6000 km., construction of masonry wall over 10 km. and belt planting to the extent of 1600 km.

<i>Item</i>	<i>Outlay (Rs. lakhs.)</i>
(i) Construction of cairns @ Rs. 300/cairn	342.00
(ii) Construction of masonry wall at the rate of Rs. 30,000/km (10 km)	3.00
(iii) Planting cost @ Rs. 5000/km (1600 km)	80.00
<b>Total</b>	<b>425.00</b>

An outlay of Rs. 60 lakhs is proposed for implementing the scheme in 1985-86.

(b) *Forest Protection*

Under this scheme it is proposed to reorganise large range sections and beats into smaller units in order to have effective and efficient protection of reserve forests, effective checking of illicit transport of forest products and improvement of the efficiency of check posts. The plan outlay is for providing additional protective staff for vulnerable areas, procurement of equipment, machinery, arms, improvement of communication systems, purchase of vehicles, etc.

<i>Item</i>	<i>Outlay (Rs. lakhs)</i>
Reorganisation of bigger units into smaller units and for additional staff	50.00
Purchase of 10 Jeeps	10.00
Communication facilities like wireless, telephone, walkie-talkie etc.	10.00
Quarters for checkpost staff	5.00
Total	75.00

An outlay of Rs. 10 lakhs is proposed for 1985-86.

(c) *Fire Protection in Natural Forests Including Protection Forests*

The protection forests in the State is about 7000 sq. km. Of this nearly 3000 sq. km comprising moist deciduous and dry deciduous forests are subject to fire hazards which cause considerable loss to the forest wealth and result in serious eco-degradation. The Plan programme is to carry out fire line clearance work, posting of fire watchers, and purchase of communication equipment like walkie-talkie, wireless, telephone, etc. Since fire protection activities in plantations and wild life sanctuaries will be carried out under the respective schemes, this scheme will be carried out in natural forests including bamboo and reed areas.

<i>Item</i>	<i>Outlay (Rs. lakhs)</i>
For fire protection works including fire watchers	60.00
For purchasing communication equipment	15.00
Total	75.00

For 1985-86 an outlay of Rs. 10 lakhs is proposed for implementing fire protection measures in the moist deciduous and dry deciduous forest areas.

(d) *Augmentation of Regeneration of Valuable Species in Natural Selection Felling Areas*

This scheme is to be implemented in natural forests (except catchment area and protection forests) where selection felling system is to be adopted for extracting mature and old trees. After the felling, intensive tending operations like weeding, thinning, girdling of inferior species, etc., and fire protection will be carried out. It is proposed to carry out the above activities in 4500 hectares.

*Item*

*Outlay (Rs.lakhs)*

1. Regeneration operation @1500/ha. for 4500 ha.	67.50
2. Fire protection	7.50
Total	75.00

An outlay of Rs. 10 lakhs is proposed for 1985-86 for carrying out intensive tending, weeding and cultural operations in selection felling areas to promote the growth of superior species. The proposal is to carry out the above activities in 600 hectares during 1985-86.

(e) *Forest Mapping*

Aerial photography gives accurate information about forest inventory. It can be used for obtaining information on actual extent of forest area, forest types, forest plantation, volume classes of trees, density, etc. The plan provision of Rs. 30 lakhs is for payment of contribution to the Land Use Board for conducting aerial photography of forests and meeting other expenses during the plan period.

An outlay of Rs. 10 lakhs is proposed for implementing the scheme during 1985-86.

2. *Survey of Forest Resources*

(a) *Forest Resources Survey Division*

The works being carried out by the Resources Survey Division will be intensified. Only two thirds of the forest area of the State have been covered by pre-investment survey of forest resources. The rest of the area is being surveyed. The outlay in the plan is for continuing the survey. Since updating of maps after resurvey has to be done continuously, provision is also made for establishing a cartography unit. The total provision for the Seventh Plan is Rs. 15 lakhs.

In 1985-86, survey of forest resources will be done in an area of 5000 hectares and maps showing the forest plantations will also be prepared. An outlay of Rs. 2 lakhs is proposed for implementing this scheme in 1985-86.

(b) *Working Plans*

In the Seventh Plan it is proposed to prepare 12 working plans to provide comprehensive data on resources in the forest divisions such as Ranni, Kothamangalam, Munnar, Malayattur, Vazhachal, Trichur, Wynad, Trivandrum, Nemmara, Palghat, Nilambur and Kozhikode. An outlay of Rs. 15 lakhs is provided for the scheme in the Plan.

An outlay of Rs. 2 lakhs is proposed for the year 1985-86.

3. *Plantation Schemes*

*Production Forestry*

During the Seventh Plan period all production forestry schemes will be undertaken on a project basis. In the past, cultural operations like weeding, cutting and removal of loranthus from teak plantations and preventive measures like fire protection in plantations and natural forests, particularly in bamboo-reed areas,

were carried out as separate schemes. In the Seventh Plan all maintenance activities including fire protection will be taken up under the respective plantation schemes (except fire protection work in natural forests and bamboo and reed areas). As far as possible the practice of leasing out forest plantations for taungya cultivation will be discontinued in view of the high incidence of soil erosion in such areas.

(i) *Plantation of Quick Growing Species*

The scheme envisages the raising of pulpwood plantations like eucalyptus, ulnus nepalensis, al bizzia etc. During the plan period 9303 hectares of existing eucalyptus plantations will be felled and the area will be regenerated by coppice growth and it will be augmented by gap-filling. An area of 750 hectares consisting of gaps-failed patches and grass lands, adjoining the eucalyptus plantations in the grass land afforestation division, Peermade, will be afforested with eucalyptus grandis. Besides, 150 hectares of plantations of ulnus nepalensis at Mankulam will be clearfelled and the area will be replanted with the same species. In addition, cultural operations, fireprotection activities, etc., will be carried out to the extent of 25,000 hectares of existing plantations of eucalyptus.

Item	Outlay (Rs. lakhs)
1. Planting cost-750 ha. @ Rs. 3000/ha	37.50
2. Cultural operations in the coppiced area for 5 years @ Rs. 500/ha (9300 ha)	46.50
3. Ulnus nepalensis planting cost for 150 ha. @ Rs. 5,000/ha and maintenance for 5 years	7.50
4. Fire protection in 25,000 ha. of existing plantations including fire watchers.	8.50
	100.00

The annual plan (1985-86) proposals under the scheme include raising plantations in 200 hectares with eucalyptus grandis, raising plantations in 30 hectares with ulnus nepalensis and doing cultural operations and fire protection activities in the existing plantations of eucalyptus species. The outlay proposed for 1985-86 Rs. 25 lakhs.

(ii) *Plantations of Species of Economic Importance*

(a) *Teak*

In the Seventh Plan clearfelling of forests for raising teak plantations will be discouraged except in denuded and degraded areas. About 1925 hectares of teak plantations which will attain the rotation age will be clearfelled and the area replanted with teak. In addition 500 hectares of degraded forests in vested forest areas will be planted with teak. Intensive cultural operations like weeding, loranthus cutting, manuring of backward plants, fire protection, etc., will also be carried out under this scheme in the new plantations as well as in 14238 hectares of the existing plantations of about 78,000 hectares.

About 50% of the teak plantations in the State is affected by loranthus parasite. The loss in annual

increment to teak due to loranthus attack has been estimated at 40% by the Kerala Forest Research Institute. Hence cutting and removal of loranthus affected branches of teak will be a major item of cultural operation during Seventh Plan period.

Breakup of the outlay proposed is shown below:

Item	Outlay (Rs. lakhs)
1. Teak planting @ Rs. 8,000/ha including maintenance for 5 years (1925 ha.)	154.00
2. Teak planting @ Rs. 8,000/ha (500 ha)	40.00
3. Fire protection including fire watchers (78,000 ha)	66.00
4. Loranthus cutting @ Rs. 450/ha. (14238 ha)	65.00
Total	325.00

In the annual plan (1985-86) it is proposed to replant 300 hectares with teak after final felling of teak plantations and to raise teak plantation in 100 hectares of degraded forests. Besides, intensive cultural operations like weeding, loranthus cutting, manuring and fire protection activities will be carried out in the existing teak plantations. For this purpose an outlay of Rs. 35 lakhs is proposed.

(b) *Matchwood (Softwood)*

In the Seventh Plan 800 hectares (330 ha. of existing plantations after clearfelling, and 470 ha. of degraded areas in vested forests) will be planted with matchwood species. Intensive soil testing by the Kerala Forest Research Institute will be resorted to before planting. Cultural operations and fire protection activities in existing softwood plantations (23600 ha) and in the newly raised area will be carried out.

The outlay is for the following activities:—

Item	Outlay (Rs. lakhs)
1. Planting @ Rs. 5000/ha. (800 ha.) including maintenance.	40.00
2. Fire protection and cultural operations in 23,600 ha.	20.00
Total	60.00

In 1985-86, it is proposed to raise 100 hectares of matchwood plantations and carry out cultural operations including fire protection in 5000 hectares of existing matchwood plantations. An outlay of Rs. 10 lakhs is proposed for the annual plan 1985-86.

(c) *Sandal Wood*

The Seventh Plan provision of Rs. 20 lakhs is intended for carrying out intensive operations like regeneration, fencing, cultural operations, etc., in 400 hectares of existing sandalwood areas at Marayoor so as to increase the proportion of sandalwood.

In the annual plan for 1985-86 it is proposed to carry out the above activities in 200 hectares and for the purpose an outlay of Rs. 5 lakhs is provided

(d) *Bamboo and Reeds*

Under this continuing scheme, bamboo and reeds will be planted along the fringes of lakes of river valley projects and river banks over a length of 75 km. after terracing. This plantation will have to be given strict protection from grazing and fire.

<i>Item</i>	<i>Outlay (Rs. lakhs)</i>
1. Terracing Rs. 26666/km.	20.50
2. Planting Rs. 10000/km.	7.50
3. Fencing and protection Rs. 15000/km.	12.00
<b>Total</b>	<b>40.00</b>

An outlay of Rs. 7 lakhs is proposed in the annual plan for 1985-86 for carrying out the scheme over a length of 15 km.

(e) *Wattle*

It is proposed to raise 170 ha. of wattle plantations in Munnar and Peermade areas. The provision is for raising the plantation and maintenance operations of the existing plantations. About 434 hectares of old plantations will be clearfelled and planted with wattle during the Seventh Plan period.

	<i>(Rs. lakhs)</i>
1. Planting 170 ha. and maintenance	8.50
2. Planting 434 ha. after clearfelling and maintenance	21.50
3. Fire protection of existing plantation	10.00
<b>Total</b>	<b>40.00</b>

In 1985-86, new wattle plantations will be raised to the extent of 50 hectares besides maintaining the existing plantations in Munnar and Peermade areas. The outlay proposed for 1985-86 is Rs. 5 lakhs.

(f) *Cashew*

The Forest Department has 5773 hectares of cashew plantations at present. Of this, about 3000 ha. are un-productive owing to poor stocking or over-maturity. Of this area, 400 hectares will be clearfelled and replanted with cashew. Besides intensive cultural practices like manuring, prophylactic spraying etc. will be carried out regularly to improve the productivity. An outlay of Rs. 40 lakhs is proposed for this item in the Seventh Plan.

In 1985-86, 50 ha. of existing unproductive and over-mature cashew plantations will be clearfelled and replanted with cashew. Cultural operations will also be carried out in the existing plantations. The outlay for 1985-86 is Rs. 5 lakhs.

(g) *Miscellaneous Hardwood*

Plantation of miscellaneous hardwood species such as Anjily, Venga, Irul, Maruthy, Thembavu,

Mahagony etc. will be done in over 200 hectares in degraded natural forests in gaps/patches. Maintenance operations like weeding, fire tracing etc. of the existing plantations will also be carried out. The outlay proposed in the Seventh Plan for this purpose is Rs. 45 lakhs.

In 1985-86, degraded natural forests over 20 hectares will be planted with miscellaneous hardwood species and the existing plantations will be maintained properly. Outlay is Rs. 5 lakhs for 1985-86.

(iii) *Others—Agro Forestry (Vanalekshmi Scheme)**Pepper Plantations*

At present there are 560 ha. of pepper plantations mostly in elevu anjily and silver oak plantations. During the plan period it is proposed to raise plantations over an extent of 700 hectares. The outlay is intended for raising new plantations mainly of silver oak and improving the existing plantations.

<i>Item</i>	<i>Outlay (Rs. lakhs)</i>
1. Raising new plantations Rs. 5000/ha. (700 ha.)	35.00
2. Maintenance of existing plantations @ Rs. 2500/ha.)	15.00
<b>Total</b>	<b>50.00</b>

For 1985-86 an outlay of Rs. 5 lakhs is proposed for raising 60 hectares of new pepper plantations and maintenance of existing pepper plantations.

*Social Forestry*(1) *World Bank Aided Social Forestry Scheme*

This project was started in July, 1984, and is expected to be completed by 1990 with World Bank Assistance. The objectives of the project include free distribution of seedlings to public, production of fuelwood, small timber and poles by establishing plantations on available Government land, on the sides of railway lines, canal banks, road margins, coastal belts and on the grounds of educational and other institutions, increase self-sufficiency in wood products, increase employment opportunities of the rural poor and augment conservation of moisture by planting of more trees to reduce soil erosion.

As the minor schemes included in the Sixth Five Year plan like reforestation of degraded forests, raising mixed plantations outside reserve forests, farm forestry and reforestation of special sites are intended for tree planting, these schemes are merged with the social forestry programme sponsored by Central Government and aided by the World Bank.

The physical targets set for the project in the Seventh Plan are free distribution of seedlings to public (3150 lakhs), establishment and maintenance of large block plantations (10,400 ha.), small block plantations (950 ha.), strip plantations (1950 ha.) tribal fuelwood plantations (1900 ha.) and tribal medicinal garden (95 ha.) construction of training-cum-extension complex at Arippa,

construction of office-cum-staff quarters and providing other infrastructural facilities. In these programmes it will be ensured that 10% of the beneficiary families will be scheduled castes and scheduled tribes.

The outlay of Rs. 5500 lakhs proposed is for completing the World Bank aided social forestry project during the Seventh Five Year Plan period.

Under this programme during 1985-86 it is proposed to distribute 400 lakh seedlings free of cost to the public, raise and maintain 1200 ha. of large block plantations, 100 ha. of small block plantations, 100 ha. of strip plantations, 200 hectares of tribal fuel wood plantations and 10 hectares of tribal medicinal gardens. Development of infrastructure facilities like training complex at Arippa and construction of office buildings and staff quarters will also be taken up under the programme. An outlay of Rs. 1025 lakhs is proposed for 1985-86.

#### 4. Forest Produce

##### (a) Extraction of Timber by the Department

It is a policy of Central and State Governments to eliminate gradually forest contractors in forestry operations. Keeping this in view attempts were made in the Sixth Plan to conduct timber operations directly by the Department in divisions like Wynad and Nilambur. In the Seventh Plan it is proposed to extend the activities in Malayattur, Konni, Thenmala and Kozhikode Divisions, where large extent of man-made plantations exist. The scheme will be implemented on a pilot basis. The outlay proposed in the Seventh Plan is for continuing the timber extraction activities and extending it to more divisions. In order to implement the scheme modern logging equipment such as saws, axes, aerial rope way and sky line crane are required in addition to additional staff.

Item	Outlay (Rs. lakhs)
(a) Purchase of modern felling axes, logging saws, 3 Nos. of aerial rope way and sky line crane.	20.00
(b) Purchase of 10 Jeeps	10.00
Total	30.00

In 1985-86, the scheme will be continued in the forest divisions like Wynad and Nilambur and will be extended to Malayattur and Konni Divisions. For the purpose an outlay of Rs. 5 lakhs is provided.

##### (b) Development of Minor Forest Produce

The scheme envisages development of minor forest produce like cardamom, medicinal plants, honey, oil seeds etc. Provision is also included under the scheme for intensive management of the coconut trees in the coconut gardens at Chaliyar and Varapuzha which are at present used as depot sites and for the intensive management of the Kanni Elam areas where cardamom grows naturally. A provision of Rs. 25 lakhs is made in the Seventh Plan for this purpose. An outlay of Rs. 5 lakhs is set apart for the scheme in 1985-86.

#### 5. Communications and Buildings

##### (a) Engineering Wing

This provision is for continuing the Engineering Wing in the Forest Department. Under the scheme, the salary of existing staff in the Engineering Wing and the office expenditure will be met. Of the total outlay of Rs. 50 lakhs for the Seventh Plan an amount of Rs. 10 lakhs is for 1985-86.

##### (b) Roads

The scheme envisages formation of adequate infrastructure facilities like roads, bridges, culverts etc. for the effective protection and development and exploitation of forests. In the Seventh Plan it is proposed to construct 225 km. of new roads and improve 300 km. of existing roads. The construction work will be undertaken by the Forest Engineering Wing. The following is the break up of the outlay suggested:

Item	Outlay (Rs. lakhs)
1. Construction of roads	225.00
2. Improvement of existing roads	125.00
Total	350.00

An outlay of Rs. 40 lakhs is provided for construction of 30 km. of new roads and improvement of 25 km. of existing roads in 1985-86.

##### (c) Buildings

Under the scheme, construction of office building complexes in the Circle Headquarters at Calicut, Trichur, Kottayam and Quilon and Forest Inspection Bungalows at Kulathupuzha (Thenmala), Achencoil, Punalur, Ranni, Thekkady, Quilon, Ernakulam, Trivandrum, Trichur, Parambikulam, Kuppady, Mananthody and Kasargode will be taken up in a phased manner. It is also proposed to construct 160 staff quarters for the field and office staff. Construction of quarters for I.F.S. probationers in selected divisions will be taken up on a priority basis. Besides, provision for staff quarters under the Rental Housing Scheme of the Housing Board will be utilised to the maximum extent possible. The construction work will be taken up by the Forest Engineering Wing.

A total outlay of Rs. 400 lakhs is proposed for the construction of buildings and connected expenditure. The outlay for 1985-86 is Rs. 40 lakhs.

#### 6. Preservation of Wild Life

##### (i) Wild Life Wing

In the Seventh Plan the schemes under preservation of wild life will be implemented (consistent with the guidelines issued by the Government of India) by the newly formed Wild Life Wing in the Department. Specific projects will also be prepared for the development of wild life sanctuaries, national parks and other programmes included in the plan proposals. The Plan outlay proposed is for strengthening the Wild Life Wing and forming a Wild Life Publicity Wing.

Of the total outlay of Rs. 100 lakhs in the Seventh Plan an amount of Rs. 10 lakhs is for 1985-86.

(ii) *National Parks and Wild Life Sanctuaries—State Share*

Eravikulam is the existing National Park in the State. Silent Valley and the core area of Periyar Tiger Reserve are being declared as National Parks. Besides, there are also other Wild Life Sanctuaries and a bird sanctuary at Thattakkad. The development activities proposed under the scheme include planting of fodder and fruit bearing tree species, fire protection measures, construction of roads and buildings, purchase of boats and vehicles and establishment of wireless communication system in the National Parks, Wild Life Sanctuaries and bird sanctuary. The programme will be implemented under centrally sponsored schemes with 50% Central assistance.

Break up of the outlay is given below:

<i>Item</i>	<i>Outlay (Rs. in lakhs)</i>
1. National Parks	
(1) Eravikulam	10.00
(2) Silent Valley	55.00
(3) Periyar Tiger Reserve	185.00
2. Wild Life Sanctuaries	
1. Neyyar	60.00
2. Idukki	16.00
3. Parambikulam	65.00
4. Wynad	58.00
5. Peechi-Vazhani	7.00
6. Peppara	50.00
7. Shendurney	50.00
8. Chimmony	15.00
9. Aralam	20.00
10. Chinnar	25.00
11. Thattakkad	12.00
<b>Total for Seventh Plan</b>	<b>628.00</b>

For the development of National Parks and Wild Life Sanctuaries, an amount of Rs. 121 lakhs is proposed as State share for the year 1985-86.

**Break up of the outlay for 1985-86**

<i>Item</i>	<i>(Rs. in lakhs)</i>
<i>I. National Parks</i>	
1. Eravikulam National Park	2.00
2. Silent Valley National Park	10.00
3. Periyar Tiger Reserve	36.00
<i>II. Wild Life Sanctuaries</i>	
1. Neyyar	12.00
2. Idukki	3.00
3. Parambikulam	13.00
4. Wynad	12.00
5. Peechi-Vazhani	2.00
6. Peppara	10.00
7. Shendurney	10.00
8. Chimmony	3.00
9. Aralam	4.00
10. Chinnar	2.00
11. Thattakkad	2.00
<b>Total</b>	<b>121.00</b>

(iii) *Recreation Forestry*

The Sabarimala Temple is situated within the interior forests and every year about 70 to 80 lakhs pilgrims visit the temple. The pilgrims trek through the forests, construct temporary sheds utilising forest produce. To protect the existing forests, minimum facilities such as shelters, provision for drinking water, latrines etc. will have to be provided. Similarly, there are sites within the forest areas which attract tourists and naturalists. It is proposed to provide picnic spots and camping sites in a few localities such as Adirappally falls, Meenmuttery falls, Palaruvi falls (Thenmala), Ottakal, etc. Trees and shrubs in and around the sites will be levelled for the benefit of the tourists and naturalists. The scheme envisages provision of additional facilities to tourists in selected locations during the Plan period.

The Seventh Plan outlay for the scheme is Rs. 10 lakhs. An amount of Rs. 2 lakhs is proposed in 1985-86.

(iv) *Others*

During the Seventh Plan period it is proposed to establish a deer farm in Kuruva island and crocodile farm at Parambikulam and to develop the crocodile farms at Neyyar and Peruvannamuzhy. Malampuzha Snake Park will be further developed to facilitate extraction of venom for medicinal purpose. An Elephant Study Centre will be established at Thekkady for the benefit of tourists and research scholars. The centre will be provided with all scientific data on elephants. Wild life parks will be established at Kallar and Walayar to kindle interest on wild life among the younger generation. Education centres will be established at Trivandrum, Ernakulam and Kozhikode to educate people on the importance of wild life conservation and environmental protection. An orphanage is proposed to be established at Kodanad for keeping the young and disabled animals received from forests etc. A Natural History Park is also proposed to be established at Neyyar. It is proposed to implement the above schemes in a phased manner during the Seventh Plan period, for which an outlay of Rs. 162 lakhs is allocated.

<i>Item</i>	<i>Outlay (Rs. lakhs)</i>
1. Deer farm	25.00
2. Crocodile farms	42.00
3. Snake park	5.00
4. Elephant study centre	10.00
5. Wild life parks	10.00
6. Education centres	50.00
7. Orphanage	10.00
8. Natural History Park	10.00
<b>Total</b>	<b>162.00</b>

Under the scheme an outlay of Rs. 10 lakhs is proposed for 1985-86.

7. *Research*

The Silvicultural Research Division will continue its activities including species elimination trials, introduction of exotic species, experiments on regeneration methods and cultural operations, espacement



trial on crop improvement etc. Also, collaborative research activities will be undertaken at the Eucalyptus Fungus Investigation Unit, Kerala Forest Research Institute, Kerala Agriculture University, Central Plantation Crops Research Institute, Tuber Crops Research Institute etc. The Eucalyptus Fungus Investigation Unit is engaged in investigation of disease problems related to eucalyptus. In the Seventh Plan the scope of activity of the Unit is likely to be extended to all pulpwood species in general inclusive of eucalyptus.

The details of forestry research programmes intended to be continued during the Seventh Plan period are given under:

(a) *Silvicultural Research—Experimental*

(1) *Medicinal Plant Gardens*

There are two medicinal plant gardens, one at Palode and the other at Kuttiyar. These gardens will be developed fully during the plan period. The areas selected is to be fenced and important indigenous and exotic medicinal plants introduced inside the gardens. They have to be tended and nurtured for the trial purposes. The programme is intended to identify important indigenous medicinal plants, study their regeneration techniques and other details and introduce valuable exotic plants in the forests.

Details of the outlay proposed are as follows:—

<i>Item</i>	<i>(Rs. in lakhs)</i>
1. Works including fencing and protection	8.00
2. Collection of plants etc.	2.00
Total	10.00

An outlay of Rs. 2 lakhs is proposed for continuing the scheme in 1985-86.

(2) *Studies Relating to Enrichment in Natural Forests*

Studies in natural forests are intended to evolve methods to enhance the regeneration, particularly pulpwood augmented by artificial means. During the Plan period the studies have to be carried out in ever green and moist deciduous forests. The outlay proposed is Rs. 10 lakhs in the Seventh Plan.

An outlay of Rs. 2 lakhs is proposed for continuing the scheme in 1985-86.

(3) *Augmentation of Rosewood and Other Valuable Hardwood Species.*

The proportion of the most valuable timber, rosewood and other valuable hardwoods in the natural forests is very low. Therefore, this scheme aims at increasing the species in selected semi-evergreen and moist deciduous forests by artificial planting, fencing, tending, protection, etc. Of the total outlay of Rs. 10 lakhs in the Seventh Plan, Rs. 2 lakhs is proposed for continuing the scheme in 1985-86.

(b) *Silvicultural Research—Statistical—Biomass Studies*

Biomass studies have to be continued in the semi-evergreen forests, moist deciduous forests, plantations and grasslands. The aim of the study is to assess the biomass produced by the above types of forests and the loss caused by fire to the biomass.

The outlay provided in the plan is Rs. 10 lakhs. An amount of Rs. 2 lakhs is provided for 1985-86.

(c) *Others*

(1) *Teak Seed Stand and Orchard*

It is estimated that about 100-150 tonnes of teak seed is required annually for the use of the State Forest Department, social forestry schemes and for supply to Forest Departments of other States.

At present teak seed is collected from plantations at random and hence poor quality seeds also get mixed up. For obtaining quality seeds, teak plantations are selected and the inferior trees are removed from the area. The remaining trees are manured for better growth and more production of seeds. The seeds collected from such trees will be of superior quality. The seeds from seed stands will be collected only till sufficient quantities of seeds are available from the teak seed orchards proposed to be formed. At present 1130 ha. of teak plantations have been converted into seed stand. About 670 hectares of teak plantations will be additionally converted into seed stand during the Plan period. Besides, a seed testing laboratory and 5 seed stores will be set up.

Under the scheme it is also proposed to establish teak seed orchard in areas where selected generally superior trees are grown by vegetative propagation for collection of seeds for multiplication. It is proposed to raise an orchard of 20 hectares at Kulathupuzha. Fifty plus trees of teak (elite trees) have been selected and used for budding teak stumps. These budded stumps are planted in the orchards in a special pattern so that cross pollination occurs among these elites and the seeds produced will be of very superior quality. The seedlings flower and fruit at early stage by vegetative propagation.

The outlay proposed is for converting 670 hectares of teak plantation into seed stand, maintaining the existing 1130 hectares of teak seed stand, establishing a seed testing laboratory, construction of five seed stores and establishing teak seed orchard to the extent of 20 hectares. Break up of the outlay is given below:

<i>Item</i>	<i>(Rs. in lakhs)</i>
1. Raising new teak seed stand	18.00
2. Weeding, fire protection etc. in the existing teak seed stand	10.00
3. Seed testing laboratory	5.00
4. Five seed stores	3.00
5. Teak seed orchard	14.00
Total	50.00

Of the total provision, an amount of Rs. 5 lakhs is for continuing the scheme in 1985-86.

(2) *Pilot Plantations of Tropical Pines and other Suitable Pulpwood Species in the Grass Land of High Ranges.*

The grasslands in the high ranges is the resultance of clearance in the past followed by annual fire. Certain varieties of tropical pines have been found to be quite suitable for these areas. Tropical pines are long fibred and hence ideally suitable as pulping materials for the paper and pulp industries. The scheme envisages raising of pilot plantations over 100 hectares in 5 years in localities like Kulamavu, Wynad and Peermade in order (1) to study the suitability of the species and provinces on a plantation scale (2) to study the phenological growth characteristics (3) to collect data on growth, and (4) to study the value and growth of undergrowth in the plantations. The Seventh Plan outlay is Rs. 20 lakhs.

An outlay of Rs. 2 lakhs is proposed for continuing the scheme in 1985-86.

(3) *Collaborative Research Schemes*

Collaborative research schemes relating to the fungal disease of eucalyptus, studies on teak skeletoniser and teak defoliator, forest ecology etc. will have to be taken up in collaboration with institutions like Kerala Forest Research Institute, Eucalyptus Fungus Investigation Unit, Kerala Agricultural University etc. The outlay of Rs. 5 lakhs proposed is for continuing the scheme in the Plan period.

An amount of Rs. 1 lakh is proposed for continuing collaborative research on above subjects in 1985-86.

(4) *Contribution to K.F.R.I.*

The plan provision of Rs. 100 lakhs is for improving the research activities sponsored by the K.F.R.I. Under the scheme financial assistance will be given to staff and equipment required for land use studies, tissue culture laboratories, tree farm management technology etc. and improvement of the activities of the sub centre at Nilambur.

Of the total outlay an amount of Rs. 10 lakhs is for 1985-86.

8. *Education and Training*

(1) *Inservice Training*

Inservice training including advanced studies abroad is to be imparted to officers in the Forest Department in subjects like project formulation, PERT/CPM, operational research, logging and saw-milling, wood technology and industry, remote sensing technique and its application in forestry, preparation of working plans, social and agro-forestry, energy problems, wild life management, forest fire control, computer training etc. During the Plan period about 60 candidates will be trained in the Forest Ranger's College and 20 candidates deputed for the Assistant Conservator of Forests Training Programme. It is also proposed to give special training to all the Accountants

in the Department to maintain accounts properly, as is being done by the Divisional Accountants in P.W.D. The training programme for the Accountants will be organised in collaboration with the IMG. The outlay proposed is Rs. 20 lakhs for meeting the training expenses of IFS officers, Assistant Conservator of Forests, Forest Rangers, Accountants and other officials deputed for special training programmes.

In 1985-86, five candidates will be sent for the training programme for Assistant Conservator of Forests and 10 candidates for the Forest Ranger's Course. A special training programme in collaboration with the Institute of Management in Government will be organised for the Accountants in the Department to maintain accounts properly. An outlay of Rs. 3 lakhs is proposed for implementing the scheme in 1985-86.

(2) *Fire Training Centre*

There is a Forest Fire Training Centre at Kulamavu in Idukki district. It is proposed to upgrade this centre into a National Fire Training Centre. Financial assistance from the Central Government to the tune of about Rs. 50 lakhs is expected for this scheme. Besides, financial assistance under the "National Project for External Assistance for Research Education and Training in Forestry" can also be expected for this centre.

Item	(Rs. in lakhs)
1. Civil works	337.50
2. Vehicles and equipment	192.75
3. Staff	78.92
4. Operating cost and maintenance	115.83
Total	725.00

An outlay of Rs. 10 lakhs is proposed for taking steps for upgrading the Fire Training Centre at Kulamavu, in 1985-86.

(3) *Forest School*

The programme is for strengthening the facilities in the Forest School at Walayar. In the Seventh Plan it is proposed to give training to the newly recruited protective staff and the existing staff. During the Plan period 400 foresters and 650 forest guards have to be given training. The outlay proposed is for construction of buildings and providing infrastructure facilities to the forest school at Walayar.

Break up of the outlay suggested.—

	(Rs. in lakhs)
1. Civil works	16.00
2. Vehicles and equipment	4.00
Total	20.00

An outlay of Rs. 3 lakhs is proposed for improving the facilities at the Forest School at Walayar during 1985-86.

## 9. Others

### *Kerala Forest Development Corporation—Share Capital Contribution*

The projects undertaken by the Corporation include plantations of pulpwood, matchwood, cardamom and tea. In the Seventh Plan, the Corporation is likely to expand its plantation activities particularly pulpwood, cardamom, tea and coffee. The plan provision of Rs. 135 lakhs is intended as share capital contribution to the Corporation, for raising new plantations of pulpwood, softwood, cardamom, tea and coffee.

Of the outlay, an amount of Rs. 5 lakhs is intended as share capital contribution for 1985-86.

### 10. *Special Component Plan.*

In the Seventh Plan it is proposed to construct hospitals, schools and link roads, and arrange water supply and electricity in Harijan Colonies in forest areas. Altogether an amount of Rs. 50 lakhs is earmarked for forestry schemes under SCP.

For the year 1985-86 an outlay of Rs. 5 lakhs is proposed for special component plan.

### 11 *Tribal Sub Plan*

Under Tribal Sub-Plan it is proposed to provide necessary infrastructure facilities including link roads, community halls, wells and ponds, water supply, electricity etc., in the tribal habitats. Also financial assistance will be given to tribal co-operatives for development of cottage industries, wood based handicraft industries and collection, processing and marketing of forest produce etc. Moreover, a comprehensive scheme for the integrated development of Idamalakudi Tribal Colony in Munnar Division will be implemented on a priority basis.

The forest areas in Wynad and Kozhikode Divisions are suitable for raising coffee plantations in the inter space/under space. Therefore, it is proposed to raise 300 hectares of new coffee plantations in these areas and improve the existing 477 hectares of coffee plantations in Sultan battery by engaging tribals so as to increase the employment opportunities to them. Residential buildings for tribals will also be provided under the scheme.

For implementing tribal sub plan under forestry an amount of Rs. 150 lakhs is set apart in the Seventh Plan. The outlay for 1985-86 is Rs. 34 lakhs.

### **Investments in Agricultural Financing Institutions**

#### *Purchase of Debentures of Kerala Co-operative Central Land Mortgage Bank*

Institutional finance for implementing major agricultural development schemes is being channelised through the Kerala Co-operative Central Land Mortgage Bank and Primary Land Mortgage Banks. In order to enable the Kerala Co-operative Central Land Mortgage Bank to raise resources from institutional agencies for implementing the agricultural development schemes during the Plan period both under the

ordinary lending programmes and special agricultural development schemes the State Government will give necessary support by purchase of debentures floated by the Kerala Co-operative Central Land Mortgage Bank. The provision proposed is for giving State Government contribution towards the debentures floated by the Kerala Co-operative Central Land Mortgage Bank during the period 1985-90 as per the approved pattern. The outlay proposed for the Seventh Plan period is Rs. 1200 lakhs. The provision, for 1985-86 is Rs. 150 lakhs.

### **Marketing, Storage and Warehousing**

#### *Agricultural Marketing*

##### 1. *Marketing Wing of the Agriculture Department*

The State Department of Agriculture is operating schemes for grading of agricultural commodities and popularising "AGMARK" graded products among the consumers since the Third Plan. During the Fourth Plan period State AGMARK Grading Laboratories were established in the districts of Trivandrum, Quilon, Alleppey and Trichur. Establishment of additional laboratories was further pursued during Fifth and Sixth Plan periods. Grading laboratories are now functioning in the districts of Trivandrum, Quilon, Alleppey, Trichur, Calicut, Palghat, Kottayam and Ernakulam. Commodities graded under 'AGMARK' in Kerala for internal consumption are coconut oil, spices and honey.

In the Seventh Plan it is proposed to cover at least six commodities under 'AGMARK' grading scheme. The existing laboratories may not be in a position to provide the laboratory and analytical support for obtaining this objective. It is proposed to establish new laboratories in the districts of Cannanore and Pathanamthitta.

Establishment of regulated markets has been accepted as the major strategy for improving the efficiency of marketing of agricultural commodities. In Kerala, regulated markets function only in the Malabar area of the State. There are about 2000 agriculture markets in Kerala and most of them do not have essential requisites like compound wall, storage facilities, cattle shed, vehicle parking space etc. This often leads to wastage and losses due to spoilage of commodities assembled for marketing. A number of malpractices like short weightings, unauthorised deductions, high rates of commissions and brokerage are prevalent in most of agricultural markets. Fair prices to producers can be ensured by bringing the markets under regulation through the enactment of Agriculture Produce Markets Act. Government of Kerala has been considering the possibility of introducing a Composite Marketing Bill in the legislature to cover the entire State.

The Seventh Plan outlay for the schemes of the marketing wing of the Agricultural Department is Rs. 50 lakhs. The outlay for 1985-86 is Rs. 10 lakhs.

##### 2. *Kerala Agricultural Marketing Project*

This is a World Bank aided project which envisages comprehensive development of agricultural marketing in the State and covers both the crop and livestock

sectors. Apart from promoting the activities of co-operative and State-owned corporate institutions in the area of marketing including processing, the Project provides for term-loan assistance to the private trade also. The likely investment cost of the Project is over Rs. 100 crores. Some of the components of the project are:

- (i) Additional storage facility for the Kerala State Co-operative Marketing Federation
- (ii) Additional storage facilities for the Kerala Co-operative Rubber Marketing Federation
- (iii) Additional storage and showroom facilities for the Kerala State Coir Marketing Federation
- (iv) Development of market yards of the Malabar Market Committee
- (v) Copra processing facilities for the Kerala State Co-operative Marketing Federation
- (vi) Copra processing facilities for the Coconut Development Corporation
- (vii) Fruit processing facilities for the Kerala Agro Industries Corporation.
- (viii) Value added processing facility for the Kerala State Co-operative Marketing Federation
- (ix) Cocoa processing facility for the Kottayam District Cocoa Marketing Co-operative Society
- (x) Tea processing facility for the Teakoy Co-operative Tea Factory
- (xi) Market Research
- (xii) Training
- (xiii) Cattle Markets
- (xiv) Storage facilities for the private trade
- (xv) Spices processing facilities for the private trade at Cochin
- (xvi) Vegetables and fruit markets for local bodies
- (xvii) Organisation and management.

In the Seventh Plan an outlay of Rs. 72 crores is set apart for this World Bank aided Project. As only initial works are likely to take place in 1985-86, an amount of Rs. 10 lakhs is proposed for that year.

### 3. Storage and Warehousing

The Kerala State Warehousing Corporation is providing scientific storage and warehousing facilities in the State. The Corporation's cumulative godown capacity is 1.02 lakh tonnes. In the Seventh Plan it is proposed to construct an additional capacity of 75,000 tonnes. The provision of Rs. 250 lakhs made in the State Plan is towards the share capital contribution. The outlay in 1985-86 is Rs. 45 lakhs.

## 11.2 Rural Development

The problems of unemployment and poverty are severe in the State. The benefits of many poverty alleviation programmes cannot be fully realised owing to a number of constraints such as lack of necessary infrastructure, absence of intrasectoral and intersectoral linkages and lack of sufficient skill and experience on the part of the target groups to sustain employment. In the past the emphasis in such schemes had been on employment generation but little attention was given to sustained increase in production or the generation of additional income. In consonance with the national approach, the State's Seventh Plan also lays greater emphasis on employment generation and poverty alleviation programmes which are productive and income generating. NREP, RLEGP and IRDP which were either reoriented or newly commenced during the Sixth Plan period will be continued in the Seventh Plan period also with a more decentralised approach to planning, monitoring and organisation for effective implementation. These programmes will be used to create necessary infrastructure for agricultural and rural development. An integrated and decentralised approach involving different departments and organisations, will be adopted for selecting schemes suited to local conditions and for the timely provision of services. Such an approach may provide the necessary linkages and ensure that the benefits reach the target groups. Special attention will also be paid to the economic uplift of womenfolk, scheduled castes and scheduled tribes. The different programmes proposed to be implemented during the Seventh Plan are detailed below.

### (a) & (b) *Integrated Rural Development Programme and Training of Rural Youths for Self-employment—State Share*

The poverty alleviation programmes in the Seventh plan aim at reducing the percentage of people below the poverty line to 25% by 1989-90. During the Seventh Plan period it is proposed to widen the coverage of IRDP to benefit 4500 poor families in every block instead of 3000 families in the Sixth Plan. Thus 6.795 lakh families will be assisted during the Seventh Plan period. These families will be helped to obtain suitable income earning assets, with the provision of supportive infrastructure as well as follow-up measures to ensure that they can have permanent employment and sustained income. Part of the capital cost of the assets will be subsidised by Government and the rest will be met from financial institutions. The total outlay for the five year period is Rs. 10700 lakhs. Of this 50% (Rs. 5350 lakhs) is to be met by the State Government.

To ensure sustained income generation from the beneficiary-schemes under IRDP, the monitoring and follow-up measures will be strengthened and made more effective at the district and block levels. The implementing officials will be given training to enable them achieve the objective of the programme. More attention will be given to infrastructure development and also co-ordination between different agencies.

TRYSEM, the sub-scheme of IRDP, aims at modernising and upgrading the existing skills of rural youth by giving intensive institutional training enabling

them to earn their living by self-employment. It is proposed to train at least 40 youths in each block every year. In the Seventh Plan, emphasis will also be laid on the settlement of the trainees by necessary follow-up measures. The establishment of group enterprises will be encouraged.

An outlay of Rs. 750 lakhs is provided for the 1985-86 Annual Plan as the State's share for IRDP (including TRYSEM). This will help provide assistance to 1.359 lakh families under IRDP and train 6040 youths under TRYSEM.

(c) *Development of Women and Children in Rural Areas - (DW CRA) State Share*

This scheme is for giving assistance and supporting services to the poorest women in rural areas with a view to enabling them take up income generating activities. Groups of 15 to 20 women will be encouraged to undertake such activities. The scheme also envisages provision of health and child care facilities to poor families. As in 1984-85 the scheme is proposed to be jointly financed by the State, Centre and the UNICEF. The expenses on honoraria etc., of the groups and infrastructure will be shared by the Centre and the State on 50:50 basis. UNICEF assistance will be available for (a) the training of those involved in the scheme; (b) programme inputs like equipment to groups of women and activities of children grant to voluntary organisations, salary to Assistant Project Officers (Women Development) and additional Gramasevikas, strengthening of training institutions and provision of transport etc., and (c) research, evaluation and monitoring and regional and national workshops.

During the Seventh Plan period the scheme is proposed to be extended to more districts. An outlay of Rs.40 lakhs is proposed for the Plan period. The State share outlay proposed for 1985-86 is Rs.15 lakhs.

(d) *Others*

Scheme for Strengthening the State Centre for Research and Training in Rural Development—State Share

The Institute of Management in Government has been recognised as the apex institute for research and training in rural development. According to the terms of Government of India recurring grant is to be paid by the Centre and the State for the Institute for carrying on research and training in rural development. An outlay of Rs. 50 lakhs is provided as the State's share for the scheme. The outlay for the Annual Plan 1985-86 is Rs. 2 lakhs.

(e) *Social Input in Area Development (UNICEF Assisted Programmes)—State Share.*

This scheme aims at integrating provision of social inputs with ongoing economic development activities in selected coastal blocks of Trivandrun, Alleppey, Ernakulam, Malappuram and Kozhikode districts. The scheme which is being implemented from 1982-83 is financed by the UNICEF and the State Government in the proportion 75:25. In the Seventh Plan an

amount of Rs. 100 lakhs is proposed as the State's Share. The anticipated assistance from UNICEF is Rs. 300 lakhs. For 1985-86, the outlay proposed is Rs. 25 lakhs as the State's share.

(f) *National Rural Employment Programme (NREP)—State Share*

The main objective of the programme is the generation of employment opportunities in rural areas especially during the lean agricultural season with a view to create durable community assets which will lead to the rapid growth of the rural economy. The outlay of Rs. 3410 lakhs proposed is the State's Share. Under the programme, there is a provision for wage as well as foodgrains component which is to be given to the workers at a subsidised rate. Out of the outlay 10% will be earmarked for social forestry and another 30% for the works benefiting scheduled castes and scheduled tribes exclusively.

During the Seventh Plan period, under rural works programme (NREP) importance will be given to creation of productive community assets. Only less than 50% of the outlay will be used for road works. As far as possible, attempts will be made to dispense with the contract system in execution of works. Steps will be taken to get the cost norms for different types of rural works scientifically fixed. Suitable training will be arranged to enable the staff at the block level to prepare schemes and projects. The decentralised administrative staff in the districts involved in NREP will be trained to co-ordinate and integrate the schemes in this programme with the other rural development and beneficiary-oriented programmes in that area.

The outlay proposed for 1985-86 is Rs. 800 lakhs. Priority will be given to completion of the unfinished but essential rural works and the works meant exclusively for scheduled castes and tribes. A good portion of this outlay will be used for housing for scheduled castes/tribes.

**Community Development and Panchayats**

1. *Community Development*

(i) *Community Development Programme*

During the Seventh Plan period it is proposed to continue the coverage of beneficiaries under various community development programmes such as agriculture, animal husbandry, education and sanitation. The programmes will be made more purposeful and useful to the beneficiaries. It is also proposed to provide vehicles to blocks, which do not have them, in order to ensure proper supervision of the different programmes. The outlay proposed for the Seventh Plan under this scheme is Rs. 220 lakhs. The Annual Plan outlay for 1985-86 is Rs. 35 lakhs.

(ii) & (iii) *Special Component Plan and Tribal Sub Plan*

The outlay of Rs. 150 lakhs proposed is for the implementation of community development programmes for the benefit of scheduled castes and scheduled tribes on a 100% grant basis. For 1985-86 the share for Special Component Plan and Tribal Sub Plan together under this scheme will be Rs. 20 lakhs.

### *New Schemes*

#### (i) *Establishment of State Institute of Rural Development and Strengthening of Extension Training Centres—State Share*

It is proposed to set up an Institute of Rural Development for training people involved in rural development. The existing three Extension Training Centres which give training at the lower-level will also be strengthened. The estimated cost of the scheme is Rs. 2.30 crores. The Government of India, under the European Economic Aid Programme, is expected to share 50% of the total estimated cost.

The proposed State share outlay for the Seventh Plan is Rs. 115 lakhs and for 1985-86 is Rs. 15 lakhs.

#### (ii) *Assistance for Economic Activities under the Auspices of Mahila Samajams in Community Development Blocks*

Under this scheme Mahila Samajams will be given assistance for economic development schemes, so that sustained income is available for poor women. Each Mahila Samajam and the sponsoring Block will decide the type of activity suitable to the area taking into account the availability of capital, raw materials, existence of skills, marketability of products etc. Selected participants will be given training under the TRYSEM programme. Workshops and other essential constructions will be arranged under NREP/RLEGP. Necessary machinery and equipment will be made available utilising loan from financial institutions and subsidy available under IRDP. Working capital required, will be arranged by the sponsoring agency.

Assistance from Centre, UNICEF, CARE etc. is anticipated. The proposed Seventh Plan outlay of Rs. 90 lakhs is towards managerial subsidy as State share. In 1985-86 an amount of Rs.10 lakhs is proposed towards managerial subsidy.

### 2. *Panchayats*

#### (i) *Training Institutions in Local Administration.*

There are two training institutions which give training to officials and non-officials in panchayat administration. Part of the outlay proposed under this scheme is for meeting the training expenses of these institutes. During the Seventh Plan period it is proposed to construct permanent buildings to house these training institutes for which a sum of Rs. 30 lakhs is provided. The outlay proposed for 1985-86 is Rs. 6 lakhs.

#### (ii) *Publication of Panchayat Raj Journal*

The Panchayat Raj Journal is a monthly publication conveying information on rural development. The main objective of the publication is to convey information on the progress and achievements in the socio-cultural and developmental activities of the Panchayats. The Seventh Plan outlay for this is Rs. 15 lakhs. The outlay for 1985-86 is Rs. 3 lakhs.

#### (iii) *Assistance to Panchayat Raj Institutions*

Panchayats are assisted by the Government through loans and grants. During the Seventh Plan

period it is proposed to provide Rs. 100 lakhs as loans and Rs. 1200 lakhs as grants.

Loans are given to Panchayats under Sub rule 6 of Kerala Local Authorities Loans Act for the creation of remunerative community assets. Grants are made to Panchayats for the co-ordination of development activities and implementation of the Seven Point Programme. Of the Seven Programmes, during Seventh Plan period, importance will be given to (i) construction of burial and burning grounds, (ii) Mini Stadia and (iii) Community Halls/Kalyana Mandapams. The programmes are expected to be financed partly from contributions from Panchayats and the Public.

For 1985-86, the outlay proposed is Rs. 195 lakhs, out of which Rs. 15 lakhs will be the loan portion.

#### (iv) *Environmental Amenities to Poor*

With a view to providing living amenities to the poor, especially those belonging to SC/ST, a phased programme of providing drinking water supply, power supply, sanitary facilities, roads to colonies etc. is proposed to be implemented through the Panchayats in the State. The outlay proposed for the scheme in the Seventh Plan is Rs. 180 lakhs and in the 1985-86 Annual Plan, Rs. 36 lakhs.

#### (v) *Special Component Plan and*

#### (vi) *Tribal Sub Plan*

During the Seventh Plan period an amount of Rs. 200 lakhs is proposed for the Special Component Plan and Rs. 20 lakhs for the Tribal Sub Plan under 'Panchayats'. The provision for 1985-86 is Rs. 40 lakhs and Rs. 4 lakhs respectively.

### 3. *Rural Development Board*

#### *Market Borrowings for Remunerative Development Schemes*

The Rural Development Board implements remunerative development schemes such as construction of shopping centres, market stalls, lodges, bus stands, community halls etc. in Panchayats. The completed schemes are handed over to Panchayats and the cost of the scheme is realised from the Panchayats in 24 half yearly instalments. The funds required for the scheme are being raised by floating debentures in open markets. During the Seventh Plan period the Rural Development Board proposes to raise Rs. 680 lakhs through market borrowings. The amount proposed to be raised from market borrowings in 1985-86 is Rs. 100 lakhs.

### **Land Reforms**

#### 1. *Resurvey of State and Preparation of Records of Rights*

The objective of the scheme is completion of the resurvey work of the State and preparation of the records of the resurveyed lands. This is for providing documentary evidence of possession to land owners, especially to the beneficiaries of the K.L.R. Act. This enables land owners to avail themselves of institutional finance for undertaking land development activities. The resurvey work relating to about

19700 square kilometres has been completed. During the Seventh Plan period, besides continuing the resurvey work, importance will be given to the finalisation of the records of the resurveyed areas. The outlay provided for this scheme in the Plan is for meeting the cost of resurvey work and for meeting the cost of preparation of Records of Rights.

An amount of Rs. 3500 lakhs is provided for this scheme in the Seventh Plan. The outlay in the Annual Plan for 1985-86 is Rs. 525 lakhs.

### **Special Programme for Area Development**

#### *(1) Development of Backward Areas Including Hill Areas.*

There are a number of social and economic constraints which prevent the progress of certain regions in the State. Wynad, Malappuram, Idukki and Kasaragod are backward regions without the necessary infrastructure and basic amenities to induce growth. To remove these constraints and induce economic growth a number of schemes such as provision of communication, transport and market facilities, electrification, development of minor irrigation and soil conservation, provision of drinking water and health facilities, rehabilitation of tribals, etc. are envisaged by the Government. Since construction of rural roads is a major programme under RLEGP and NREP other infrastructure and economic development schemes will be given higher emphasis under the backward area development. The outlay proposed for Seventh Plan under this scheme is Rs. 500 lakhs.

The outlay proposed for the scheme in 1985-86 is Rs.75 lakhs. Out of the total outlay for the Seventh Plan 15% is set apart for Special Component Plan and another 15% for Tribal Sub Plan. In 1985-86 the provision for SCP will be Rs.5 lakhs and that for TSP Rs.10 lakhs.

### **11.3 Co-operation**

The aim of the Co-operative Sector under Seventh Plan will be consolidation and strengthening of Co-operatives as viable institutions capable of catering to the various needs of the community. Co-operatives also have the potential for more employment opportunities and services. The Co-operative system covers credit, supply of agricultural inputs, marketing, processing and distribution of essential commodities. The marketing, consumer and storage wings will be strengthened during the Seventh Plan period. Consumer co-operatives will be equipped to increase the retail sale of consumer goods in rural and urban areas and to control prices of essential consumer articles. Promotion of Co-operatives organised for activities other than credit will be given priority so as to ensure development on a par with the Credit Co-operatives. Societies capable of providing employment opportunities shall be organised on a selective basis, the criteria being the potential of the economic activity for employment generation. Programme aiming at the welfare of scheduled caste/scheduled tribe members of co-operative will be continued. Employment oriented schemes will be formulated and implemented under Special Component Plan and Tribal Sub Plan so that a good percentage of the scheduled castes/scheduled tribes

could be brought above the poverty line by the end of the Plan period. Government, for its part, will continue to assist co-operatives in a substantial way to achieve the broad objectives of the Seventh Plan.

A total outlay of Rs. 3800 lakhs will be required for the programmes proposed under Co-operation in the Seventh Plan. The Schemes are outlined below:

#### *Credit Co-operatives*

##### *1. Long Term Operation (LTO) Fund Financed Schemes-- Share Capital Contribution to Credit Co-operatives*

To achieve the envisaged loaning programmes the share capital base of credit co-operatives has to be strengthened. The outlay proposed is for payment of share capital contribution to District Co-operative Banks, Primary Agricultural Credit Societies, Farmers' Service Co-operative Banks, Co-operative Urban Banks, Kerala Co-operative Central Land Mortgage Bank and Primary Land Mortgage Banks by borrowing from the National Rural Credit (L.T.O. Fund) of the NABARD. The outlay proposed for the Seventh Plan period is Rs. 350 lakhs. An amount of Rs. 60 lakhs is set apart for this scheme in 1985-86.

##### *2. Managerial Subsidy and Other Support Programmes*

Under this scheme, managerial subsidy will be provided to credit co-operatives including primary agricultural credit societies, Primary Land Development Banks, Urban Banks and Farmers' Service Societies. Potentially viable societies will be assisted so that they achieve viability within a reasonably short period. The outlay proposed in the Seventh Plan is Rs. 65 lakhs and for the Annual Plan 1985-86 Rs. 10 lakhs.

##### *3. Outright Grant for Special Bad Debt Reserve Fund/ Risk Fund*

Outright grant to credit co-operatives is intended for offsetting the risk involved in financing weaker sections for consumption purposes. District Co-operative Banks, Primary Agricultural Credit Societies, Girijan Service Co-operative Societies and Urban Co-operative Banks which issue loans to weaker sections for consumption and other purposes are eligible for assistance under the scheme. The grant will be credited to the Special Bad Debt Reserve of the Societies. The Seventh Plan provision for this scheme is Rs. 50 lakhs. An amount of Rs. 10 lakhs is set apart in the Annual Plan 1985-86.

##### *4. Incentive Grant for Mobilisation of Deposits and Deposit Guarantee Schemes*

The provision made in the Plan is for giving incentive grant to Primary Agricultural Credit Societies, Farmers' Service Co-operative Banks, Co-operative Rural Banks and Co-operative Urban Banks to augment their resources by way of deposits. The provision for Seventh Plan period is Rs. 70 lakhs and for 1985-86 Rs. 12 lakhs.

### 5. *Agricultural Credit Stabilisation Fund—State Contribution*

A State level Agricultural Credit Stabilisation Fund will be constituted. Under the stabilisation arrangements, in times of natural calamities, relief by way of postponement of recovery of loans, (short term and medium term) is allowed. The funds required will be found by the District Banks, the State Co-operative Bank and Government apart from the NABARD. The outlay proposed is to meet the State's share of conversion of S.T. loans as instalments of M.T. loans. An amount of Rs. 5 lakhs is set apart for the Seventh Plan period and Rs. 1 lakh for the Annual Plan 1985-86.

### 6. *Assistance for Construction of Building to New District Co-operative Banks*

The outlay proposed is for providing loan to District Co-operative Banks organised in the newly formed Districts of Wynad, Pathanamthitta and Kasargod. The provision for the Seventh Plan period is Rs. 15 lakhs and for the year 1985-86 is Rs. 5 lakhs.

### *Housing Co-operatives*

#### 7. *Managerial Assistance to Housing Co-operatives*

The scheme is for payment of managerial assistance to Primary Housing Societies for a period of five years. The programme is to assist new Societies organised during the Seventh Plan period and to provide spill over subsidy to those assisted in previous years. The outlay provided for the Seventh Plan period is Rs. 45 lakhs. The Annual Plan provision for 1985-86 is Rs. 7 lakhs.

#### 8. *Primary Housing Societies—Share Capital Contribution*

The housing societies will diversify and expand their activities during the Seventh Plan period. In order to enable them take up purchase and allotment of sites and provide financial assistance to repairs and renewals of existing buildings, supply of building materials etc. the primary societies will be given share capital contribution (to 100 Societies) during the Seventh Plan period. The provision for the Seventh Plan is Rs. 100 lakhs, Rs. 7 lakhs is earmarked for the Annual Plan 1985-86.

#### 9. *Loan-cum-Subsidy for Construction of Buildings*

The majority of the primary housing societies do not have their own buildings to house their offices. With the meagre margin of 1% on the loans advanced it will not be possible for them to acquire landed property and to put up a building. The Societies require assistance for the purpose. It is proposed to assist societies for purchase of sites and for construction of building by way of loan and subsidy in the ratio of 75:25 subject to a maximum of Rs. 2,00,000 per society. An outlay of Rs. 100 lakhs is proposed for Seventh Plan to assist 50 societies. The provision for 1985-86 is Rs. 10 lakhs.

#### 10. *Managerial Subsidy and Equipment Grant*

The provision in the Plan is for giving financial assistance to Labour Contract Societies by way of

managerial subsidy. The Seventh Plan provision for this scheme is Rs. 10 lakhs and for 1985-86 is Rs. 1 lakh.

#### 11. *Share Capital Contribution*

Labour Contract Societies will continue to be supported by way of share participation to qualify them for institutional finance. The Seventh Plan provision is Rs. 15 lakhs. An amount of Rs. 2 lakhs is earmarked for the year 1985-86.

### *Farming Co-operatives*

#### 12. *Subsidy to Farming Co-operatives for Farm Equipment*

The programme is to give managerial subsidy to Joint Farming Co-operatives and Better Farming Co-operatives during the Seventh Plan period. Apart from managerial subsidy grants for purchase of farm equipment and agricultural machinery will be provided to Joint Collective and Better Farming Co-operative Societies. An amount of Rs. 5 lakhs is provided for this scheme. The outlay for 1985-86 is Rs. 1 lakh.

#### 13. *Share Capital Contribution to Farming Co-operatives*

The Joint/Collective/Better Farming Societies will be eligible for share capital contribution according to the extent of land under cultivation. Share participation to enhance the borrowing power of the societies will continue in the Seventh Plan. The Seventh Plan envisages an outlay of Rs. 10 lakhs. The outlay for 1985-86 is Rs. 2 lakhs.

#### 14. *Assistance for Construction of Office-cum-Godown/ Farm Houses*

Loan-cum-subsidy is being paid to Farming Co-operatives for construction of office-cum-godown and farm houses to meet part of the estimated cost of construction. An amount of Rs. 5 lakhs is set apart for this scheme during the Seventh Plan period. The outlay for the year 1985-86 is Rs. 1 lakh.

### *Storage, Warehousing and Marketing Co-operatives*

#### 15. *Subsidy for Construction of Godowns*

The scheme is for payment of assistance for the construction of rural godowns to primary agriculture credit societies, marketing godowns to marketing co-operatives and godowns to tribal co-operatives with financial support from the N.C.D.C. N.C.D.C. provides 60% of the estimated cost for construction of godowns by way of loan and the State Government has to provide 20% of the cost by way of subsidy and the balance amount has to be met by the society from its own funds. For tribal co-operatives NCDC provides 50% as loan and 25% as subsidy to State Government and the State Government in turn has to provide 50% as loan and 50% as subsidy. The outlay proposed is for meeting subsidy portion of the cost of construction of godowns by State Government. The Seventh Plan provision for the scheme is Rs. 100 lakhs. For 1985-86 Rs. 20 lakhs is earmarked.



16. *Primary Marketing Co-operative—Share Capital Contribution*

The outlay is for giving share capital contribution to primary marketing co-operatives for expansion and diversification of their business. During the Seventh Plan period it is proposed to assist 35 societies under the scheme. The Seventh Plan provision for this scheme is Rs.150 lakhs. An amount of Rs. 35 lakhs is set apart for the year 1985-86.

17. *Strengthening Marketing Activities—Subsidy*

The outlay proposed is for giving incentives to credit societies, marketing societies etc. for the promotion of marketing activities and towards the cost of supervising staff to implement the programme. The village co-operative and marketing societies will be encouraged to improve the distribution of agricultural requisites and also provide technical services so as to develop into effective service centres. The provision in the Seventh Plan period is Rs. 20 lakhs. An amount of Rs. 4 lakhs is set apart in the 1985-86 Plan.

18. *Incentive for Sales to Marketing Co-operatives*

The outlay proposed is for giving incentives, awards etc. to the individual members of credit societies in proportion to the sale of agricultural produce through marketing societies. The provision is also for giving incentives, awards etc. to marketing co-operatives for outstanding performance. An amount of Rs. 70 lakhs is set apart for this scheme in the Seventh Plan and Rs. 10 lakhs is provided in the 1985-86 Plan.

19. *Implementation of Schemes Financed by N.C.D.C.—Payment of State Share of the Assistance*

Payment of margin money assistance to the Rubber Marketing Federation and CAMPCO has been sanctioned by the N.C.D.C. during 1983-84 and 1984-85. N.C.D.C. has stipulated that the State Government should contribute their share of assistance as contemplated in the Project Reports submitted along with the proposals. An outlay of Rs. 150 lakhs is provided in the Seventh Plan for the payment of the State's share of the assistance in respect of the schemes implemented with the assistance of National Co-operative Development Corporation in the case of the Federation. An amount of Rs. 30 lakhs is set apart for the year 1985-86.

20. *Strengthening of Marketing Activities—Loan*

Loans for purchase of trucks, weighing machines and other equipment for primary processing of agricultural produce will be provided to improve the efficiency of marketing societies. The Seventh Plan provision for this scheme is Rs.75 lakhs and that for the year 1985-86 is Rs. 15 lakhs.

21. *Price Fluctuation Fund*

In the context of revitalisation of primary marketing co-operatives it will be necessary to contribute to the Special Price Fluctuation Fund of those societies undertaking outright purchase of agricultural commodities. The scheme is for Government contribution towards the Special price fluctuation fund of the

marketing co-operative societies so that possible loss on account of outright purchase is met. The outlay in the Seventh Plan is Rs. 10 lakhs and that in 1985-86 is Rs. 2 lakhs.

22. *Managerial Subsidy to Marketing Co-operatives*

This scheme is for payment of managerial subsidy to primary marketing and processing co-operative societies towards the cost of supervisory and technical staff. The outlay for the Seventh Plan period is Rs.40 lakhs. An amount of Rs. 8 lakhs is set apart for the year 1985-86.

23. *Loans to Kerala State Co-operative Marketing Federation for Taking Shares in KRIBCO*

The outlay proposed is for payment of long term loans to the Kerala State Co-operative Marketing Federation for taking shares in KRIBCO. A portion of the outlay is to meet the subsidy portion towards the cost of construction of godowns. The Seventh Plan provision is Rs.15 lakhs. The provision in the Annual Plan 1985-86 is Rs. 5 lakhs.

24. *Processing Co-operatives—Share Capital Contribution*

The scheme for share participation in marketing societies for processing activities will continue during the Seventh Plan. Societies assisted by the NCDC will also qualify for such share contribution. For installation of new processing units or rehabilitation of existing units NCDC provides 65% of the block cost by way of loan and balance cost has to be shared by State Government and the society concerned. The State Government provides assistance upto 30% of the cost by way of share contribution. The outlay proposed is for share contribution towards the cost of new processing units and the spillover assistance payable to societies assisted in previous years. The provision for the Seventh Plan period is Rs.150 lakhs. In 1985-86 an amount of Rs.40 lakhs is provided.

*Consumer Co-operatives*

25. *Organisation and Promotion of Co-operative Consumer Activities*

(a) *Subsidy*

The outlay proposed is for payment of managerial subsidy to primary consumer co-operative stores and other societies under the rural consumer development scheme during the Seventh Plan period. The outlay is also intended to meet the subsidy portion of assistance for purchase of vehicle and construction of godown by consumer co-operatives and other societies engaged in the distribution of consumer articles. The outlay for the Seventh Plan period is Rs. 100 lakhs. For the year 1985-86 an amount of Rs. 15 lakhs is set apart.

(b) *Share Capital Contribution*

The consumer co-operatives will be provided financial assistance by way of share capital contribution to augment their own resources and mainly for institutional credit. The provision for the Seventh Plan period is Rs. 200 lakhs. For the year 1985-86 an amount of Rs. 55 lakhs is set apart.

(c) *Loans*

Financial assistance to consumer co-operatives for construction of godown and acquisition of vehicles will be given in the form of loan and subsidy. The outlay is to meet the loan portion of the assistance. The Seventh Plan provision for this scheme is Rs. 50 lakhs. The Annual Plan provision for 1985-86 is Rs. 10 lakhs.

*Student Stores*26. *Working Capital and Managerial Subsidy*

The outlay proposed is for payment of working capital grant, managerial subsidy and equipment grant to college and school co-operative stores. An amount of Rs. 130 lakhs is set apart for the Seventh Plan period. In 1985-86 an amount of Rs. 26 lakhs is provided.

27. *University Co-operative Stores—Share Capital Contribution*

The outlay proposed is for payment of share capital contribution to Universities, co-operative stores for expansion and diversification of business. An amount of Rs. 20 lakhs is earmarked for the Seventh Plan period and Rs. 2 lakhs for the year 1985-86.

28. *Financial Assistance under Rural Consumer Development Schemes*

The outlay proposed is for payment of loan-cum-subsidy to Lead Societies under Rural Consumer Development Scheme for construction of office-cum-godown and also for purchase of vehicles. The assistance will be provided in the form of loan-cum-subsidy to consumer co-operatives and others brought under Rural Consumer Development Scheme. The Seventh Plan provision for this scheme is Rs. 75 lakhs and for the year 1985-86 an outlay of Rs. 16 lakhs is earmarked.

29. *Consumer-Co-operatives Incentive Awards for Sales Promotion*

Sales promotion in consumer co-operatives will be supported. Incentive bonus is payable to sales personnel as part of sales promotion. A portion of such incentive bonus paid by societies engaged in retail distribution of consumer articles will be subsidised. The outlay proposed is for payment of such incentives which help the promotion of retail sales of consumer articles by co-operatives. All types of societies engaged in the retail sale of consumer articles will be brought under the scheme. Also, the outlay will be used for suitable schemes for organising sales promotion. The Seventh Plan provision is Rs. 150 lakhs. An amount of Rs. 3 lakhs is set apart for the year 1985-86.

30. *Share Capital Contribution to School/College Co-operatives.*

School/College Co-operative Stores depend on the members' share capital for their working capital requirement. Dearth of sufficient working capital is a serious problem facing these societies. It is

proposed to provide assistance by way of share capital contribution so as to serve as working capital and also to enhance the borrowing power of the societies. School societies with a minimum membership of 100 and paid up share capital of Rs. 1,000 and sales turnover of Rs. 15,000 per annum may be paid. Government share capital contribution in the ratio of 1:5 subject to a maximum of Rs. 5,000 per society. College stores with a minimum membership of 100 and paid up share capital of Rs. 2,000 and annual sales turnover of Rs. 25,000 may be paid in the ratio of 1:5 subject to a maximum of Rs. 15,000 per society. The Seventh Plan provision for this scheme is Rs. 34 lakhs. An amount of Rs. 7 lakhs is earmarked for the year 1985-86.

31. *Audit of Co-operatives—Strengthening of Audit wing of the Department*

A scheme for strengthening the audit wing of the Co-operative Department to cope with the expansion and diversification of activities in Co-operatives is under consideration of Government and is expected to be implemented during the Seventh Plan period. The outlay proposed is for meeting the cost of officers proposed to be appointed in the audit wing of the Department consequent on the reorganisation. A part of the outlay will be utilised for strengthening and co-ordinating the work of the Department. The Seventh Plan provision is Rs. 275 lakhs. An amount of Rs. 50 lakhs is earmarked for the year 1985-86.

32. *Expansion of Co-operative Training College (NCCIT), Trivandrum*

The outlay proposed is for giving grant to Co-operative Training College (NCCIT), Trivandrum for expanding facilities so as to organise new in-service training courses, for construction of hostel building, purchase of furniture, library books etc. The Seventh Plan envisages an outlay of Rs. 10 lakhs. The provision for 1985-86 is Rs. 2 lakhs.

33. *Grant to Circle Co-operative Unions*

The scheme is for payment of grant to Circle Co-operative Unions for meeting a portion of the cost of Departmental Inspectors posted as full time Secretaries in Circle Co-operative Unions. Grant to Circle Co-operative Unions for construction of building will also be provided out of this. The Seventh Plan provision is Rs. 25 lakhs. The outlay for 1985-86 is Rs. 6 lakhs.

34. *Co-operative Education, Study Tours and Orientation Courses*

The outlay proposed is for payment of grant to the State Co-operative Unions for meeting the cost of Educational Instructors/Sahayaks etc., engaged in co-operative education and payment of allowances to participants under the member education programme. The provision is also intended for meeting the expenditure towards conduct of seminars, conferences of departmental and institutional personnel, expenses in connection with the study tours and award of prizes. An amount of Rs. 20 lakhs is set apart for this scheme during the Seventh Plan period. The outlay for 1985-86 is Rs. 4 lakhs.

### 35. *Research and Training in Co-operation*

The outlay proposed is for payment of grant to the State Co-operative Union to meet the expenditure towards maintenance of the Junior Personnel Training Centres and also for construction of building for Co-operative Training Centres. An amount of Rs. 25 lakhs is set apart for the scheme in the Seventh Plan. The outlay for the year 1985-86 is Rs. 5 lakhs.

### 36. *Co-operative Book Corner and Publicity Materials*

The provision proposed is for payment of assistance to State Co-operative Union towards the scheme 'Co-operative Book Corner' introduced jointly by the Co-operative Department, Kerala Institute of Languages and Kerala State Co-operative Union with a view to publish books on Co-operation in Malayalam and also to meet the cost of publication of pamphlets and other publicity materials relating to Co-operative Development. The Seventh Plan provision is Rs. 5 lakhs and that for the year 1985-86 is Rs. 1 lakh.

### *Information and Publicity*

#### 37. *Publication of Co-operative Journal*

The outlay proposed is for meeting the capital and revenue expense involved in the publication of periodicals, pamphlets, and manuals published by the Publication Wing of the Department. The provision is also for meeting the cost of additional staff proposed to be appointed in the publication wing. An outlay of Rs. 5 lakhs is set apart for the Seventh Plan period. The Annual Plan 1985-86 has an outlay of Rs. 1 lakh.

### *Other Co-operatives*

#### 38. *Women's Co-operatives*

The provision proposed is for payment of working capital grant, managerial subsidy, furniture subsidy, building subsidy etc., to women's co-operatives. The provision proposed is also for payment of share capital contribution to women's co-operatives for promotion of employment among women and larger participation of women in the movement. The outlay for the Seventh Plan period is Rs. 50 lakhs and for the year 1985-86, Rs. 10 lakhs.

#### 39. *Co-operative Hospitals and Dispensaries*

The co-operative hospitals and dispensaries are provided with various types of assistances such as managerial subsidy, share capital contribution, loan-cum-subsidy for construction of buildings, assistance for dealing in drugs etc., according to the pattern of assistance approved for each scheme. The outlay proposed is for payment of the above assistance to co-operative hospitals and dispensaries during the Seventh Plan period. The Seventh Plan provision for the scheme is Rs. 126 lakhs. The provision for the year 1985-86 is Rs. 26 lakhs.

#### 40. *Employees Co-operative Societies*

The outlay proposed is for payment of managerial subsidy to employees co-operatives, interest subsidy to

Government Servants Co-operative Societies and share capital contribution to employees' co-operatives. The Seventh Plan provision is Rs. 50 lakhs and that for the year 1985-86 is Rs. 7 lakhs.

#### 41. *Irrigation Co-operatives*

The outlay proposed is for payment of share capital contribution, loan-cum-subsidy, managerial subsidy etc., to co-operatives undertaking minor irrigation works. An amount of Rs. 5 lakhs is set apart for the Seventh Plan period. The outlay for the year 1985-86 is Rs. 1 lakh.

#### 42. *Co-operatives Organised for Promotion of Employment*

The outlay proposed is for payment of working capital grant, managerial subsidy, share capital contribution and loans to societies organised for self employment activities such as Co-operative Educational Societies, Taxi Drivers Co-operative Societies, Motor Transport Co-operative Societies, Autorickshaw Drivers C. S., Co-operative Printing Press, Literary Writers Co-operative Societies, Balawadi Co-operative Societies, Job Workers Co-operative Societies and miscellaneous types of Co-operatives. The criteria for assistance will be the economic and the activity chosen and the need for Governmental assistance. The Seventh Plan provision is Rs. 280 lakhs. The provision for the year 1985-86 is Rs. 45 lakhs.

#### 43. *Technical and Promotional Cell for Formulation Projects for Institutional Finance*

The outlay proposed is for meeting the expenditure on salaries and other costs of officers appointed in the technical and promotional cell attached to the Department. Institutional finance for development activities in the co-operative sector on increasingly larger scale will be attracted through bankable projects. Project formulation will be taken up by special staff appointed for the purpose. The Seventh Plan provision is Rs. 20 lakhs. An amount of Rs. 2 lakhs is earmarked for the year 1985-86.

#### 44. *Special Component Plan—Financial assistance to Harijan Co-operatives*

The outlay proposed is for payment of share capital grant, managerial subsidy, interest subsidy, share capital contribution etc., to Harijan Co-operative Societies implementing economic development schemes for the welfare of Harijans. The provision is also to meet the expenditure on salaries of the Inspectors of the Department whose services have been lent to Harijan Co-operative Societies on free service terms and interest relief to Harijan/Girijan Co-operative, to make available working capital at concessional rate of interest. In the Seventh Plan an outlay of Rs. 460 lakhs for this scheme is provided. An amount of Rs. 80 lakhs is set apart for the year 1985-86.

#### 45. *Tribal Sub-Plan*

The outlay proposed is for providing working capital grant, managerial subsidy, share capital grant, interest subsidy, share capital contribution etc., to

Girijan Co-operative Societies. The outlay is also for meeting the expenditure on salaries of the Inspectors of the Department deputed to Girijan Co-operatives on free service terms. The Seventh Plan provision for this scheme is Rs. 60 lakhs. The Annual Plan 1985-86 envisages an outlay of Rs. 9 lakhs.

## 11.4 Irrigation and Flood Control

### A. Major and Medium Irrigation

Irrigation has an important role in achieving the State's objective of increasing agricultural production through multiple cropping. Though Kerala gets good rainfall, owing to its concentration in two spells, the long dry season and heavy surface run off, it is essential to build up the irrigation system to ensure availability of water for cultivation during the dry season and for stabilisation of cultivation in other seasons.

The irrigation potential of the State is 16 lakh hectares net (or 25 lakh hectares gross). Of this, the area that can be brought under irrigation by major and medium irrigation schemes is estimated to be 6 lakh hectares (or 14 lakh hectares gross). The ten completed irrigation projects viz., Chalakudy, Peechi, Malampuzha, Neyyar, Pothundy, Gayathiri, Walayar, Vazhani, Mangalam and Checrakuzhy, irrigate an area of 1.47 lakh hectares and the eleven partially commissioned ongoing schemes irrigate an area of 2.19 lakh hectares. Thus the gross area irrigated by the major and medium irrigation schemes in the State till March 1984 was 3.66 lakh hectares. An addition of 30,500 hectares of land is expected to be brought under irrigation area as a result of the ongoing schemes by the end of 1984-85.

During the Seventh Plan it is proposed to complete all the major and medium irrigation schemes started prior to 1-4-1974. The outlay required for projects financed by the World Bank are fully provided and these schemes are expected to be completed during the Seventh Plan itself. Utilisation of the potential already created will be one of the important strategies of Seventh Plan. For extending the water courses upto blocks of 5 to 10 hectares the required outlay is provided under the Command Area Development Programme.

The outlay proposed for major and medium irrigation schemes in the Seventh Plan is Rs. 435 crores. Details of the Seventh Plan schemes are given below:—

### Major Schemes

#### A. Ongoing Schemes

##### 1. Pamba Irrigation Scheme

This scheme comprises a barrage at Maniyar across Kakkad river and a net work of canals taking off from the barrage. The latest estimated cost of the scheme is Rs. 52 crores. The scheme was taken up for implementation in 1961-62. The ultimate irrigation potential of the scheme is 49456 hectares. The expenditure on the project till March, 1984 was Rs. 4324 lakhs and an extent of 43138 hectares (net) has been brought under irrigation by the project.

The outlay for the Seventh Plan for the project is Rs. 242 lakhs. This outlay is earmarked in 1985-86 to complete the scheme in all respects.

##### 2. Periyar Valley Irrigation Scheme

This scheme envisages construction of a barrage at Bhoothathankettu across Periyar River and a system of canals and distributories. The scheme, started during 1956, is estimated to cost Rs. 57 crores. The ayacut anticipated is 79460 hectares (gross) of Ernakulam District. The total expenditure on the scheme till March 1984 is Rs. 4043 lakhs and achievement of Ayacut till that period is 73682 hectares gross. The scheme is scheduled to be substantially completed by March 1985 except some tail end reaches.

The Seventh Plan outlay is Rs. 280 lakhs and this amount is earmarked for 1985-86 to complete the scheme in all respects.

##### 3. Chitturpuzha—Moolathara Irrigation Scheme

This scheme is for remodelling of the existing irrigation system in Chitturpuzha for irrigating 32600 hectares, gross of Chittur Taluk and peripheral lands of Palghat District. The estimate of Rs. 12.52 crores is under revision. The scheme was started in 1963. The expenditure till March, 1984 on the scheme is Rs. 1269 lakhs and the achievement of ayacut till that period is 24155 hectares gross. It is expected that the scheme will be completed by March 1985.

The outlay proposed for the Seventh Plan is Rs. 150 lakhs and this amount is provided for 1985-86 for meeting committed payments.

##### 4. Kuttiady Irrigation Scheme

This scheme aims at construction of a masonry dam across Kuttiady River at Peruvannamuzhy with a canal system to irrigate an area of 35850 hectares gross. The estimated cost of the scheme is Rs. 48.60 crores. The scheme was started in 1962 and the expenditure upto March, 1984 is Rs. 44.97 crores. The ayacut achieved till March 1984 is 30655 hectares gross. The Seventh Plan outlay for this scheme is Rs. 828 lakhs which is inclusive of a share to the KSEB. The outlay proposed in 1985-86 is Rs. 328 lakhs for the committed payments and for completion of the scheme in all respects.

##### 5. Kanhirapuzha Irrigation Scheme

The scheme aims at constructing an earthen dam with a central masonry spillway across Kanhirapuzha to provide irrigation facilities for an area of 21900 hectares gross in Mannarghat, Ottappalam and Palghat Taluks. The estimated cost of the scheme is Rs. 42 crores.

The scheme was started in 1961-62 and an amount of Rs. 3279 lakhs is spent for the project till March, 1984. The achievement of ayacut till March 1984 is 16027 ha. and it is expected that the scheme will be completed in 1986-87. The Seventh Plan outlay for the scheme is Rs. 677 lakhs. The outlay for 1985-86 is Rs. 300 lakhs.

### 6. *Kallada Irrigation Scheme*

The Kallada Irrigation Scheme, the biggest irrigation scheme in the State, is estimated to cost Rs. 210 crores and will benefit an area of 61,600 hectares net (92,000 ha. gross) in Quilon District and in parts of Alleppey and Pathanamthitta Districts. The scheme was taken up in 1961-62. The World Bank is financing the first stage of the scheme which will benefit an area of 37,600 hectares net (or 56,000 hectares gross). The expenditure for the scheme upto March 1984 is Rs. 105 crores. The ayacut created by the scheme till March 1984 is 610 hectares net (or 912 ha. gross). The Seventh Plan outlay for this scheme is Rs. 9817 lakhs. The outlay for 1985-86 is Rs. 3000 lakhs.

### 7. *Pazhassi Irrigation Scheme*

The scheme is a diversion scheme across Valappattanam river in Cannanore district to irrigate an area of 32,370 hectares gross. The estimated cost of the scheme is Rs. 5400 lakhs. The scheme was started in 1961 and the expenditure till March 1984 is Rs. 4480 lakhs. The ayacut achieved till March 1984 is 10,803 hectares gross. It is expected to complete the scheme by 1985-86.

The proposed outlay in the Seventh Plan is Rs. 806 lakhs. The outlay proposed for 1985-86 is Rs. 300 lakhs.

### 8. *Chimoni Irrigation Scheme*

This scheme aims at supplying water to 26,200 hectares (gross) of kole lands and the peripheral lands in Trichur District at an estimated cost of Rs. 23.43 crores. This is an infrastructure work to be provided by the NABARD assisted Trichur Kole Development Scheme. The scheme was started in 1975 and the expenditure till March 1984 is Rs. 806 lakhs. It is expected that the scheme will be completed by 1988.

The outlay for the Seventh Plan is Rs. 1803 lakhs. The outlay proposed for the year 1985-86 is Rs. 150 lakhs.

### 9. *Idamalayar Irrigation Scheme*

This scheme aims the utilisation of tailrace waters of Idamalayar Hydro Electric Project by diverting water through the barrage of Periyar Valley Irrigation Scheme at Plancode to irrigate an area of 52,400 ha. gross. The estimated cost of the scheme is Rs. 61.47 crores. The expenditure on the scheme till March 1984 is Rs. 1046 lakhs. It is aimed to complete the scheme by 1991-92.

An amount of Rs. 1705 lakhs is proposed for the year 1985-86. Out of this Rs. 800 lakhs will be the share of K.S.E.B. The total Seventh Plan outlay for this scheme is Rs. 5981 lakhs.

### 10. *Muvattupuzha Valley Irrigation Scheme*

The scheme aims at the utilisation of tailrace waters of Idukki Hydro Electric Project by constructing a small dam across Thodupuzha river at Malankara. The scheme estimated to cost Rs. 48 crores for irrigating 52,200 ha. gross of both wet and dry lands of Idukki, Ernakulam and Kottayam Districts.

The scheme was started in 1975. Till March 1984 an amount of Rs. 1735 lakhs was spent on this scheme. The Seventh Plan outlay for the scheme is Rs. 3834 lakhs. It is expected that the scheme will be completed by 1989-90. An amount of Rs. 200 lakhs is proposed for the year 1985-86.

### 11. *Kakkadavu Irrigation Scheme*

This scheme consists of a reservoir at Kakkadavu across Kariangode river to irrigate an area of 41,700 hectares (gross) in Cannanore and Kasargode Districts. The estimated cost of the scheme is Rs. 26 crores and the expenditure till March 1984 is Rs. 141 lakhs. The scheme's costs and benefits have undergone a change after a study by a central team. The Seventh Plan provision for this scheme is Rs. 2000 lakhs. This provision is made in case the State decides to go ahead with the scheme. The outlay proposed for 1985-86 is Rs. 10 lakhs.

### 12. *Beyporepuzha Irrigation Scheme*

The Beyporepuzha project as originally envisaged was for the construction of a barrage across Chaliyar (also known as Beyporepuzha) at Areacode in Malappuram District and for the diversion of water through a distribution system consisting of two main canals with branches and distributorics benefiting an ayacut of 5812 hectares in Malappuram and Calicut Districts. The Project report was forwarded to Central Water Commission in 1979. Possibility of large scale submergence of the lands upstream of barrage created local objections which led to further studies on alternative proposals. These proposals could not be pursued further due to low cost-benefit ratio. Hence an integrated scheme for the Chaliyar basin was thought of since there are no major/medium schemes in the Chaliyar river. There are also no major/medium irrigation schemes in Malappuram District.

The present proposal envisages construction of three storage dams across, Chalipuzha, Maruthapuzha and Punnappuzha which forms the Chaliyar river lower down. The three storage dams are proposed to be interlinked and the ayacut of 5,000 hectares approximately fed through a common canal system. The approximate cost of this scheme will be Rs. 250 crores. The Seventh Plan outlay for the scheme is Rs. 1885 lakhs. An outlay of Rs. 10 lakhs is proposed for 1985-86.

### 13. *Kuriarkutty-Karappara Revised Scheme*

The Moolathara right bank canal is now being extended as a part of the main canal of the proposed Kuriarkutty-Karappara irrigation project which envisaged utilisation of the tailrace waters of the storage reservoirs at Kuriarkutty, Pulikkal and Karappara, after generating power at Vallaramkadavu. Planning Commission has not approved the hydro-electric part of the project and therefore the Electricity Board is not in a position to go ahead with their part of the programme. The irrigation part will also suffer for want of storage. Some work has already been done on extension of canals costing Rs. 1.02 crores till 31-3-1984. A revised project is under preparation,

which is not dependent on the storage at Kuriarkutty, but is basically dependent on surplus in Chittoor-puzha. The Seventh Plan provision is Rs. 608 lakhs for executing these works. The outlay proposed for 1985-86 is Rs. 10 lakhs.

## II. Medium Schemes

### A. Ongoing Schemes

#### 14. Attappady Irrigation Scheme

This scheme consists of a masonry dam at Chittar across Siruvani reservoir in Attappady and a canal system to irrigate an area of 8050 hectares gross in the tribal area of Attappady. The project is estimated to cost Rs. 20.80 crores. The scheme was started in 1975 and the expenditure till March 1984 is Rs. 473 lakhs. It is expected to complete the scheme by 1989-90. The outlay for the Seventh Plan is Rs. 2020 lakhs.

The outlay proposed for 1985-86 is Rs. 60 lakhs.

#### 15. Karapuzha Irrigation Scheme

This scheme aims at the construction of a dam across Karapuzha at Vazhavatta and a network of distributories at an estimated cost of Rs. 12 crores. The scheme was started in 1975 and the expenditure till March 1984 is Rs. 592 lakhs. The ultimate irrigation potential that can be developed by the scheme is 9300 hectares gross in South Wynaad Taluk. It is aimed to complete the scheme by 1988-89. The Seventh Plan outlay for the scheme is Rs. 725 lakhs.

The outlay proposed for 1985-86 is Rs. 50 lakhs.

#### 16. Vamanapuram Irrigation Project

The first stage of the scheme aims at constructing a dam at Valayanki across Kallar, the tributary of Vamanapuram river and a network of canal system to irrigate an area of 24250 hectares (gross) in Trivandrum District. The estimated cost of the scheme is Rs. 37.12 crores and the expenditure upto March 1984 is Rs. 59 lakhs. The scheme was started in 1979. The Project is expected to be completed by 1989-90. The outlay provided in the Seventh Plan is Rs. 3000 lakhs.

The proposed provision for 1985-86 is Rs. 10 lakhs.

#### 17. Meenachil Irrigation Scheme

It is intended to construct a storage reservoir at the Meenachil river basin at Cherippad to irrigate an area of 10,000 hectares (gross) in Kottayam District. The estimated cost of the scheme is Rs. 35 crores. The scheme was started in 1978 and the expenditure upto March 1984 is Rs. 20 lakhs.

It is expected to complete the project by 1991-92. The outlay proposed for the Seventh Plan is Rs. 3000 lakhs. The outlay earmarked for 1985-86 is Rs. 10 lakhs.

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#### 18. Banasurasagar Irrigation Scheme

The objective of the scheme is to construct a dam across Karamanathodu, a tributary of Panamaram river (tributary of Kabini). The scheme will irrigate an area of 4800 hectares (gross) which is predominantly inhabited by scheduled castes and tribes. The estimated cost of the scheme is Rs. 11.37 crores. The scheme was started in 1979 and the expenditure upto March 1984 is 107 lakhs.

It is aimed to complete the scheme by 1992-93. The outlay proposed for the Seventh Plan is Rs. 1000 lakhs. The outlay earmarked for 1985-86 is Rs. 10 lakhs.

### Others

#### 19. Water Development and Modernisation

It is proposed to rectify the canal system of projects to achieve better utilisation of water storage by reducing losses to the minimum. The work on some extension of ayacuts will be continued under this scheme. The outlay in the Seventh Plan for water development and modernisation is Rs. 500 lakhs. The outlay proposed for 1985-86 is Rs. 50 lakhs.

#### 20. Research, Survey and Investigation

##### (a) Reseach

The outlay is to carry out studies in optimum water development and utilisation and for such studies to be conducted in KERI and CWRDM. The Seventh Plan outlay for Research is Rs. 500 lakhs. The outlay for 1985-86 is Rs. 100 lakhs.

##### (b) Survey and Investigation

It is proposed to carry out hydrological and meteorological studies and other surveys on river basins to formulate integrated river valley projects. The outlay of Rs. 500 lakhs in the Seventh Plan is to implement the scheme and to conduct preliminary investigations of some schemes.

The outlay proposed for the year 1985-86 is Rs. 100 lakhs.

#### 21. Bridge-cum-Regulator at Kanakkankadavu

This scheme envisages the construction of a bridge cum-regulator at Kanakkankadavu across Chalakudy river just upstream of its joining with Periyar river at a cost of Rs. 235 lakhs. The regulator is intended to benefit 2600 hectares of paddy fields by preventing the entry of salt water upstream of the proposed bridge-cum-regulator. A bridge across the Chalakudy river will increase communication facilities and help the development of the locality. The outlay for this scheme included in the Seventh Plan is Rs. 235 lakhs. The outlay proposed for 1985-86 is Rs. 50 lakhs.

#### 22. Regulator-cum-Bridge at Chamaravattom

The scheme envisages construction of a regulator-cum-bridge at Chamaravattom across Bharathapuzha, about 5 km. upstream of the river mouth at Ponnani at a cost of Rs. 15.81 crores. The regulator is mainly

intended to store water required for 3130 ha. of land lying on either side of Bharathapuzha from Kuttipuram to Ponnani by making sufficient quantity of water available for lift irrigation schemes on the upstream so that the second crop in these lands can be stabilised and an additional third crop can be raised. Besides this, 3668 hectares of kole lands in Ponnani and Talappilly taluks is proposed to be irrigated for third crop. Thus the total area benefited will be 6798 ha. Besides this it is also aimed at controlling intrusion of saline water upstream of Chamaravattom. The Seventh Plan outlay for the scheme is Rs. 1581 lakhs.

The outlay proposed for 1985-86 is Rs. 200 lakhs.

### 23. *Thanneermukkom Project*

Thanneermukkom Salt Water Barrier, which forms part of the Kuttanad Development Scheme, was taken up in 1958. The latest estimated cost of the scheme is Rs. 1350 lakhs. The first stage consisting of 1/3 portion of the regulator and the allied structures on the Thanneermukkom side was completed in 1965. The Second stage consisting of 1/3 portion of the regulator and allied works on the Vechoor side was completed in 1975. The work on the central portion is in progress. The total expenditure during the Sixth Plan is expected to be Rs. 110 lakhs. The cumulative expenditure on the scheme till end of 1984-85 was about Rs. 616 lakhs. Considering the balance requirement for the completion of the scheme an amount of Rs. 775 lakhs is proposed for Seventh Plan for the completion of this scheme. The 1985-86 outlay is Rs. 115 lakhs.

### 24. *Advance Action on New Schemes*

The outlay of Rs. 753 lakhs in the Seventh Plan is to carry out survey and investigation of the schemes like Thuppanad, Aralam, Maruthappuzha, Irinjipuzha and Chalipuzha etc. The outlay proposed for the year 1985-86 is Rs. 150 lakhs.

### B. *Minor Irrigation*

Minor irrigation schemes are quick yielding and require only low capital investment besides possessing considerable employment potential, especially for unskilled and semi skilled labour. Owing to the undulating topography of the State it is not possible for the major projects to supply water to every pocket of arable land. The answer to this problem is provision of minor irrigation facilities. The objective of the Sixth Plan was to bring an additional area of 47640 ha. (net) or 56930 ha. (gross) under minor irrigation for food and cash crops. During the first four years of the Sixth Plan 33493 ha. (net) or 41634 ha. (gross) could be brought under irrigation through minor irrigation schemes. In 1984-85 about 6060 ha. (net) or 7670 ha. (gross) could be brought under irrigation. The State Ground Water Department is also engaged in the exploration and exploitation of ground water in the State for irrigation, water supply and other purposes.

A brief account of the programme under minor irrigation schemes for the Seventh Plan is given below:—

The objective of the Seventh Plan is to bring an additional area of 63,850 ha. (net) or 82,900 ha. (gross) under minor irrigation for food and cash crop cultivation. The following strategy will be adopted in the

planning of minor irrigation schemes during the Seventh Plan period:—

- (a) In order to preclude the possibility of areas taken up under Minor Irrigation being subsequently brought under major irrigation in future, thus duplicating the effort, minor irrigation schemes will be concentrated only in areas, where major irrigation schemes cannot command. Also more lift irrigation schemes are planned.
- (b) Top priority will be given for restoration of completed schemes which have been damaged.

(A field verification of ayacut conducted in 1976 revealed that 1845 minor irrigation schemes were damaged. The approximate cost for repairing them and making them serviceable is about Rs. 550 lakhs. The number of schemes now defunct is still higher and the cost for repairing all of them is therefore estimated at Rs. 750 lakhs. This can be correctly assessed only after the joint verification of the Irrigation and Revenue Departments is over)

- (c) At present Lift Irrigation schemes are taken up departmentally, only if the area benefited is 100 acres (40.50 ha.) and above. This has been so fixed, as otherwise, it is not economical to maintain the lift irrigation schemes departmentally, in view of the poor returns, as well as the high per acre cost of maintenance. At the same time, Government are desirous of helping agriculturists by taking up schemes in areas where the benefited area will be below 40.50 ha. subject to maintenance being done by beneficiaries or other suitable set up.
- (d) 10% of the outlay for minor irrigation schemes is proposed to be utilised on scheme benefiting scheduled castes/scheduled tribes.
- (e) In selecting schemes under minor irrigation the policy is to give top priority to those districts where the proportion of irrigated area is comparatively low and the potential for minor irrigation is high and;
- (f) basin-wise master plans identifying new schemes for tapping the remaining resources by way of minor irrigation schemes are also proposed to be prepared with the help of the existing surface water investigation organisation. These master plans will serve as guidelines for taking up new schemes from the Seventh Plan onwards.

### *Development of Ground Water*

The programmes included in the Seventh Plan for the development of ground water in the State are the following:—

#### *Ongoing Schemes*

##### *1. Ground Water Survey and Development*

This continuing scheme is for pinpointing locations for wells, preparing report on the ground water

condition of the remaining districts, preparation of hydrogeological map of Kerala, collection of data on water levels of selected observation wells and to execute deposit works of construction of different types of ground water structures etc. During the Seventh Plan period 5000 well sites will be located, hydrogeological map of Kerala will be completed, and 750 tube/bore wells will be constructed. The outlay for Seventh plan is Rs. 600 lakhs.

An amount of Rs. 125 lakhs is proposed for the year 1985-86.

#### 2. *Scheme for Strengthening Hydrology and Design Wing*

This scheme is to conduct water balance studies and engineering research for the large scale development of ground water resources of the State. The outlay for the Seventh Plan is Rs. 50 lakhs. The outlay for 1985-86 is Rs. 8 lakhs.

#### 3. *Scheme for Strengthening the Ground Water Organisation in the State—State Share.*

The ground water organisation in the State has been developed to have a District-wise set up except in the recently formed Districts namely, Pathanamthitta, Wynad and Kasaragod. Shortage of drilling rigs and other equipment is a major constraint for large scale utilisation of ground water resources. It is proposed to provide machinery and equipment on 50% Central assistance especially for shallow tube/bore wells in all the Districts to cope with the demand of farmers. The Seventh Plan outlay for the scheme is Rs. 200 lakhs.

An outlay of Rs. 40 lakhs is proposed for the year 1985-86 as State's share of the Centrally Sponsored Schemes.

#### 4. *Other Ongoing Schemes*

The important programmes included under this head are development of Onattukara region, coastal monitoring, setting up of a workshop and stores, geophysical exploration, photogeological studies, development of minor irrigation for comprehensive coconut development scheme, for the development of ground water for tribal areas of Attappady and revitalisation of existing wells. The Seventh Plan provision for this item is Rs. 150 lakhs.

The outlay proposed for the year 1985-86 is Rs. 25 lakhs.

#### 5. *Implementation of Community Irrigation Tube Well Scheme*

The objective of this scheme is provision of irrigation through public tube wells to be commissioned by the Department. Maintenance and running of these wells can be entrusted with the Minor Irrigation Department/Public Body constituted for this purpose, who will purchase the wells and make them their asset. Institutional finance can also be made use of for this purpose for which the Department can work as the liaison agency. This work will be carried out by the Department by drilling wells and designing and installing optimum size of pumpsets.

An initial target of 200 tube wells is fixed for five years of the Seventh Plan. The irrigation potential anticipated is 8000 hectares. The outlay proposed for the plan period is Rs. 100 lakhs.

The outlay proposed for the year 1985-86 is Rs. 15 lakhs.

#### 6. *Utilisation of Ground Water for Harijan/Tribal Beneficiaries*

The programme includes construction of wells and installation of suitable pumpsets. The wells commissioned will be handed over on payment basis to the Harijan/Tribal Welfare Department or any other agency authorised by Government, so that the benefits accrue to scheduled castes and scheduled tribes.

An initial target of 250 tube/bore wells is fixed for Seventh Plan. The outlay for Seventh Plan is Rs. 100 lakhs.

The provision for the year 1985-86 is Rs. 20 lakhs.

#### 7. *Setting up a Data Bank*

Collection of the basic statistics on the ground water system of the State, such as total number of wells, rate of withdrawal from these wells, basic characteristics of the known aquifer system, recharge characteristics etc., their proper compilation, storage and retrieval of the same for use are highly essential to maintain a proper understanding of the ground water potential. This can be accomplished by setting up a Data Bank in the Department. The Seventh Plan outlay for this scheme is Rs. 5 lakhs.

The outlay proposed for the year 1985-86 is Rs. 1 lakh.

#### 8. *Research Studies to Economise Construction of Wells and Selection of Pumps of Optimum Capacity*

The programme envisages taking up of research studies to economise drilling and construction through the use of less costly casing materials. Another area of study is the use of optimum size of pumpsets, for water lifting to save wastage of energy. The Seventh Plan provision for this scheme is Rs. 5 lakhs.

The amount proposed for the year 1985-86 is Rs. 1 lakh.

#### 9. *Ground Water Quality Studies in the Coastal Aquifers*

Although the coastal tract of the State provides a potential groundwater storage it is subject to the inherent threat of quality problems due to the proximity of the sea and backwaters. Monitoring of quality variation in each aquifer zone, study of the interaction of quality and changing environments and nature of fresh water, saline interface in each aquifer zone etc. are the subjects of study under the scheme. These studies could be carried out making use of the laboratory facilities available with the Department. The Seventh Plan outlay for this scheme is Rs. 5 lakhs.

The outlay proposed for the year 1985-86 is Rs. 1 lakh.



10. *Detailed Exploration to Pinpoint Bore Well Locations in Hard Rock Areas*

Hard rock hydrology is a recently developed science and it needs further refinement to qualify as a well developed science. The geophysical setting of hard rock is no where uniform and as such a general solution is not effective. Each terrain has its own geophysical features which have to be studied in detail to solve the ultimate problem of selection of a suitable location for a well. This needs exhaustive geophysical studies. The Seventh Plan programme envisages carrying out of these studies and selection of sites for different types of wells. These spots will be peg-marked and plotted on a map. Selection of 4000 suitable locations is kept as the target for five years of the Plan. The outlay proposed is Rs. 5 lakhs.

The provision for the year 1985-86 is Rs. 1 lakh.

11. *Scheme for Providing Irrigation Facilities through Shallow Tube/Bore Wells and Revitalisation of Wells*

It is proved that shallow tube wells (filter point wells) are quite feasible in some part of the coastal areas of Trivandrum, Quilon, Alleppey, Ernakulam, Trichur Malappuram, Calicut and Cannanore Districts. Shallow bore wells are feasible in pockets of almost all districts. It is proposed to implement a scheme for providing irrigation facilities through the construction of filter point wells, shallow bore wells and revitalisation of wells. The target proposed is the construction of 1300 shallow tube/bore wells, during the Seventh Plan period. The Plan provision is Rs. 20 lakhs.

The amount proposed for 1985-86 is Rs. 2 lakhs.

12. *Setting up an Extension and Training Centre*

It is necessary to popularise the ground water development and utilisation practices so that the farmers could avail themselves of maximum benefit out of the activities of the Department. With this objective a programme of Extension and Training in the Ground Water Development Programme is prepared. The Seventh Plan outlay for this scheme is Rs. 5 lakhs.

The outlay proposed for 1985-86 is Rs. 1 lakh.

13. *Scheme for Induced Recharge in the Selected Basins*

The objective of this scheme is identification of the recharge basins of the major aquifer systems of the State and implementation of feasible programmes to augment the rate of recharge. Important activities under this programme include contour bunding, making infiltration trenches and recharge wells. The Seventh Plan outlay for the scheme is Rs. 5 lakhs.

The outlay proposed for 1985-86 is Rs. 1 lakh.

14. *Constitution of Ground Water Corporation*

With a view to obtaining institutional finance for Ground Water Development and ensuring proper utilisation of resources, constitution of a Ground Water

Development Corporation is contemplated in the Seventh Plan. Besides implementing well irrigation schemes this agency could take up and carry out well construction for various beneficiaries on receipt of payments. The nominal provision of Rs. 5 lakhs proposed is for providing equity share/loans to the corporation.

II *Surface Water*

1. *Lift Irrigation Scheme*

Works involving drawal of water by mechanical means from rivers, tanks etc. are classified under this category. Only works benefiting over 40.50 hectares are taken up at Government cost. The works covering less than 40.50 hectares are to be executed by lift irrigation co-operative societies or other organisations. In respect of works benefiting scheduled castes and scheduled tribes this limit is not insisted upon by the Department. It is proposed to bring an area of 19050 ha. (net) or 28575 ha. (gross) by lift irrigation schemes during the Seventh Plan period. The total outlay for the scheme in the Seventh Plan is Rs. 1800 lakhs. An outlay of Rs. 240 lakhs is proposed in 1985-86 to irrigate an area of 2860 ha. net or 4290 ha. gross by lift irrigation schemes.

2. *Minor Irrigation Class I Works*

Works costing above Rs. 2 lakhs and upto Rs. 35 lakhs are classified under this category. The upper limit is Rs. 45 lakhs in hilly areas. During the Seventh Plan period it is proposed to bring an area of 19050 ha. net or 28575 ha. gross under irrigation through Minor Irrigation Class I Schemes. The Seventh Plan Provision for this scheme is Rs. 1700 lakhs.

During the year 1985-86 it is proposed to take up 227 Minor Irrigation Class I Schemes to benefit an area of 2860 ha. net or 4290 ha. gross. An amount of Rs. 230 lakhs is provided for this during the year 1985-86.

3. *Minor Irrigation Class II Works—P.W.D.*

Works, other than petty works, costing upto Rs. 2 lakhs are classified under this category. From 1982-83 all the Minor Irrigation Class II works are ordered to be executed with Government funds by the P.W.D.

During the Seventh Plan period it is proposed to complete all the ongoing M.I. Class II works taken up by P.W.D. and to complete the new schemes to bring an area of 9525 ha. gross under irrigation through these schemes. Out of this an amount of Rs. 50 lakhs is provided for implementation of M.I. Class II works executed by District Collectors with people's participation to carry out the spill over works alone. The outlay for Seventh Plan is Rs. 980 lakhs. During 1985-86 an amount of Rs. 100 lakhs is provided to bring 1430 ha. of area under irrigation through these schemes.

For M.I. Class II works with people's participation Rs. 10 lakhs is earmarked to carry out the spill over works already executed through the Development Department.

#### 4. *Strengthening Surface Water Organisation and Investigation—State Share*

The outlay of Rs. 50 lakhs in the plan is to meet the expenditure in connection with survey and investigation of M.I. works and strengthening of the Department.

The outlay proposed for 1985-86 is Rs. 10 lakhs.

#### 5. *Minor Irrigation Works in I.P.D. Units*

This scheme aims at the provision of minor irrigation facilities to selected areas where Intensive Paddy Development Schemes of Agricultural Department are implemented. During the Seventh Plan it is proposed to cover an area of 1450 hectares. The Seventh Plan outlay for this scheme is Rs. 300 lakhs.

An amount of Rs. 30 lakhs is proposed for the year 1985-86 to cover an area of 250 hectares in the I.P.D. Units.

#### 6. *Repairs to Damages caused to Minor Irrigation Structures*

A large number of minor irrigation schemes require repairs for the full utilisation of the irrigation potential. It is proposed to rectify the damages and restore irrigation facilities to 8570 ha. of area during the Seventh Plan period. The outlay for the scheme is Rs. 300 lakhs.

The outlay proposed for 1985-86 is Rs. 35 lakhs to restore/provide irrigation facilities to 124 hectares.

#### 7. *Minor Irrigation—Special Component Plan*

The outlay of Rs. 500 lakhs in the Seventh Plan is for providing irrigation facilities to 3330 hectares predominantly inhabited by scheduled castes and scheduled tribes. The programme includes lift irrigation and class II minor irrigation works.

The outlay proposed for 1985-86 is Rs. 75 lakhs to benefit an area of 500 hectares.

#### 8. *Minor Irrigation—Tribal Sub Plan*

The amount of Rs. 100 lakhs earmarked in the Plan is to provide irrigation facilities to 1000 hectares of area predominantly inhabited by scheduled tribes.

An amount of Rs. 20 lakhs is proposed for 1985-86 to benefit an area of 135 hectares under Tribal Sub Plan.

### III *Other Schemes*

#### *Kattampally Scheme*

This is a multipurpose irrigation scheme for prevention of salt water intrusion, flood control, navigation and communication. The first stage of the scheme comprising a regulator cum bridge and lock was completed during the second year of the Fourth Plan. The second stage, a pilot project costing Rs. 22 lakhs, which envisages reclamation of about 410 ha. of marshy area is being done. About 40% of the bund

formation is completed by spending Rs. 7 lakhs. The balance has to be completed during the Seventh Plan. For this Rs. 15 lakhs is proposed in the Plan.

The amount proposed for the year 1985-86 is Rs. 3 lakhs.

#### C. *Command Area Development*

Command Area Development Programme is a Centrally assisted scheme (50%) aimed at reducing the gap between irrigation potential created and utilised. Command Area Development Programme envisages construction of on-farm works and the provision of a machinery necessary for efficient water management. The major activities proposed are:

- (1) Construction of field channels from spouts in the canal systems to individual holdings;
- (2) Introduction of Warabandi with a view to assure equitable water distribution among the beneficiaries and
- (3) Land levelling and shaping to reduce deep percolation losses within individual farms.

A comprehensive C.A.D. Bill, 1983 has been approved by the State Council of Ministers on 11-5-1983. The Draft Bill has been sent to Government of India for obtaining the 'prior sanction of the President to introduce the same in the State Assembly. The sanction of the President for the introduction of the Bill in the State Assembly has not been received so far. In the meanwhile action was initiated to implement the work of formation of field channels utilising the provisions of K.L.D. Act, 1964 pending enactment of C.A.D. Bill. 110 Schemes under C.A.D. Programme covering an area of 4009.53 hectares have been approved by the State Land Development Board. Another 74 schemes covering 2516.15 hectares have been approved by the District Land Development Committee and are to be placed before the State Land Development Board. A third batch of 45 schemes have since been prepared covering 1756 hectares.

The total outlay proposed in the Seventh Plan for Command Area Development is Rs. 3500 lakhs. Of this an amount of Rs. 1500 lakhs is for Command Area Development and Rs. 2000 lakhs is earmarked for the construction of field channels to take water upto 10 hectares 5 hectares block level mainly in the projects Malampuzha, Peechi, Chalakudy, Periyar Valley, Pamba and Neyyar.

The proposed outlay for the year 1985-86 is Rs. 200 lakhs.

#### D. *Flood Control and Anti-Sea Erosion*

##### *Flood Control*

The high incidence of rainfall causes floods and damages to agricultural lands, public property, roads, canals etc. Owing to deforestation and silting of river beds, the problem of floods will only accentuate in future unless flood control measures are planned and implemented as a time-bound programme. The flood control works done in the Sixth Plan included construction of retaining walls, bed bars, permeable

groynes etc., to protect the thickly populated banks of rivers, works for protection of schools, places of worship, roads, canals etc.

The Seventh Plan strategy is based by and large on a short range plan to fit in with the long range Master Plan prepared by the Department during 1963. The completion of works in hand and protection of river basins are given priority. Widening and deepening the leading channel of Thottappally spillway to control the flood problems in the low lying Kuttanad basin, completion of the works for providing better drainage facilities to low lying areas of Cochin and Calicut cities, completion of works for improving Amayizhanchan Thodu to mitigate floods in Trivandrum City, completion of the balance work of the new cut connecting Keeranalloor and Puraparamba rivers, Onambalam cut in Kallada area of Quilon District, provision for the purchase of three dredgers to augment the existing fleet for deepening river mouths and backwaters for quick discharge of flood waters, purchase of spares for renovation of existing old dredgers and construction of dry dock and workshop at Ernakulam in addition to the reconstruction of the existing dry dock at Alleppey are the activities proposed in the Plan.

In the Seventh Plan is proposed to commence a scheme as a result of which valuable land on either side of the rivers are reclaimed by protecting the banks with standard rubble packed retaining walls with top layer cement pointed upto a suitable level, after giving sufficient vent way in the rivers at those places, for flood discharges. The ventway required will be ascertained after actual model studies. A rough evaluation to assess the feasibility of this scheme has been done in a few reaches in Bharathapuzha and it has been found that cost of land so reclaimed will be about Rs. 5 lakhs per hectare. The outlay proposed is Rs. 100 lakhs for the scheme. Moreover a separate provision of Rs. 10 lakhs is provided for conducting model studies for preparing schemes in all river basins.

The details of the Seventh Plan proposals are given below:—

<i>Item of work</i>	<i>Plan outlay (Rs. lakhs)</i>
1. Spill over works	600.00
2. Identified works on Zonal basis	
(i) Southern rivers—Karamana, Neyyar, Vamanapuram, Ithikara and Kallada	100.00
(ii) Kuttanad rivers—Achencoil, Pamba, Manimala and Meenachil	130.00
(iii) Periyar, Chalakudy and Moovattupuzha	100.00
(iv) Karuvannoor and Keecheri basins	30.00
(v) Bharathapuzha, Tirur, Poorapuzha, Kadalundi, Chaliyar, Beypore and Kallai	100.00
(vi) Northern rivers—Valapattanam, Kuttiadi, Mahe, Tellicherry, Ancharakandi, Payswini, Chandragiri etc.	100.00

3. Deepening and Widening the leading channels of Thottappally Spillway	400.00
4. Purchase of dredgers	180.00
5. Purchase of spares for renovation of existing dredgers	50.00
6. Construction of Dry Dock and Workshop	50.00
7. Improvements to river channels, controlling the opening of bars	100.00
8. Reclamation of river banks	100.00
9. Cut-off, inter-connecting rivers, embankment etc.	10.00
10. Provision for model studies	10.00
11. Preparation of Master Plan for flood control works	40.00
Total	2200.00

Out of Rs. 2200 lakhs proposed in the Seventh Plan, it is proposed to provide Rs. 250 lakhs during the year 1985-86. There are 43 schemes in progress in 1984-85 with a spill over commitment of about Rs. 400 lakhs. Out of these 10 schemes are expected to be completed by the end of this year. This means that about 33 works with a commitment of Rs. 300 lakhs will spill over to 1985-86. For completing of as many of these schemes on priority basis, an amount of Rs. 160 lakhs is proposed in 1985-86. A few new works are also proposed, for which an outlay of Rs. 25 lakhs is proposed. For starting the work of widening and deepening the leading channel of Thottappally spillway, Rs. 10 lakhs is proposed. Purchase of one dredger, purchase of essential spares for the renovation of the existing dredgers and taking up of the construction of dry dock and workshop at Ernakulam in addition to the reconstruction of the existing dry dock at Alleppey are also proposed in 1985-86. Model studies for the new scheme of reclamation and investigation work for the preparation of the long range master plan are also proposed for 1985-86. The scheme-wise break-up of the proposed outlay for 1985-86 is as follows:

	<i>Rs. in lakhs</i>
1. Execution of spillover works	160
2. New emergent identified works	25
3. Widening and deepening of leading channel of Thottappally Spillway	10
4. Purchase of one dredger	40
5. Purchase of a spares for renovation of existing dredgers	5
6. Construction of Dry Dock and Workshop	5
7. Provision for model studies	1
8. Preparation of Master Plans	4
Total	250

### Anti-Sea Erosion

Under Anti-Sea erosion priority is given for completing the Phase-I Programme which consists of construction of new sea walls of 18.3 k m. and reforming 46.6 km. of old damaged sea walls. It is worked out that respectively Rs. 60 lakhs and 30 lakhs per kilometre are necessary for new construction, reforming of old damaged sea wall. The outlay required is estimated at Rs. 25.20 crores. Phase-I is to be completed by the third year of the Seventh Plan, Phase-II which consists of construction of sea walls for 143 km. of beaches and reforming of 10 km. of damaged sea walls is proposed to be taken up on completion of Phase-I. For this an amount of Rs. 28.80 crores is required. Also for the stabilisation of inlets and protection of coasts adjacent to inlets a provision of Rs. 1 crore is made in the Plan. Thus the total requirement in the Seventh Plan is Rs. 55 crores.

A number of coastal inlets in Kerala are to be developed as fishing harbours and minor ports. Large quantity (3.5 million m<sup>3</sup>) of beach material is to be dredged by capital dredging and maintenance dredging in the near future. The outlay (Centre and State together) for different schemes is given belows:—

Item	Plan Outlay (State and Centre) Rs. crores
1. Construction of new sea walls as Phase-I programme	12.00
2. Reformation of old damaged sea walls as per Phase-I programme	13.20
3. Construction of new sea wall as per Phase-II programme	25.80
4. Reformation of damaged sea walls as per Phase-II programme	3.00
5. Stabilisation of inlets and Protection of coasts adjacent to inlets	1.00
Total	55.00

For anti-sea erosion scheme Central loan assistance in the ratio of 2:1 (Central and State respectively) is provided to the State Government since the Fourth Plan period for implementation. This has been modified from 1983-84 onwards in respect of reformation of damaged sea walls. Only assistance in the ratio of 1:1 is provided for this, whereas for the new works old ratio is retained. The Central assistance to the tune of Rs. 33.97 crores will be forthcoming.

As Phase-II programme is only a continuation of Phase-I programme, assistance of Government of India may be continued in the same pattern as existing now. The programme of Anti-Sea Erosion works during 1984-85 includes 70 schemes spilled over from 1983-84 with balance commitment of Rs. 1295 lakhs for their completion and 64 new works with an estimated cost of Rs. 1734 lakhs. So it is estimated to complete 119 spill over works. An amount of Rs. 1100 lakhs is required in 1985-86 for these works alone. The physical target is construction of 11 kms. of new sea walls and 13 kms. of reformation works. The proposed outlay also includes provision of Rs. 20 lakhs for coastal erosion studies.

During the Seventh Plan period the State Sector outlay is Rs. 22 crores and the anticipated Central loan is Rs. 34 crores. The outlay for 1985-86 is Rs. 350 crores. The anticipated Central Loan is Rs. 5.50 crores.

### 11.5 Power Development

The Kerala power grid today has an installed capacity of 1011.5 MW (540 MW firm power) and annual generation capacity of 4730 M units from 9 completed generation schemes. The State has a power potential of 3 million KW at 60% load factor. At present seven hydro power generation schemes are under construction. The Idamalayar Project, Idukki Stage III and Sabarigiri Augmentation Scheme were scheduled for completion in the Sixth Plan. But owing to contract failures, labour problems and difficulties in acquisition of forest land, particularly after the implementation of the Forest Conservation Act with its stringent procedures, the projects could not be commissioned on targeted dates. These projects are expected to be completed in the first year of the Seventh Plan.

During the last two years, Kerala experienced severe power shortage due to insufficient rain. Since the State cannot fully depend on hydro-power it is imperative that a thermal plant is set up in the State with Special Central assistance.

#### Generation

The power demand by the end of Seventh Plan is estimated at 8682 million units. With the commissioning of the ongoing schemes and availability of States share of power from the Central sector projects like Ramagundam STPS, Kalpakom Atomic Power Station and Neyveli TPS the grid capacity of the State can be raised to 8290 MW. Five small hydro electric projects as well as one unit each of Pooyankutty Stage I and Adirapally Schemes are also proposed to be commissioned by the end of Seventh Plan period. With this the system capacity can be raised to meet the power demand during the Seventh Plan period. Taking into consideration the above factors the following investment proposals are made for the Seventh Plan.

(a) A provision of Rs. 13491 lakhs has been made in the Plan for ongoing generation schemes. An amount of Rs. 2600 lakhs is also required under additional Central assistance for Lower Periyar which has been posed for World Bank Aid.

(b) Under the new schemes in the Seventh Plan five small hydel projects as well as Pooyankutty Stage I and Adirapally Schemes are proposed. Of these, three small schemes and Pooyankutty have already been cleared by Central Electricity Authority. The remaining schemes are in an advanced stage of processing by Central Electricity Authority (CEA). A provision of Rs. 12883 lakhs has been made for taking up these schemes under the State Plan. In addition to this an amount of Rs. 15400 lakhs is expected as additional Central assistance for Pooyankutty which is posed for external aid.

(c) For meeting the demand beyond Seventh Plan it is proposed to take up six new hydel schemes and a thermal station for which works are to be started during the Seventh Plan period. Towards this, a provision of Rs. 1476 lakhs has been made in the Plan.

(d) Other provisions made include Rs. 750 lakhs towards survey and investigation and research works and Rs. 500 lakhs towards renovation of existing generating stations and Rs. 200 lakhs towards modernisation of load despatch. Thus a total provision of Rs. 28650 lakhs is required under the Seventh Plan for generation over and above the additional Central assistance of Rs. 18000 lakhs for projects posed for external aid.

The Idamalayar Project, Idukki Stage II, Idukki Stage III and the Sabarigiri Augmentation Schemes are proposed to be commissioned in 1985-86. Also, works on Kallada Hydro Electric Project is expected to be started. The work of Lower Periyar and Kakkad will be continued. Among the new schemes, work is proposed to be started in 1985-86 on all the five small schemes as well as Pooyankutty Stage I and Adirapally.

Advance action on new schemes like Kuttiyadi Augmentation, Mananthavady, Peringalkurhu Right Bank, Pallivasal Replacement Scheme is also proposed to be taken up in 1985-86. The Thermal Plant can also be started during this year. A total amount of Rs. 5446 lakhs is required in 1985-86 for Generation Schemes. The details of schemes included in the Seventh Plan are presented below:--

#### I. Survey, Investigation and Research

In order to supply necessary details relating to World Bank aided projects and for provision of data to the Central Electricity Authority on the various projects submitted to it for clearance, the investigation machinery has to be strengthened. Also, it is proposed to conduct intensive research to find out ways and means to reduce power losses and to bring about economy in all aspects relating to power generation, transmission and distribution. The Seventh Plan provision for survey, investigation and research is Rs. 750 lakhs. The plan outlay for 1985-86 is Rs. 100 lakhs.

#### II. Power Projects

##### Ongoing Schemes

##### 1. Idamalayar:

This multipurpose project aims at producing 320 MU of power and irrigating 52400 hectares of agricultural land at Periyar Valley with the help of a barrage. The project was sanctioned in 1973. The original estimate of the project was Rs. 2340 lakhs. The revised estimate of the project is Rs. 8897 lakhs (Rs. 5985 lakhs for power and Rs. 2912 lakhs for irrigation).

The project is proposed to be commissioned by 1985-86. Electricity Board has spent Rs. 1049 lakhs more than its share. The Irrigation Department has

to give Rs. 1572 lakhs towards their share. Hence the spillover expenditure of Rs. 1572 lakhs has to be transferred by the Irrigation Department. That Department has to provide its share without delay so as to commission the project at the stipulated time. (Irrigation Plan provides Rs. 800 lakhs towards their share in the Annual Plan of 1985-86 and the balance amount in the next year of the Plan.)

##### 2. Idukki Stage III

This Scheme envisages augmentation of Idukki reservoir by diversion of waters from Kallar and Erattayar streams to yield additional power of 376 MU annually at Idukki Power Station. The scheme was approved by Planning Commission in 1975 at an estimated cost of Rs. 410 lakhs. The revised estimate of the project is Rs. 1176 lakhs. The actual expenditure for this project till 1983-84 was Rs. 1068 lakhs and it is proposed to spend Rs. 125 lakhs during 1984-85.

The spill over expenditure of Rs. 48 lakhs have been provided in the Seventh Plan. The project is proposed to be commissioned in the first year of the Seventh Plan 1985-86.

##### 3. Sabarigiri Augmentation

This scheme was approved in 1972 at an estimated cost of Rs. 127 lakhs which involves construction of 5 small dams and two diversion tunnels of a total length of 2.6 kms. The revised cost of the project is Rs. 634 lakhs. On completion this project will produce 125 MU of power per annum.

Expenditure for this project till March 1984 was Rs. 546 lakhs and the anticipated expenditure in 1984-85 is estimated to Rs. 80 lakhs. The outlay required in the Seventh Plan is Rs. 48 lakhs. The project is proposed to be commissioned in 1985-86.

##### 4. Kakkad

The Kakkad Hydro Electric Scheme a tailrace development of the existing Sabarigiri Hydro Electric Project was sanctioned in 1976. The original estimate of the project was Rs. 1860 lakhs. The latest cost of the project is Rs. 4117 lakhs. Expenditure upto March 1984 was Rs. 891 lakhs. The anticipated expenditure in 1984-85 is Rs. 150 lakhs.

On completion this project will produce 262 MU of power. The spill over expenditure of this project is estimated at Rs. 2822 lakhs and this amount is included in the Seventh Plan. The project is to be commissioned by 1987-88. The outlay for 1985-86 is Rs. 1000 lakhs.

##### 5. Idukki Stage II

This project for adding three more generating units of 130 MW of power each was sanctioned in 1979 at an estimated cost of Rs. 3168 lakhs. The expenditure for this project upto March 1984 was Rs. 1953 lakhs. It is proposed to spend Rs. 2100 lakhs during 1984-85.

The spill over expenditure for this project is estimated at Rs. 3047 lakhs and that amount is included in the Seventh Plan. The project is proposed to be

commissioned by 1986-87. The 1985-86 outlay is Rs.2700 lakhs.

#### 6. *Kallada*

This is a low head scheme with a dam toe power station with an installed capacity of 15 MW in the ongoing Kallada Irrigation Scheme. The cost of the scheme which was sanctioned in 1981 is estimated at Rs.1180 lakhs.

A portion of the Sixth Plan outlay provided for advance action on new schemes was spent for this project. In 1983-84 an amount Rs.200 lakhs was spent on this project and the anticipated expenditure in 1984-85 is Rs.45 lakhs.

The spill over commitment of Rs.806 lakhs is provided in the Seventh Plan. The project is proposed to be commissioned by 1986-87. The outlay for 1985-86 is Rs.450 lakhs.

#### 7. *Lower Periyar*

This is a tailrace development scheme just below the Neriamangalam Power Station. This 180 MW power Project was cleared by the Planning Commission in 1983.

The original cost of this project was Rs.8843 lakhs and the latest revised cost is Rs.10050 lakhs. This project is proposed to be posed for World Bank Aid and the necessary formalities for obtaining sanction is in progress. Anticipating that the project will get central aid, 35% of the total project cost excluding the cost of tunnel works (Rs.2600 lakhs) has been posed for central assistance.

The World Bank aid of Rs.2600 lakh is expected for this scheme. The spill over included in the Seventh Plan account is Rs.6720 lakhs.

The project is proposed to be commissioned by 1989-90. The State Sector outlay in the Seventh Plan is Rs.6720 lakhs. The outlay provided for 1985-86 is Rs.400 lakhs.

#### *New Schemes*

The following schemes are proposed in the Seventh Plan for accrual of benefits in Seventh and Eighth Plan period.

#### 8. *Malampuzha, Hydro Electric Project (small).*

This is a small hydro electric project designed to generate 5.6 MU of power. The irrigation release from the existing Malampuzha dam are proposed to be utilised for power generation under this scheme by constructing a power station at the dam.

The estimated cost of this project is Rs.295 lakhs. It is proposed to commence the preliminary works on the scheme by 1985-86 and complete the works by 1987-88. The Seventh Plan outlay for the scheme is Rs.295 lakhs. The outlay for 1985-86 is Rs.25 lakhs.

#### 9. *Madupatty Hydro Electric Project (small)*

Construction of a dam toe power station at the existing Madupatty dam and the utilisation of the free water release from this reservoir to the Munnar Head works (frequently used at the Pallivasal Hydro Electric Project for additional power generation) are envisaged under this scheme.

The project will generate 6.4 MU of power. The estimated cost of this project is Rs.292 lakhs. It is proposed to commence the works in 1985-86 and complete by 1987-88. The Seventh Plan outlay for the scheme is Rs.292 lakhs. The outlay for 1985-86 is Rs.25 lakhs.

#### 10. *Malankara Hydro Electric Project (small)*

This scheme envisages utilisation of the tailrace releases from the Idukki Power House and the inflow from 153 Sq. Kms. catchment of Thodupuzha river less the irrigation utilisation for producing power at a station located on the right bank of the river down stream of the irrigation dam at Malankara which is now under construction. This scheme envisages generation of 42 MU of power. The work is proposed to be started on 1985-86 and this project will be commissioned by 1987-88. The total outlay for the Seventh Plan is Rs.780 lakhs. The 1985-86 Annual Plan outlay is Rs.400 lakhs.

#### 11. *Pooyankutty Stage I*

The Pooyankutty Hydro Electric Project envisage integrated development of Pooyankutty, Uppe Idamalayar, Kudalur and Thottiyar rivers, tributaries of Periyar for optimum power generation and for incidental water benefits.

Under Stage I the main Pooyankutty Part will be taken up with the first two units of 120 MW each at the Pooyankutty power station. The cost of this project is estimated to Rs.22000 lakhs.

The project is posed for World Bank assistance. It is expected that 70% of the cost (Rs.15400 lakhs) can be obtained by way of Central assistance. As such Rs.6600 lakhs have only been provided in the Seventh Plan. The 1985-86 outlay in the State sector is Rs.300 lakhs.

#### 12. *Chimoni Hydro Electric Project (small)*

This scheme envisages utilisation of the regulated irrigation release from Chimoni reservoir during December to May to produce about 6.5 MU of power at a dam toe power house with an installed capacity of 2.5 MW.

The estimated cost of the project is Rs.316 lakhs. The project is proposed to be started in 1985-86 and commissioned by 1987-88. The Seventh Plan outlay for the project is Rs.316 lakhs. The outlay for 1985-86 is Rs.50 lakhs.

#### 13. *Peppara Hydro Electric Project (small).*

The storage reservoir at Peppara is intended for Trivandrum Water Supply. The power generation

scheme envisaged utilisation of the water supply releases and the surplus yield to generate 11.5 MU of power annually at a dam toe power house with an installed capacity of 3 MW.

The estimated cost of the project is Rs. 400 lakhs. The work is proposed to be started in 1985-86 and the project will be commissioned by 1987-88. The outlay made in the Seventh Plan for this project is Rs. 400 lakhs. The 1985-86 outlay is Rs. 50 lakhs.

#### 14. *Mini-Micro Schemes*

Investigation are under way for mini-micro schemes. Though specific schemes have not been identified it is estimated that 40 MU of power can be generated through Mini-Micro schemes. Since specific schemes are not formulated no provision has been made for 1985-86. However a total Seventh Plan outlay of Rs. 200 lakhs is made.

#### 15. *Adirappally Hydro Electric Project*

This is mainly a tail race development scheme in the Chalakudy river below the Peringalkuthu Left Bank and Right Bank Schemes. The scheme envisages creation of a forebay in Chalakudy river with the diversion dam located about 3 km. downstream of the Peringalkuthu Left Bank Power Station to pick up the tail waters of the Peringalkuthu Left Bank and Right Bank Power Stations and also the yield from its own catchment and to utilise the waters for power generation at a power station located on the Left Bank of the Kannamkuzhithodu, a tributary of Chalakudy river.

The project is expected to generate 331 MU of power. The estimated cost of the project is Rs. 5400 lakhs. The project is proposed to be commissioned by 1989-90. In the State Sector an outlay for Rs. 4000 lakhs is made for the Scheme in the Seventh Plan. In 1985-86 the outlay will be Rs. 100 lakhs.

#### 16. *Advance Action on New Schemes*

In order to meet the long term demand for power new schemes are to be identified and started during the Seventh Plan period. Based on the survey and investigation the following schemes are identified for being taken up in the Seventh Plan.

(1) Kuttiyadi Augmentation, (2) Manantody, (3) Chalakudy Basin Development (4) Pallivasal Replacement (5) Achancoil and (6) Pooyankutty Stage II.

The total estimated cost of all these projects come to Rs. 76105 lakhs. On completion these projects will produce 2964 MU of power. After taking into consideration the resource position an amount of Rs. 1476 lakhs is provided in the Seventh Plan.

### III *Renovation of Existing Generating Stations and Modernisation of Load Despatch*

Some of the generating stations are old and frequent breakdowns lead to failures and consequent overloading of other stations. So far, no special provision has been

made for getting over these problems. Hence a provision of Rs. 500 lakhs is made in the Seventh Plan for renovation and improvements to existing stations including importing and replacing machinery wherever necessary. The 1985-86 outlay is Rs. 50 lakhs. Similarly computerisation of load despatch is also found necessary. As such, provision is made for modernisation of load despatch in the Plan. The amount of Rs. 200 lakhs is earmarked for this scheme in the Seventh Plan. The 1985-86 outlay is Rs. 50 lakhs.

### IV *Thermal Power Station*

In order to stabilise power generation and to meet the ever-increasing demand for power a Thermal Power Station is required to be established in Kerala. Since the State is dependent fully on hydro electric projects for power any drought as experienced recently, will lead to chronic power shortage. Hence the necessity for a Thermal Plant is all the more great.

An amount of Rs. 100 lakhs is provided in the plan for preliminary works to establish a Thermal Plant in the State. The first stage of the Thermal Station with a capacity of 420 MW is proposed for commissioning in the State. The outlay for 1985-86 is Rs. 50 lakhs.

The State visualises full Central assistance for this project since the State does not have resources for investment in a thermal plant. If the Central assistance as expected is not available, the plant may be started as a Central sector Scheme in view of the importance of such a plant in the State.

### V *Transmission*

A huge backlog of transmission work remains to be completed in the Seventh Plan. In order to maintain the power supply without any break of supply alternate feeding arrangements to important sub stations are required to be made. Lines and sub stations will have to be constructed for feeding new industries with extra-high voltage so as to promote industrialisation. The highest voltage level now prevailing in the State is 220 K.V. A 400 K.V. line is to be drawn to Trichur north in the Seventh Plan period for drawing Kerala's share of power from central power projects like Ramagundam and Neyveli.

To divert power generated from Pooyankutty to the north of Kerala, a 400 K.V. line is to be established at Trichur at the earliest. The Super Grid Directorate of the Central Electricity Authority has approved this proposal.

In order to minimise power losses and solve voltage problems, schemes are formulated for the installation of a static var compensation to the extent of 330 MVAR in the 220 K. V. sub stations during the Seventh Plan.

To cope with the increasing demand for power and to rationalise transmission works it is proposed to introduce computer methods for system operation and load despatch. An outlay of Rs. 18780 lakhs is required for works in the transmission sector during the Seventh Plan period. The 1985-86 outlay is Rs. 2280 lakhs.

The following sub stations and lines are programmed to be completed in the year 1985-86.

1. Trivandrum North Sub Station 220 K.V. line
2. 110 K.V. lines:
  - (a) Kalamassery           Aroor
  - (b) Kakkad                Edappal
  - (c) Cannanore           Kasargode
  - (d) Quilandy tap
  - (e) Trichur North       Viyyur
  - (f) Aroor                 Mararikulam
  - (g) Trivandrum         Trivandrum North
  - (h) Kalamassery        Kaloor
3. 110 K. V. Sub Stations
  - (a) Quilandy
  - (b) Kaloor

In addition to the above, fifteen 66 K. V. lines and nine 66 K. V. Sub stations are proposed to be completed during 1985-86.

#### VI *Distribution and Rural Electrification*

At present one lakh applications for power connections are pending with the K.S.E.B. When the lines are connected more people will come forward for electric connections. Even in the case of existing consumers the supply conditions have to be improved considerably. Overloading of lines can be avoided only by increasing the web of the 11 KV network so that the LT line system will get considerably reduced and the loads will be fed more or less directly from the 11 KV distribution transformers. Again, this will help reduce losses in the distribution system considerably.

Even though all the villages in the State have been provided with electricity, because of the dispersed settlement pattern in Kerala, there are places in the villages still to be provided with electricity. All such hamlets or Karas or desams are proposed to be provided with electricity during the Seventh Plan period. It is also proposed to provide electricity to all scheduled caste and tribal colonies in the Seventh Plan itself.

It is necessary to give connections to a large number of agricultural pumpsets over and above the programme for energisation of pumpsets utilising institutional finance outside the plan.

For improving the distribution system of the three Metropolitan cities of Trivandrum, Cochin and Kozhicode the following schemes are proposed to be taken up in the Seventh Plan:

#### *Trivandrum*

In addition to the existing three sub stations two 110/11 KV gas-filled substations fed by 110 KV cables are proposed to be started at Cantonment and Fort. In addition to that 22 switching stations at important city centres are planned to stabilise supply conditions.

#### *Ernakulam*

One 110/11 KV substation and one gas-filled substation fed by 110 KV cables and 29 switching stations at various centres are also proposed.

#### *Calicut*

One 110/11 KV substation and one gas-filled substation fed by 110 KV cables and 20 switching stations are proposed. The distribution transformers are proposed to be standardised with ratings of 400 and 250 KVA.

The estimated amount for the master plan of the three cities comes to Rs. 6000 lakhs (transmission Rs. 2300 lakhs and distribution Rs. 3700 lakhs.)

Taking into consideration all the above items of work it is estimated that Rs. 16220 lakhs will be required for Distribution and Rural Electrification in the Seventh Plan. Of the above Rs. 3000 lakhs is proposed to be financed by R.E.C. under plan schemes alone. Out of the total allocation of Rs. 16220 lakhs an amount of Rs. 3000 lakhs is earmarked for the Special Component Plan and Rs. 240 lakhs for the Tribal Sub-Plan.

The master plan to improve the supply conditions of Trivandrum, Calicut and Cochin towns are proposed to be taken up in 1985-86, the first year of the Seventh Plan. The outlay for 1985-86 is Rs. 2090 lakhs.

#### VII *New and Renewable Sources of Energy (including Intergrated Rural Energy Development Programme)*

Very little has been done in the State for the development of other forms of energy in the past. It is intended to develop new forms of energy in addition to the already accepted forms of biogas energy development.

The Department of Non-Conventional Energy Sources has worked out a number of programmes for funding and giving incentives to non-conventional energy programmes. The State Government proposes to set up an Agency for Non-Conventional Energy Resources and Rural Technology (ANERT) for promoting and implementing research and development programmes relating to non-conventional energy resources and rural technology in the State. In addition to the expected financial assistance from the centre an amount of Rs. 600 lakhs is allocated in the State sector for tapping these resources of energy. Following are some of the areas which can be explored during the Seventh Plan period:



(i) *Development of Wave Energy including Setting up of a Pilot Plant*

Kerala has a long coastal line of over 580 kilometres. Methods of tapping tidal wave energy are being studied. Production of electric power by escalating water column type wave energy converters can be organised during the Seventh Plan in two stages:

(a) Erecting a laboratory model of 100 KW output followed by

(b) Setting up Pilot Plants of 100 KW near Trivandrum.

(ii) *Setting up of a Solar Village*

A model solar village of 100 families to be created supported by solar energy in the areas of agriculture, agricultural processing, cattle and poultry farming, animal husbandry etc.

(iii) *Development of Wind Power*

Wind energy forms a cheap source of energy for irrigation, water supply and electricity production. A battery of small wind turbines is proposed to be installed as a pilot project for tapping energy on a decentralised fashion. Research and Development work will have to be strengthened and pilot plant monitored.

(iv) *Setting up of two Pilot Plants for Mini/Micro hydel*

Several suitable sites have been identified in Kerala for setting up micro/mini power plants of capacity below 2 MW. Pilot Plants could be set and the scheme monitored.

(v) *Integrated Rural Energy Development*

Availability of sufficient energy is the key to future economic growth. The means for generating and for supplying energy and power are more or less totally absent in small villages. The necessary infrastructure for communication and transport are either absent or under developed. Villages need energy for many different uses and this can be met from different sources. An integrated approach for rural energy development can be tried out in different agro-climatic zones of the State based on the results of a comprehensive energy survey.

(vi) *Energy Conservation-Pilot Programme*

Energy conservation in commercial and small industrial sectors does not receive adequate attention. The communities where low level of energy consumption exist, conservation in these sectors will be necessary for overall growth. It is proposed to initiate pilot projects sectorwise to effect energy conservation in small sectors. The Seventh Plan outlay for the scheme is Rs. 20 lakhs.

The amount proposed for 1985-86 is Rs. 6 lakhs

(vii) *Biogas from Weeds*

The State-sponsored Research Centre have developed a method of producing biogas from *Salvinia* and other weeds. This should be developed further into small domestic/Community plants for large scale implementation. For this purpose is Rs. 50 lakhs. The outlay proposed for 1985-86 is Rs. 8 lakhs.

(viii) *Solar Device/Cookers etc.*

Solar thermal and solar photovoltaic systems have large scope in the country for street lighting, chilling, cooking, stand by power supply, water pumping etc. Marketable systems are being developed. These systems need to be propagated and developed to suit community requirements.

(ix) *Popularisation of Improved Chulah*

The scarcity of firewood owing to forest denudation, irregular supply of costly petroleum products etc. have laid the emphasis on propagation of improved wood stoves. The related technology has to be further developed and transferred to village community for this purpose. An amount of Rs. 50 lakhs is set apart in the Plan.

**11.6 Industry and Minerals****Village and Small Industries***Small Scale Industries*

The number of small scale industries promoted during the Sixth Plan period was quite significant. In fact the total number of SSI units nearly doubled during this plan period. This was possible because of more incentives and an improved support system. In order to sustain this growth rate, an annual growth rate of 10% is aimed at the small scale sector during the Seventh Plan period. Considering the growth potential and the scope for employment it is intended to promote 20,000 additional small scale units in the Seventh Plan. To achieve this target the following strategies will be followed.

(i) Possibilities for developing ancillary and component industries will be explored.

(ii) Project with low and obsolete technology will be discouraged and higher incentives will be given

to units with new technology and those that are energy saving. The Department will establish Pilot project using new processes developed by national research organisations.

(iii) The package of incentives will be tailored to reduce regional imbalances in industrial growth.

(iv) The State will concentrate more on industries that require high skills and have a greater added value. Knowledge-based and service industries will be encouraged.

(v) Fuller exploitation of opportunities already provided in resources and demand-based industries will be encouraged.

(vi) More Industrial Estates, Development Plots and Functional Complexes will be established in selected growth centres and adequate infrastructure facilities provided. There will be exclusive industrial estates for non-resident Indians.

(vii) Women entrepreneurs and entrepreneurs belonging to scheduled castes and scheduled tribes will be given special encouragement.

(viii) The promotional organisations connected with small scale industries will be reorganised and restructured so as to render help in the areas of financial assistance, raw material supply and infrastructure development. Special incentives will be provided for marketing of SSI products.

(ix) More entrepreneurs will be trained and motivated through entrepreneurship development programmes.

There has been significant progress in the growth of small scale industries during the last two decades. This is evident from the total number of units registered with the Directorate of Industries. But today a large number of units are neither healthy nor viable. Several reasons such as lack of adequate and timely promotional assistance, lack of working capital, shortage of some critical raw materials, marketing problems, inadequate infrastructure facilities such as power, managerial inability, lack of dedication of the entrepreneurs etc. are said to be the reasons for this state of affairs. Despite such adverse conditions the number of small scale industries has gone up with higher incentives and a somewhat improved support system.

In order to achieve the objective of setting up 20,000 small scale units during the Seventh Plan period an aggregate investment of Rs. 200 crores will be needed. These additional units will help provide employment to 1 lakh people. The target of 20,000 units will include 1000 units run by women entrepreneurs and 2000 by harijan entrepreneurs (of which 200 will be scheduled tribe entrepreneurs). One hundred small units will be promoted by way of industrial co-operatives. It is proposed to revive 3000 sick units during the plan period. Production of goods worth Rs. 575 crores per annum is expected from these additional units by the end of the plan.

It is targeted to promote 3300 modern units during the year 1985-86 for which a total outlay

of Rs. 10.91 crores is earmarked in the plan. The State will have about 50,000 healthy small scale units with an aggregate investment of nearly Rs. 475 crores producing goods worth Rs. 1500 crores and providing employment to 4.58 lakh people by the year 1989-90.

The schemes and outlays proposed for achieving the targets set under small scale sector in the Seventh Plan are given below:-

### I. Supervision and Organisation

#### 1. Training of Departmental Personnel

It is essential that the officials of the Department of Industries and Commerce are sent for different training programmes. It is therefore proposed to get a number of officials trained every year. An outlay of Rs. 5 lakhs is set apart for this scheme in the plan. The outlay for 1985-86 is Rs. 1 lakh.

#### 2. District Industries Centres-State Share

The strength of staff in the existing 14 DICs is about 770. It would be necessary to have a staff strength of about 900 by the end of the Seventh Plan. This includes additional posts of project managers, credit managers and other technically qualified people. At the same time taluk offices will be merged with the district offices in due course according to the DIC pattern. An outlay of Rs. 54 lakhs is proposed as State's share to meet the cost of staff, rent etc. The outlay for 1985-86 is Rs. 11 lakhs.

#### 3. DICs—Construction of Buildings

Construction of buildings for four DICs is over. Two DICs are under construction and the rest will be completed during the Plan period. The outlay of Rs. 122 lakhs in the plan is for 10 DICs. Construction of two buildings will be started in 1985-86. The outlay for 1985-86 is Rs. 25 lakhs.

### II Information Services

#### (i) Aid to Small Industries Associations

There are Small Industries Associations at the State and District levels. There is also an association for women industrialists. The Seventh Plan outlay of Rs. 4 lakhs is to provide some aid to these associations. The outlay for 1985-86 is Rs. 0.75 lakh.

#### (ii) Industrial Information Centres

Information centres and entrepreneurial clinics are functioning in all the DICs. These centres are to be provided with books, periodicals, different kinds of application forms etc., for reference of the entrepreneurs. The plan provision of Rs. 51 lakhs is to meet the cost of these items. The outlay for 1985-86 is Rs. 9 lakhs.

#### (iii) Documentation Centre

There is a documentation centre attached to the Directorate of Industries and Commerce. The Centre needs to be developed further. It will collect and make available data for SSI Units. Uptodate information

will be available on a computer. The outlay for the Seventh Plan is Rs. 20 lakhs and that for 1985-86 is Rs. 3 lakhs.

(iv) *Subsidy for Publication of Directory, Pamphlets, Periodicals etc.*

The subsidy is for two yearly Industries Directory, the monthly 'Vyavasaya Keralam' and other publications. The outlay for this scheme is Rs. 5 lakhs. For the Annual Plan for 1985-86 the outlay is Rs. 1 lakh.

### III *Technical Assistance*

(i) *Subsidy for Technical Know-how*

The scheme is to provide subsidy towards the cost of acquisition of technical know-how from recognised sources. A target of promoting 200 units with new technology is proposed. The outlay for the scheme in the Seventh Plan is Rs. 10 lakhs. The 1985-86 outlay is Rs. 1.5 lakhs.

(ii) *Entrepreneurship Development Programmes*

It is proposed to train 4000 new entrepreneurs under this scheme during the Seventh Plan period. The programme also envisages motivation training to a few selected students in the final year of Engineering Colleges and Technical Institutions in the state.

Institutional Assistance to the extent of 50% to 75% of the cost of entrepreneur development programmes is expected from Industrial Development Bank of India and Commercial Banks. Job-oriented in-plant training will also be arranged through institutions such as S.I.S.I., KELTRON and other industrial units so as to benefit 1000 candidates under the scheme. The Seventh Plan outlay for the scheme is Rs. 20 lakhs. The outlay for 1985-86 is Rs. 4 lakhs.

### IV *Loans to Small Scale Entrepreneurs*

(1) *Seed Capital Loan*

Seed capital assistance will be made available at concessional rate of interest to small scale entrepreneurs who are not beneficiaries of the centrally sponsored margin money loan scheme, and entrepreneurs getting composite loans and substantial grants on investment. The quantum of seed capital assistance will be increased by an amount equivalent to the consumer contribution demanded by State Electricity Board for power connection subject to a ceiling of Rs. 15,000 or 10% of the fixed investment of a unit. It is expected that a total of about 16000 units will get assistance under the scheme during the Plan period. The outlay for the Seventh Plan is Rs. 1700 lakhs. The 1985-86 outlay is Rs. 255 lakhs.

2. *Sales Tax Loan to Small Scale Units*

The outlay is for providing interest-free loan equivalent to remittance of sales tax for a period of five years to units which were set up before 1-4-1979 and not eligible for sales tax exemption.

The outlay for the Seventh Plan is Rs. 230 lakhs. The outlay for 1985-86 is Rs. 77 lakhs.

### *Interest Subsidy*

*Recoupment of Loss of Interest on Loan by KFC.*

The scheme envisages provision of subsidy at the rate of Rs. 3.5% to borrowers of loans upto Rs. 5 lakhs from the Kerala Financial Corporation who are prompt in repayment. The amount provided is for provision of subsidy for past cases in which commitment already exists. The outlay for the Seventh Plan is Rs. 35 lakhs. The 1985-86 outlay is Rs. 7 lakhs.

### VI *Marketing Assistance*

(i) *Trade Fairs and Exhibitions*

In order to assist small scale industries take part in trade fairs and exhibitions an amount of Rs. 50 lakhs is proposed in the Seventh Plan. The outlay for 1985-86 is Rs. 10 lakhs.

(ii) *Subsidy for Setting Up of Quality Control Laboratories for ISI and other Recognised Standards*

A 50% subsidy to a maximum of Rs. 25,000 will be given to about 200 small scale units during the Seventh Plan period for setting up quality control laboratories in order to obtain I.S.I. or recognised standards. The outlay in the Seventh Plan is Rs. 10 lakhs. The outlay in 1985-86 is Rs. 1.50 lakhs.

(iii) *Assistance for Marketing through SIDECO*

The Marketing Division of SIDECO proposes to increase the sale of goods produced by small scale units. A sales target of Rs. 10 crores worth of products is suggested through SIDECO in the Seventh Plan. An outlay of Rs. 10 lakhs is proposed as grant at the rate of 1% on the sales turnover. This will be over and above service charges SIDECO gets from industrialists. An outlay of Rs. 1.50 lakhs is set apart from 1985-86.

### VII *Industrial Programme for Women*

*Scheme for Industries Managed by Women*

This scheme is for promoting 1000 new industries by women and to provide employment to 5000 women. Grant on investment and managerial expenses will be provided to such units promoted. The outlay in the Seventh Plan is Rs. 100 lakhs. The outlay in 1985-86 is Rs. 15 lakhs.

### VIII *Industrial Co-operatives including Beedi Co-operatives, Co-operatives of Women and other Co-operatives*

It is proposed to promote 100 industrial co-operatives during the Seventh Plan period. Of these 25 will be beedi co-operatives, 10 will be co-operative units run by women entrepreneurs and the rest by others. The various schemes under industrial co-operatives and proposed outlays are given below:

(i) *Share participation in Industrial Co-operatives*

In order to strengthen the equity base of industrial co-operatives, government participates in the equity of these co-operatives in the ratio of 1:4 by promoters and government respectively. An amount of Rs. 25 lakhs

will be given to beedi co-operatives, Rs.15 lakhs to co-operatives started by women and Rs. 60 lakhs to those started by others by way of share participation. During the Annual Plan period, 1985-86 these three forms of co-operatives will be given Rs. 3.75 lakhs, Rs. 2.25 lakhs and Rs. 9 lakhs respectively.

(ii) *Grants to Industrial Co-operatives*

Grants up to 50% of the cost of machinery/equipment, 50% of the rent for the first two years and managerial grant for a period of four years on a tapering basis are given to industrial co-operatives. An amount of Rs. 20 lakhs will be given to beedi co-operatives, Rs. 6 lakhs to co-operatives started by women and Rs. 24 lakhs to co-operatives started by others. The outlay for 1985-86 will be of the order of Rs. 3 lakhs, Rs. 0.90 lakh and Rs. 3.60 lakhs respectively.

(iii) *Loans to Beedi Industrial Co-operatives*

Beedi co-operatives will be given share capital loan to the extent of Rs. 10 lakhs during the Seventh Plan period. The outlay for 1985-86 is Rs. 1.5 lakhs.

## IX *Industrial Estates*

It is proposed to take up the industrial estates programme by way of functional industrial complexes and industrial development plots. Industrial finance will also be available for developing industrial estates. The growing awareness of industrial pollution, non-availability of land and consequent cost escalation, the cost of consumer contribution for power supply etc. call for the development of industrial plots in identified growth centres. It is proposed to establish industrial plots in all the districts with a total area of 100 acres for each district and 10 functional industrial complexes in different parts of the State during the Seventh Plan period. The following schemes are included under the programme industrial estates:

(i) *Functional Industrial Complexes*

Promotion of three Functional Complexes for Electronics industry including units for manufacturing components are proposed. Functional industrial complexes in other potential areas such as rubber, plastics, leather, knitwear and garments, household electricals, office equipment, spices, cosme tics furniture, building materials, pharmaceuticals, food items etc., will also be considered. Altogether ten Functional Complexes are proposed in the Seventh Plan. An amount of Rs. 350 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 12.50 lakhs.

(ii) *Industrial Growth Centres and Infrastructure Development*

For establishing Development Plots in all districts in identified growth centres and for the infrastructure development an outlay of Rs. 1000 lakhs is proposed. Separate provision is made for "No Industries Districts". Institutional finance is also contemplated for the scheme. In the Annual Plan for 1985-86 an outlay of Rs. 125 lakhs is provided.

## X *Rural Industrialisation*

(i) *Rural Artisans Programme—State Share*

Rural artisans will be given training in various trades and subsidy will be provided to the extent of 1/3

of the cost of Rs. 3000 whichever is less towards purchase of tools and equipments required by the artisans costing not more than Rs. 10,000 availing bank finance. Central assistance of Rs. 1 lakh per district per annum is also available for implementing the scheme and a matching contribution of Rs. 70 lakhs is provided by the State in the Seventh Plan. The outlay for 1985-86 is Rs. 14 lakhs.

(ii) *District Industries Centres—Margin Money*

Under District Industries Centre Programme, Government of India provides Rs. 2 lakhs per district for giving margin money loan to units in non urban and rural areas. Matching contribution has to be provided by the State Government. About 2250 units will be assisted under this scheme. An amount of Rs. 140 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 28 lakhs.

## XI. *Development of Infrastructure in 'No industry Districts, —State Share*

The Central Government provides 1/3 of the expenditure for development of infrastructure subject to a limit of Rs. 200 lakhs per 'No Industry District.' The two thirds of the expenditure has to be met by the State Government. The outlay is to meet the balance requirements of what had been given in the Sixth Plan period and what is expected by way of institutional finance for development of infrastructure in the two 'No Industry' Districts in the State viz., Wynad and Idukki. An amount of Rs. 380 lakhs is provided in the Seventh Plan. In the Annual Plan for 1985-86 an outlay of Rs. 75 lakhs is earmarked.

## XII. *Revitalisation of Sick Units*

The number of sick units in Kerala is increasing in alarming proportions. There are more than 6000 units identified as sick. Efforts will be made to revive the viable units. A target of reviving 3000 units is proposed in the plan period. The revival programme will be implemented through the following two schemes.

(1) *Subsidy for Preparation of Rehabilitation Reports*

The cost of preparation of rehabilitation reports will be provided wherever consultants are engaged. The outlay for the Seventh Plan is Rs. 30 lakhs and that for 1985-86 is Rs. 6 lakhs.

(ii) *Loan Assistance for Revival of Sick Units*

Margin money loan as well as term loan for purchase of equipments for balancing production and for paying off sales tax arrears of sick units will be provided in order to bring back them to production. Cases involving Government assistances upto Rs. 50,000 will be taken up by District Industries Centres. Units requiring above Rs. 50,000 will be taken up by SIDECO availing Industrial Reconstruction Corporation of India finance. The outlay for the Seventh Plan is Rs. 450 lakhs. An amount of Rs. 65 lakhs is provided for 1985-86.

## XIII. *State Investment Subsidy*

The State provides 10% subsidy subject to a maximum of Rs. 10 lakhs on capital investment in all the

districts (15% subject to a maximum of Rs. 15 lakhs in Quilon District) where central investment subsidy is not available. At present the scheme is implemented in 6 districts. It is estimated that about 7000 units will be benefited by the scheme. An amount of Rs. 500 lakhs is provided in the Seventh Plan. Of this, Rs. 100 lakhs is earmarked in the Annual Plan for 1985-86.

#### *XIV. Departmental Units*

##### *1. Common Facility Service Centre at Changanacherry*

The outlay of Rs. 5 lakhs is mainly to meet the establishment charges of the centre. An amount of Rs. 1 lakh is provided in the Annual Plan for 1985-86.

##### *2. Quality Marking Depot for Starch at Perinthalmanna*

A quality marking depot will be established at Perinthalmanna to revive the sick starch units in Malappuram District. The plan provision of Rs. 7 lakhs includes capital expenditure for setting up of the unit, establishment charges etc. The outlay for 1985-86 is Rs. 1.25 lakhs.

##### *3. Ceramics Service Centre at Mangattuparamba*

The centre is entrusted with SIDECO on an agency basis and Government has to meet the expenses. The outlay of Rs. 32 lakhs is to pay off the arrears in the Sixth Plan and to meet the expenses during the Seventh Plan. An amount of Rs. 16 lakhs is earmarked for 1985-86.

#### *XV. Harijan Development Programme*

It is proposed to promote 18000 small scale units by Harijan entrepreneurs during the Seventh Plan of which 200 will be by harijan women. The following schemes will be implemented to achieve the targets:

##### *(i) Industrial Estates for Harijans*

An industrial estate exclusively for harijan entrepreneurs is being promoted at Thonnakkal Harijan Colony in Trivandrum district. The provision of Rs. 25 lakhs in the Seventh Plan is for completion of the remaining work of the Thonnakkal Estate and to take up two more estates in other districts. The outlay for 1985-86 is Rs. 3.75 lakhs.

##### *(ii) Grants to Harijan Entrepreneurs*

About 1500 harijan entrepreneurs will be given stipendary training under Entrepreneurship Development Programme, 50% to 75% of the total (excluding stipend) is expected from financial institutions. The balance is to be provided by the Government. It is also proposed to provide grant to units started by harijan women also. An amount of Rs. 35 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 5.25 lakhs.

##### *(iii) Loans to Harijan Entrepreneurs*

The outlay of Rs. 180 lakhs proposed in the Seventh Plan is to provide loans to units started by harijan entrepreneurs. The Annual Plan (1985-86) outlay is Rs. 27 lakhs.

##### *(iv) Industrial Co-operatives by Harijans*

About 20 industrial co-operatives will be promoted by harijan entrepreneurs. These co-operatives will be provided with share capital assistance and grant. Grant will be provided to the existing co-operative also. The Seventh Plan outlay is Rs. 35 lakhs. The outlay for 1985-86 is Rs. 5.25 lakhs.

##### *Others*

The total outlay under Special Component Plan allocated is Rs. 500 lakhs. The outlay in 1985-86 is Rs. 80 lakhs.

#### *XVI. Tribal Sub Plan*

It is proposed to promote 200 units by entrepreneurs belonging to scheduled tribes. The following schemes are proposed to achieve the targets

##### *(i) Grants to Tribal Entrepreneurs*

An amount of Rs. 30 lakhs is provided in the Seventh Plan. The outlay provided for 1985-86 is Rs. 4.5 lakhs.

##### *(ii) Loans to Tribal Entrepreneurs*

The Seventh Plan outlay is Rs. 10 lakhs. Of this an amount of Rs. 1.5 lakhs is provided for 1985-86.

##### *(iii) Industrial Co-operatives of Tribes*

The outlay of Rs. 25 lakhs proposed in the Seventh Plan is for share participation grant assistance to ten proposed industrial societies by scheduled tribes. An amount of Rs. 3.75 lakhs is provided for 1985-86.

#### *XVIII. New Schemes*

##### *(i) Setting up of Pilot Plant Employing New Processes Developed by National Research and Development Laboratories*

Several new processes are developed by the National Research and Development Laboratories. The general tendency is to go in for units with conventional technology. This often results in unhealthy competition and sickness. Therefore it is proposed to set up pilot plants with technologies/processes developed by these organisations with involvement of such organisations by the Department of Industries and Commerce and hand over to entrepreneurs on hire purchase or outright purchase basis once the plants are running well. To start with five such units are proposed during the Seventh Plan. The Seventh Plan outlay is Rs. 25 lakhs. Of this, Rs. 5 lakhs is provided for 1985-86.

##### *(ii) Special Assistance to Units in Cochin Export Process Zone.*

The Cochin Export Process Zone is being established. There will be both SSI and medium and large units in CEPZ. It is proposed to give a special incentive by way of subsidy of 25% of the cost of indigenous machinery and equipments installed by the small scale units in CEPZ. The outlay for Seventh Plan is Rs. 35 lakhs. An amount of Rs. 7 lakhs is provided for 1985-86.

*(iii) Industrial Estates for Non-resident Indians*

In order to attract investment from non-resident Indians, it is proposed to set up three industrial estates exclusively for non-resident Indian entrepreneurs in selected centres in the northern, central and southern regions of the State. An outlay of Rs. 450 lakhs is set apart in the Seventh Plan. The Annual Plan outlay for 1985-86 is Rs. 25 lakhs.

*(iv) Common Facilities in Large Industrial Areas*

Large industrial areas are established in several parts of the State such as Palghat, Kalamassery, and Thrikkakara. It is proposed to provide common facilities such as bonded warehouses, buildings and equipments for testing laboratories for ISI certificates etc. for 3 centres. An outlay of Rs. 50 lakhs is provided in the Seventh Plan. The Annual Plan outlay for 1985-86 is Rs. 10 lakhs.

*(v) Maintenance of Infrastructure in Industrial Areas/Estates*

In most of the industrial estates/areas where sheds/plots are given on hire-purchase basis there is no agency to maintain infrastructure such as water supply, internal roads etc. It is proposed to provide assistance to the extent of 50% subject to a maximum of Rs. 1 lakh per annum per estate for this purpose. This assistance will be made towards the cost of common showrooms/marketing arrangements in the estates/areas. The Seventh Plan outlay is Rs. 25 lakhs. An amount Rs. 5 lakhs is provided for 1985-86.

*(vi) Soft Loan for Installing Equipment for Preservation of Energy*

It is proposed to give soft loan for installing energy saving equipment for existing units. An amount of Rs. 25 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 5 lakhs.

**Khadi and Village Industries**

The State Khadi and Village Industries Board runs Khadi and Village industries centres and provides gainful employment to rural artisans engaged in khadi and village industries. In addition, the Board extends financial assistance and technical guidance to 19 village industries. The funds required for the implementation of the khadi and village industries programmes are provided by the Khadi and Village Industries Commission (KVIC) whereas the administrative expenditure is met by the State Government.

The special employment programme being implemented by the Board with the help of State Government envisages provision of additional employment opportunities to 2.5 lakhs of people through Khadi and Village Industries. The main thrust of the programme is starting of departmental khadi production centres in land donated by the public or the Government or the Panchayat for this purpose. With a view to creating more employment opportunities new industries like rubber-based village industries, stone cutting for construction purposes, arecanut processing, processing of Ayurvedic herbs and plants etc. are proposed to be included in the schedule of KVIC.

The funds required for the organisation of village industries will be provided by KVIC and expenditure for building construction and other expenses are to be met by the State. The working capital necessary for the programme except in tribal areas is to be availed from nationalised banks.

The major portion of the funds provided by the State Government under plan schemes is used for the construction of Khadi workshops. Kerala State Warehousing Corporation, SIDECO, Kerala State Construction Corporation and Kerala Survodaya Sangh are agencies that carry out the construction work for the Board. However due to paucity of funds necessary infrastructure could not be created in time. A sum of Rs. 900 lakhs is provided in the plan for the programmes of the Board in the Seventh Plan. Of this an amount of Rs. 180 lakhs will be for programmes benefiting scheduled castes and scheduled tribes. In 1985-86 an amount of Rs. 150 lakhs is earmarked for schemes under Khadi and Village Industries.

**Coir**

In the past plans the coir development programmes largely involved organising a large number of coir-co-operatives and bringing more coir workers into the co-operative fold. In spite of the various measures introduced in these plans only a little over 50% of the coir workers could become members of the co-operatives. Neither regular work nor reasonable wages could be given to those who were brought into the co-operative fold. The internal and external markets have not expanded sufficiently to absorb the production in the industry and enable it to fully employ all the coir workers. This is the most crucial problem facing the industry. Recently there has been a sharp fall in the demand for coir products in the foreign markets, owing mainly to competition from synthetic substitutes and cheaper chinese-made grass mats. If the industry is to withstand the acute competition in the international markets, steps should be taken to gradually mechanise the industry.

Production should also be diversified to suit the changing tastes of the consumers. While vast changes are taking place in other consumer goods industries, the coir industry alone cannot remain without change and survive.

The difficulty of getting sufficient quantity of husks is another important problem facing the coir industry. Retting and fibre extraction are carried out mainly by women workers under the most dreary and unhygienic conditions. Steps will have to be taken to improve the health and general welfare of the workers engaged in these activities.

Laying emphasis on programmes for sales promotion, product diversification, mechanisation and promotion of general welfare of coir workers constitute the strategy for coir development in the Seventh Plan. The scheme-wise details and outlay proposed for coir development in the Seventh Plan and the Annual Plan for 1985-86 are furnished below:—

**I. Coir Co-operatives****1. Interest Subsidy to Coir Co-operative Societies**

The Kerala State Co-operative Coir Marketing Federation and coir co-operative societies which satisfy

the norms prescribed by the NABARD are given cash credit accommodation for their working capital requirements at a concessional rate of interest.

Interest subsidy is paid to District Co-operative Banks and to the State Co-operative Bank to enable them extend financial assistance to the societies at concessional rate of interest. The outlay of Rs. 300 lakhs in the Plan provided is to meet this expenditure. The outlay for 1985-86 will be Rs. 35 lakhs.

## 2. *Godowns to Primary Coir-Co-operative Societies and Coir Marketing Federation*

Subsidy for the construction of godown is given not exceeding Rs. 1,25,000 per godown to the Coir Marketing Federation and Rs. 5,000 each to the primary societies. Under the N.C.D.C. Scheme, the maximum subsidy payable to Marketing Federation is Rs. 4 lakhs and to primary societies is Rs. 20,000. The State Government has to make necessary provision in the budget for getting reimbursement of N.C.D.C. assistance. An outlay of Rs. 75 lakhs is earmarked for this scheme in the Seventh Plan and Rs. 10 lakhs in the Annual Plan for 1985-86.

## 3. *Working Capital Loans to Coir Co-operative Societies*

An outlay of Rs. 200 lakhs is provided in the Seventh Plan for giving working capital loans to the newly registered societies as well as other societies which are not ripe for availing themselves of institutional finance. The requirements of the potentially viable societies are assessed before loans are given to them. The outlay for 1985-86 will be Rs. 30 lakhs.

## 4. *Loans to Coir Marketing Federation and Co-operatives for Construction of Godowns*

Financial assistance by way of loan is given up to a maximum of Rs. 3,75,000 for each godown to Marketing Federation and Rs. 15,000 each to primary societies for construction of godowns. Under the N.C.D.C. scheme, the maximum loan to be paid to the Federation is Rs. 6 lakhs per godown. The Plan provision of Rs. 50 lakhs is intended for giving loans to Marketing Federation and primary societies for construction of godowns. The provision in the Annual Plan for 1985-86 is Rs. 7 lakhs.

## 5. *Grant for Wiping off Loss of Coir Societies*

Many coir societies are not eligible for refinance due to heavy accumulation of loss and their inability to provide margin money. In order to help these societies wipe off their losses, and enable them to avail themselves of refinance facilities they have to be given assistance. According to the scheme, a special fund with contribution from the State and Central Governments on a matching basis to wipe off the accumulated losses of identified societies has to be created. Assistance from the fund extended to a society for wiping off its loss should be strictly a one-time operation. The Seventh Plan outlay for this scheme is Rs. 10 lakhs and 1985-86 outlay Rs. 2 lakhs.

## 6. *Establishment of Mechanical Processing Units Under Co-operatives*

Coir co-operatives will be given financial assistance for establishing processing units with facilities for dyeing of yarn, mechanical extraction of coir fibre and spinning and weaving under a common roof. This scheme is implemented with the assistance of NCDC. According to the scheme, 65% of the cost will be reimbursed to State Government by NCDC by way of loan. Of the balance amount 26% is to be paid by State Government as share capital and the remaining 9% will be members' share. The plan provision of Rs. 25 lakhs is for payment of share capital portion of State Government. The amount earmarked for 1985-86 under this scheme is Rs. 5 lakhs.

## 7. *Assistance to Kerala State Co-operative Coir Marketing Federation for Opening Raw Material Bank*

This scheme envisages provision of assistance to Kerala State Co-operative Coir Marketing Federation for opening of raw material bank for the purchase and supply of dyes and chemicals to maintain quality and sustain uninterrupted production in the coir mats and matting societies. The outlay earmarked under this scheme in the Seventh Plan is Rs. 22 lakhs and in the Annual Plan Rs. 5 lakhs.

## 8. *Establishment of Common Facility Service Centre*

Under this scheme assistance will be provided for establishing godown facilities, cluster type work centres and common facility service centres for coir products under World Bank assistance. However, 15% margin money should be made available by the implementing agency. The provision is towards margin money to be paid by State Government. The amount required for subsidising the interest is included in the general provision for interest subsidy which is a continuing scheme. This new scheme is one of the schemes included under Kerala Agricultural Marketing Project with World Bank assistance. The Seventh Plan allotment for this scheme is Rs. 130 lakhs and the 1985-86 allotment Rs. 15 lakhs.

## II. *Coir Corporation*

### 9. *Kerala State Coir Corporation—Share Capital Investment*

The Seventh Plan provision of Rs. 50 lakhs is for giving share capital contribution to Kerala State Coir Corporation, a fully Government owned undertaking, which is mainly engaged in the production and marketing of coir products. The Corporation plays an important role in the uplift and development of coir industry in the State and marketing of coir products of small scale producers. Other development programmes undertaken by the Corporation include starting of coir factories opening of sales rooms and emporia and promotion of Research and Development. The allotment for 1985-86 is Rs. 8 lakhs.

### 10. *Loans to Kerala State Coir Corporation*

The outlay provided in the Seventh Plan is for giving a loan of Rs. 25 lakhs to Kerala State Coir Corporation. When the Corporation raises loans from

banks and other financial institutions margin money has to be provided. The loan assistance in 1985-86 will be Rs. 5 lakhs.

### III. Coir Board Schemes

#### 11. Opening of Sales Depots

Financial assistance as grant to manufacturing societies and the Marketing Federation is provided for opening and running sales depots within the country for marketing the products of coir co-operatives. According to the scheme of co-operativisation approved by the Coir Board, financial assistance at the rate of Rs. 30,000 in the first year, Rs. 20,000 in the second year and Rs. 10,000 in the third year per depot is given. The existing depots have also to be provided with grant for the recurring expenditure. However, in the case of recurring expenditure, the assistance will be given only for a maximum period of four years. The total outlay earmarked under this scheme for the Seventh Plan period is Rs. 50 lakhs. The outlay for 1985-86 is Rs. 5 lakhs.

#### 12. Grant-in-aid to Coir Co-operatives towards Managerial Expenses

As a part of the coir development programme in the State, the coir co-operatives have to be strengthened. In the absence of competent managers, co-operatives cannot be made efficient. Therefore managerial subsidy is proposed to be paid on a tapering basis for a period of three years. A sum of Rs. 25 lakhs is set apart for providing managerial assistance to the coir co-operatives during the Plan period. In 1985-86 the provision will be Rs. 5 lakhs.

#### 13. Subsidy for Purchase/Modernisation/Renovation of Ratts, Looms, Equipment etc.

Under the co-operativisation scheme approved by Government of India 50% central assistance is available for the purchase/modernisation/renovation of ratts and willowing machines to the primary coir co-operative societies in the yarn sector at the rate of Rs. 400—1000, per ratt and Rs. 6,500 for willowing machine subject to a maximum of Rs. 1 lakh per society. Assistance for the purchase of shearing units, looms and warping unit will also be provided subject to a maximum of Rs. 5.5 lakhs. One third of the assistance will be given as subsidy. A sum of Rs. 81 lakhs is set apart in the Seventh Plan to meet the State's share of the above expenditure on subsidy. The allocation of 1985-86 is Rs. 16 lakhs.

#### 14. Loan for Purchase/Modernisation/Renovation of Ratts, Looms, Equipment etc.

According to the scheme approved by the Government of India, financial assistance is made available to the primary societies and manufacturing societies to undertake modernisation programmes. Under the scheme the maximum amount given to the Primary Societies is Rs. 1 lakh and to the manufacturing societies is Rs. 5.5 lakhs. Two thirds of the assistance will be given as loan. The State Government will have to meet 50% of the sum given as loan. The outlay provided in the Plan viz. Rs. 162 lakhs, is to meet the State's share. The outlay for 1985-86 is Rs. 32 lakhs.

#### 15. Share Capital Contribution to Coir Co-operative Societies

The Seventh Plan provision of Rs. 100 lakhs is for share participation by the State Government in the coir societies in order to strengthen the share capital base of the societies. The existing societies and the societies to be newly registered during the Plan period will be eligible for share participation by Government subject to a maximum of 15% of the optimum resources necessary. According to the scheme evolved by Central Government assisting coir industry, 50% of the expenditure for giving share capital assistance will be met by Central Government by way of loan and the remaining 50% is to be met by the State Government. Share capital contribution is made only at the rate of Rs. 180 per member in respect of manufacturing societies. The 1985-86 outlay for this scheme is Rs. 20 lakhs.

#### 16. Rebate Sale and Discount Sale of Coir Products

Government of India has agreed to allow 20% rebate of the sale of coir products upto 60 days in an year. The State Government and the Central Government are to meet the expenditure on this on 50:50 basis. In respect of discount sale Government of India have suggested that the proposal for allowing discount on sale of coir yarn may be included in the plan. A scheme for one time discount of 15% to 25% for clearance sale of the accumulated stock of coir yarn of Coir Federation was also proposed. A provision of Rs. 50 lakhs is made in the plan to meet the State's share for the above programme. The provision for 1985-86 is Rs. 10 lakhs.

### IV. Other Schemes

#### 17. Development of Coir Industry and Husk Control

The Department of Coir Development is not fully equipped to handle activities other than issue of financial assistance, raw material control and organisation of co-operatives. There are other fields where proper attention is needed such as quality enforcement at production stages, marketing and market development activities information service including market intelligence, collection of statistics and planning. Some assistance to private sector is also essential. It is difficult to attend to these activities in the existing set up. Strengthening of the Department is therefore essential in order to undertake the various activities. A provision of Rs. 150 lakhs is made in the Plan for this purpose. The outlay for 1985-86 is Rs. 25 lakhs.

#### 18. Training of Personnel of Coir Co-operative Societies/Department

This scheme aims at providing training to the supervisory staff of the coir co-operative societies. The training programme will be designed in consultation with the Coir Board and co-operative institutions. Expertise on quality control is also proposed to be created by training suitable hands. The Seventh Plan outlay for this scheme is Rs. 5 lakhs and the outlay for 1985-86, Rs. 1 lakh.



### 19. *Introduction of Levy System for Collection of Raw Husks*

The major constraint to the successful working of the coir co-operatives is the shortage of raw husk. If the primary societies are to provide their members with regular work and satisfy the norms fixed by the Government of India under the co-operativisation schemes, they will require about 85 crores of husk in an year. Under the present set up the average annual collection of husk is only around 20 crores. Unless regular and adequate supply of husk is ensured, the societies will not be able to utilise their production capacities fully. Therefore the question of introduction of levy system is to be considered seriously. For the implementation of the levy system, sufficient staff support is required. Government of India have agreed in principle to meet 50% of the cost of implementation of the programme. The plan provision is towards the 50% cost of staff support under the scheme. The Seventh Plan provision is Rs. 100 lakhs. The provision for 1985-86 is Rs. 10 lakhs.

### 20. *Publicity and Propaganda including Trade Fairs and Exhibitions*

The coir manufacturing societies and the Coir Marketing Federation are given assistance to carry out sales promotion activities in and outside the country. Assistance is also provided to take part in trade fairs and exhibitions. For taking part in fairs and exhibitions they are given grants not exceeding Rs. 15,000 for a trade fair and Rs. 5,000 for an exhibition. A provision of Rs. 50 lakhs is made for the scheme in the plan. The allotment for 1985-86 is Rs. 7 lakhs.

### 21. *Price Fluctuation Fund*

Creation of the price fluctuation fund is a condition precedent to institutional finance insisted by the Reserve Bank of India, in order to compensate the loss that may be incurred by Marketing Federation due to price fluctuations. The scheme envisages contribution by Government at 5% of the value of outright purchase by Coir Marketing Federation from primary and manufacturing societies. The Seventh Plan outlay for the scheme is Rs. 100 lakhs. The allotment for 1985-86 is Rs. 20 lakhs.

### 22. *Housing Scheme for Coir Workers*

The scheme envisages provision of assistance to the coir workers for the construction of houses. Under the proposed scheme, the beneficiaries will have to invest 25% of the requirement while 25% will be available under programmes like NREP. The balance of 50% will be given to the beneficiary as subsidy under this scheme. The maximum amount that could be given as assistance under this scheme will be Rs. 5,000. A total allocation of Rs. 10 lakhs is made in the Plan. The Annual Plan outlay for 1985-86 is Rs. 2 lakhs.

### 23. *Welfare Measures*

Assistance for setting up and running of nurseries and creches is given to the societies which have large number of women coir workers. Cost of construction of building and cost of equipment will have to be met. Salary and other expenses will be subsidised. A sum of Rs. 30 lakhs is provided in the Plan for establishing a few welfare centres during the Seventh Plan period.

The outlay earmarked in the Annual Plan for 1985-86 is Rs. 5 lakhs.

### **Handloom**

There are about 95,000 handlooms in Kerala providing direct employment to about 1.5 lakh persons and indirect employment to 1 lakh persons. The industry is concentrated in the northern districts of Cannanore and Kozhikode and the southern district of Trivandrum. The development of handloom industry in the successive five year plans has been sought to be achieved by organising weavers' co-operative societies. Weavers outside the co-operative fold are being assisted through the Handloom Development Corporation. As a result of the implementation of various developmental programmes there has been considerable increase in production of handloom cloth and employment in the organised sector, consisting of the co-operative and corporate sectors.

The industry today is facing competition from neighbouring States where the cost of production and in turn the selling price of cloth are lower. This is partly because no minimum wage for handloom workers has been fixed in the neighbouring States. The main problems facing handloom industry in Kerala are (i) low demand for traditional items and for certain non-traditional items as well (ii) large scale fluctuations in yarn prices and irregularity of supplies (iii) shyness of working capital, (iv) in-adequate technical innovation and (v) lack of design facilities. With a view to tackling these problems and developing the industry, the following strategy will be adopted during the Seventh Plan period.

- (i) Increase in productivity to maintain and stabilise the present level of employment with higher wages prevalent in the State.
- (ii) Educating the weavers of the realities of the problem and encouraging them to concentrate on high value items including those for exports;
- (iii) Technological upgradation of looms in a phased manner in order to increase productivity and reduce physical strain on the weavers;
- (iv) Proper and timely distribution of yarn and ensuring the availability of sufficient finance to weavers from the Apex Society and Handloom Development Corporation;
- (v) Starting of more common facility service centres to facilitate dyeing and processing of yarn and cloth;
- (vi) Re-establishment of export market for Kerala handloom, efforts for which include the setting up of an efficient market intelligence system;
- (vii) Reorganisation of the closed private handloom factories in Cannanore district as workers' co-operatives;
- (viii) Bringing 90% of the looms in the State under the organised sector consisting of the co-operative societies and the Handloom Development Corporation by the end of the

Seventh Plan period and extending assistance in the form of loan and grant to the remaining 10% of the looms under the Integrated Rural Development Programme.

A production target of 100 million metres of handloom cloth is proposed for the last year (1989-90) of the Seventh Plan. Of this, 93 million metres would be produced in the organised sector and the balance 7 million metres in the unorganised sector. Out of the total of 90,000 looms to be brought under the organised sector by the end of the Seventh Plan Period, 69,000 would be in the co-operative sector and 21,000 in the Corporate sector. It is proposed to bring 71,000 looms under direct production programme by the year 1989-90, with a production target of 78.1 million metres and marketing target of 40.2 million metres. Of this, 55.0 million metres would be produced in 50,000 looms in the co-operative sector and 23.1 million metres in 21,000 looms under the Handloom Development Corporation. Production per loom under direct production programme has been fixed as 1100 metres per annum assuming 200 days of work and 5.5 metres per day (giving allowance for monsoon and harvest seasons). In respect of looms under direct production programme all the production and marketing infrastructure facilities would be provided by the concerned institutions.

During the Seventh Plan period it is proposed to make the handloom co-operative societies more efficient in their functioning. For this all the elements of assistance, viz. share capital loan to member-weavers, share capital contribution by Government, ensuring availability of finance from NABARD, managerial assistance, assistance for modernisation and requisition of fixed assets etc., would be given to the societies in a package. Enhanced outlay has been provided for modernisation of looms, starting of processing facilities, warehouses etc., in order to increase productivity and introduce new designs. Modern techniques in weaving, introduction of new designs etc., will be taught to weavers. In order to make available hank yarn of requisite count and quality at proper time and at reasonable prices to the weavers, it is proposed to open raw material bank by Apex Society and Handloom Development Corporation. Adequate marketing infrastructure would be built by the Apex Society as well as by the primary societies. A market intelligence unit is proposed to be started in the Directorate of Handloom. Schemes under special component plan and tribal sub plan have been drawn up separately for the benefit of scheduled castes and scheduled tribes.

The Handloom Development Corporation proposes to create additional production and marketing infrastructure facilities in order to complete the spill over schemes under Intensive Development Programme and also to achieve the targets set under direct production and marketing programmes. The Corporation proposes to open new production centres in clusters in addition to achieving the original targets proposed in respect of weavers' co-operative societies under intensive development programme. It is proposed to organise 62 A Class, 62 B Class and 65 C Class marketing depots by the Corporation during the Seventh Plan period. Of these, a few depots in major cities would be run directly by the Corporation and the remaining on agency basis. Export sales by the Corporation is proposed to be enhanced to Rs. 3 crores per annum by

the end of the Seventh Plan period. For this purpose Kerala Garments Limited, the subsidiary company of the Corporation would be expanded and an additional unit set up. The Corporation also proposes to set up a Research and Development Centre at Trivandrum with facilities for advanced training, research on technology adoption, marketing etc., and also a technical library.

The following schemes are proposed in the Seventh Plan to achieve the objectives aimed at under handloom development. Separate provision and targets for the Annual Plan for 1985-86 are also indicated.

### 1. *Production Oriented Schemes*

#### A. *Co-operative Sector*

Production Oriented Schemes are implemented through the weavers' co-operative societies and the Handloom Development Corporation. Primary Weavers' Co-operative Societies can be broadly divided into factory type societies and cottage type societies. In the first year of the Plan, i.e. 1985-86, also all elements of assistance will be made available to handloom co-operatives.

#### (i) *Factory Type Weaver's Societies*

In the factory type weaving centres 50 to 100 weavers who do not possess looms of their own are provided employment under a common roof. These societies help create better productivity and introduce new designs and patterns under experienced and skilled supervisors. Two categories of factory type weaver's societies are organised. The first category consists of closed down private factories which are purchased and converted into cooperative societies of erstwhile workers of the defunct factory. The second category comprises factories newly organised inducting loomless weavers. In Cannanore district, where there is concentration of weavers, several private factories are closed down. It, therefore, becomes essential to organise factory type weavers' co-operative societies in order to provide employment to the weavers thrown out of employment. It is proposed to organise 25 new factory type societies and to expand 50 existing societies during the Seventh Plan period. Government assistance would be given for meeting capital cost like purchase of land, construction of buildings, acquisition of looms and accessories, processing facilities etc. Weavers will be provided with loan in order to enable them fully subscribe their share capital in the societies. Government will also participate in the share capital of the co-operatives. Managerial assistance will be given to the societies to appoint experienced persons to properly manage the societies. Fifty percent of the cost of all these elements of assistance will be met by Government of India and hence the outlay proposed here (Rs. 145.45 lakhs) is only the State's share in the Seventh Plan.

In 1985-86 it is proposed to start 4 new societies and expand 7 societies. An outlay of Rs. 21.80 lakhs is earmarked in the Annual Plan for 1985-86 as the State's share of this Centrally Sponsored Scheme. The outlay is to meet expenditure relating to construction of buildings, purchase of looms, managerial assistance, share capital to societies, looms to members etc.

(ii) *Cottage Type Weavers's Co-operative Societies*

In the cottage type handloom weaver's co-operative societies the worksheds are attached to the residence of the weavers. There were 468 cottage type weaver's co-operative societies in the State at the end of 1983-84. Excluding 88 societies under liquidation and 41 dormant societies, the number of working societies at the end of the year was only 339. In the Seventh Five Year Plan it is proposed to revitalise the weavers' co-operative societies by providing timely assistance by way of supplying raw materials and other production and marketing, infrastructure facilities. Weavers will be provided with loans in order to enable them subscribe fully their share in the societies. Besides, Government would participate in the share capital of the weavers' co-operative societies. The outlay includes provision for giving tapering grant to meet the pay and allowance of the managerial staff. In order to increase productivity, it is proposed to bring about technological improvements in a phased manner. Financial assistance will be given to the societies for modernisation of the looms of member-weavers and also for purchase and distribution of looms to loomless weavers. Fifty percent of the cost of these programmes will be met by Government of India. The outlay proposed here in the Seventh Plan (Rs. 234 lakhs) is only the State share. This outlay also includes provision for construction of warehouses and pre-loom processing facilities for cottage type primary co-operative societies.

An outlay of Rs. 35.05 lakhs is set apart for this scheme in 1985-86 to meet the expenditure on share capital loan to weavers, share capital contribution by Government, managerial assistance and acquisition of fixed assets.

B. *Corporate Sector*

The Handloom Development Corporation intends to expand its production activities substantially. A total outlay of Rs. 180 lakhs is provided in the Seventh Plan for this scheme. Of this an amount of Rs. 50 lakhs has been provided for giving share capital contribution to the Corporation. An equal amount will be given by Government of India for the purpose. The Corporation has been implementing two Intensive Handloom Development Projects, one at Cannanore and another at Trivandrum. The Corporation has to complete certain spillover items of work in order to fully achieve the original target fixed in respect of co-operative societies and clusters. An amount of Rs. 70 lakhs is provided in the plan for the purpose. The amount will be given to the Corporation during the first two years of the Seventh Plan, during which period the Corporation should complete all the spill over works in the two projects. Two new schemes have been proposed in the Corporate Sector, one for giving financial assistance (in the form of margin money) to the Corporation for setting up a raw material bank and the other for giving interest subsidy to the Corporation.

In the Annual Plan for 1985-86 an amount of Rs. 51.50 lakhs is earmarked for giving assistance to Handloom Development Corporation. Of this an amount of Rs. 1.50 lakhs is proposed for margin money

assistance and Rs. 7.50 lakhs for giving interest subsidy to the Corporation.

2. *Hantex—Share Capital Contribution*

Government will continue to contribute to the share capital of the State Handloom Weavers' Co-operative Society Limited (Hantex), for which an amount of Rs. 50 lakhs is proposed for the Seventh Five year Plan. An equal amount will be contributed by the Government of India towards share capital.

In 1985-86 an amount of Rs. 7.50 lakhs has been proposed as the share capital contribution to the society in order to enhance the activities of production and marketing of handloom cloth.

3. *NCDC Assisted Schemes (State Share)*

National Co-operative Development Corporation (NCDC) extends financial assistance for the construction of worksheds and showrooms by primary societies, construction of godowns, construction and repairs of emporia by Hantex etc. Seventy five percent of the total cost of the schemes will be given by NCDC as loan to the State Government. Twenty per cent of the cost is to be met by State Government and 5 percent by the concerned primary/apex society. The outlay provided (Rs. 100 lakhs) is for meeting the State's share of 20 per cent for implementing the following five programmes in the Seventh Plan.

- (i) Workshed for primary societies (continuing scheme)
- (ii) Godown for Hantex (Continuing scheme)
- (iii) Construction and Renovation of Handloom Houses for Hantex (New Scheme)
- (iv) Showrooms for Primary Societies (New Scheme)
- (v) Handloom process House (Post-loom) (New Scheme).

An amount of Rs. 15 lakhs is provided in the Annual Plan for 1985-86 towards the State's Share for implementing various schemes.

4. *Export Oriented Development Scheme*

This scheme is for setting up a unit for the manufacture of specially processed handloom fabrics for export as well as local market. These types of cloth (like fire proof cloth are intended for serving different needs. The unit for manufacturing such fabrics, fully equipped with modern machinery, would be set up by Government. Later on the Unit could be entrusted to public sector organisations like Handloom Development Corporation or HANTEX. In view of the high wages prevalent in the State it is desirable to go in for the manufacture of such value added products. An outlay of Rs. 50 lakhs is proposed for the Seventh Five Year Plan under this scheme.

An outlay of Rs. 5 lakhs is proposed in the Annual Plan for 1985-86 for meeting the cost of land acquisition and preliminary expenses.

### 5. Training and Extension

The outlay of Rs. 59 lakhs proposed in the Seventh Plan is for continuing the following four schemes.

- (i) Training of Weavers.
- (ii) Training of employees of co-operative societies.
- (iii) Weavers' common facility service centre.
- (iv) Establishment of an Institute of Textile Engineering Technology.

1985-86.

Increasing productivity in the handloom sector is an urgent necessity in view of the high cost of labour in the State. Technological innovation, coupled with enterprise of weavers is the answer to this problem. It is, therefore, proposed to continue the schemes of giving training to handloom weavers in modern techniques of weaving, improved design etc. and also to the employees of handloom co-operative societies in modern methods of management of the societies. The common facility service centre at Balaramapuram near Trivandrum under Hantex will be continued during the Seventh Plan. Preliminary steps have been taken for the establishment of an Institute of Textile Technology. It is proposed to establish the Institute early during the Seventh Plan.

The outlay earmarked for this scheme in 1985-86 is Rs. 10.10 lakhs. An amount of Rs. 3.75 lakhs is for imparting training to weavers, Rs. 0.60 lakh for giving training to employees of Co-operative Societies, Rs. 0.75 lakh for the Common Facility Centre at Balaramapuram and Rs. 5 lakhs for the preliminary steps relating to the Institute of Textile Technology.

### 6. Marketing Schemes

The following three schemes intended to promote marketing of handloom fabrics will be continued. The Plan provision is Rs. 63.60 lakhs.

- (i) Publicity and Propaganda
- (ii) Supply of mobile van and trucks
- (iii) Marketing Depots by Primary Societies.

Financial assistance is given to Hantex and Hanveev for meeting expenditure on advertisement through mass media and for participation in exhibitions inside and outside the State. Government also extends assistance to Hantex, Hanveev and primary societies for acquiring mobile van and trucks for transportation and sale of handloom cloth. Primary societies are provided with a tapering grant for meeting the administrative expenses of their marketing depots. It is proposed to continue these schemes during Seventh Plan period in order to strengthen the marketing infrastructure. To develop handloom industry in the State it is essential to re-establish export market for Kerala handloom goods. It is proposed to create a market intelligence unit attached to the Directorate of Handloom in order to collect and analyse necessary data and monitor the scheme. Experts in the field of marketing would be appointed on contract basis, under the scheme, to promote marketing.

In 1985-86 a total amount of Rs. 9 lakhs will be allotted for this scheme. The outlay will be shared among publicity propaganda (Rs. 3 lakhs), mobile vans and trucks (4.50 lakhs), marketing depots (Rs. 0.75 lakhs) and market intelligence units (Rs. 0.75 lakh).

### 7. Incentive Schemes (Co-operative Sector)

Major part of the outlay proposed under this head is for giving subsidy to co-operative banks against loss of interest. NABARD extends refinance facilities to Co-operative Central Banks for lending to primary handloom weavers' co-operative societies and Hantex towards working capital, construction of workshops, modernisation of looms etc. Out of the 55 million metres of handloom fabrics proposed to be produced under direct production programme in the co-operative sector during the last year of the Seventh Plan, about 20 million metres would be procured by Hantex. Short term credit for procurement of handloom fabrics by Hantex would also be extended by NABARD. The Co-operative Central Banks lend to the handloom co-operative societies at the same rate of interest, charged by NABARD. The element of subsidy at the rate of 3½% given by Government to Co-operative Central Banks enable them to meet their establishment expenditure. An outlay of Rs. 205 lakhs is proposed under this scheme in the Seventh Five Year Plan.

It is necessary to introduce new designs and varieties to suit different tastes for the development of the handloom industry. Weaver's co-operative societies which innovate in introducing new designs and patterns should be encouraged. Provision of Rs. 5 lakhs has been made for giving prizes to handloom weavers' co-operative societies which introduce best designs patterns, varieties etc.

In the 1985-86 Annual Plan the amount allotted for this scheme is Rs. 30.75 lakhs. Of this Rs. 30 lakhs will be for giving interest subsidy during the year and Rs. 0.75 lakhs for giving prizes to handloom weaver's societies which introduce new designs and patterns.

### 8. Welfare Schemes.

The following welfare schemes are proposed during the Seventh Five Year Plan and for this purpose an outlay of Rs. 167 lakhs is suggested.

- (i) Renovation of weavers' houses
- (ii) Contributory thrift fund.
- (iii) Stipend to children of weavers to undergo training in National Institute of Handloom Technology.
- (iv) Weavers' Housing Scheme-Centrally Sponsored (State Share).
- (v) Weavers' Group Insurance Scheme.
- (vi) Old age pension to weavers.
- (vii) Creation of a Reserve Fund.

Handloom Weavers are in the lower strata of society. It is, therefore, necessary to implement

certain welfare measures for their economic uplift in addition to assistance for production and marketing of handloom fabrics. In cottage type weaving, the weavers' sheds are located adjoining their residential houses. It is proposed to extend financial assistance for the renovation of weavers' houses. Government contribution is given to the thrift fund formed in the weavers' Co-operative societies by depositing a small portion of the wages of weavers. The outlay includes provision for continuing the scheme. Stipend is being given to children of weavers for undergoing textile technology course in the Institute of Textile Technology, Salem. This scheme is proposed to be continued during the Seventh Plan period. Even after starting the Institute of Textile Technology in the State the scheme of giving stipend to children of poor weavers has to be continued.

It is proposed to implement a comprehensive housing scheme for weavers with central assistance. The target is to construct 5000 houses in places where there is concentration of weavers. An amount of Rs. 100 lakhs is provided in the Seventh Five Year Plan under this scheme. An equal amount is expected towards central assistance for implementing the scheme. Outlay of Rs. 10 lakhs has been provided for giving Government contribution for implementing a Group Insurance Scheme for weavers. It is proposed to give old age pension to weavers who are unable to do any work and are at the same time destitutes. An outlay of Rs. 5 lakhs is provided for the purpose of the plan. Provision of Rs. 5 lakhs has been made for giving State Government's contribution for the creation of a reserve fund in the handloom sector. This fund would, among other things, enable to extend assistance to the apex institutions viz. Hantex and Hanveev in times of extreme fluctuations in the prices of yarn and other raw materials.

A total amount of Rs. 25.05 lakhs is proposed for the Annual Plan of 1985-86 for the welfare schemes. This outlay will be shared by the scheme of giving financial assistance for renovating the residential houses of weavers (Rs. 6 lakhs), contribution to the thrift fund (Rs. 0.75 lakh), stipend to children of weavers (Rs. 0.30 lakh), housing (Rs. 15 lakhs), contribution for implementing group insurance scheme (Rs. 1.50 lakhs), old age pension scheme (Rs. 0.75 lakh) and contribution for the reserve fund (Rs. 0.75 lakh). In 1985-86, 750 houses are proposed to be constructed.

#### 9. Administration and Direction

During the Seventh Five Year Plan it is proposed to bring 90% of the looms to the organised sector. Fifty thousand looms are proposed to be brought under direct production programme in the co-operative sector and 21,000 looms in the corporate sector. Considerable additional production, marketing and infrastructure facilities have to be created during the Plan period. For the proper planning and implementation of these schemes adequate supervisory personnel have to be appointed. Hence an outlay of Rs. 20 lakhs is proposed for appointing additional staff in the Directorate and District Offices. The provision is also for appointing additional staff in the Planning and Monitoring Cell in the Directorate.

An amount of Rs. 3 lakhs is proposed under this head in the Annual Plan 1985-86.

#### 10. Special Component Plan

All the production-oriented schemes in the co-operative sector under factory type and cottage type weaver's co-operative societies, included under general sector plan will be implemented exclusively for the benefit of scheduled castes, for which separate outlay has been proposed. Separate outlays have been provided for implementing the programme of imparting training to weavers belonging to scheduled castes and also for giving financial assistance for renovation of weavers' houses. An amount of Rs. 106.75 lakhs has been provided in Seventh Plan for implementing handloom development schemes exclusively for scheduled castes towards State's share. An equal amount would be given by Government of India.

An amount of Rs. 16.10 lakhs is proposed under Special Component Plan in 1985-86. An equal amount would be available as Central assistance.

#### 11. Tribal Sub Plan

Separate provision has been proposed for implementing production oriented schemes in the co-operative sector, exclusively for the benefit of weavers belonging to scheduled tribes. Schemes for imparting training to weavers and for giving financial assistance for renovation of weavers' houses would also be implemented, for which separate outlays have been proposed. An amount of Rs. 19.20 lakhs has been provided under tribal sub plan towards State share. An equal amount would be provided by Government of India.

In the Annual Plan for 1985-86 an amount of Rs. 2.80 lakhs has been proposed under Tribal Sub-Plan. The Centre will also contribute an equal amount.

#### Powerloom

There were about 2670 powerlooms in the State, of which 880, constituting about 33 per cent of the total number of looms, are in the co-operative sector. There are 32 powerloom weavers' co-operative societies in the State. Of these 15 are handloom weavers' societies with powerlooms. Out of the 32 societies, one society is dormant and another one is under liquidation. Production of cloth in the powerlooms of the co-operative sector during 1983-84 is estimated to be about 27 lakh metres. During the Seventh Five Year Plan it is proposed to introduce 2000 powerlooms in the State. These looms would be in about 200 powerloom weavers' co-operative societies to be organised with an average number of 10 looms per society. Additional pre-loom processing facilities would be created during the plan period, in addition to strengthening of existing ones. It is estimated that additional direct employment to the extent of 3000 and indirect employment of 1000 could be created in the powerloom sector during the Seventh Plan period. Following schemes are proposed under Powerloom industry during the Seventh Five Year Plan.

### 1. *Training in Powerloom Weaving*

The scheme is for continuing the existing Training Centre in Powerloom weaving during the Seventh Five Year Plan. An outlay of Rs. 10 lakhs is proposed during the Seventh Plan in order to train more weavers required for the additional powerlooms proposed to be installed in the co-operative Sector during the plan period.

An amount of Rs. 1.50 lakhs is proposed for continuing the existing Powerloom Training Centre in 1985-86.

### 2. *Service Centre for Powerloom*

A Service Centre for giving training in powerloom weaving etc., is functioning at Aranattukara near Trichur under the auspices of the Government of India, since the beginning of 1982-83. Government of India have established the Centre in the State on the condition that a permanent building for the Centre would be put up by the State Government. The outlay of Rs. 5 lakhs has been proposed for the Seventh Plan towards cost of land and building for the Centre. Land acquisition for construction of building would be taken up during the first year itself.

An amount of Rs. 1 lakh is provided in the Annual Plan 1985-86 towards cost of acquisition of land and other preliminary expenses connected with the construction of building.

### 3. *Comprehensive Scheme for Revitalisation of the Existing Powerloom Weavers, Co-operative Societies*

Existing powerloom weavers' co-operative societies have to be revitalised in order to fully utilise the capacity of powerlooms already installed and to give full employment to these workers who have only part-time employment at present. The elements of financial assistance to the Societies include.

- (i) Share capital contribution by Government.
- (ii) Managerial assistance on a tapering basis for the efficient management of the societies and
- (iii) Margin money loan to avail institutional finance by the societies.

All these components of assistance would be given in one package to the societies so that the revitalisation is effected within the shortest period. The outlay proposed during the Seventh Five Year Plan is Rs. 25 lakhs.

An amount of Rs. 4.50 lakhs will be spent under this scheme in 1985-86.

### 4. *Strengthening of Existing Pre-loom Processing Facilities*

Existing pre-loom processing facilities are proposed to be strengthened by modernising the existing machinery and adding new ones. Capacity of the processing facilities have to be expanded in tune with the expansion of productive capacity in the powerlooms. An amount of Rs. 10 lakhs is proposed for the Seventh Five Year Plan.

In the Annual Plan for 1985-86 an amount of Rs. 1.50 lakhs is proposed for modernisation and strengthening of the existing processing centres.

### 5. *Organisation of New Powerloom PWweavers' Co-operative Societies*

During the Seventh Five Year Plan, it is proposed to establish 2000 new powerlooms in the State, distributed in 200 co-operative Societies, each having 10 powerlooms. These co-operative societies would be organised on a phased manner distributed over five years. It is proposed that the co-operative societies of powerlooms should, as far as possible, be set up for the weavers of handloom lying idle in co-operative sector or outside the co-operative fold. This would be in conformity with the policy enunciated by Government that weavers should be the beneficiaries of the development of powerloom sector. This is a comprehensive scheme having the following six components:—

- (a) Share capital loan to members.
- (b) Share participation by Government.
- (c) Margin money loan by Government.
- (d) Managerial grant.
- (e) Starting of new pre-loom processing facilities.
- (f) Investment subsidy.

Members of the powerloom weavers' co-operative Societies would be provided with loan in order to enable them to fully subscribe the share capital. An amount of Rs. 150 lakhs is proposed towards Government participation in the share capital of these societies. Amount required towards cost of powerlooms, buildings and working capital would be taken on loan from financial institutions like NSIC, KFC and NABARD. Provision has been made for giving margin money loan to the societies to enable them to avail institutional finance. During the initial years of working of these societies managerial assistance would be given on a tapering basis. Pre-loom processing centres would be started for the smooth working of the societies. Powerloom units are eligible for investment subsidy as in the case of small scale industrial units. Central investment subsidy at the rate of 25% (subject to a maximum of Rs. 25 lakhs per unit) is given in 'no industry' districts of Wynad and Idukki at the rate of 15% (subject to a maximum of Rs. 15 lakhs per unit) in the backward districts of Alleppey, Malappuram and Cannanore. State investment subsidy is being given at the rate of 15% (subject to a maximum of Rs. 15 lakhs per unit) in Quilon district and at the rate of 10 per cent (subject to a maximum of Rs. 10 lakhs) in the remaining districts. Provision has been made for giving State investment subsidy to the powerloom units. An amount of Rs. 325 lakhs has been proposed for implementing all the programmes under the scheme during the Seventh Plan period.

In 1985-86 it is proposed to organise 30 powerloom societies with an average of 10 looms per society. An outlay of Rs. 49.20 lakhs is provided in the Plan for 1985-86.

#### 6. *Organisation of a Powerloom Weavers' Apex Co-operative Society*

In order to co-ordinate the activities of the powerloom weavers' co-operative societies it is proposed to organise an Apex Society. The Apex Society would arrange for the procurement and supply of raw materials and also for the marketing of cloth. The amount provided under the scheme is for share participation by Government and also for giving managerial assistance during initial years of its working. An amount of Rs. 25 lakhs is proposed in the Seventh Plan for giving assistance to the Apex Society.

In 1985-86 an outlay of Rs. 3.75 lakhs is earmarked for this scheme for giving share capital, managerial assistance and margin money loan to the society.

### **Handicrafts**

The major handicrafts of Kerala are ivory carving, wood and horn carving, bell metal casting, lapidary works, screw pine mat weaving, bamboo and reed weaving, cane and rattan work, coconut shell carving and paddy straw picture making. Of these crafts, Kerala excel in ivory carving and bell metal casting. No proper estimate is available either about the total number of people employed by the industry or about its annual production. According to an estimate the handicrafts industry in Kerala employs about half a lakh craftsmen. The most important among the problems facing handicrafts industry is the inability to provide full time employment to the workers. Scarcity of raw materials, especially ivory and rose wood, difficulty in the marketing of products and unwillingness of the craftsmen to adapt themselves to the changing tastes and preferences of the consumers are other major problems. The craftsmen are said to be exploited as their incomes are lower even though their products are sold at high prices. This has forced many artisans to seek alternative means of livelihood and consequently caused shortage of craftsmen in some of the trades. If the craftsmen were to be given full time employment, there should be adequate demand for the products. Therefore any programme undertaken with a view to revitalising the industry should make an attempt to solve the problems of marketing. The schemes proposed to be taken up in the Seventh Plan under handicrafts are given below:

#### I. *Assistance to Co-operatives*

##### (1) *Assistance to Handicrafts Co-operatives*

This scheme aims at revitalising the existing handicraft co-operatives in the State. Assistance will be given by way of establishment grant towards the salary of staff and rent of office for four years on a tapering basis. Lumpsum grant for the purchase of machinery/equipment, purchase of land and building and for renovation of showrooms is also given. Apex and primary societies are also given grants to take part in exhibitions. The Seventh Plan allocation for the scheme is Rs. 60 lakhs. The outlay for 1985-86 is Rs. 8 lakhs.

##### (2) *Kerala State Handicrafts Apex Society*

The Apex Society is formed mainly with a view to marketing the handicrafts products. The amount

allotted (Rs. 10 lakhs) is to provide for Government share participation to strengthen the capital base of the society. The provision for 1985-86 is Rs. 2 lakhs.

##### (3) *Share Participation in Primary Handicrafts Co-operative Societies*

This scheme is intended to strengthen the capital base of the primary handicrafts co-operative societies. Government share participation in primary societies would be upto four times the paid up share capital from members. However the maximum amount that could be given to a society under this scheme is Rs. 50,000. The societies could utilise this amount as working capital or for the creation assets. The outlay earmarked for continuing this scheme in the plan is Rs. 15 lakhs. The outlay for 1985-86 is Rs. 3 lakhs.

##### (4) *Interest Subsidy*

Loans are given to handicrafts societies at 6½% interest through the District-Co-operative Banks. 5% subsidy of interest is given to the District Co-operative banks towards their loss on account of this subsidised lending. The scheme is sponsored by the Reserve Bank of India. Since the handicrafts co-operatives have to depend more and more on other financial institutions for meeting their working capital requirements, the scheme has to be continued. The plan outlay for the scheme is Rs. 5 lakhs. The outlay for 1985-86 is Rs. 1 lakh.

#### II. *Assistance to Craftsmen*

##### (5) *Training in Handicrafts*

One of the major reasons for the poor demand for handicraft products is the unwillingness of craftsmen to introduce new designs and models. Members of handicrafts societies are therefore to be given advanced training to improve the quality of products by introducing new designs and improved methods under master craftsmen. The provisions of Rs. 15 lakhs is towards payment to craftsman trainers and trainees as well as raw material. The outlay for 1985-86 is Rs. 2 lakhs.

##### (6) *Incentive to Individual Craftsmen*

Individual craftsmen engaged in the handicrafts industry are to be given 50% subsidy for the purchase of tools subject to a maximum of Rs. 750. A craftsman is eligible to get this assistance only twice, and there should be a time lag of three years between the receipt of the first and the second one. The outlay provided is Rs. 5 lakhs. The outlay for 1985-86 is Rs. 1 lakh.

##### (7) *Mechanisation and Introduction of Modern Tools and Equipments to Craftsmen on Subsidised Rates*

The handicrafts industry uses age-old methods of production and equipments. To increase productivity, it has to use modern technology. The individual craftsmen and production units may not be able to obtain modern machines and tools without assistance from the Government. The objective of this plan scheme is to assist craftsmen and production units



acquire modern machines and equipment. Under the scheme individual craftsmen, co-operative societies and production units are given 50% subsidy by way of reimbursement for the purchase of tools and machines. This assistance is subject to a ceiling of Rs. 2,000 per craftsman or unit. A provision of Rs. 5 lakhs is made in the plan to assist the craftsmen to acquire modern tools and equipments. The outlay for 1985-86 is Rs. 1 lakh.

### III. Departmental Units

#### (8) Craft Museum

The proposal is to set up a Craft Museum at Trivandrum for the collection and exhibition of rare and exquisite items of traditional handicrafts both from inside and outside the State. It is also intended to house the proposed museum in the new building to be constructed for the District Industries Centre. A sum of Rs. 20 lakhs is set apart for the above museum. The outlay for 1985-86 is Rs. 5 lakhs.

#### (9) Setting up of Common Facility Service Centre

The objective of this scheme is to increase the facilities available at the Common Facility Service Centre for wood and ivory already set up at Attakulangara (Trivandrum) under the Handicrafts Development Corporation and to set up a new Centre at Trichur. The idea is to instal new machinery so that more Craftsmen could make use of the facilities available at the Trivandrum Centre. It is proposed to increase the number of craftsmen working there from 90 to 250. An amount of Rs. 50 lakhs is provided for the above scheme. The outlay for 1985-86 is Rs. 7 lakhs.

#### (10) Documentation and Reproduction of Temple Carvings, Folk Crafts etc.

The proposal is to document selected temple carvings and folk arts like Theyyam, Pavakoothu, Koodiyattom etc., and to reproduce them in wood and papier mache. From the commercial point of view also such a scheme is considered feasible because if these temple carvings are reproduced in wood and papier mache etc., marketing of them would not be a problem. The Seventh Plan outlay for this scheme is Rs. 5 lakhs and the annual plan outlay for 1985-86 is Rs. 1 lakh.

### IV. Marketing Assistance

#### (11) Propaganda and Publicity

The Handicrafts Development Corporation and the Handicrafts Apex Society are participating in Exhibitions and are selling their products by giving rebate for the sales during the annual handicrafts week. The amount of Rs. 10 lakhs provided in the Seventh Plan under this scheme is to be utilised for the reimbursement of expenditure incurred for giving the rebate, and for conducting exhibitions and seminars and for undertaking other sales promotion programmes. The outlay for 1985-86 is Rs. 2 lakhs.

#### (12) Raw Materials Depot for Ivory, Rosewood etc.

The Handicrafts Development Corporation, Trivandrum, Handicrafts Apex Society, Ernakulam and the Trichur Lapidary Central Co-operative Society are having their raw materials depots at Trivandrum, Cherpu and Trichur respectively. These organisations purchase raw materials in bulk and stock them in their depots and supply them to craftsmen and member societies at 75% of the cost. The balance 25% is given to them as subsidy by the Government. Government gives subsidy to the institutions by way of reimbursement to be used as revolving funds i.e. working funds for stocking raw materials and supplying them to craftsmen at concessional rates. At a time when the cost of raw materials are going up at a rapid pace, the scheme has greater relevance. Therefore the scheme has to be continued and an outlay of Rs. 15 lakhs is provided. The outlay for 1985-86 is Rs. 3 lakhs.

#### (13) Survey of Handicrafts

The proposal is for conducting a market survey and other studies in respect of important crafts of Kerala. A survey of handicrafts will throw light on the problems faced by the various handicrafts of the State. The Economics and Statistics Department could be entrusted the task of conducting the survey. An amount of Rs. 5 lakhs is provided for this scheme. The outlay for 1985-86 is Rs. 1 lakh.

#### (14) Market Research

The objective of this scheme is to open a Market Research Cell to study the demand trends for handicrafts. The setting up of a Market Research Cell is necessary for this purpose. The Plan outlay for the scheme is Rs. 3 lakhs. The outlay for 1985-86 is Rs. 0.50 lakh.

### V. Assistance to Corporations

#### (15) Kerala State Handicrafts Development Corporation

One of the functions of this Corporation is purchase of handicrafts directly from the craftsmen offering fair prices and selling them through its emporia. The Corporation's major source of funds is the share capital contribution by the Government. Additional capital would enable the Corporation purchase more handicrafts from craftsmen and sell them through their emporia. A major reason for fall in demand for handicrafts is the relatively high prices for the products of the Corporation. As long as the prices are not made competitive the Corporation cannot hope to get out of the present difficulties. It is not in a position to stand on its own legs without liberal support from the State Government. Therefore, the Government proposes to invest Rs. 75 lakhs in the Corporation during the Seventh Plan period. The outlay for 1985-86 Plan is Rs. 10 lakhs.

#### (16) Kerala Artisans Development Corporation

This Corporation was registered in October 1981 to render a package of assistance to the poor artisans belonging to the blacksmithy, carpentry,



bronze, coppersmithy, goldsmithy, stone masonry, pottery and shoe-making trades. To achieve this objective it has to be implemented a programme of setting up of primary production units in different trades to accommodate 10 artisans in each centre as a self-employment programme. The concept of a primary production unit is that it will be a small industrial establishment equipped with modern intermediate tools and equipments. A total of 3200 primary production units should be set up all over the State as a phased programme within a period of 10 years. The cost of setting up of one unit is estimated to be Rs. 1 lakh to 3 lakhs. The investment is to be shared by the beneficiaries, the Corporation and the Banks in the ratio of 10: 40: 50 respectively.

As the first stage, the Corporation wanted to implement its programmes in the three districts of Kottayam, Cannanore and Malappuram (Subsequently the programme would be extended to other districts). So far the Corporation could set up only a Development Centre at Kottayam for organising the primary production units under its guidance. The organisational work on the setting up of 15 primary production units is also complete. It is expected that these units will start functioning soon. Governmental assistance in the form of increased share capital participation is required to expand the Corporation's activities. Therefore a sum of Rs. 30 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 6 lakhs.

#### (17) *Kerala State Bamboo Corporation*

The Kerala State Bamboo Corporation came into existence in 1971 as a fully Government owned Company. The major activity of the Corporation is to collect bamboo and reeds in bulk from the forest coupes and to stock them in Corporation's raw material depots with a view to distributing them to the workers engaged in bamboo and reed industry. The marketing of finished goods is also undertaken by the Corporation. Financial support from the Government to the Corporation will be to the extent of Rs. 45 lakhs in the Seventh Plan. The outlay for 1985-86 is Rs. 10 lakhs.

#### VI. *Welfare Measures*

##### (18) *Old age Pension to Craftsmen*

Master Craftsmen above 60 years of age who have distinguished themselves in any one or more traditional crafts of Kerala are eligible to old age pension. Pension is given at the rate of Rs. 100 per mensem. The scheme has to be continued and the outlay provided for this is Rs. 5 lakhs. The 1985-86 Plan outlay is Rs. 1 lakh.

##### (19) *Subsidy for Raw Materials Sold Through Depots of Handicrafts Development Corporation and Apex Society*

Under the scheme raw materials are purchased in bulk by the Handicraft Development Corporation, Trivandrum, Handicraft Apex Society, Ernakulam and Trichur, Lapidary Central Co-operative Society Trichur. These are stocked in their depots and distributed to Craftsmen and member societies at 75% of the cost. The balance 25% would be given to the concerned institutions as subsidy by the Government.

The Seventh Plan provision for the scheme is Rs. 75 lakhs and the provision for 1985-86 is Rs. 10 lakhs.

##### (20) *Craftsmen Welfare Fund*

It is proposed to form guilds of craftsmen and to give assistance to them through the Handicrafts Development Corporation and the Apex Society for creating the Craftsmen Welfare Fund for the welfare of the Craftsmen. The provision of Rs. 5 lakhs is for meeting the expenditure in this regard. The 1985-86 outlay is Rs. 1 lakh.

#### VII.

##### (21) *Special Component Plan*

An amount of Rs. 38 lakhs is earmarked in the Plan for assisting the artisans belonging to Scheduled Castes. Provision for the development of Harijan artisans have been made under almost all the major programmes included in the Sector. In addition to the organisation of handicrafts co-operative societies exclusively for Harijans other major schemes undertaken for their welfare are provisions of incentives to individual craftsmen assistance for the acquisition of modern tools, training in handicrafts, taking shares in Harijan handicrafts co-operatives and old age pension to the artisans belonging to the scheduled castes. The outlay for 1985-86 is Rs. 6 lakhs.

#### VIII.

##### (22) *Tribal Sub Plan*

The amount set apart in the Plan exclusively for the artisans belonging to scheduled tribes is Rs. 4 lakhs. All the major schemes included in this sector have made provisions to assist the artisans belonging to scheduled tribes. The outlay for 1985-86 is Rs. 0.40 lakh.

#### **Large and Medium Industries**

Kerala has been experiencing the problem of low investment and low growth rate in the Industrial sector for a long time now. The share of the State in central investment, which has been consistently on the low side, has also shown a declining trend in recent years. The fact that the working results of the State Government companies are also not encouraging. This has become a deterrent to further investments by the Government in the public sector. The private sector had been shy because private entrepreneurs believed that the situation prevailing in the State was not conducive to industrial investment. However, of late, distinct signs of improvement are seen. The remarkable growth of the electronics industry and the significant increase in the number of joint sector companies point to this. With a stable industrial relations climate, improved power situation, and better infrastructure support and enhanced incentives, Kerala hopes for increased investment and growth rate during the Seventh Plan period. The broad objective is increase of industrial output at an annual growth rate of 10% during the plan period.

The State has to get a larger share of industrial investments by the Centre. Such investments could

be made through expansion and diversification of the existing central sector units as well as establishing new units, especially foot-loose industries. A list of such projects has been prepared for consideration by the centre and is presented elsewhere.

In keeping with the guidelines in the 'Approach to the VII Five year Plan', State sector units will concentrate on better utilisation of capacity, modernisation, up-gradation of technology and promotion of efficiency.

Expansion and diversification proposals will be encouraged. The working of Government companies will be continuously reviewed and monitored to improve efficiency. Steps have already been taken to introduce the concept of corporate planning in public sector units.

The State will encourage industries in the private and joint sectors by providing increased incentives and improved infrastructure facilities. The support system will be generally geared up to meet the objectives and targets of the plan.

In the industrial development of the State a major thrust will be on the development of the electronics industry. Promotion of high value-added and knowledge-based industries like electronics will, in general, be encouraged. The potential in the fields of steel based industries, communications rubber-based industries, chemical, engineering, and mineral based industries etc. will also be fully exploited.

#### A. Promotional and Incentive Schemes

##### 1. Kerala Financial Corporation

Kerala Financial Corporation is engaged in the financing of medium and small scale industries. The funds required for this corporation are mobilised from national financial institutions and the State Government. Share capital contribution of the State Government is its major source of finance. IDBI provides an amount equal to the State's share, as matching contribution. The Corporation proposes to continue its activities with greater vigour during the Seventh Plan period. It has also initiated action to collect loan

arrears from the units, assisted by it which have defaulted repayment over a long period. This will help improve its financing capabilities in the coming years. In order to increase the share capital base of the Corporation, an amount of Rs. 200 lakhs is set apart in the Plan. The outlay for 1985-86 is Rs. 40 lakhs.

##### 2. Kerala State Industrial Development Corporation., Ltd. (KSIDC)

The Kerala State Industrial Development Corporation proposes to expand its promotional and developmental activities during the Seventh Plan period. A large number of entrepreneurs including non resident Indians have shown interest in setting up industries with assistance from the Corporation. It proposes to assist 192 projects of which 156 are new and 36 are on-going projects. About 20 of the on-going projects are expected to be completed by the end of March 1985. The balance of the financial assistance sanctioned to the 20 projects would be disbursed in 1985-86. The remaining 16 ongoing projects are expected to be completed during the Seventh Plan period. An amount of Rs. 1766 lakhs is required by the Corporation for these 36 projects during 1985-90. The 156 new projects proposed to be assisted by the Corporation include projects in the joint sector as well as private sector in the fields of textiles, chemicals, engineering, minerals, rubber etc. The total investment on these 156 projects is estimated at over Rs. 629 crores. The Corporation has to invest Rs. 5925 lakhs on these projects by way of share capital (Rs. 2055 lakh) and loan (Rs. 3870 lakhs). Altogether an amount of Rs. 6608 lakhs is required by the Corporation during the plan period, 1985-90, for assisting the above 192 projects. Taking into account the total resource position of the State, an outlay of Rs. 2500 lakhs is provided as assistance to the Corporation. The Corporation is expected to spearhead the industrial development programme in the State during the Seventh Plan period.

The Corporation will be provided an amount of Rs. 450 lakhs (Rs. 150 lakhs as share capital and Rs. 300 lakhs as market borrowings) during 1985-86. A list of projects sponsored by Kerala State Industrial Development Corporation is presented in Table 11.1.

TABLE 11.1

## Project Proposals of the KSIDC—Share and Loan Investments (1985-86 to 1990-91)

Industrial Category/ Name of Company	Product & Annual Capacity	Location of Factory: District	Sector: Private: Joint	Appr. Cost of Project	Financing Pattern			Expected Investment Disbursement by KSIDC			Expected (Direct) Employment (Nos.)	Year of Completion (Expected)	
					Share	Loan	Subsidy/ Seed Capital/ Others	Share	Loan	Total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>I ENGINEERING, ELECTRICAL, ELECTRONICS</b>													
1. Marine Salvages Ltd.	Ship-breaking: Metal Scraps—15300t.	Kozhikode	Joint	173.00	67.00	96.00	10.00	21.00	50.00	71.00	134	1985-86	
2. N. G. Machines Pvt. Ltd.	Numerically controlled machines: 25 Nos; Lathes: 50 Nos.	Alleppey	Private	104.38	6.81	69.59	27.98	..	35.00	35.00	55	do.	
3. Century Cylinders & Appliances Pvt. Ltd.	LPG Cylinders: 1 lakh Nos.	Malappuram	do.	87.75	18.40	58.00	11.35	..	28.00	28.00	107	do.	
4. Paragon Steels (Pvt.) Ltd.	Alloy Steel Castings: 1250 t.	Palghat	do.	64.20	19.00	40.00	5.20	..	10.00	10.00	63	do.	
5. Kerala Electric Lamp Works Ltd.	GLS Lamps: 10 million Nos. Fluorescent Tubes: 4 ,, M.V. Lamps; 0.03 ,, Sod. Vapour Lamps: 0.01 ,,	Ernakulam	do.	674.00	215.00	449.00	10.00	25.00	..	25.00	1000	1986-87	
6. Eddy Current Controls (India Ltd.)	Portable Electric Tools: 24000 Nos.	Trichur	Joint	150.00	40.00	100.00	10.00	10.40	50.00	60.40	80	do.	
7. Ancillary to Cochin Shipyard	Sub-structurals for Ships 5000 t.	Ernakulam	do.	282.00	110.60	161.40	10.00	28.75	60.00	88.75	206	do.	
8. Steel Forgings Unit	Steel Forgings: 1000 t.	do.	do.	80.00	20.00	54.00	6.00	5.20	24.00	29.20	50	do.	
9. Dissolved Acetylene Cylinder	D.A. Cylinders: 15000 Nos.	Trivandrum	do.	160.00	45.00	105.00	10.00	11.70	60.00	71.70	100	do.	
10. Ferrite Magnets (Kerala Ferrites Ltd.)	F-Magnets: 1000 t.	Quilon	Joint	200.00	52.00	133.00	15.00	13.50	60.00*	73.50	66	1986-87	
11. Printed Circuit Boards	PCBs. 22000 sq. meters	Pathanamthitta	do.	190.00	48.00	127.00	15.00	12.50	60.00	72.50	154	do.	
12. Tape Deck Mechanism	TD Mechanisms: 10 lakh Nos.	Kasargod	do.	200.00	70.00	115.00	15.00	28.60	50.00	78.60	570	do.	
13. Galvanised Plain/Corrugated Coils & Sheets	Galvanized plain corrugated coils & Sheets: 35000 t.	Malappuram	do.	930.00	275.00	640.00	15.00	71.50	..	71.50	350	1987-88	
14. Ceramic Substrates	Alumina & Non-alumina items Rs. 95 lakhs	Trivandrum	do.	250.00	73.00	167.00	10.00	19.00	80.00	99.00	136	do.	
15. Computer Soft Ware	Computer Soft Ware: Rs. 100 lakhs	Ernakulam	do.	60.00	15.00	40.00	5.00	3.90	10.00	13.90	20	do.	
16. Sluice Reflex Valves	Sluice/Reflex Valves Rs. 3 crores	Kottayam	do.	162.00	30.00	80.00	10.00	7.80	40.00	47.80	150	do.	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
17.	Sintered Products	Sintered components like Bushes, gears & washers: 100 t.	Kozhikode	do.	65.00	16.00	43.00	6.00	4.16	13.00	17.16	70	do.
18.	Electrical Resistance Wires	E. R. Wires: 60 t.	Palghat	do.	199.00	56.00	133.00	10.00	14.60	60.00	74.60	80	do.
19.	LPG Cylinder Valves	LPG Cylinder Valves: 6 lakh Nos.	Ernakulam	do.	115.00	28.30	76.70	10.00	7.40	30.00	37.40	110	do.
20.	Magnetic Heads	Magnetic Heads: 2 million Nos.	Cannanore	Private	148.00	34.00	99.00	15.00	3.40	50.00	53.40	260	1988-89
21.	Automobile Garage (1)	Auto-garage unit	Ernakulam	do.	50.00	12.50	33.50	4.00	1.25	3.50	4.75	10	do.
22.	Automobile Garage (2)	do.	Kozhikode	do.	50.00	12.50	33.50	4.00	1.25	3.50	4.75	10	do.
23.	Computer Peripherals	Line Printers: 400 Nos. Floppy Disc Drives: 1000 Nos.	Cannanore	do.	385.00	113.00	257.00	15.00	11.30	..	11.30	435	do.
24.	Sophisticated Process Equipment	S.P. Equipment: 2400 t.	Ernakulam	do.	177.00	87.00	80.00	10.00	8.70	40.00	48.70	360	do.
25.	Automobile Body Building Unit	Bus Bodies: 100 Nos.	Palghat	Joint	65.00	16.20	43.30	5.50	4.20	13.30	17.50	50	do.
26.	Electrical Switches	Ele. Switches: 7.5 lakh Nos.	Wynad	do.	54.00	6.00	36.00	12.00	2.00	6.00	8.00	45	do.
27.	Tool Room	Stampings, Press Tools, etc. Rs. 400 lakhs	Idukki	Private	560.00	162.00	373.00	25.00	16.20	..	16.20	329	do.
28.	Cold Rolling Mill	Cold-rolled strips: 10,000 t.	Malappuram	Joint	520.00	158.00	347.00	15.00	41.08	..	41.08	535	do.
29.	High Tension Strappings	HT Strappings: 10000 t.	Idukki	Private	527.00	151.00	351.00	25.00	15.10	..	15.10	237	1989-90
30.	Coil Springs	Tension, Compression, Torsion, Coil Springs: 500t.	Palghat	Joint	90.00	22.00	60.00	8.00	5.72	30.00	35.72	55	do.
31.	Auto Wheels	Auto Wheels: 3 lakh Nos.	Kasaragod	Private	713.00	223.00	475.00	15.00	22.30	..	22.30	630	do.
32.	Arc Welding Equipment	A-W-Equipment 3100 Nos.	Pathanamthitta	do.	329.00	95.00	219.00	15.00	9.50	..	9.50	267	do.
33.	X-ray Equipment	X-ray Equipment 100 Nos.	Trivandrum	do.	180.00	50.00	120.00	10.00	5.00	60.00	65.00	100	do.
34.	Roller Bearings	Cylindrical & Other Roller Bearings: 2.3 lakh Nos.	Kozhikode	Private	2000.00	657.00	1333.00	10.00	65.70	..	65.70	1000	1989-90
35.	Malleable Iron Castings	MI Castings: 1800 t.	Palghat	do.	223.00	64.00	149.00	10.00	6.40	74.00	80.40	115	do.
36.	AC Line Conditioners, Etc.	AC line conditioners: 3000 lines	Quilon	do.	100.00	24.00	67.00	9.00	2.40	37.00	39.40	70	do.
37.	DC Motors	DC Micromotors: 5 lakh Nos.	Kasaragod	do.	185.00	47.00	123.00	15.00	4.70	60.00	64.70	350	do.
38.	Hosiery Knitting Needles	Hosiery Knitting Needles: 40 million Nos.	Idukki	do.	439.00	121.00	293.00	25.00	12.10	..	12.10	105	do.
39.	Non-Ferrous Foundry	Brass, Aluminium Castings: 400 t.	Trichur	Joint	106.00	25.00	71.00	10.00	6.50	41.00	47.50	75	do.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
40.	Engineering Complex	Pharmaceutical Machinery, Packaging Machinery, Materials Handling Equipment, Fabricated Chemical Equipment, etc. 750 t.	Palghat	do.	270.00	80.00	180.00	10.00	20.80	90.00	110.80	305	do.
41.	Sealed Compressor Unit	Sealed Units for Refrigerators, etc. 30,000 Nos.	Kasaragod	Private	377.00	144.00	218.00	15.00	14.40	..	14.40	250	do.
42.	Cold Drawn Tubes	C.D. Tubes:1800 t.	Pathanamthitta	do.	119.00	25.00	79.00	15.00	2.50	39.00	41.50	105	do.
43.	Copper and Lead Tubes	Copper & Lead Tubes: 2000 t.	Trichur	do.	300.00	90.00	200.00	10.00	9.00	90.00	99.00	100	do.
44.	Welded Gas Cylinders	Welded Gas Cylinders: 25000 Nos.	Kasaragod	Private	107.00	21.00	71.00	15.00	2.10	41.00	43.10	80	do.
45.	Aluminium Extrusions	Alu. Extrusions: 1000 t.	Trichur	do.	215.00	62.00	143.00	10.00	6.20	60.00	66.20	108	1990-91
46.	Tungsten Carbide	Tungsten Carbide Products 65 t.	Quilon	do.	589.00	181.00	393.00	15.00	18.10	..	18.10	230	do.
47.	Voltage Stabilisers	Voltage Stabilizers: 100VA to 1KVA etc	Trivandrum	Joint	60.00	15.00	40.00	5.00	3.90	10.00	13.90	50	do.
48.	Brake Linings and Clutch Facings	Brake Linings & Clutch Facings:750 t.	Pathanamthitta	do.	175.00	43.00	117.00	15.00	11.20	60.00	71.20	250	do.
49.	Bimetallic Bearings	Thin-walled, Bimetallic Bearings: 6 million pieces	Malappuram	Private	900.00	290.00	600.00	10.00	29.00	..	29.00	320	do.
50.	Jelly—Filled Cables	J-F Cables: 6.25 lakh KM	Quilon	do.	1023.00	326.00	682.00	15.00	32.60	..	32.60	175	do.
51.	Hand Tools	Hand Tools: 3000 t.	Pathanamthitta	do.	443.00	133.00	295.00	15.00	13.30	..	13.30	420	do.
52.	Auto Ancillaries	Auto Electricals: 1.8 lakh Nos	Kottayam	Private	530.00	167.00	353.00	10.00	16.70	..	16.70	600	do.
53.	Dash-Board Instruments	D.B. Instruments: 5 lakh Nos.	Idukki	do.	296.00	74.00	197.00	25.00	7.40	90.00	97.40	194	do.
54.	PVC Power Cables	PVC Power Cables: 2000 KM	Kottayam	do.	730.00	233.00	487.00	10.00	23.30	..	23.30	330	do.
55.	Automobile Gears	Auto gears: 1.2 million Nos.	Kasaragod	Joint	100.00	20.00	67.00	13.00	5.20	37.00	42.20	20	do.
56.	Industrial Link Chains	Link Chains: 1500 t.	Alleppey	Private	297.00	84.00	198.00	15.00	8.40	90.00	98.40	164	do.
57.	Auto Tyre Tube Valves	Auto Tyre/Tube Valves: 10 m. Nos.	Wynad	do.	360.00	95.00	240.00	25.00	9.50	..	9.50	170	do.
58.	Universal Joint Cross	UJCross for Commercial Vehicles, Cars, Jeeps, Tractors etc. 6 lakh Nos.	Malappuram	do.	180.00	45.00	120.00	15.00	4.50	60.00	64.50	85	do.
59.	Shock Absorbers	Shock Absorbers: 7.5 lakh Nos.	Wynad	Private	468.00	131.00	312.00	25.00	13.10	..	13.10	210	1990-91
60.	Engine Valves	Engine Valves: 3m. Nos.	Pathanamthitta	do.	392.00	116.00	261.00	15.00	11.60	..	11.60	160	do.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
61.	Tie-Rod Ends & Drag Links	Tie-rod Ends & Drag Links: 80,000 Sets	Malappuram	do.	108.00	21.00	72.00	15.00	2.10	36.00	38.10	100	do.
62.	Carburettors	Carburettors: 1.5 lakh Nos.	Kozhikode	Joint	142.00	38.00	94.00	10.00	10.00	47.00	57.00	66	do.
63.	Twist Drills	T-Drills: 2 million Nos.	Kottayam	Private	111.00	27.00	74.00	10.00	2.70	37.00	39.70	85	do.
64.	Cutting Tools	HSS Tool Bits: 3.5 lakh Nos. Hacksaw Blades: 20 Nos. Bandsaw Blades 6 lakh metres	Quilon	do.	122.00	25.00	83.00	15.00	2.50	41.00	43.50	140	do.
65.	Lamp Ancillaries	Tungsten Filaments, etc. 80 m. Nos.	do.	do.	473.00	143.00	315.00	15.00	14.30	..	14.30	140	do.
66.	Ceramic Capacitors	Ceramic Capacitors: 100 m. Nos.	Cannanore	do.	275.00	76.00	184.00	15.00	7.60	90.00	97.60	135	do.
67.	Cinema Arc carbon	C. A. Carbon: 4m. pairs	Malappuram	do.	187.00	47.00	125.00	15.00	4.60	60.00	64.70	380	do.
Sub-Total I (67 Projects)					20396.33	6037.31	13449.99	867.03	836.51	2116.30	2952.81	13911	
<b>II CHEMICAL &amp; ALLIED INDUSTRIES INCLUDING PESTICIDES &amp; DYES</b>													
68.	Pigments India Ltd.	Industrial Pigments: 2040 t.	Trichur	do.	150.00	40.00	86.00	24.00	7.40	55.00	62.40	179	1985-86
69.	Union Air Products Pvt. Ltd.	Oxygen 0.39 m.cu.mtr. Nitrogen: 0.1"	Ernakulam	Private	96.00	10.00	64.00	22.00	..	33.00	33.00	25	do.
70.	Yugma Chemicals Ltd.	Calcium Carbide: 7500 t.	Cannanore	do.	196.00	51.00	130.00	15.00	8.00	56.00	64.00	80	do.
71.	Pragati Paints Ltd.	Paints, Enamels, Varnishes, etc. 3000 t.	do.	Joint	226.00	79.15	131.85	15.00	20.58	55.00	75.58	115	do.
72.	Nylon Fishing Nets (Seven Seas Nylons Ltd.)	N. F.nets: 120-320 t.	Ernakulam	do.	96.00	9.40	64.00	22.60	2.43	40.00	42.43	81	do.
73.	HDPE Jerry Cans	HDPE Jerry Cans: 2 lakh Nos.	Alleppey	do.	45.00	10.00	30.00	5.00	2.60	25.00	27.60	55	do.
74.	Explosive Auxillaries	Detonators/fuses: 10m. Nos.	Malappuram	do.	140.00	31.00	94.00	15.00	8.06	47.00	55.06	60	1986-87
75.	Synthetic Camphor	Synthetic Camphor: 500 t.	Trivandrum	do.	60.00	15.00	40.00	5.00	3.90	30.00	33.90	38	do.
76.	Nitrous Oxide	Nitrous Oxide: 10m. litres	Malappuram	do.	100.00	20.00	67.00	13.00	5.20	30.00	35.20	52	do.
77.	Expandable Polystyrene Beads	Exp. Polystyrene beads: 1000 t.	Idukki	Private	250.00	58.00	167.00	25.00	5.80	80.00	85.80	60	1986-87
78.	Cochin Fertilizers & Chemicals Ltd.	Agrochemicals: 800t.	Ernakulam	Joint	80.00	19.00	53.50	7.50	5.00	23.50	28.50	60	do.
79.	Activated Carbon	Activated Carbon: 1200 t.	Alleppey	do.	185.00	46.50	123.50	15.00	12.10	60.00	72.10	170	do.
80.	Sunflag Nylons Ltd.	Nylon 6 Filament Yarn: 6000t.	Trivandrum	do.	4900.00	1690.00	3200.00	10.00	439.40	..	439.40	400	do.
81.	HDPE/PPE Circular Woven Sacks	PP Woven Sacks: 400t.	Alleppey	do.	97.00	20.00	65.00	12.00	5.20	30.00	35.20	65	do.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
82.	Hydraxy Coumarin	Hydraxy Coumarin & Diethyl Aniline: 90 t.	Quilon	do.	80.00	16.00	53.00	11.00	4.20	20.00	24.20	40	do.
83.	Multilayer Plastic Films and Sheets	Co-extruded Plastic Films: 1000 t.	Idukki	do.	135.00	20.00	90.00	25.00	5.20	40.00	45.20	70	do.
84.	Dowtherm	Diphenyl-Diphenyl Oxide: 3000 t.	Malappuram	Private	1035.00	330.00	690.00	15.00	33.00	..	33.00	140	1987-88
85.	Vinyl Acetate Monomer	VA Monomer: 5000 t.	Kottayam	Joint	800.00	256.00	534.00	10.00	66.56	..	66.56	230	do.
86.	Copper-Clad Laminates	C.C. Laminates: 2.5 lakhs sq. mtr.	Idukki	do.	400.00	107.00	268.00	25.00	28.00	..	28.00	120	do.
87.	Sulphuric Acid	Sulphuric Acid: 900 t.	Alleppey	do.	45.00	9.00	30.00	6.00	2.50	..	2.50	10	do.
88.	Polyvinyl Alcohol Polyvinyl acetate	Polyvinyl Alcohol:1000t. Polyvinyl Acetate: 2000 t.	Trichur	do.	250.00	74.00	166.00	10.00	19.24	80.00	99.24	100	do.
89.	Linear Alkyl Benzene	LA Benzene: 50000t.	Ernakulam	do.	5000.00	1530.00	3460.00	10.00	398.00	..	398.00	350	1989-90
90.	Polyester Filament Yarn	Polyester F. Yarn: 10000t. Methanol: 2865t.	Trivandrum	Private	7500.00	2490.00	5000.00	10.00	249.00	..	249.00	264	do.
91.	Potassium Chlorate	Potassium Chlorate: 4000t. Sodium Chlorate: 2000 t.	Alleppey	Private	300.00	85.00	200.00	15.00	8.50	90.00	98.50	120	do.
92.	Benzyl Compounds	Benzyl Acetate, B-Alcohol Benzyl Chloride: 300 t.	Malappuram	Joint	54.00	12.00	36.00	6.00	3.12	6.00	9.12	110	do.
93.	Methyl Parathions	M-Parathions:500 t.	do.	do.	172.00	42.00	115.00	15.00	10.92	60.00	70.92	85	do.
94.	Sodium Hydrosulphite	Sod. Hydrosulphite: 3000 t.	do.	do.	63.00	12.00	42.00	9.00	3.12	10.00	13.12	85	do.
95.	Potassium Nitrate	Pot. Nitrate: 1000 t.	Kasaragod	do.	75.00	15.00	50.00	10.00	3.90	20.00	23.90	40	do.
96.	Gallic Acid	Gallic Acid: 100 t.	Wynad	do.	60.00	6.50	40.00	13.50	2.00	10.00	12.00	45	do.
97.	Chemical Intermediate Complex	Ethyl Formate, Diethyl Melonate Ortho-amino Phenol etc. 1000 t.	Kozhikode	Private	300.00	90.00	200.00	10.00	9.00	50.00	59.00	50	1990-91
98.	Red Phosphorous	Red Phosphorous: 300t.	Pathanamthitta	Joint	80.00	15.00	54.00	11.00	3.90	10.00	13.90	50	do.
99.	Zinc Phosphide & Aluminium Phosphide	Zinc/Aluminium Phosphide: 300t.	Cannanore	Private	227.00	50.00	152.00	15.00	6.00	70.00	76.00	125	do.
100.	Trimethyl Propane	T-M-Propane: 2000 t.	Kottayam	do.	250.00	73.00	167.00	10.00	7.30	30.00	37.30	60	do.
101.	Diphenyl Amine	D-P-Amine:600 t.	Quilon	do.	154.00	36.00	103.00	15.00	3.60	50.00	53.60	87	do.
102.	Alpha Naphthyle Amine	A-N-Amine:375 t.	Pathanamthitta	do.	127.00	32.00	85.00	10.00	3.20	30.00	33.20	82	do.
103.	Melonic Esters	Melonic Esters: 425 t.	Trivandrum	Private	159.00	43.00	106.00	10.00	4.30	50.00	54.30	75	1990-91

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
104.	Diethyl Thiophosphoryl Chloride	DE-TP-Chloride: 300t	Alleppey	do--	90.00	18.00	60.00	12.00	1.80	20.00	21.80	51	-do-
105.	Chlorinated Polyethylene Products	Chlo-PE-Products: 1000t.	Kottayam	do-	434.00	134.00	290.00	10.00	13.40	..	13.40	154	-do-
106.	Polyurethane Foam Cloth	PU-Foam Cloth: 3m.sq.mtr.	Quilon	-do-	350.00	100.00	235.00	15.00	10.00	..	10.00	100	100
107.	Alkyl Phenol	Noyl Phenol: 2000t. Dodecyl Phenol :2000t.	Ernakulam	-do-	675.00	215.00	450.00	10.00	21.50	..	21.50	100	-do-
108.	Aluminium Chloride	Alu, Chloride: 1500t.	Quilon	-do-	200.00	52.00	133.00	15.00	5.20	60.00	65.20	50	-do-
109.	Aceto Phenone	Acc. Phenone: 1000 t.	Alleppey	-dc-	100.00	20.00	67.00	13.00	2.00	30.00	32.00	50	-do-
110.	Oxo-Alcohols	Iso-octanol, Isodecanol, Iso-tri-decanol: 6000t.	Malappuram	-do-	1750.00	570.00	1105.00	15.00	57.00	..	57.00	440	-do-
111.	Precipitated Calcium Carbonate	Calcium Carbonate: 3000t.	Cannanore	Joint	132.00	29.00	88.00	15.00	7.54	40.00	47.54	120	-do-
112.	Sodium Penta Chlorophenate	Sod Penta. Chlorophenate: 330t:	Alleppey	-do	57.00	11.00	38.00	38.00	2.86	8.00	10.86	41	-do-
113.	Insoluble Sulphur	Insoluble Sulphur:1500t.	Pathanamthitta	Private	350.00	105.00	230.00	15.00	10.50	..	10.50	100	-do-
114.	Surfactants	Fatty alcohol sulphate:1500t. Alkanolamides : 150t. Fatty acid Esters : 150t. Ethylene Oxide Condensates: 500t.	Trivandrum	-do-	108.00	26.00	78.00	10.00	2.60	30.00	32.60	100	-do-
Sub-Total II (47 Projects)					28133.00	8732.55	18784.85	615.60	1534.63	1378.50	2913.13	5084	

### III DRUGS & PHARMACEUTICALS

115.	Thompson Drugs & Chemicals Ltd.	Chloroquin Diphosphate: 50t.	-do-	-do-	150.00	35.00	100.00	15.00	9.10	40.00	49.10	60	1985-86
116.	Gelatine Capsules	Empty Hard Gel.Capsules: 400-600 Million Nos.	Trichur	-do-	450.00	140.00	300.00	10.00	36.40	..	36.40	120	1986-87
117.	Advetist Chemicals Ltd.	Chloramphenicol: 50 t.	Cannanore	-do-	80.00	16.00	53.00	11.00	4.16	30.00	34.16	65	-do-
118.	Beta Naphthole & Bon Acid	B-Naphthole: 3800t; B-Acid : 400t.	Kottayam	-do-	150.00	40.00	100.00	10.00	10.40	50.00	60.40	75	1987-88
119.	Beta Ionone	B-Ionone: 200t	Alleppey	-do-	80.00	16.00	53.00	11.00	4.16	30.00	34.16	50	-do-
120.	Antibiotic Drug Formulations	Penceilin, Tripowder, etc. Rs.4 crores	Trivandrum	-do-	245.00	71.00	164.00	10.00	18.50	50.00	68.50	250	1988-89
121.	Anhydrous Dextrose	Anhydrous Dextrose: 3750t.	-do-	Private	155.00	41.00	104.00	10.00	4.10	44.00	48.10	62	-do-
122.	Piparazine & Salts	Piparazine & Salts: 150 t.	Alleppey	-do-	146.00	33.00	98.00	15.00	3.30	40.00	43.30	147	-do-



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
123.	Bulk Drugs Complex	Diazepar: 2.4t; Trimethoprine; 6t.; Mebendazole: 2.5t.; Salbutamol 0.3t.	Trivandrum	-do-	83.00	20.00	56.00	7.00	2.00	25.00	27.00	60	1989-90
124.	Enzymes	Enzymes: 10t.	Idukki	-do-	400.00	108.00	267.00	25.00	10.80	..	10.80	120	-do-
Sub-Total III (10 Projects)					1939.00	520.00	1295.00	124.00	102.92	309.00	411.92	909	
<b>IV. RUBBER-BASED INDUSTRIES</b>													
125.	Chlorinated Rubber	Chlorinated Rubber: 650 t.	-do- -do-	-do-	414.00	123.00	276.00	15.00	32.00	..	32.00	80	1986-87
126.	Surgical Rubber Goods	S-R-Goods: 11.46 lakh Nos.	Kottayam	-do-	280.00	83.00	187.00	10.00	21.60	60.00	81.60	200	1987-88
127.	Butyl Rubber (Kerala Rubber & Reclaims Ltd.)	Butyl Rubber Tubes: 4 lakh Nos.	Ernakulam	-do-	90.00	20.00	60.00	10.00	5.20	30.00	35.20	70	-do-
128.	Reclaimed Rubber	R-Rubber: 3000t.	Kozhikode	Private	140.00	36.00	94.00	10.00	3.60	30.00	33.60	100	1988-89
129.	Precured Rubber Tread.	P-C-Rubber Treads:1500t.	Idukki	-do-	300.00	75.00	200.00	25.00	7.60	90.00	97.50	200	1989-90
Sub-Total IV (5 Projects)					1224.00	337.00	817.00	70.00	69.90	210.00	279.90	650	
<b>V. CERAMICS/MINERAL-BASED INDUSTRIES</b>													
130.	Glazed Tiles Kerala Ltd.	Glazed Wall & Flooring Tiles: 5000t.	-do-	-do-	630.00	200.00	420.00	10.00	52.00	..	52.00	110	1986-87
131.	Textured Foam Covering	Textured Decorative Moulded Foam Covering and Wall Covering: 3m. sq. mtr.	Alleppey	-do-	610.00	185.00	410.00	15.00	48.10	..	48.10	200	
132.	Granite Polish Unit	Granite Processing: 1.2 lakh sq. ft.	Cannanore	-do-	120.00	25.00	80.00	15.00	6.50	30.00	36.50	50	-do-
133.	Diamond Processing Unit	Diamond Polishing: 3 lakh pcs.	Trivandrum	Private	100.00	24.00	67.00	9.00	2.40	20.00	22.40	100	1987-88
134.	Graphite Mining & Beneficiation	Graphite/Processed: 2000t.	Ernakulam	Joint	200.00	55.00	135.00	10.00	14.30	50.00	64.30	100	-do-
135.	Sanitary Wares	Sanitary Wares: 1200 t.	Trichur	-do-	241.00	70.00	161.00	10.00	18.20	80.00	98.20	75	-do-
136.	Ceramic Fibre	Ceramic Fibre: 600t.	Alleppey	Private	500.00	160.00	325.00	15.00	16.00	..	16.00	50	1988-89
137.	Ball Clay Beneficiation	Ball Clay Processing: 10,000t.	Ouilon	Joint	70.00	14.00	47.00	9.00	3.60	17.00	20.60	30	-do-
138.	Aluminium Powder	Alu. Powder: 1000t:	Alleppey	-do-	73.00	14.00	49.00	10.00	3.65	19.00	22.65	60	-do-

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
139.	Iron Powder	Iron Powder: 1000t.	Quilon	Private	145.00	33.00	97.00	15.00	3.30	30.00	33.30	68	-do-
140.	Polycster Concrete	Polycster Concrete:1500t.	-do-	-do-	120.00	25.00	80.00	15.00	6.50	30.00	36.50	80	1989-90
141.	Glass Wool	Glass Wool: 4000t.	Alleppey	-do-	578.00	177.00	386.00	15.00	17.70	..	17.70	270	-do-
142.	Polycil HT Insulators	Poly. HT. Insulators: 5000t.	-do-	Joint	300.00	85.00	200.00	15.00	22.10	90.00	112.10	400	-do-
143.	Mini Cement Plant	Portland Cement: 66000t.	Cannanore	Private	426.00	127.00	284.00	15.00	12.70	..	12.70	300	1990-91
144.	Sheet Glass	Sheet Glass: 50,000t.	Alleppey	-do-	1500.00	485.00	1000.00	15.00	48.50	..	48.50	1000	-do-
Sub-Total V (15 Projects)					5613.00	1679.00	3741.00	193.00	275.55	366.00	641.55	2893	
<b>VI. TEXTILES</b>													
145.	Damodar Textiles Pvt. Ltd.	Fibre Dyeing: 900t.	Palghat	Private	90.00	22.50	60.00	7.50	2.25	60.00	62.25	86	1985-86
146.	Textile Processing Unit	Textile Processing: 6—7.5m.mtr.	Alleppey	do.	234.00	63.00	156.00	15.00	6.30	80.00	86.30	300	1989-90
147.	Sewing Threads	Cotton/Synthetic Threads— Coloured & white: 600 t.	Palghat	do.	200.00	56.00	134.00	10.00	5.60	60.00	65.60	300	1990-91
Sub-Total VII (3 Projects)					524.00	141.50	350.00	32.50	14.15	200.00	214.15	686	
<b>VII. Wood-Based /Related Industries</b>													
148.	Veneers & Laminations (India) Ltd.	Decorative Plywood: 3.24 lakh sq. mtr.	Pathanamthitta	Joint	23.25	..	13.50	9.75	..	13.50	13.50	20	1985-86
149.	do.	Wooden Furniture: 30000 chairs & 15000 tables	do.	do.	260.00	72.00	173.00	15.00	20.00	93.00	113.00	100	1988-89
150.	Wooden-Panelled Doors & Windows	W-P-Doors & Windows Door Frames: 4800 Nos.; Window frames: 3200 Nos.; Door shutters: 7200 Nos. Window Shutters: 4800 Nos.	do.	do.	82.00	20.00	55.00	7.00	5.20	25.00	30.20	60	1987-88
Sub-Total VII (3 Projects)					365.25	92.00	241.50	31.75	25.20	131.50	156.70	180	
<b>VIII Paper/Boards</b>													
151.	Sri. Sai Mahraj Pulp & Paper Mills Ltd.	Straw Boards: 9000 t.	Palghat	Joint	106.00	30.00	67.00	9.00	9.00	18.50	27.50	106	1985-86
152.	Metallised Paper	Met. Paper: 1000t.	Idukki	Private	111.00	12.00	74.00	25.00	1.20	30.00	31.20	100	1988-99
153.	Magazine Paper	Magazine Papers: 6000t.	do.	do.	3000.00	835.00	2140.00	25.00	83.50	..	83.50	200	1990-91
Sub-Total VIII (3 Projects)					3217.00	877.00	2281.00	59.00	93.70	48.50	142.20	406	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>IX. Leather &amp; Leather Products</b>													
154	Leather House Slippers	L-H-Slippers: 3 Lakh Nos.	Trivandrum	do.	100.00	23.00	67.00	10.00	6.00	30.00	36.00	85	1986-87
		Sub-Total IX(1 Project):			100.00	23.00	67.00	10.00	6.00	30.00	36.00	85	
<b>X. Food Processing Industries</b>													
155.	Poonmudi Tea Pack Ltd.	Tea Bags: 108 Nos.	Ernakulam	do.	71.50	25.00	41.00	5.50	3.88	10.10	13.98	25	1985-86
156.	Kaveri Meat Exports Co., Ltd.	Processed Meat: 1.5 lakh cattle/Bufalos	Alleppey	Joint	80.00	16.00	54.00	10.00	4.16	24.00	28.16	90	1986-87
157.	High Fructose Syrup	H-F. Syrups: 3000t.	Trichur	do.	120.00	30.00	80.00	10.00	7.80	40.00	47.80	80	do.
158.	Cola Bottling Plant	Soft Drinks: 5 lakh cases of 24 bottles each	Alleppey	Private	120.00	30.00	75.00	15.00	7.80	30.00	37.80	58	1977-88
177.	Cocoa Butter Equivalent	Cocoa-Butter-Equivalent 5000.t	Idukki	do.	294.00	73.00	196.00	25.00	7.30	90.00	97.30	115	1988-89
160.	Instant Coffee	Instant Coffee: 720 t.	Wynad	do.	287.00	67.00	195.00	25.00	6.70	90.00	96.70	85	1989-90
161.	Protein Isolate	Protein Isolate: 1500t.	Idukki	do.	133.00	19.00	89.00	25.00	1.90	30.00	31.90	75	do.
162.	Cocoa Processing Unit	Chocolates, Malted Food, Malted Extracts, etc., 20100t.	Idukki	Joint	600.00	175.00	400.00	25.00	45.50	..	45.50	125	1990-91
		Sub-Total X (8 Projects)			1705.50	435.00	1130.00	140.50	85.04	314.10	399.14	653	
<b>XI. Hotel Industry</b>													
163.	Kerala Hotels (P) Ltd.	3-star Hotel (71 tooms)	do.	do.	178.00	63.00	105.00	10.00	..	40.00	40.00	149	do.
164.	May Flower Hotels (P) Ltd.	4-star Hotel (33 Rooms)	Ernakulam	do.	118.00	43.00	65.00	10.00	..	40.00	40.00	86	do.
165.	Hotel Kandath International (P) Ltd.	3-Star Hotel (44 Rooms)	Palghat	do.	255.00	95.00	150.00	10.00	..	50.00	50.00	100	1986-87
166.	Calicut Hotels	3-star Hotel (50 Rooms)	Kozhikode	do.	150.00	40.00	100.00	10.00	..	40.00	40.00	70	1987-88
		Sub-Total XI (4 Projects)			701.00	241.00	420.00	40.00	..	170.00	170.00	405	
<b>XII. Miscellaneous Industries</b>													
167.	Syngems (India) Pvt. Ltd.	Synthetic gems: 26730kg.	Palghat	do.	150.00	40.00	100.00	10.00	..	40.00	40.00	63	1985-86
168.	Zodiac Oils & Chemicals Pvt. Ltd.	Rice Bran Oil from 1.8 lakh tonnes of RB.	Malappuram	do.	112.00	30.00	68.00	14.00	..	38.00	38.00	95	do.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
169.	Printing Press	Rs. 50 lakhs (Turnover)	Kozhikode	Joint	75.00	15.00	50.00	10.00	6.50	20.00	26.50	35	1986-87
170.	Cattle Feed	Cattle Feed: 25000t.	Palghat	Private	165.00	45.00	110.00	10.00	4.50	30.00	34.50	65	1987-88
171.	Rice Bran Oil	R.B. Oil from 0.9 lakh t. of Rice Bran	Palghat	Joint	114.00	28.00	76.00	10.00	7.28	30.00	37.28	60	1988-89
172.	Industrial Alcohol	Indl. Alcohol: 6m. litres	Trichur	Private	196.00	55.00	131.00	10.00	5.50	60.00	65.50	60	1989-90
Sub-Total XII (6 Projects)					812.00	213.00	535.00	64.00	23.78	218.00	241.78	378	
Grand Total (172 Projects)					64730.08	19328.36	43112.34	2247.38	3067.38	5491.90	8559.28	26,240	

### 3. *State Investment Subsidy*

The State Government is providing investment subsidy to new industries set up in all districts where central investment subsidy is not available. The extent of assistance is limited to 10% of the capital invested subject to a maximum of Rs. 10 lakhs. In Quilon and Pathanamthitta districts the rate of subsidy has been raised to 15% or Rs. 15 lakhs whichever is less. Considering the anticipated increase in the number of units an amount of Rs. 1500 lakhs is provided in the Seventh Plan for this scheme. The outlay for the Annual Plan 1985-86 will be Rs. 100 lakhs.

### 4. *Interest Free Sales Tax Loan*

This scheme is intended for giving interest free loan to the companies implementing diversification or substantial expansion programmes, against the sales tax paid by the units in the preceding years. The scheme could not be implemented as contemplated originally due to non-finalisation of certain operational details. Now the State Government have taken a decision to implement this scheme as expeditiously as possible. Keeping the overall resource position in view, an amount of Rs. 1500 lakhs is provided for the scheme in the Seventh Plan. The Annual Plan outlay for 1985-86 is Rs. 50 lakhs.

### 5. *Preparation of Feasibility/Project Reports*

The KSIDC is operating a scheme, on behalf of the State Government under which 50% of the cost for the preparation of feasibility/project reports will be met by it. It is expected, that the number of entrepreneurs seeking assistance from the Corporation will increase in the coming years and hence an outlay of Rs. 100 lakhs is provided for the purpose. An outlay of Rs. 15 lakhs is earmarked for this scheme in 1985-86.

### 6. *Subsidy on Electricity Duty*

Under this scheme all industrial units newly started or completed expansion after 1-4-1977 will be exempted from payment of electricity duty for a period of three years. In the case of new units their electricity bills will be limited to the extent of concession granted. In the case of expanded units, they have to claim the concession as a subsidy. The scheme could not be implemented during the Sixth Plan period as envisaged earlier. It is now decided to implement this scheme during the Seventh Plan period for which an amount of Rs. 500 lakhs is provided, for 1985-86 the outlay will be Rs. 25 lakhs.

### 7. *Centre for Management Development*

The Centre is imparting training to the functional managers of industrial concerns in various fields of management. It has drawn up a programme for the expansion of its activities during the Seventh Plan, including setting up of additional facilities such as reference library etc. An amount of Rs. 25 lakhs is provided in the Plan as State assistance to the Centre for meeting the expenses connected with this expansion programme. An amount of Rs. 4 lakhs is set apart for 1985-86 for meeting the expansion in connection

with purchase of books, furniture, equipment for the library, audio visual equipment, etc.

### 8. *Export Processing Zone at Cochin (CEPZ)*

The Government has already initiated action for the establishment of an Export Processing Zone at Cochin. In accordance with the understanding with the Government of India, the State Government has to provide the infrastructure facilities such as water supply, electricity and roads. The expenditure will be apportioned among the different participating departments. Some special incentives to units in CEPZ are also proposed. The provision of Rs. 1000 lakhs is meant for the expenditure connected with providing infrastructure facilities (Rs. 500 lakhs) and incentives (Rs. 500 lakhs). An amount of Rs. 240 lakhs is set apart in the Annual Plan for 1985-86 towards creation of infrastructure facilities.

### 9. *Kerala State Export Trade Development Council*

The Council which has been formed as a co-ordinating agency to study the problems of exports from the State and to evolve appropriate measures for enhancing exports has proposed to expand its activities during the Seventh Plan period. Three divisions have been proposed for discharging the functions relating to (i) information services (ii) marketing and product promotion and (iii) training programmes. In order to carry out the functions assigned to these divisions they have to be provided with adequate staff and other required facilities. An outlay of Rs. 100 lakhs is provided in the plan for meeting the expenses connected with acquisition of capital assets such as furniture, fixtures, office equipment, vehicles etc. The 1985-86 Annual Plan outlay for the activities of the council will be Rs. 15 lakhs.

### 10. *Industrial Development Areas*

Under this scheme certain Industrial Development Areas have been established in the State. A new industrial development area is being established at Pudukkottai in Palghat District and steps have been taken to acquire an area of 878.85 acres for this purpose. It is proposed to establish more Development Areas in various parts of the State with all basic infrastructure facilities. The provision of Rs. 500 lakhs in the Seventh Plan is to meet the expenses connected with payment of compensation to the land owners and providing infrastructure facilities in Development Area at Pudukkottai and to develop areas in other parts of the State. An outlay of Rs. 50 lakhs is earmarked for this scheme in 1985-86 to be incurred in connection with the ID Area at Pudukkottai in Palghat District.

### B. *Holding Companies*

### 11. *Kerala State Electronics Development Corporation Ltd.*

The High Level Committee on Industry Trade and Power constituted by the Government of Kerala in 1982 has identified the electronics sector as one of the key sectors to be developed in Kerala during the Seventh Plan period. A strong foundation for the growth of this sector has already been laid in the State with the establishment of the Research and Development Centre, Testing and Development Centre and the

prime promotional agency viz., the Kerala State Electronics Development Corporation. Three major areas proposed to be given special emphasis during the plan period are (1) communication equipment and systems, (2) computers and data processing and (3) process control instrumentation. The Kerala State Electronics Development Corporation, the nodal agency for the development of electronics industry in the State, has drawn up certain projects for inclusion in the Seventh Plan. The total investment required by the Corporation for the implementation of these projects is estimated at Rs. 111.87 crores. This involves investment on the on-going projects as well as new schemes. Ninespillover projects, including revitalisation of subsidiary companies and 16 new projects comprising expansion/diversification and modernisation of existing projects have been proposed by the Corporation (Project-wise details are given separately).

Altogether an amount of Rs. 5000 lakhs (Rs. 2000 lakhs as share capital and Rs. 3000 lakhs as market borrowings) is provided in the Plan as State assistance towards these projects. The balance amount will be mobilised by the Corporation through institutional finance and internal generation of funds. The State sector outlay for 1985-86 Annual Plan will be Rs. 550 lakhs (Rs. 300 lakhs as share capital and Rs. 250 lakhs as market borrowings). This outlay will be utilised for completion of spillover works and for new schemes such as computer centre for data processing and software development and for assisting projects like ceramic capacitors proposed in the joint sector. Details such as total project cost State sector outlay, envisaged capacity, employment potential etc. of the spillover projects to be completed and expansion/diversification/new projects proposed to be taken up by the Corporation are given in Table 11.2.

TABLE 11.2

Kerala State Electronics Development Corporation Limited—Scheme-wise State Sector Outlay (1985-90)

(A) Spillover Projects

(Amount in Rs. lakhs)

Name of Project	Project Cost	Estimated Investment during VI Plan	Cost of Spill over in VII Plan	Proposed State Sector Outlay during VII Plan	Capacity per Annum	Employment by 1990 (Nos.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Cybernetics Systems Products	400	100	300	120	Rs. 15 crores worth system	300
2. PGM Multiplexing Terminals	250	80	170	70	500 Terminals	300
3. Analytical Instruments	100	28	72	36	500 Nos.	100
4. Data Acquisition Systems	200	50	150	75	10 Systems	200
5. Binary Process Controllers	100	28	72	36	150 Nos.	100
6. Central Tool Room	100	50	50	50	..	50
7. Control Valves (Jt. Sector)	500	200	300	..	3000 Nos.	500
8. Sidkel TV (Jt. Sector)	75	25	50	50	10000 Nos. B & W TV 10,000 colour TV.	200
9. Keltron Component Complex Limited	150	120	30	30	48-Milpes	..
10. Revitalisation of Subsidiary Companies						
1. Keltron Power Devices Ltd.	210	142	68	68	..	..
2. Keltron Rectifiers Ltd.	186	131	55	55	..	..
3. Keltron Counters Ltd.	39	38	1	1	..	..
4. Keltron Resistors Ltd.	29	22	7	7	..	..
5. Bielectro Magnetics Ltd.	110	48	62	62	..	..
<b>Total—A</b>	<b>2449</b>	<b>1062</b>	<b>1387</b>	<b>660</b>	<b>..</b>	<b>1750</b>

(B) *New Projects*

Name of Project	Project Cost	Proposed State Sector Outlay in VII Plan	Capacity per/Annura	Employment Potential
(1)	(2)	(3)	(4)	(5)
1. Telephone Instruments	500	100	5 lakh Pieces	500
2. Electronic Rural Automatic Exchange	500	100	50,000 lines	500
3. Colour TV/VCR	800	100	100,000 Nos.	500
4. Computer Centre & Software Development	1000	500	..	3000
5. Joint Sector Projects Already Identified				
(i) Ceramic Capacitors	300	35	100 Mil Nos.	300
(ii) Ceramic Substrates	145	15	2000 Mil Nos.	50
6. Electronic PABX System	500	100	40,000 lines	500
7. Other Joint Sector Projects	1000	150	..	1000
8. Medical Electronics Projects	300	150	Rs. 5 crores worth Equipments	300
<b>Total—B</b>	<b>5045</b>	<b>1250</b>		<b>6650</b>

(C) *Expansion, Diversification and Modernisation of Existing Projects*

1. Keltron Controls Division	1000	500	Rs. 100 Crores Worth Systems	1000
2. Cybernetics Systems Division	400	300	Rs. 30 Crores Worth Systems	300
3. Industrial Electronics Division	450	300	Rs. 30 Crores oWrth Systems	1000
4. Consumer Electronics Division	300	200	(Various Products)	500
5. Mass Communication Division	300	200	(Product Diversification Existing 3450 Nos. Instruments/Systems)	300
6. PCB Division	75	60	„ 4000 M <sup>2</sup>	200
7. Special Products Division	200	150	Rs. 10 Crores Worth System	200
8. Components Division				
1. Keltron Component Complex Ltd	300	200	100 Mil Nos.	500
2. Keltron Crystals Ltd	100	100	5 Mil Nos.	200
3. Keltron Magnetics Ltd	50	50	..	100
4. Keltron Resistors Ltd	80	80	100 Mil Nos.	100
5. Keltron Power Divisions Ltd	1000	500	105 Mil Nos.	700
6. Keltron Rectifiers Ltd	200	150	Mil Nos.	500
7. Dielecto Magnetic Ltd	100	100	Products Diversification	200
8. Keltron Counters	100	100	do.	400
9. Keltron Projectors	50	50	do.	150
10. Keltron Entertainment System	50	50	do.	150
<b>Total—C</b>	<b>4755</b>	<b>3090</b>	..	<b>6500</b>
<b>Grand Total</b>	<b>12249</b>	<b>5000</b>	..	<b>14090</b>

(A) *Spillover Projects*(1) *Cybernetics Systems Products*

The Corporation has entered into the area of Mini-Micro computers and microprocessor-based systems with a number of products such as a range of computer systems for various applications, view data systems, colour graphic terminals, cash registers, micro-processor based card attendance system, electronic ticket issuing systems, data communication systems etc. The Electronic Development Corporation has taken up a number of high technology products and these are proposed to be taken up for commercial production through this division. The production activities of this division started with the infrastructure facilities available at Keltron Equipment Complex, Karakulam. However, in view of the need to have full-fledged facilities to take up commercial production of these high-technology products, a project for setting up a production unit at Trivandrum was finalised. Work in this direction has started. The total project cost is estimated to be Rs. 400 lakhs and it is estimated that by end of the Seventh Plan period an investment of Rs. 100 lakhs would be made. The balance of Rs. 300 lakhs is earmarked for spill over investment during the Seventh Plan period.

(2) *PCM Multiplexing Terminals*

The Corporation is entering the area of Communication Equipments which were hitherto reserved for manufacture by a central public sector corporation. The Corporation is planning to set up a unit for manufacture of this product with indigenous technology. A contract for supply of terminals on a trial basis to P&T is presently under execution. Project work has started using existing facilities.

(3) *Analytical Instruments*

Setting up of production facilities for on-line analytical instruments is in progress at Keltron Controls, Aroor. The project is implemented in technical collaboration with M/s BBC Kent, UK. Technology transfer will be completed during Sixth Plan period and commercial production of the products is expected by 1985-86.

(4) *Data Acquisition System*

This project is being implemented with technical collaboration from M/s Hitachi Ltd. of Japan. Computer based data acquisition systems required for thermal power plants are proposed to be manufactured at Keltron Controls, Aroor. Technology transfer has already been started and is expected to be completed by the end of Sixth Plan. First phase of the project will be commissioned in 1985-86.

(5) *Binary Process Controllers*

This project is also complementary to existing activities of Keltron Controls, Aroor and is implemented in technical collaboration with M/s. CGEE Alsthom of France. Technology transfer for this is in progress and is expected to be completed by the end of Sixth Plan. Commercial production of the system is proposed to be taken up during 1985-86.

(6) *Central Tool Room*

The Corporation has set up a Central Tool Room for electronics industry at Trivandrum. The first phase of it came into operation during the Sixth Plan period. It is proposed to take up the second phase of this for creation of additional facilities for tool making in the Seventh Plan. In view of the proposed expansion for production of electronic equipment, there will be substantial requirements for precision tooling and this is proposed to be met through this central facility. The proposed investment in Seventh Plan is Rs. 50 lakhs.

(7) *Control Valves Project*

The Corporation is setting up this project in the joint sector through a new company viz., Masoneilan (India) Ltd., in Trichur district. The project implementation has already been started and civil works is in progress at the site. The first phase of the project i.e. assembly of valves from SKD parts is expected to commence by the end of the Sixth Plan period in a rented building. Phased indigenous manufacture of valves will be taken up at the factory in the Seventh Plan. No State sector outlay is proposed during Seventh Plan as the project financing will be from other sources.

(8) *Sidkel T.V.*

This is a joint sector project of the Corporation SIDECO, another public sector undertaking of Government of Kerala. The first phase of the project namely manufacture of Black and White TV has already been started in a rented building at Manjeri in Malappuram district. In the Seventh Plan it is proposed to take up assembly of colour TV receivers also in this unit.

(9) *Keltron Component Complex Ltd.*

This is an Associate Company of the Corporation manufacturing Aluminium Electrolytic Capacitors, at Cannanore. As part of its indigenisation programme, the Company is setting up etching and forming facilities to make etched and formed aluminium foils, which is the basic raw material. Implementation of this programme has already been started. Technology transfer is in progress. The project is expected to be completed during the Seventh Plan period.

(10) *Revitalisation of Subsidiary Companies*

The Corporation has submitted a proposal to Government of Kerala for revitalisation of five of its subsidiary companies which are facing serious operational problems due to shortage of working finance. In view of the favourable market conditions, the performance of these companies can be improved and their operations can be turned profitable if additional investment as proposed is made immediately. The revitalisation programme is expected to be taken up during the terminal year of Sixth Plan (1984-85) and is expected to continue in the first year of the Seventh Plan (1985-86).



**(D) New Projects****(1) Telephone Instruments**

The Corporation has obtained a Letter of Intent for the manufacture of 500,000 Nos. of telephone instruments per annum. The Government of India is presently considering centralised purchasing of technology for the implementation of this project and the decision on this matter is expected to be taken before the end of 1984. Once the matter relating to technology import finalised, the project will be taken up for implementation. As per the new policy the project is allowed for implementation in the joint sector, and the proposals in this direction are under active consideration.

**(2) Electronic Rural Automatic Exchange**

The Corporation has a Letter of Intent for the manufacture of Electronic Rural Automatic Exchange. In view of the proposed expansion of the telecommunication network in the country these types of exchanges are required in large numbers during the Seventh Plan Period. The Corporation is planning to set up a unit for the manufacture of this equipment. The technology purchase of this project is also done by a Sub-Committee appointed by the Government of India and the matter is under finalisation. This project is proposed to be implemented in the joint sector.

**(3) Colour TV/VCR**

With the expansion of the TV network in the country, the demand for Colour TV has increased substantially. A project for setting up of most modern plant with an annual capacity of 100,000 TV receivers per annum is conceived and the negotiations are underway for getting the production technology from one of the reputed manufacturers abroad. It is also proposed to take up manufacture of VCRs in this plant. The project is identified for joint sector participation from nonresident Indians and discussions in this direction are in progress.

**(4) Computer Centre and Software Development**

The software development has been one of the fastest growing sectors in the electronic industry. Considering the large number of educated manpower available in the State the Corporation has conceived a project for setting up of a large Computer Centre for data processing and software development. This is proposed as a major activity and an outlay of Rs. 500 lakhs from the State sector is earmarked for taking up this project during the Seventh Plan period.

**(5) Identified Joint Sector Projects****(i) Ceramic Capacitors**

It is proposed to set up a Ceramic Disc Capacitors project with a capacity of 100 million discs per annum. The Corporation has already negotiated with M/S. Murata Manufacturing Company and a formal technology assistance agreement has been signed. This project with an investment of Rs. 300 lakhs will be taken up for implementation during the Seventh Plan period.

**(ii) Ceramic Substrates**

The Corporation has conceived a project for setting up of a unit for the manufacture of Ceramic Substrates such as cores for resistors etc. M/S. Y.S. Porcelain Tubes Manufacturing Company, Japan has agreed to provide technology required for this project and a formal agreement with them is under finalisation. The project is proposed to be implemented in the joint sector, arrangements for which also have been finalised.

**(6) Electronic PABX System**

In view of the expansion programme proposed by the Government of India in the telecommunication system the demand for Electronic PABX System is expected to increase substantially. The Corporation plans to take up a project for the manufacture of this item in the joint sector during the Plan period. The Corporation has received offers from a number reputed companies for technology transfer.

**7. Other Joint Sector Projects**

The Corporation has as one of its corporate objectives the developmental role for the promotion of electronic industries in the State. In this direction the Corporation proposes to promote setting up of joint sector projects by private entrepreneurs. Development of small scale ancillary units is also proposed.

**8. Medical Electronics Projects**

This is a new area identified by the Corporation for investment during the Seventh Plan period. The Corporation has already made a beginning by development of equipments like foetal heart monitor, ECG etc. which will be taken up for commercial production.

**C. Expansion, Diversification and Modernisation of Existing Projects****(1) Keltron Controls**

The Corporation has set up a modern plant for the manufacture of Process Control Instrumentation System and allied products at Aroor in Alleppey district. Process Control Instrumentation System is a product area identified as a major thrust area for further expansion during the Seventh Plan period. It is also necessary to induct new technologies in this area so that the Corporation can also offer the Process Control Instrumentation with the state-of-art technology. It is proposed to take up products based on distributed control, new range of transmitters etc. in this plant during the Plan period.

**(2) Cybernetics Systems Division**

The Corporation plans to expand the Cybernetics Systems Division during the Plan period. It is proposed to expand the present product range by addition of a number of computer based systems and Micro-Processor based systems. Technology development in this direction has also been initiated at the Electronic Research and Development Centre. Products based on the new generation of the technology will be taken up for diversification of this unit during the Seventh Plan period.

(3) *Industrial Electronics Division*

This unit presently manufactures a range of Industrial Electronics Products such as UPS Systems, Speed Control Systems etc. It is proposed to expand the capacity of this unit and also to take up new products such as high capacity UPS Systems, Static Compensators. etc., during the Plan period.

(4) *Consumer Electronics Division*

The Division proposes to expand its manufacturing and marketing capacity with the addition of new products such as Digital TV, VCR, Colour TV Monitors, Educational Video Products etc. Provision has been made during the Plan period for diversification of this Division.

(5) *Mass Communication Division, Trivandrum*

A number of new projects have been identified for diversification of this Division such as Colour CCTV Systems, FM transmitters, low power TV transmitters etc. These projects have been identified taking into account the expansion of the mass communication demand projected at the national level.

(6) *PCB Division*

The Corporation has set up a PCB Division at Trivandrum manufacturing professional grade PCBs. During the Plan period it is proposed to diversify into manufacture of multi-Layer PCBs. Investment required for this is included in the Plan proposals.

(7) *Special Projects Division*

This Division is presently engaged in supplying special projects to Defence, Space Department etc. meeting their special requirements. In view of the increase in their projected requirements of such systems, it is proposed to expand this unit during the Plan period.

(8) *Component Divisions*

A number of components manufacturing units have been set up through associate subsidiary companies. It is proposed to expand their capacities and to take up new products for diversification. Capacity of Keltron Component Complex Ltd., Cannanore is proposed to be raised to 100M/ year, KCL to 5M/ year and KRL to 200M/year. At Keltron Power Devices Ltd., capacity expansion as well as diversification into Integrated circuits, optoelectronic devices etc. is proposed. At Keltron Rectifiers Ltd. it is proposed to take up diversification to thyristors.

12. *Kerala State Industrial Enterprises Limited.*

The Kerala State Industrial Enterprises, promoted as a holding company has six companies in its fold. The control of two companies viz., The Trivandrum Rubber Works and Kerala Clays and Ceramics Products has been released from the company recently. The Company has drawn up investment proposals for 14 new projects to be implemented through its five subsidiaries during the Seventh Plan period. The total cost of these projects is estimated at Rs. 3321 lakhs and a State sector outlay of Rs. 1310 lakhs is proposed. In addition to this, the spillover requirement of Rs. 129 lakhs for the Aspirin Project (total cost Rs. 1131 lakhs) implemented by the Kerala State Drugs and Pharmaceuticals Limited also is provided. The total outlay provided will thus be Rs. 1439 lakhs.

An outlay of Rs. 200 lakhs is provided in Annual Plan for 1985-86 towards the completion of the Aspirin Project and expansion of BT Bottles manufacturing plant of Kerala State Drugs and Pharmaceuticals, and implementation of General Purpose Alternator Project of Kerala Electrical and Allied Engineering Company etc. Details of the projects such as total project cost, State sector outlay, envisaged capacity, employment potential etc. are given in Table 11.3

TABLE 11.3

**Kerala State Industrial Enterprises Limited**  
**Scheme-wise State Sector Outlay 1985-90**

Name of Scheme/Project	Project cost (Rs. in lakhs)	State Sector Outlay (Rs. in lakhs)	Capacity per Annum	Employment Potential (Nos.)
(1)	(2)	(3)	(4)	(5)
<i>(i) Kerala Ceramics Ltd.</i>				
(a) Mechanisation of China Clay Mine	214	86	1 lakh TPA	400
(b) Expansion of China Clay Processing Plant	115	46	Additional 9000 TPA	100
(c) Rationalisation of Porcelain Division	80	32	Additional 1440 TPA	250
(d) Diversification of Porcelain Division	600	240	..	600
(e) Diversification of Sanitaryware Division	153	61	Additional 1000 TPA.	100
Sub Total	1162	465		1450

(1)	(2)	(3)	(4)	(5)
<i>(ii) Kerala Electrical and Allied Engineering Company Limited</i>				
(a) LPG Cylinders	87	35	3 lakh Numbers	150
(b) Brushless Alternators for General Purpose	300	100	1200 Numbers	234
(c) Brushless Alternators for Automobiles	282	120	1 lakh Numbers	76
Sub Total	669	255		460
<i>(iii) Kerala Soaps &amp; Oils Ltd.</i>				
(a) Soap	700	280	Expansion of Existing 9000 MT to 11000 MT.	50
(b) Vanaspathi	200	80	Expansion of 3000 MT. to 15000 MT.	80
(c) Fatty acid Splitting	200	80	3600 MT.	26
Sub Total	1100	440		156
<i>(iv) Kerala State Drugs and Pharmaceuticals Ltd.</i>				
(a) Aspirin Project (Spill over)	1131	129	1000 TPA of Salicylic Acid, 1000 TPA of Acetylye Salicylic acids and 100 TPA of Sodium Salicylate.	257
(b) B.T. Bottles	40	20	4.5 lakh Numbers to 20.5 lakh Numbers.	90
(c) Bulk Drugs	200	80	..	100
Sub Total	1371	229	..	447
<i>(v) Kerala State Detergents and Chemicals Limited</i>				
(a) Sodium Hydro Sulphite and Liquid Sulphurdioxide Project	150	50	300 MT.	20
Sub Total	150	50		20
Total	4452	1439		2533

*(i) The Kerala Ceramics Limited*

The Kerala Ceramics Limited has proposed five expansion/diversification projects to be taken up during the Seventh Plan period viz., (a) mechanisation of China Clay Mines (b) expansion of China Clay processing plant (c) retionalisation of porcelain division, (d) diversification of porcelain division and (e) diversification of Sanitaryware division. At present the mining is done with the help of the available machinery. It is proposed to acquire new mining area and to purchase the required earthmoving machinery. Mechanisation of China clay mines will enable the unit to enhance production of China Clay to one lakh tonnes. It is also proposed to increase the capacity of the China clay processing plant by 9000 tonnes per annum and the rationalisation of porcelain division will generate additional capacity of 1440 tonnes per annum. By way of diversification of the porcelain division, the company will be able to manufacture some of the new high technology ceramic products such as cylinder liners for automobiles, biotechnology items like bone joints, electronic ceramics, cutting tools

etc. The Company also proposes to double the capacity of the sanitaryware division (the recently taken over Functional Industrial Estate for Ceramics, Quilon) during the Seventh Plan period. All these five projects together cost Rs. 1162 lahs and an amount of Rs. 465 lakhs has been earmarked as State's share during the plan period.

*(ii) Kerala Electrical and Allied Engineering Company Limited*

The Company proposed to implement three projects during the Seventh Plan period for the manufacture of (a) LPG Cylinders, (b) Brushless Altemators for General Purpose and (c) Brushless Alternators for Automobiles. The LPG Cylinder project with a capacity to manufacture 3 lakh numbers of LPG Cylinders per annum is bein? set up at Mamala at an Estimated cost of Rs. 87 lakhs. With the expertise developed in the manufacture of Brushless Altemators for the Railway, the Company now aims to take up manufacture of Brushless Alternators for General

Purposes. A Letter of Intent for the manufacture of 1200 Nos. of General Purposes Alternators per annum has been received. A prospective collarboator has been identified and negotiations are in progress. This project is estimated to cost Rs. 300 lakhs. The prototypes developed by the Company and fitted to a few vehicles for testing have been showing satisfactory performance. The Company has applied for DGTD Registration for manufacture of one lakh numbers per annum of alternators for automobiles. The cost of this project is estimated to be Rs. 282 lakhs. An outlay of Rs. 255 lakhs has been provided in the Seventh Plan for implementing these projects.

(iii) *Kerala Soaps and Oils Ltd.*

The Kerala Soaps and Oils Ltd., has proposals on two expansion and one diversification projects. They are (a) Expansion of Soaps, (b) Expansion of Vanaspathi and (c) Fatty Acids Splitting Plant. The Company has already initiated action for acquisition of 2.96 acres of land adjacent to the factory premises for its expansion programmes. This project for increasing the capacity to 11000 tonnes of soap per annum is estimated to cost Rs. 700 lakhs. An application for licence for substantial expansion of vanaspathi to 15000 MT/annum has been submitted to Government of India. The project is estimated to cost Rs. 200 lakhs. The Fatty Acid Splitting Plant will cost Rs. 200 lakhs. An outlay of Rs. 440 lakhs as State's share has been earmarked for these projects in the Seventh Plan.

(iv) *Kerala State Drugs and Pharmaceuticals Limited*

The Company is implementing a project for manufacturing Aspirin. In order to complete the project an amount of Rs. 129 lakhs is provided towards apill over requirement. Expansion of B. T. Bottles and a project to manufacture bulk drugs are the two new projects proposed to be taken up during the Seventh Plan period. The cost of the former project will be Rs. 40 lakhs envisaging an increase in capacity from 4.5 lakhs Nos. to 20.5 lakh Nos. per annum. The Bulk Drugs Project is estimated to cost Rs. 200 lakhs. The Detailed Project Report is under preparation. These two new projects have been provided with an outlay of Rs. 100 lakhs during the Seventh Plan period.

(v) *Kerala State Detergents and Chemicals Limited:*

The Company has plans to take up manufacture of sodium hydrosulphite and liquid sulphur dioxide during the Seventh Plan period. The capacity envisaged is 300 tonnes per annum of each. The investment required is around Rs. 150 lakhs. An amount of Rs. 50 lakhs is set apart as State's share during the Plan period for this purpose.

C. *Chemicals:*

13. *Kerala Minerals and Metals Limited (KMML)*

The Plan proposals of the Company include two projects, one for the expansion of its mineral separation capacity to 120000 MT per annum and another for the manufacture of titanium sponge metal with an annual capacity of 1000 tonnes. The former project, for which industrial licence has been received, is estimated to cost Rs. 1900 lakhs. The State Government have to invest Rs. 500 lakhs as share capital in this project.

The balance is proposed to be mobilised from industrial financial institutions such as IDBI, IFCI etc. The project is expected to be completed by October, 1986. The implementation of the Rs. 35 crore titanium sponge metal project is scheduled to be commenced in April 1986. A Letter of Intent has been obtained from the Government of India. The State share contribution towards this project is of the order of Rs. 1000 lakhs. The balance amount of Rs. 1300 lakhs is proposed to be mobilised through institutional finance. Altogether an amount of Rs. 1000 lakhs (Rs. 500 lakhs each) is provided in the Plan as State share capital contribution towards these two projects.

In the Annual Plan for 1985-86 an amount of Rs. 50 lakhs is earmarked for this unit for the expansion of mineral separation plant.

14. *Malabar Cements Limited*

The 4.2 lakhs tonnes per annum capacity Cemen Plant established by the Company at Walayar in Palghat district has commenced commercial production in May, 1984. As against the estimated original cost of Rs. 33.50 crores an amount of nearly Rs. 53 crores would be spent on this project. This overrun of cost is to be met by the State Government as per the guarantee given to the all India institutions financing this project. The State Government has invested an amount of Rs. 1050 lakhs as share capital as on 31-3-1984. However an amount of Rs. 9.95 crores is yet to be tied up which is the overrun in the project cost since December, 1982. The outlay provided in the Plan is for paying off this cost overrun. It may also be necessary to provide for a higher equity participation by Government. The outlay for the Seventh Plan is Rs. 500 lakhs. The outlay for 1985-86 is Rs. 300 lakhs.

D. *Electricals and Cables*

15. *Transformers and Electricals, Kerala Limited*

The fourth stage expansion programme of the Company envisaging enhancement of its transformer manufacturing capacity from 3000 MVA to 6000 MVA is being implemented in two phases. Works connected with the first phase costing Rs. 725 lakhs have almost been completed. The capacity has been enhanced to 4500 MVA. The second phase of the project, estimated to cost Rs. 300 lakhs will be implemented in the Seventh Plan period. The Company has also proposals to update the circuit breaker technology and to take up manufacture of metal clad switch-gear vacuum and SF6 breakers, control and relay panels etc., during the Seventh Plan period. The project is estimated to cost Rs. 260 lakhs. The outlay is primarily meant for the completion of the expansion project and the updating of switchgear technology. The 1985-86 Annual Plan outlay will be Rs. 100 lakhs and will be utilised for the second phase of the expansion project.

16. *Taco Cable Company Limited*

The taco Cable Company has taken up a project during the Sixth Plan period for the manufacture of 5000 LKM of jelly filled telephone cables per annum. The Company has obtained a licence for this purpose in 1980. Steps for acquisition of land are at an advanced stage and action has been initiated for procurement of machinery. The total cost of the Project has been

revised to Rs. 1849.79 lakhs. The entire share capital of Rs. 615.79 lakhs is to be financed by the State Government. An amount of Rs. 180 lakhs has been provided by the State Government during the Sixth Plan period for this purpose. An amount of Rs. 400 lakhs is provided in the Plan as State share capital contribution towards this project. An outlay of Rs. 175 lakhs is made in the Annual Plan for 1985-86 for meeting the expenses connected with the acquisition and development of land and for payment of advance to suppliers of machinery required for the project.

#### 17. *United Electrical Industries Limited:*

The Company is implementing an expansion programme for the enhancement of its meter manufacturing capacity to 324000 numbers per year. Owing to certain financial difficulties faced by the company it took a decision to expand the capacity only upto 2,50,000 numbers for the present. By the end of March 1984 the company has created a capacity of 200,000. During the Seventh Plan period the company proposes to expand the capacity to 3,00,000 for which an amount of Rs. 20 lakhs is expected as State assistance. In addition to this, the company proposes to implement two projects, one for the manufacture of Load Break Switches (HT & LT) and another for potentiometers. The former with a capacity of 2400 number per annum would cost Rs. 110 lakhs, to be financed by way of State assistance of the order of Rs. 80 lakhs and bank loan of Rs. 30 lakhs. The latter with a capacity of four million numbers per annum is estimated to cost Rs. 65 lakhs and out of this an amount of Rs. 40 lakhs is expected from the State Government. Altogether an amount of Rs. 100 lakhs is provided in the Plan towards these three projects. An amount of Rs. 20 lakhs required for the expansion project is earmarked in the Annual Plan for 1985-86.

#### E. *Refractories*

#### 18. *Chalaky Refractories Limited:*

This company is implementing an expansion programme for the enhancement of its manufacturing capacity to 10000 tonnes of refractories per annum. As per the Project Report revised in 1982, the Project

would cost Rs. 146 lakhs. An amount of Rs. 64.65 lakhs has already been spent on this project. Out of the total amount required for completion of the project the State Government will provide Rs. 50 lakhs. This amount will be spent in 1985-86.

#### 19. *Special Refractories Project*

KSIDC is implementing a project for the manufacture of 12,000 tonnes of refractories such as refractories of high alumina, power messes including castables etc., in technical collaboration with a Russian firm. A Letter of Intent was received in 1977. The Detailed Project Report was prepared by MECON. The Corporation has initiated action for the establishment of project in the State sector. The cost of the Project is estimated to be around Rs. 40 crores. The State Government has to invest an amount of Rs. 1300 lakhs in this project during the Seventh Plan period. An amount of Rs. 100 lakhs is provided in the Annual Plan for 1985-86 for meeting the expenses connected with the acquisition and development of land at Mala in Trichur District and payment of advance to the suppliers of machinery etc., required for the project.

#### F. *Steel*

#### 20. *Steel Industrials Kerala Limited (SILK)*

Steel Industrials Kerala Limited was established in 1975 for establishing iron and steel based industries in the State. The Company has established a Steel Fabrication Unit at Shertallai with a capacity to fabricate 3000 tonnes, a Ship Breaking Unit with a capacity to generate ferrous scrap, breaking ships of 20000 LDT per annum at Beypore and a Steel Forging Unit with a capacity of 4500 tonnes per annum at Athani. Two projects viz., the Autokast limited and the Ship Breaking unit at Azhikkal are under implementation. The company proposes two expansion projects and two new projects in the Seventh Five Year Plan. The outlay earmarked for 1985-86 is Rs. 100 lakhs. This is intended for the Steel Fabrication and Steel Forgings units. Details of the proposed projects are given in the Table. 11.4

TABLE 11.4

**Steel Industrials Kerala Limited**  
**Scheme-wise State Sector Outlay—1985-90**

(Rs. lakhs)

Name of Scheme	Project Cost	State Sector Outlay	Capacity per Annum	Employment Potential (Nos.)
<b>a. Spillover Projects</b>				
1. Autokast Limited	1900	50	18000 tonnes of Steel/ SG Iron/Grey Iron	1200
2. Ship Breaking Unit at Azhikkal	174	41	15000 tonnes of ferrous scrap	173
<b>b. Expansion Projects</b>				
1. Steel Fabrication	300	100	From existing 3000 tonnes to 5000 tonnes	60
2. Steel & Industrial Forgings Limited	300	100	From existing 4500 tonnes to 8750 tonnes	80
<b>C. New Projects</b>				
1. Valves Manufacturing Unit	400	135	3600 tonnes	200
2. Spring Manufacturing Unit	400	135	7200 tonnes of Leaf Springs & 4200 tonnes of Coil Springs	248
3. Mini Steel Plant	700	235	50,000 tonnes/Annum	75
Total (SILK)	4174	796		2036

(a) *Spillover Schemes*1. *Autokast Limited*

The unit with a capacity to manufacture 18000 MTs of Steel/SG Iron/Grey Castings at Shertallai is under implementation. The first phase of the project is almost completed and the second phase is expected to be completed by June 1986. The estimated cost of the project is Rs. 1900 lakhs, of which Rs. 615 lakhs will be the share capital contribution by Government. Of this, an amount of Rs. 565 lakhs is expected to be received in the Sixth Plan. The outlay of Rs. 50 lakhs is the balance towards share contribution.

2. *Ship Breaking Unit at Azhikkal*

The unit is being set up at Azhikkal with a capacity to generate 15000 tonnes/annum of ferrous scrap by breaking old ships. Out of the estimated cost of Rs. 174 lakhs an amount of Rs. 70 lakhs will be the share contribution by the State Government. Of this, Rs. 29 lakhs would be given in Sixth Plan. The outlay of Rs. 41 lakhs is to meet the balance.

(b) *Expansion Projects*1. *Steel Fabrication*

The company proposes to enhance the fabrication capacity of the unit from the existing 3000 tonnes/annum to 5000 tonnes/annum with an investment of Rs. 300 lakhs. The outlay of Rs. 100 lakhs is provided as State contribution towards the share capital.

2. *Steel and Industrial Forgings Ltd.*

The capacity of the Forgings Unit will be increased from 4500 MTs/annum to 8750MTs/annum. The project cost is estimated to be Rs. 300 lakhs of which Rs. 100 lakhs will be share capital contribution.

(c) *New Projects*1. *Valves Manufacturing Unit*

With the establishment of the Integrated Castings Unit and the Steel Forge Unit, SILK will be manufacturing all types of valve castings and valve forgings. Therefore the company considers it advantageous to establish a unit for manufacturing valves. The proposed unit will have a capacity of 3600 tonnes and the project cost would be Rs. 400 lakhs. An amount of Rs. 135 lakhs is provided as share capital contribution.

*Spring Manufacturing Unit.*

The unit will have a capacity to manufacture 7200 tonnes of Leaf Springs and 4200 tonnes of Coil Springs. The project will cost Rs. 400 lakhs. The company is seeking technical collaboration from a Swedish firm. The outlay of Rs. 135 lakhs is towards share capital contribution.

3. *Mini Steel Plant*

SILK proposes to set up a mini steel plant in the Seventh Five Year Plan to manufacture 50,000 tonnes of billets per annum. With the establishment

of this unit the billet manufacturing capacity in the State will increase to one lakh tonnes. The total investment in the project is estimated to be Rs. 700 crores of which Rs. 235 lakhs is proposed as share contribution.

21. *Kerala Rolling Mills Limited*

KSIDC is establishing a rolling mill with an annual capacity of 45,000 tonnes at Eradikode in Malappuram district. The Letter of Intent for this project, being established in the State Sector, was received by the Steel Complex Limited, a subsidiary company of KSIDC. The project is estimated to cost Rs. 700 lakhs. A new company has been registered for the establishment of this project. The State Government will invest Rs. 200 lakhs in the share capital of this company during the Plan period. An amount of Rs. 25 lakhs is earmarked in the Annual Plan for 1985-86 as the State's share contribution for the Company.

G. *Textiles*22. *Kerala State Textile Corporation Limited*

The Corporation proposed to set up five new spinning mills in the State sector. Active steps have been taken during the Sixth Plan period for the establishment of three mills with an installed capacity of 12,500 spindles each in Alleppey, Kasaragod and Malappuram districts. A spillover requirement of Rs. 373 lakhs will be provided by the State Government as equity contribution to these three mills to instal 25000 spindles and complete the projects. Another major project proposed for inclusion in the Seventh Plan is the second phase of the modernisation of the three mills hitherto managed by the Corporation and taken over by the State Government in October, 1984. This modernisation programme would cost Rs. 414.47 lakhs which is expected to be financed by the State Government and financial institutions. An amount of Rs. 210 lakhs will be provided as State's contribution. The Corporation proposes to increase the facilities in the existing Testing Laboratory. An amount of Rs. 37 lakhs is earmarked for this purpose. During the Plan period an amount of Rs. 620 lakhs will be given to the Corporation for implementing the above projects. For the setting up of the new spinning mills and for the modernisation programme an amount of Rs. 100 lakhs is earmarked in the Annual Plan for 1985-86.

23. *Sitaram Textiles Limited*

The Company proposes an expansion project envisaging installation of 3712 additional spindles in the spinning preparatory, additional machinery in the processing and spinning departments and also for fuel saving purpose. This project is estimated to cost Rs. 143.84 lakhs. The capital cost would be around Rs. 103.84 lakhs. An amount of Rs. 30 lakhs will be provided as share capital contribution for implementing the project during the Seventh Plan period. Of this, Rs. 25 lakhs is provided in the Annual Plan for 1985-86.

24. *Trivandrum Spinning Mills*

The Company has completed the first phase of its modernisation programme with an investment of

Rs. 125.83 lakhs, in December 1981. The second phase of this project for improving spinning productivity and allied activities is proposed to be implemented during the Seventh Plan period. The cost of the project would be Rs. 97.30 lakhs. The State Government will invest an amount of Rs. 30 lakhs in the project as share capital contribution of Rs. 15 lakhs and loan assistance of Rs. 15 lakhs. The balance cost will be met by term loan from financial institutions. The State proposes to invest an amount of Rs. 25 lakhs in 1985-86 on this project.

#### 25. *Co-operative Spinning Mills*

The Cannanore Co-operative Spinning Mills has a proposal to expand its spindleage from the present level of 28000 to 50,000 numbers, for which the Company has obtained an Industrial Licence. The project cost is estimated at Rs. 600 lakhs. Of this, the State Government has to contribute Rs. 200 lakhs as share capital. An amount of Rs. 100 lakhs is provided in Seventh Plan.

Steps have been taken to set up two new co-operative spinning mills, one each in Trichur and Alleppey with NCDC assistance. The cost of these mills is estimated at Rs. 700 lakhs and Rs. 775 lakhs respectively. The equity investment by the State Government in these two mills is expected to be of the order of Rs. 315 lakhs and Rs. 220 lakhs respectively. An amount of Rs. 120 lakhs to the project at Trichur and Rs. 100 lakhs to that in Alleppey will be provided in the Seventh Plan.

In the Annual Plan for 1985-86 an amount of Rs. 100 lakhs will be set apart for Co-operative Spinning Mills. This will be shared by Cannanore Co-operative Spinning Mills (Rs. 40 lakhs), Trichur Co-operative Spinning Mills (Rs. 30 lakhs) and Alleppey Co-operative Spinning Mills (Rs. 30 lakhs).

#### II. *Automobiles*

##### 26. *Scooters Kerala Limited*

The Company is presently engaged in the assembly of scooters on work and contract basis for Scooters India Limited. Owing to various reasons including the irregular supply of components by the Scooters India, the Company could not utilise the installed capacity fully for the last few years. Considering this, the Company has planned to take up certain diversification programmes. The major project included in this is for the manufacture of 50,000 numbers of mopeds per annum which is estimated to cost Rs. 662 lakhs. The Company has obtained a Letter of Intent in 1982 for this purpose. The project is proposed to be financed by way of State's share contribution of the order of Rs. 220 lakhs and term loan of Rs. 442 lakhs from industrial financial institutions. The State Government will invest Rs. 50 lakhs as share capital contribution in this project during the Seventh Plan period. The contribution in 1985-86 will be Rs. 10 lakhs.

##### 27. *Kerala Automobiles Limited*

The Kerala Automobiles is engaged in the implementation of a project having a capacity to manufacture 10,000 three wheelers per year, in a phased

manner. The first phase of the Project has been commissioned in February 1984 with a capacity to manufacture 1500 three wheelers. As projected in the Detailed Project Report the Company would incur a cash loss of about Rs. 40 lakhs during 1985-86. The State Government had already given an undertaking to the IDBI that the cash loss will be met by Government. The amount of Rs. 40 lakhs provided in the Plan is meant for this purpose. The entire amount will be disbursed in 1985-86.

#### I. *Sugar*

##### 28. *Mannam Sugar Mills Co-operative*

This company has a proposal to set up a distillery unit for the manufacture of 10,000 bulk litres of rectified spirit per day. According to the Detailed Project Report approved by the State Government the project would cost Rs. 100 lakhs. Approval of the financial institutions has also been obtained. The State Government have to invest Rs. 25 lakhs as share capital in the project. Besides this, the Government will give an amount of Rs. 25 lakhs as long term loan. The balance has to be mobilised through institutional finance. Thus a total sum of Rs. 50 lakhs is provided in the Plan towards this project. The contribution in 1985-86 will be Rs. 25 lakhs.

#### J. *Others*

##### 29. *Revitalisation and Taking Over*

Certain large and medium units are becoming sick due to various reasons often beyond their control and technical, financial and managerial problems. These units require timely financial help from the State Government. During the Sixth Plan period a few companies were given such assistance. In certain cases it becomes necessary to take over such units and entrust them with holding companies for revitalisation. In this circumstance, the State Government have evolved this scheme which is proposed to be continued during the Seventh Plan period also. An amount of Rs. 200 lakhs is provided in the Plan for meeting the expenses in connection with the operation of this scheme. Of this outlay, an amount of Rs. 50 lakhs will be provided in the year 1985-86.

#### **Mining**

The important minerals in Kerala are mineral sands, china clay, glass sand, limestone, limeshell, graphite, bauxite, iron ore, gold, tungsten, mica and gemstones. The main thrust in mineral development in the Seventh Plan will be on exploration of important mineral deposits and on the commercial exploitation of these deposits. The responsibility of exploration of mineral deposits and establishment of commercial utility of these minerals is vested with the Department of Mining and Geology and the Kerala Mineral Exploration and Development Project. The schemes on mining and mineral development in the Seventh Plan are drawn up with a view to strengthening the activities of these two organisations.

The schemes under implementation by the Department of Mining and Geology are to be continued during

the Seventh Plan period with a view to achieving the objectives of implementing the provisions in the Mines and Minerals (Regulation and Development) Act and Rules made thereunder. In addition to the ongoing schemes, certain new schemes are to be implemented in the Seventh Plan. The scheme-wise details are given below:

### 1. Mineral Investigation

The Department proposes to continue the detailed exploration programmes for refractory and kaolinitic clays, limestone, limeshell, silica sand, dimension and decorative stones and other economic minerals, required by the mineral based industries in the State. An outlay of Rs. 90 lakhs is provided in the Seventh Plan. This includes provisions for essential strengthening of staff needed by the organisation. The provision for 1985-86 is Rs. 11 lakhs.

### 2. Strengthening of Chemical Laboratory

The objective of the scheme is to provide additional facilities in the chemical laboratory with a view to strengthening it for conducting analytical work on various mineral samples collected during the course of field operations. The proposed outlay is Rs. 8 lakhs in the Plan and the provision for 1985-86 is Rs. 2 lakhs.

### 3. Training of Personnel

The objective of the scheme is to train officers of the Department in various field of mineral development during the plan period. The amount provided in the plan is Rs. 2 lakhs. The outlay for 1985-86 is 0.40 lakh.

### 4. Setting up of a Clay Testing Laboratory

The Department is carrying out surveys for locating clay deposits in various parts of the State. It is proposed to set up a clay testing laboratory to undertake the chemical and physical tests and testing of bulk samples required for the development of clay deposits in the State. The amount provided in the Seventh Plan is Rs. 35 lakhs and outlay for 1985-86 is Rs. 5 lakhs.

### 5. Rock Cutting and Polishing Unit

The Kerala State Geological Programming Board has stressed the importance of the commercial exploitation of rocks conforming to the grade of dimension and decorative stones. It is proposed to set up a Rock Cutting and Polishing Unit in order to identify the rocks which may suit to the grade of dimension and decorative stones and to evaluate their commercial viability by conducting adequate field studies as well as laboratory tests including polishing tests. Of the outlay of Rs. 15 lakhs provided in the Seventh Plan, the Annual plan outlay for 1985-86 is Rs. 1 lakh.

## Mineral Development

### 1. Kerala Mineral Exploration and Development Project

The Project with UNDP assistance started operation in April, 1977 has the major objective of exploration and economic evaluation of the known and partially developed iron ore, graphite, phlogopite mica,

gold deposits, etc. The project is to be continued in the Seventh Plan period to explore the primary gold prospects at Maruda and the adjacent one at Mannucheeni and Thannikkadavu and those known to be present further to the North of Nilambur valley and to conduct other surveys in the particular area. The amount provided in the Plan is Rs. 220 lakhs which also includes the cost of construction of a building. The outlay for 1985-86 is Rs. 35 lakhs.

### 2. Placer Gold Mining Project

The objective of the project is to start pilot scale mining of placer gold bearing gravels from the river beds of Chaliyarpuzha and Punnappuzha. It also envisages mining operations and beneficiation for two years under UN technical assistance with an U.N. outlay of about U.S. \$ 0.332 million. The outlay proposed is Rs. 80 lakhs in the Seventh Plan for the scheme and is to be implemented by K. M. E. D. P. The outlay for 1985-86 is Rs. 15 lakhs.

## Transport and Communications

The State has a multi modal transport infrastructure. Some of these modes are quite extensive and modern while some are traditional and declining like the inland waterways and coastal shipping. The demand for transport in the State has been increasing steadily, perhaps at a rate faster than elsewhere in the country. The trend in traffic handled by various modes in the State indicates the increasingly important role of road transport. The High Level Committee on Physical Infrastructure and Transport is of the view that if corrective measures are not taken now the present rate of growth of traffic by road and rail will continue to increase at a faster rate while the role of inland waterways and coastal shipping will dwindle still further. It is therefore necessary to adopt measures to achieve a more balanced distribution of traffic among the various modes. A long term road development plan should be prepared and implemented to improve the transport network while efforts are simultaneously made to divert traffic to other modes particularly to inland waterways and coastal shipping by suitably developing and improving them. Also, the public transport system should be run efficiently to reduce the magnitude of personal modes of transport such as cars, motorcycles and scooters which have grown phenomenally in the recent years.

A beginning towards achieving this long term objective is being made in the Seventh Plan. The strategy adopted in the Plan is to increase the capacity of the existing system by improving the individual modes. Priority is given to completion of spill over works in each of the modes. To those works which will add substantially to the capacity and efficiency are given higher priority. Adequate provision is made for completing important canal works in the inland waterways and to fully equip selected minor ports in the State. Due emphasis is also laid on the development of tourism



infrastructure and transport with a view to increase the flow of foreign and domestic tourists into the State.

### Ports and Harbours

Among the four intermediate ports and nine minor ports in the State only Neendakara, Calicut|Beypore and Azhikkal handled any significant traffic in recent years. The traffic through minor ports in Kerala declined from 6.9 lakh tonnes in 1958-59 to 1.8 lakh tonnes in 1982-83. Number of steamers came down from 364 in 1967-68 to 20 in 1982-83. This was despite the developmental efforts, inadequate as they were, in the past Five Year Plans. The main drawback in these ports are inadequate depth in the approach channel and basin, insufficient berthing facilities and handling equipments and the lack of basic amenities such as supply of fuel and fresh water for the ships in anchor.

Considering the capital intensive nature of investment and the paucity of funds, the strategy in the Sixth Plan was to restrict developmental efforts to a few selected ports. The criteria adopted in selecting the ports for development were that they formed an integral part of the overall transport system in the State, augmenting, at the same time, the capacity of a major port. Four ports, namely Neendakara, Calicut|Beypore, Azhikkal and Vizhinjam were identified and some investments made during the Plan. The emphasis in the Seventh Plan is to complete the ongoing schemes. The priority given to Neendakara and Beypore in the Sixth Plan will continue and further investments will be made to complete the ongoing works. Adequate provision will also be made to equip these two ports with necessary infrastructure facilities. Azhikkal and Vizhinjam will be taken up next. For these ports detailed investigation, data collection, model studies and preparation of project reports are proposed to be completed during this period. Developmental activities, could start as soon as those preliminary steps are completed.

A development plan has been drawn up for this sector requiring an investment of Rs. 1800 lakhs for the next five years. The Plan is to fully equip Neendakara and Beypore ports to facilitate efficient handling of cargo. At Neendakara port facilities for vessels upto 3.85 m draft initially and to 6 m draft later, will be provided. Four self-propelled barges of 350 tonne capacity and one speed launch will be acquired. To strengthen the workshop facilities, a slipway and necessary machinery will be provided at this port. An amount of Rs. 360 lakhs is earmarked for this purpose. With these facilities and adequate dredging, the loading capacity of Neendakara Port will be increased to 1800 tonnes per day. The development schemes envisaged at Beypore include the completion of breakwaters, deepening the approach channel to

5 m draft, construction of 5 m draft wharf and the construction of transit sheds and a coastal road connecting Calicut and Beypore. One 400 HP Tug and a speed launch will be procured for the port. This would require an investment of about Rs. 440 lakhs for Beypore during the Plan period. Adequate provision is made for the purchase of dredging machinery to undertake dredging at minor ports. To improve the efficiency of dredging operations, purchase of three Hopper Barges is envisaged in the Plan. In order to attend to the routine maintenance and periodic repair of floating crafts, the existing workshops at Beypore and Neendakara are proposed to be modernised. Purchase of a sea going vessel and necessary electronic equipments for hydrographic survey are also envisaged. In order to conduct pre-dredging and post-dredging surveys effectively one more survey unit is being set up at Cannanore in addition to the strengthening of existing unit at Beypore.

A short description of the various schemes included in this Seventh Plan under Ports and Harbours is given below:

#### 1. Development of Minor Ports

##### (i) Neendakara Cargo Harbour

It is proposed to provide the essential facilities and equipment in the Neendakara port to cater to vessels upto 3.85 m draft initially and to 6 m draft later. The following items of works costing Rs. 200 lakhs are proposed and the cost of the items is also indicated:

	Rs. lakhs
Wharf, 210 m long, with cranes	70
Transit shed	20
Approach road	5
Dredging the approach channel to 4 m depth	54
Handling systems, storage bins	
Buildings	5

On completion of the above development programmes the traffic through this port is expected to reach 3.57 lakh tonnes per annum.

An outlay of Rs. 17 lakhs is proposed for 1985-86 for starting the construction of wharf.

##### (ii) Beypore Cargo Harbour

The main objective is to make Beypore an all weather port and increase the cargo traffic to about 5 lakh tonnes by the end of the Plan period by providing all basic infrastructure facilities at the port. This would call for a total investment of Rs. 360 lakhs during the plan period. The important items of works are:

	Rs. lakhs
Spillover works for completing breakwaters	200
Construction of wharf (240 m)	90
Construction of two transit sheds	20
Construction of link road connecting Calicut and Beypore	10
Dredging approach channel to 5 m draft and terminal basin	40

An outlay of Rs. 100 lakhs is proposed in the 1985-86 Annual Plan to meet the cost of spillover works.

### (iii) Vizhinjam Cargo Harbour

Vizhinjam Harbour has all the potential for development as a Cargo Harbour. Construction of two breakwaters has been completed under the fishing harbour project. A temporary wharf, 50 m long and 9 m draft, is available along the side of the main breakwater. The construction of fishing harbour will be over by 1987-88. The depth of the sea and the availability of construction materials in the nearby area give ample scope for the construction of a Cargo Harbour. A total amount of Rs. 20 crores will be required for developing a deep water harbour at Vizhinjam. The draft proposed for the wharf is 12 m. When fully developed a total cargo of about 4 lakh tonnes per annum is anticipated at Vizhinjam. A provision of Rs. 10 lakhs is made in the Plan for preliminary work.

An outlay of Rs. 0.5 lakh is proposed for 1985-86.

### (iv) Azhikkal Cargo Harbour

The existing facilities at the port include an R.C.C. wharf of 42.67 m length and 6 m draft, with a hand operated 5 tonne crane and one 175 H.P. harbour tug. There are a few wooden lighters owned by private parties. The present capacity of the port is 300 tonnes to 400 tonnes per day. It will not be possible to increase the traffic through the port without making improvements to the approach channel. No major construction programme is envisaged in the Seventh Plan. A provision of Rs. 10 lakhs is suggested for completing the model studies and other preliminaries.

An outlay of Rs. 0.5 lakh is provided for 1985-86.

## 2. Investigation, Planning and Engineering Studies

Investigation for the development of Vizhinjam and Azhikkal ports is to be completed during the Seventh Plan period. Necessary investigations at Neendakara and Beypore Ports

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are also to be carried out. Investigations on other minor ports have to be initiated. The Harbour Engineering Department requires adequate strengthening to take up project works. It is also necessary to impart training to technical staff. A sum of Rs. 30 lakhs is earmarked for this purpose in the Seventh Plan.

An outlay of Rs. 5 lakhs is provided for 1985-86.

## 3. Construction and Repairs

### (i) Capital Repairs and Major Additions to Piers and Other Structures

In order to keep the old piers at Alleppey, Tellicherry, Calicut and Trivandrum in working condition, regular capital repairs have to be undertaken. The godowns at all the minor ports also need repairs. An outlay of Rs. 20 lakhs is proposed in the Seventh Plan.

An outlay of Rs. 3 lakhs is proposed for the year 1985-86.

### (ii) Capital Repairs and Major Additions to Equipments and Floating Crafts

A provision of Rs. 35 lakhs is made for undertaking major repairs to existing floating crafts of the Department during the Seventh Plan period.

An outlay of Rs. 5 lakhs is provided for the year 1985-86.

## 4. Dredging and Surveying

### (a) Dredging

The two dredgers available with the Port Department (600 m<sup>3</sup>/hr CSD Meena and 200 m<sup>3</sup>/hr CSD Neendakara) are quite old, but they can be put to efficient use by proper maintenance and by providing adequate supporting facilities. These include barges and pipelines. A total outlay of Rs. 765 lakhs is proposed for dredging schemes in the Seventh Plan.

### (i) Purchase of New Supplementary Equipments for Ports and Dredging

A 10 tonne pull tug is under construction at Bombay at a cost of Rs. 70 lakhs. An amount of Rs. 35 lakhs has been paid. The vessel is expected to be ready by April 1985. The allotment in the 1984-85 budget is Rs. 19 lakhs. The balance amount of Rs. 16 lakhs is provided in the Seventh Plan. In addition, the following equipments are also proposed to be acquired during the Plan period.

	Rs. in lakhs
4 self propelled barges of 350 T capacity for Neendakara Port	100
Two Speed Launches for Neendakara and Beypore Ports	30
One 400 HP Tug for Beypore Port	45

The total requirement on these items in the Seventh Plan would be Rs. 191 lakhs.

An outlay of Rs. 46 lakhs is proposed for 1985-86 which includes Rs. 16 lakhs for the balance payment for the tug under construction.

(ii) *Purchase of Self Propelled Hopper Barges and Pipelines for Dredging*

Dredging at the bar mouth, with pipelines, is difficult as the lines break often due to wave action. Dredging is delayed on account of this. The length of pipe line required to dump the dredged soil is also high at the bars. To overcome this difficulty, it is proposed to procure three 700 m<sup>3</sup> Hopper Barges at an estimated cost of Rs. 400 lakhs. The pipelines available with the Department for dredging operations are insufficient and therefore 1000 m of pipelines are proposed to be procured at a cost of Rs. 50 lakhs. Altogether a total provision of Rs. 450 lakhs is made under this scheme in the Seventh Plan.

An outlay of Rs. 20 lakhs is proposed for 1985-86 towards initial payment for barges and purchase of 300 metres of pipelines.

(iii) *Capital Dredging at Minor Ports*

The Seventh Plan provision of Rs. 100 lakhs is necessary to meet capital dredging at minor ports. This includes expenditure on fuel, stores and maintenance of dredgers, tugs and pipelines.

An outlay of Rs. 10 lakhs is provided for the year 1985-86.

(iv) *Tugs for Surveying and Dredging Operations*

A powerful tug was ordered at a cost of Rs. 60 lakhs during the Sixth Plan period. An amount of Rs. 10 lakhs has already been paid. Meanwhile it was decided to construct two smaller tugs in place of the above big tug. These two tugs are expected to cost of Rs. 80 lakhs. The Budget provision for 1984-85 for this scheme is Rs. 46 lakhs. The balance amount of Rs. 24 lakhs is provided in the Annual Plan for 1985-86.

(b) *Hydrographic Survey*

An outlay of Rs. 220 lakhs is provided in the Seventh Plan for the various activities of the Hydrographic Survey Wing of the State Port Department. Details of the schemes proposed to be undertaken are as follows:

(i) *Hydrographic Survey Unit for Pre-dredging and Post-dredging Surveys*

The Hydrographic Survey Unit at Beypore was created with a skeleton staff under the Chief Hydrographer to attend to pre-dredging and post-dredging surveys together with other hydrographic surveys along the northern coast of Kerala. Consequent on the increase in harbour engineering works, the hydrographic survey requirements have also gone up. In order to conduct the surveys successfully one more Survey Unit is necessary. A Unit at Cannanore is proposed in the Seventh Plan. A provision of Rs. 30 lakhs is made to continue the existing Unit at Beypore and to create an additional Unit at Cannanore.

An outlay of Rs. 5 lakhs is proposed for the year 1985-86.

(ii) *Replacement of Engine and Other Equipments of Survey Vessels*

There are four vessels under the Survey Wing—M. V. Jalanireekshak, M. V. Hydrographer, M. V. Geveshini and M. V. Path Finder. These vessels are very old and require capital repairs and replacement of engine, hull and other parts. An outlay of Rs. 105 lakhs is proposed for undertaking these works.

An outlay of Rs. 10 lakhs is proposed for the year 1985-86.

(iii) *Purchase of Survey Vessel, Electronic Equipments and Survey Instruments*

For the successful conduct of the survey a good sea-going vessel is also required. One of the existing survey vessels, with a wooden hull, is 16 years old, and has to be replaced immediately. A provision of Rs. 30 lakhs is made in the Plan for the purchase of a survey boat.

A provision of Rs. 2 lakhs is made for the purchase of 10 transceiver (20 pieces) sets which are used for short distance radio communication between shore and vessel. All modern hydrographic survey organisations are using Hifix for speedy and accurate surveying. By introducing this equipment a better scientific hydrographic study can be undertaken. A provision of Rs. 13 lakhs is suggested for purchase of the equipment. A total of Rs. 15 lakhs is provided for the purchase of electronic equipment during the Plan period.

In order to equip the survey units adequately, a provision of Rs. 35 lakhs is suggested for the purchase of instruments for the proposed unit at Cannanore and for the existing units at Beypore and Quilon. Some of the old equipment, will be replaced and modern survey instruments provided.

A total outlay of Rs. 80 lakhs is provided for the purchase of survey vessels, equipments and other instruments.

The outlay for 1985-86 is Rs. 12 lakhs.

(iv) *Extension of Office Building*

The offices of the two field units of the Hydrographic Survey Wing at Quilon and Beypore are functioning in Government buildings. It is proposed to extend the building at Quilon and to make some modifications to the building at Beypore. A provision of Rs. 5 lakhs is made for this purpose.

An outlay of Rs. 2 lakhs is proposed for the year 1985-86.

5. *Others*

(i) *Housing for Port Staff*

The Seventh Plan provision of Rs. 10 lakhs is to continue the construction of residential quarters for Port Staff. Priority will be given to construction of flats to the officers and dormitory to the crew and seamen of rescue tugs to be stationed at Neendakara and Beypore.

An outlay of Rs. 2 lakhs is proposed for 1985-86.

(ii) *Establishment of a Central Workshop and Stores Organisation*

The Department has two workshops, one at Beypore and the other at Neendakara. These workshops are equipped to attend to repairs of flat bottomed vessels and to the overhauling of machinery. To haul up tugs and barges, a drydock or a slipway is to be constructed at these ports. Stores items and spares for machinery are to be procured. It is proposed to construct a slipway at Neendakara Port at a cost of Rs. 20 lakhs. An amount of Rs. 15 lakhs will be required for the procurement of spares and stores at Neendakara Port. The cost of spares for Beypore Port is estimated at Rs. 10 lakhs. With a view to strengthen the Port Department necessary technical staff will be provided and for this an outlay of Rs. 15 lakhs is earmarked. A total provision of Rs. 75 lakhs is suggested for all these items in the Seventh Plan.

An outlay of Rs. 8 lakhs is proposed for the year 1985-86.

(iii) *Search and Rescue Organisation*

At present distress calls and rescue operations are attended to using the Departmental crafts. This arrangement is not satisfactory. A separate set of crafts suitable for high seas and heavy weather condition is essential. In addition, all the Departmental crafts are to be equipped with necessary communication and weather warning equipments. Auxiliary rescue units and inflatable crafts are proposed for all ports and a speed launch for Vizhinjam Port. The speed launch proposed for Neendakara and Beypore Ports can also be put into service during emergencies. The Seventh Plan provision of Rs. 65 lakhs is for this purpose.

An outlay of Rs. 5 lakhs is proposed for 1985-86.

**Roads and Bridges**

Roads form the most important transport infrastructure in the State. Eventhough the State has a fairly extensive network of over 99,000 km. of roads, PWD roads constitute only about 19,000 km. The high density of population and the increasing demand for transport facilities, have placed a heavy burden on these roads. Traffic intensity has been rising sharply during the past two decades without commensurate increase in the length or in the quality of the road network. While motor vehicle density with respect to area increased over seven fold, the increase in the length of PWD roads was only 47%. The condition of many of these roads is far from satisfactory. They do not, by and large, conform to accepted standards. If funds provided for road construction and development have been inadequate, cost escalation made it worse.

The strategy in the Seventh Plan is therefore to improve and upgrade the existing road network. Prime importance is given to complete spillover works, particularly on State Highways and Major District Roads in as short a time as possible. More emphasis is laid on development and improvement than on new construction. The object is to improve the capacity of the existing network. While taking over panchayat roads, priority will be given to such roads where the density of vehicular traffic is more or to those which will form missing links in the road system.

With these objectives in view, a road development plan requiring an outlay of Rs. 145 crores for the next five years is proposed. In addition to this, a sum of Rs. 55 crores has been set apart for the payment of pending bills relating to road works. Of the outlay of Rs. 145 crores Rs. 25 crores is set apart for the development and improvement of State Highways and Rs. 25 crores for bringing the Major District Roads to proper standards. For the development of other District Roads an amount of Rs. 30 crores is proposed. About 30 per cent of the total outlay (Rs. 41 crores) is provided for taking up village road works under the Minimum Needs Programme. This includes provision for the improvement of panchayat roads, taken over in the past, to Other District Road standards. For improvement of roads under Tribal and Harijan settlements a sum of Rs. 14.5 crores is proposed. Other schemes such as railway safety works, roads of economic importance, machinery and equipment and research programme are also proposed in the Seventh Plan.

1. *State Highways*

It is estimated that about 60% of the State Highways require improvement. There are also a number of weak bridges on these roads which require reconstruction. It is proposed to undertake development and improvement works in a

phased manner, giving priority to more important stretches in the next few years. This is estimated to cost about Rs. 1800 lakhs. Together with a provision of Rs. 700 lakhs, for the construction of bridges and culverts, a total of Rs. 2500 lakhs is suggested for road works under State Highways. With this allocation about 300 km. of State Highways are proposed to be improved during the Plan period.

An outlay of Rs. 500 lakhs is proposed for the year 1985-86 for completing the development and improvement works on 60 km. of roads and the construction of bridges and culverts.

## 2. Major District Roads

About 60% of the road length under Major District Roads also require improvement. There are a number of weak bridges all along these roads which require either improvement or reconstruction. Geometrics of several locations are to be improved. A length of 320 km. of roads under this category is proposed to be improved during the Plan period for which a provision of Rs. 1600 lakhs is provided. In addition 900 lakhs is suggested for the construction of bridges and culverts. Thus a total provision of Rs. 2500 lakhs is proposed for this category of roads. The main aim is to bring these roads to the requisite standards, including bitumenised tar surfacing.

An amount of Rs. 500 lakhs is suggested for 1985-86 for completing improvement works on a length of 64 km. of Major District Roads and the construction of bridges and culverts on them.

## 3. Other District Roads

Massive investment would be required to bring the existing road length of about 7800 km. under this category to proper standards. It is proposed to undertake selected works from among the ongoing works, with a view to adding substantially to the capacity of the network. Out of 460 km. of Other District Roads proposed to be improved during the Seventh Plan period, 235 km. are to be upgraded to Major District Road standards and 225 km. to Other District Road standards. An amount of Rs. 2170 lakhs is proposed for this purpose. Together with a provision of Rs. 830 lakhs for bridges and culverts, a total provision of Rs. 3000 lakhs is proposed for road works under Other District Roads.

An outlay of Rs. 500 lakhs is proposed for 1985-86 for improving a length of 35 km. to Major District Road standards and 30 km. to Other District Road standards. This includes provision of Rs. 166 lakhs for completing selected works on bridges and culverts.

## 4. Machinery and Equipment

Available machinery in the Department is quite insufficient for carrying out road works efficiently and economically. The few available

with the Department now are very old and require frequent repairs. It is therefore proposed to purchase new equipments, such as asphalt mixing plants, road rollers, road pavers and concrete mixers during the Plan period. To improve quality and speed of the works, gradual mechanisation is also proposed. An outlay of Rs. 250 lakhs is provided for this scheme.

A sum of Rs. 50 lakhs is proposed for the year 1985-86.

## 5. Minimum Needs Programme

### Village Roads

There is about 3330 km. of village roads under the Public Works Department. Most of these roads are of poor standard and insufficient width. The expenditure involved in upgrading these roads to Other District Road (ODR) standards will be very high. Therefore only 775 km. of village roads are proposed to be improved to ODR standards during the next five years. Development and improvement including widening, macadam surfacing and black topping will be undertaken on a priority basis, for which an amount of Rs. 3100 lakhs is proposed. Of them an amount of Rs. 1500 lakhs will be for village roads under the Special Component Plan. For improving/reconstructing bridges and culverts, a sum of Rs. 1000 lakhs is suggested.

An outlay of Rs. 620 lakhs is proposed for the year 1985-86 for upgrading 105 km. of Village Roads to Other District Road standards and for completing works on some of the bridges and culverts on them. An amount Rs. 300 lakhs is included under the Special Component Plan for 1985-86.

## 6. Planning, Research, Survey and Investigation

Adoption of modern technology and highway engineering is necessary to ensure best use of road construction materials. Training and research facilities, now available at Kerala Highway Research Institute, are proposed to be expanded for this purpose by equipping the institution with adequate technical personnel and laboratory facilities. Information on roads and road transport has not been built-up adequately to develop well conceived road networks, at the lower levels. It is proposed to undertake studies on the various aspects of road development in the coming years. A provision of Rs. 100 lakhs is suggested for studies, research and investigation in the Seventh Plan.

An outlay of Rs. 20 lakhs is proposed for 1985-86.

## 7. Railway Safety Works

Many of the railway level crossings in the State are unmanned and are prone to serious accidents. Hence construction of road over-bridges, manning of unmanned level crossings

according to prescribed norms and other works connected with railway crossings in the State Highways, Major District Roads, Other District Roads and Village Roads are to be taken up during the Seventh Plan period. An amount of Rs. 400 lakhs is proposed for this purpose in the Plan.

An outlay of Rs. 80 lakhs is provided in 1985-86 for the scheme.

#### 8. Others

##### (i) Special Component Plan—Roads in Harijan Settlements.

This scheme envisages construction of approach roads to schools, market places, hospitals and dispensaries for the benefit of Scheduled Castes. An outlay of Rs. 1050 lakhs is proposed for this scheme in the Seventh Plan. A total road length of 420 km. is proposed to be improved during this period.

An amount of Rs. 210 lakhs, is proposed for 1985-86 under this scheme to improve 84 km. of roads in harijan settlements.

##### (ii) Tribal Sub Plan Roads in Tribal Areas

Construction of approach roads to schools, market places, hospitals etc., in tribal areas is envisaged under this scheme. An amount of Rs. 400 lakhs is suggested for this scheme to improve 160 km. of roads during the Seventh Plan period.

An outlay of Rs. 80 lakhs is suggested for 1985-86 under this scheme for improving 32 km. of roads in tribal areas.

##### (iii) Roads of Economic Importance—State Share

An outlay of Rs. 200 lakhs is provided as the State's share for development and improvement of roads of economic importance. Matching central assistance will be available for this scheme which is implemented by the National Highway Wing of the State.

An outlay of Rs. 40 lakhs is proposed for the year 1985-86.

##### (iv) Spillover payments for Road Works

A number of road works have been taken up in the past and owing to insufficient budget provision many bills are pending payment. An amount of Rs. 5500 lakhs is allocated in the Seventh Plan for Spillover Payments. The amount set apart for this purpose in the Annual Plan 1985-86 is Rs. 3000 lakhs.

#### Road Transport

Kerala State Road Transport Corporation owns about a third of the total stage carriage  
374830MC.

fleet in the State. As on 1-4-1984 the Corporation was operating 3169 buses with a daily scheduled distance of about 8.2 lakh km. earning a revenue of Rs. 24 lakhs daily, compared to 661 buses with a daily scheduled distance of 1.7 lakh km. earning a revenue of Rs. 2 lakhs per day at the time of formation of the Corporation in 1965. The number of passengers carried by the Corporation increased from 4 lakhs to about 21 lakhs per day during this period.

The strategy in the Seventh Plan for the development of the Corporation will be:

- (i) to reduce the number of uneconomic trips by rationalising schedules and frequencies.
- (ii) to give top priority to the replacement of old vehicles.
- (iii) to stabilise the existing level of operations before any further expansion.
- (iv) to withdraw from those areas where the private sector is providing services along with Kerala State Road Transport Corporation and from those areas where services are uneconomic.
- (v) to establish regional authorities with sufficient powers to ensure better control and efficiency of operation.
- (vi) to reduce the bus staff ratio.

The Corporation proposes to invest Rs. 99.75 crores for its developmental activities during the Seventh Plan period. It is proposed to put on road 625 additional buses (125 buses annually) and replace 1925 buses which are above 10 years. Improvement of infrastructure facilities by constructing new bus stations, work shops, offices etc., is also envisaged.

The Corporation also proposes to nationalise the routes in Chirayinkil Taluk so as to bring the entire Trivandrum District under nationalised bus transport system.

The developmental schemes of the Corporation for the Seventh Plan can be summarised as follows:

	(Rs. in crores)
(1) Replacement of 1925 buses aged more than 10 years	62.56
(2) Commissioning of 625 buses for expansion in existing routes	20.31
(3) Infrastructure facilities for item (2)	8.03
(4) Commissioning of 200 buses for the complete nationalisation of Trivandrum district	6.50
(5) Infrastructure for item (4)	2.35
Total	99.75

The sectoral outlay envisaged for the developmental activities is as follows:

	(Rs. in crores)
Land	0.25
Building & Fixtures	6.50
Plant and Machinery	3.50
Vehicles	89.37
Others	0.13
<b>Total</b>	<b>99.75</b>

The capital requirements of the Corporation during the Seventh Plan (1985-90) and Annual Plan (1985-86) are proposed to be met from the following sources.

	(Rs. in crores)	
	1985-90	1985-86
Capital contribution by State Government	33.00	6.20
Capital contribution by Central Government	16.50	3.10
Loan from LIC	12.00	0.80
Loan from IDBI	32.00	8.00
Internal resources	6.25	0.90
<b>Total</b>	<b>99.75</b>	<b>19.00</b>

In 1985-86 the Corporation proposes to commission 540 buses at a cost of Rs. 16.50 crores, 375 of which will replace 'overaged' buses. In order to complete the nationalisation process in Trivandrum Revenue District, as a first step 40 buses are proposed to be commissioned exclusively for nationalising Chirayinkil Taluk. The remaining 125 buses will be used to meet the increase in traffic in the existing routes operated by the Corporation. Infrastructure facilities costing Rs. 2.50 crores will also be provided during 1985-86.

### Inland Water Transport

Kerala's inland water transport system includes about 1900 kms of water ways consisting of navigable rivers, coastal and cross canals. The traffic by this mode has declined over the years, from 3.8 million tonnes (1964-65) to 1.3 million tonnes (1978-79) mainly due to its low speed, high handling charges and poor facilities on the wharfs and jetties. The High Level Committee on Physical Infrastructure and Transport set up by the Government has suggested that it should be possible to move at least 5 million tonnes of cargo by waterways by the turn of the century if these defects are rectified and proper facilities are provided over the next few years. It is also necessary to develop this as an alternate mode of transport as otherwise traffic on the road system, particularly along the coast, will be too heavy and the transport expensive. Those sections of the waterways, where freight traffic originates and terminates near the waterfront and also those where mechanised barges can be operated with

speed and safety should be modernised and improved. There are a number of such sections in Kerala, of which the Quilon-Cochin section deserves top priority. According to the National Transport Policy Committee (1980), the entire West Coast Canal, which includes this stretch, meet the criteria for declaration as National Waterways. The State has requested the Centre to declare and develop this stretch as a National Waterway. It is proposed in the long run to make the entire West-Coast canal navigation by stages. The vast potential for the movement of bulk cargo in the Cochin region needs to be exploited. In this context, the development of Champakkara and Cochin-Udyogamandal Canals should be given importance. Preference should be given to side protection of canals where the width is narrow and constant deepening is necessary for navigation. Terminal and transport facilities should be improved considerably to develop passenger traffic. Modernisation of fleet and augmentation of ferry services are also necessary to increase capacity and attract more traffic to this mode.

In the interest of efficiency and economy in operation, it is necessary to have a single organisation in the Water Transport sector. As an immediate measure water transport services in Cochin area should be integrated under a single agency.

With the above perspective in view, a detailed programme of action has been drawn up for the Seventh Plan for which an outlay of Rs. 1500 lakhs is necessary. For the development of inland canals a provision of Rs. 590 lakhs is recommended under centrally sponsored scheme (of which the State share would come to Rs. 295 lakhs) and Rs. 535 lakhs under State sector. The major share of the State sector outlay, viz; Rs. 240 lakhs would be towards spillover schemes. A total provision of Rs. 1125 lakhs is thus earmarked for inland canal schemes alone. An outlay of Rs. 365 lakhs is suggested for the State Water Transport Department for investment on boats and terminal facilities. An amount of Rs. 320 lakhs is proposed as State contribution to the Kerala Inland Navigation Corporation to increase transport capacity of the organization and enlarge its operation.

#### 1. Assistance to Transport Services:—

##### *Kerala Inland Navigation Corporation (KINCO)*

The Corporation, incorporated in December 1975, commenced commercial operation in 1977. The main activities of the Corporation are the transportation of raw materials like rock phosphate and sulphur for FACT from Cochin harbour to the factory at Udyogamandal and Ambalamedu and the operation of ferry services to and from the islands around Cochin. With the purchase of two more higher capacity barges which are expected to be put into operation in October 1984, the number of barges will be 8 with a capacity of 1750 tonnes. The present fleet



strength of passenger boats is nine. Orders have been placed for the construction of one more boat of 150 passenger capacity. The State share of the investment in the Corporation during the Sixth Plan period would be about Rs. 80 lakhs. During the Seventh plan period the Corporation proposes to invest Rs. 530 lakhs of which Rs. 345 lakhs would be for the development of cargo transport. It is proposed to acquire six barges during the plan period at a cost of Rs. 150 lakhs, mainly for the transportation of an estimated 2 lakhs tonnes of phosphoric acid and liquified ammonia for FACT. An amount of Rs. 100 lakhs is suggested for the setting up of a fully equipped workshop with dry dock and slipway for the repair of barges, tugs and other vessels. Development of passenger transport would require an investment of Rs. 155 lakhs. This is for the construction of 25 passenger boats at a cost of Rs. 125 lakhs and construction of boat jetties at a cost of Rs. 30 lakhs. A provision of Rs. 30 lakhs is earmarked for the purchase of 20 cents of land and the construction of Office building. An outlay Rs. 320 lakhs is proposed as State contribution to the Corporation in the Seventh Plan.

An outlay of Rs. 50 lakhs is provided as State contribution to KINCO during 1985-86.

## 2. Training, Survey and Research

An outlay of Rs. 60 lakhs is suggested for undertaking traffic surveys and hydrographic studies and the training of departmental staff. Training of newly recruited members of crew such as syringes and drivers, mechanics and fitters is envisaged under this scheme. Strengthening the technical wing of the Water Transport Directorate adequately to provide technical and statistical support is also proposed.

A provision of Rs. 1 lakh is made for 1985-86.

## 3. Land and Buildings and Terminal Facilities-State Water Transport Department

The construction of boat station at Alleppey at a cost of Rs. 30 lakhs to provide basic amenities to passengers and crew is proposed. Construction of Office buildings at Vaikom, Changanaserry, Muhamma and a few other stations are also to be taken up. A parcel office has to be constructed at Alleppey boat station. It is proposed to provide good fender posts in the 71 approved boat jetties and 94 jetties proposed for approval by the Irrigation Department. The outlay includes provision for the construction of a car shed at the Directorate.

The total outlay of Rs. 75 lakhs suggested under this scheme is distributed as under.

- |   |              |
|---|--------------|
| (i) Spillover works                                 | Rs. 3 lakhs  |
| (ii) Construction of station officers at 8 stations | Rs. 61 lakhs |
| (iii) Car shed at Directorate                       | Rs. 1 lakh   |
| (iv) Providing fender posts                         | Rs. 10 lakhs |

An outlay of Rs. 6 lakhs is provided for 1985-86.

## 4. Acquisition of Fleet and Augmentation of Ferry Services-State Water Transport Department (SWTD)

The present fleet strength of the Department is 73 and with this it operates 56 schedules in 68 routes covering a total route distance of 7840 kms. The Department initiated a scheme in the previous plan to replace the old boats for augmentation of ferry services. Fourteen boats have already been constructed and the remaining 8 boats are under various stages of construction. There will still be 16 old boats more than 30 years old. Most of these old boats are not service worthy and should be scrapped in a phased manner. As the budget provision for 1984-85 is only Rs. 15 lakhs the balance amount of Rs. 17 lakhs to complete the construction of 8 boats has to be met in the Seventh Plan. It is proposed to construct 25 new boats (16 new boats for the replacement of old boats, 4 spare boats and 5 new boats for operating additional services) in the Seventh Plan for which a provision of Rs. 150 lakhs (@ Rs. 6 lakhs) is earmarked. Construction of 2 fast-moving boats at a cost of Rs. 15 lakhs is also envisaged for introducing super express services. A sum of Rs. 8 lakhs is earmarked for meeting the cost on crew, mechanics and staff for the operation of additional services. A total outlay of Rs. 190 lakhs is provided for the acquisition of fleet and augmentation of ferry services during the Seventh Plan period.

An outlay of Rs. 35 lakhs is provided for 1985-86. This is to meet the spillover expenditure of Rs. 17 lakhs for the 8 boats under construction and for 3 new boats to be constructed during the year.

## 5. Workshop Facilities-State Water Transport Department

The State Water Transport Department's workshop at Alleppey requires considerable improvement. Since the department fleet is fairly old, the demand for repair is high. On an average 15 to 18 boats are to be withdrawn from service for major repairs annually. In addition 2 to 3 boats are retained every day for minor repairs. An outlay of Rs. 25 lakhs is suggested for the expansion of the dockyard and workshop facilities. This includes acquisition of land for the expansion of the dock and workshop yards, construction of three sheds and a slipway to facilitate docking of more boats, provision of store shed and roofing for smithy and moulding centres and the purchase of modern machines such as milling machine and power-saw. The appointment of Dock Superintendent in the Dock and Repair section and a skeleton mechanical staff consisting of one machanic, one fitter and one electrician at each of the important stations for the speedy execution of minor repairs of boats, is also included as part of this scheme.



An outlay of Rs. 2 lakhs is suggested for 1985-86.

#### 6. *Inland Canal Schemes--Public Works Department*

##### (a) Central Sector--State share

##### (i) Chempakkara Canal--Stage II

Chempakkara Canal with a length of 20 km. is to connect Cochin Port with the Industrial Region at Ambalamugal by an improved waterway. The proposal was to deepen the whole length to give a minimum draft of 2.5 m. below L.W.L. during the 1st stage. This was completed in June 1983 at a cost of Rs. 235 lakhs. Single lane dredging (100%) and double lane dredging (94%) were done. The remaining portion to be dredged is included in the second stage of the project. The second stage of the project, for effecting further improvements to the canal is being finalised taking into consideration the recommendations of the Dutch Mission. The estimated cost of the project is Rs. 155 lakhs. The project is expected to be cleared by the Government of India and the work started during 1985-86.

##### (ii) *Neendakara-Cheriazheekkal Canal*

This Fourth Plan scheme is to widen the canal portion from Neendakara Port to Cheriazheekkal (from 70.00 km. to 84.00 km. reach of the West Coast Canal) to a minimum width of 23 m and deepen the portion to a minimum depth of 2.5 m. at L. W. L. The revised project, estimated to cost Rs. 89.75 lakhs, is pending clearance with the Government of India. Under this scheme dredging work was completed upto 74.71 km. and side protection works upto 75.03 km. by 1981-82. The scheme is likely to be completed during 1985-86. Including anticipated expenditure during the current year, the cumulative expenditure on the scheme would be about Rs. 55 lakhs. The balance amount of Rs. 35 lakhs, required to complete the project, is provided for 1985-86.

##### (iii) *Cochin-Udyogamandal Canal*

The Cochin-Udyogamandal Canal Scheme, included first in the Fifth Plan, could not be taken up since the project report is with Government of India for clearance. The total cost of the project is now estimated at Rs. 200 lakhs. The heavy traffic in the Alwaye-Cochin sector is expected to increase further in the coming years to reach around 4 million tonnes by the turn of the century. This traffic can be handled by mechanised barges if adequate draft is provided in the Cochin-Udyogamandal Canal. This project is proposed to be completed during the Seventh Plan period.

##### (iv) *Improvement to West-Coast Canal--Quilon Cochin Section.*

This project, to improve the canal to a depth of 2.5 m. and a width of 23 m. based on the recommendations of the Bhagavathy Committee and included in the Fifth Plan, could not be started because it has not been cleared by the Government of India. The revised cost of the project is estimated at Rs. 6.18 crores. The project report has been forwarded to Government of India in August 1982. Detailed comments on the project report have also been submitted. The State Government has been directed to conduct a hydrographic survey as part of the project. A provision of Rs. 200 lakhs is suggested for the project in the Plan. The State Government has requested the Centre to declare this reach from Quilon to Cochin of the West Coast Canal as National Waterways.

The four canal schemes suggested under Central sector in the Seventh Plan are:

##### (i) Champakkara Canal--Stage II

Rs. 155 lakhs

##### (ii) Neendakara-Cheriazheekkal Canal

Rs. 35 lakhs

##### (iii) Cochin-Udyogamandal Canal

Rs. 200 lakhs

##### (iv) West Coast Canal--Quilon-Cochin Section

Rs. 200 lakhs

Total Rs. 590 lakhs

Of the total provision of Rs. 590 lakhs proposed under Central Sector, the 50 per cent State Share of Rs. 295 lakhs is provided in the Plan.

An outlay of Rs. 50 lakhs is provided as State share of the Central Sector scheme for 1985-86.

#### 7. *State Sector Schemes*

##### (i) *Spillover Schemes*

There are 55 spillover inland canal works to be completed. These works alone require more than Rs. 325 lakhs for completion. An outlay of Rs. 240 lakhs is provided to complete as many spillover works as possible during the period.

An outlay of Rs. 50 lakhs is provided for the year 1985-86 towards spillover works.

##### (ii) *New Emergent Works*

Under this scheme some more new works are proposed to be taken up to improve the existing feeder canals at vital reaches so as to facilitate

the plying of modern mechanised crafts. The outlay of Rs. 120 lakhs is provided for this purpose.

An amount of Rs. 15 lakhs is provided for 1985-86.

(iii) *Badagara-Mahe Canal*

This is one of the Third Plan Schemes carried out initially under Central sector. Out of a total length of 19 km. 12 km. of the canal has been completed. Total cost of the remaining works is estimated at Rs. 450 lakhs. By carrying out some minimum works like the construction of 2 cartable bridges and the excavation in the remaining reaches, the canal can be opened for traffic. The provision of Rs. 50 lakhs is suggested for the purpose.

An outlay of Rs. 15 lakhs is provided for 1985-86.

(iv) *Construction and Improvement of Jetties*

At present there are 104 boat jetties approved by the Irrigation Department, including some south of Quilon where boat services are not operated by the SWTD. The Department therefore utilises only 71 of these approved jetties. 94 more jetties are to be approved additionally to meet the increasing demand. Proper jetties are essential from the point of view of safety of passengers and boats. The provision of Rs. 95 lakhs is made for the construction and improvement of jetties.

An outlay of Rs. 21 lakhs is provided for 1985-86.

(v) *Purchase of Small Dredgers*

Regular dredging of inland canals has to be carried out for making the waterways navigable. The existing dredgers in the Department are very old and are inadequate to meet the increasing need of small dredging in the canals. An outlay of Rs. 30 lakhs is made for the purchase of small dredgers during the Plan period.

The distribution of the total outlay of Rs. 535 lakhs under State sector among the above five schemes are:—

(i) Spillover works	Rs. 240 lakhs
(ii) New emergent works	Rs. 120 lakhs
(iii) Badagara-Mahe Canal	Rs. 50 lakhs
(iv) Construction and Improvement of jetties	Rs. 95 lakhs
(v) Purchase of small dredgers	Rs. 30 lakhs

**Tourism**

Despite many attractions—beaches, backwaters and wild life—the number of tourists visiting the

State has been relatively low. A survey conducted in 1980 shows that about 2.9% of the foreign tourists arriving in India visit Cochin and 8% visit Trivandrum/Kovalam. It is estimated that by 1990 about 25 lakhs tourists will visit India. The domestic tourist arrivals will be about eight times the number of foreign tourists. From these estimates, the total number of tourists both domestic and foreign, visiting Kerala by 1990 could be about 13.5 lakhs.

The strategy for tourism development in the Sixth Plan was to develop travel circuits connecting important tourist centres catering to varied tourist interests. While all efforts will be made to achieve this goal, the emphasis in the Seventh Plan will be on developing beach tourism, trekking, wild life tourism and incentive holiday tourism. It would also be the endeavour to exploit the potential of inland waterways for tourism development in the State.

With these objectives in view, the schemes for the development of tourism have been drawn up for the Seventh Plan. The Tourist Department and the Kerala Tourism Development Corporation are the two agencies involved in the operation of these schemes. Details of schemes are given below:

1. *Tourist Transport Services*

The natural waterways existing in Kerala can be profitably exploited for tourism development by providing specialised tourist facilities such as tow boats and motor launches at popular centres and reservoirs of dams. It is proposed to provide boat basin and jetty at places like Quilon and Alleppey, boat landing and other facilities at Pathiramanal and Vallakkadavu (Trivandrum). Purchase of motor launches and ski boats are also proposed. An outlay of Rs. 44 lakhs is provided for the purpose in the Seventh Plan.

For 1985-86, an amount of Rs. 8 lakhs is provided.

2. *Tourist Accommodation*

Youth tourism is an important segment among foreign as well as domestic tourists. Youth tourists, constituting about 39% of total arrivals, stay longer than the average visitor and tend to make repeated visits. It is proposed to construct Youth Hostels at ideal places like Cochin, Thekkady and Guruvayoor and dormitories for budget tourists (including youth) in or near Guest Houses. Dormitories already planned for Kanyakumari, Quilon, Ernakulam, Alwaye, Malayattor, Kalady and Malampuzha have to be given top priority. An amount of Rs. 75 lakhs is proposed for the construction of such dominatories in the Seventh Plan. Adequate accommodation like Yatrikas for middle income tourists (both foreign and domestic) will also be provided in selected places of tourist interest in the travel circuits, for which an outlay of Rs. 50 lakhs is provided. A provision of

Rs. 40 lakhs is made for the operational expenses of Guest Houses|Dormitories|Yatrikes and other accommodation. Thus a total outlay of Rs. 165 lakhs is provided in the Plan for tourist accommodation.

In the Annual Plan 1985-86, an amount of Rs. 25 lakhs is proposed under this scheme.

### 3. Kerala Tourism Development Corporation

The Kerala Tourism Development Corporation is mainly concerned with the construction and running of hotels to provide better accommodation facilities for both foreign and domestic tourists. It also provides tourist transport services. During the Seventh Plan period the Corporation proposes to invest Rs. 10 crores in its various hotel projects, tourist transport services and publicity. The hotel projects envisaged by the Corporation are Cochin Project (Rs. 280 lakhs) Kumarakom Project (Rs. 160 lakhs), Thampanoor Project (Rs. 43 lakhs), Cannanore Project (Rs. 75 lakhs) and Trichur Project (Rs. 80 lakhs). The Corporation also proposes to construct 20 cottage rooms (Rs. 25 lakhs) at Bolghatty and improve|provide additional facilities in Mascot Hotel (Rs. 36 lakhs), Hotel Samudra (Rs. 15 lakhs), Guruvayoor T. B. (Rs. 13 lakhs), Garden House (Rs. 6 lakhs) and Thekkady units (Rs. 9 lakhs). Other schemes envisaged by the Corporation are construction of motels (Rs. 40 lakhs) at Kottarakkara, Kuttikkannam, Kayamkulam, Alwaye and Kuttippuram, purchase of linen, cutlery, crockery etc. (Rs. 35 lakhs), publicity (Rs. 25 lakhs), construction of staff quarters at Thekkady, Kumarakom and Malampuzha (Rs. 12 lakhs), construction of a registered office (Rs. 20 lakhs) for the Corporation at Trivandrum and purchase of coaches|boats (Rs. 130 lakhs) for the Transport Division of the Corporation.

An outlay of Rs. 500 lakhs is proposed as share capital contribution to the Corporation and Rs. 250 lakhs as loan during the Seventh Plan period.

In the Annual Plan (1985-86) an amount of Rs. 75 lakhs is provided as share capital contribution and Rs. 25 lakhs as loan by Government to the Corporation.

### 4. Survey and Statistics

The Tourist Department has taken up collection of statistics only on a limited scale. It is proposed to constitute a separate Research and Studies Division for this purpose. This Division will also be equipped to study the feasibility of hotel projects to be financed by the various agencies such as the Kerala Financial Corporation and the Department of Industries. It would also make recommendations for the granting of approval to hotels and star classification based on a new system of recognition approved by the

State. A provision of Rs. 3.50 lakhs is made for the purpose in the Plan.

An outlay of Rs. 0.50 lakh is provided for the Annual Plan 1985-86.

### 5. Tourist Information and Publicity

Information and publicity are the core of tourism promotion. It is proposed to open information offices in leading cities such as Bombay, Bangalore, Hyderabad, Goa, Sreenagar, Agra and Kanyakumari. It is also proposed to open offices within Kerala at Kovalam, Thekkady, Quilon, Alleppey, Ernakulam, Trichur, Guruvayur, Calicut and Malampuzha. An amount of Rs. 20 lakhs is earmarked for the purpose in the Seventh Plan.

Adequate publicity is essential for tourist promotion. It is proposed to bring out useful publicity materials like folders, maps and tourist literature for which Rs. 10 lakhs is provided. Other important schemes envisaged are purchase of audiovisual equipment and production of films (Rs. 10 lakhs), mobile publicity units (Rs. 12.5 lakhs) and media advertisements (Rs. 10 lakhs). It is proposed to participate in important exhibitions in and outside the State and provide hospitality to travel trade, travel press, TV team and film units in India and abroad for which a provision of Rs. 35 lakhs is made.

Thus a total sum of Rs. 97.50 lakhs is provided for information and publicity programmes in the Seventh Plan.

An outlay of Rs. 17.50 lakhs is provided for the year 1985-86 under this scheme.

### 6. Tourist Centres

The scheme envisages the construction of guest houses at important places for which an outlay of Rs. 150 lakhs is provided in the Seventh Plan. Considering the importance of wild life tourism, better accommodation and other facilities are proposed to be provided in all National Parks|Wild Life Sancturaries like Neyyar, Peechi, Wynad, Idukki etc., for which a provision of Rs. 15 lakhs is made in the Plan. For the modernisation and illumination of Malampuzha Gardens and flood lighting of monuments and for conducting cultural activities, entertainment etc., at tourist centres, an outlay of Rs. 30 lakhs is proposed. Thus a total provision of Rs. 195 lakhs is proposed in the Seventh Plan under the scheme, tourist centres.

In 1985-86 an amount of Rs. 30 lakhs is provided for tourist centres.

### 7. Other Schemes

(i) *Promotion of Local Cultural Programme, Boat Races, Festivals etc.*

Provision of Rs. 175 lakhs is made in the Plan to celebrate Tourism Week coinciding with

**Onam Festival** at selected centres in the State, to promote cultural programmes during local festivals at selected places, to organise boat races etc., so that tourists are attracted to the State round the year. A total provision of Rs. 185 lakhs is proposed for this scheme in the Seventh Plan.

For the Annual Plan period 1985-86, an amount of Rs. 32 lakhs is earmarked.

(ii) *Others*

Other programmes envisaged in the Plan for the development of tourism include the establishment of an integrated organisational set up for tourism planning, execution, monitoring and evaluation (Rs. 12.50 lakhs), grant-in-aid for Youth Hostel, Veli (Rs. 2.50 lakhs), improvement to golf course (Rs. 5 lakhs), tourism training (Rs. 15 lakhs), preparation of area development plans and feasibility studies (Rs. 5 lakhs), introduction of water sports (Rs. 5 lakhs), adventure tourism (Rs. 5 lakhs) and setting up of one or two heritage centres (Tourist Villages) (Rs. 10 lakhs). A total provision of Rs. 60 lakhs is made for the above schemes in the Seventh Plan.

An outlay of Rs. 12 lakhs is provided for the Annual Plan period 1985-86.

## 11.8 Scientific Services and Research

### *S. & T. Programmes*

The proposals for the development of Science and Technology, have been formulated keeping in view the goals and aims enunciated in Planning Commission's "Approach Paper". The Science and Technology programmes, will be integrated with other activities for socio-economic development and improvement in the quality of life. Apart from ensuring fuller use of existing capacity linkages between the different sectors like educational institutions, research institutions, industries, Government departments and planning and decision making bodies will be established. Appropriate technologies will be developed as needed for different sectors of society such as weaker sections, women in the traditional and emerging areas etc. The existing centres of excellence will be consolidated and specialised academic programmes will be encouraged. Support for basic research will be increased and more stress laid on studies relating to our natural resources. In the Seventh Plan a total outlay for Rs. 2400 lakhs is set apart for Science and Technology programmes. The following schemes are proposed under this sector.

#### 1. *State Committee on Science, Technology and Environment*

The State Committee on Science and Technology is in charge of Science and Technology Development programmes as well as environment

development programmes. The State Committee functions through its Executive Committee and Task Groups. The number of Task Groups which is now twelve, is proposed to be increased. The activities of the Committee, proposed for the Seventh Five Year Plan, are broadly divided into three groups:

- (i) Science and Technology Promotion Programmes.
- (ii) Entrepreneurship Development Programmes based on Science and Technology.
- (iii) Popularisation of Science.

The programmes included under (i) are mainly research projects, assistance to institutions for development schemes, programmes for the promotion of scientific interests in youth, appropriate technologies for rural development, organisation of seminars, symposia etc., establishment of science and technology entrepreneurs parks, etc., form the activities under the second category. Programmes like support for research and development projects, support to voluntary organisations, publications etc., are also thought of for the popularisation of Science.

The Seventh Plan outlay is Rs. 200 lakhs. An amount of Rs. 15 lakhs is provided in the Annual Plan for 1985-86, mainly for on-going schemes.

#### 2. *Formation of a Department of Science, Technology and Environment*

A separate Department will be formed to co-ordinate the various development programmes under Science, Technology and Environment. The activities of the centres of excellence have to be co-ordinated and links established with concerned Administrative Departments, Universities and other educational institutions. In the annual plan 1985-86, Rs. 3 lakhs is provided for carrying out the preliminary work connected with the formation of the Department. The Seventh Plan outlay is Rs. 20 lakhs.

#### *State Institutions*

#### 3. *Lal Bahadur Sastri Engineering Research and Consultancy Centre*

The research and consultancy services of the Centre will be extended to new areas of Engineering and Technology for which additional infrastructural facilities have to be built up. In the Seventh Plan an outlay of Rs. 50 lakhs has been set apart and in the Annual Plan 1985-86, Rs. 7 lakhs.

#### 4. *Sree Chithra Thirunal Institute for Medical Science and Technology*

This National Institute is financed by the Department of Science and Technology, Government of India. The Seventh Plan outlay proposed

for the Institute in the Central Sector is Rs. 28.75 crores with a capital component of Rs. 9.55 crores. The Seventh Plan programmes of the Institute include development of Biomedical Technology to intensify research and development efforts on second generation plastic products, bio-alloys, bio-ceramics etc., and also the development of the hospital wing as one of the leading hospitals for patient care, teaching and research. Considering the local importance of the Institute an amount of Rs. 50 lakhs is provided in the Seventh Plan and Rs. 7 lakhs in the Annual Plan for 1985-86 for those of its R & D activities relevant to the State and to establish close linkages with State Institutions.

#### 5. *Electronics Research and Development Centre*

'Electronics Research and Development Centre' seeks to develop technology in three major areas viz: computers and data processing, Control Instrumentation and Industrial Electronics, and communication. The main outputs of ER & DC could be measured by its achievements in the following R & D measures.

- (i) Development of Productive Technology.
- (ii) Competence Building.
- (iii) Man Power Development.

However, the justification for the Centre would be its ability to realise productive technology directed to Indian and export markets. In Seventh Plan, it is proposed to develop the following Groups in the Centre.

- (i) Cybernetics Systems Group.
- (ii) Power Electronics Group.
- (iii) Mass Communication Group.
- (iv) Medical Electronics Group.
- (v) Defence Electronics Group.
- (vi) Materials Development Centre.
- (vii) Government Data Centre.
- (viii) Product and Systems Engineering Group.

Besides, library and support services have to be developed.

In the Seventh Plan Rs. 400 lakhs have been provided and in the Annual Plan 1985-86, Rs. 40 lakhs. The resources for the balance outlay would be found from KELTRON, Department of Electronics, Department of Defence, Department of Science and Technology, Government of India etc.

#### 6. *Kerala Forest Research Institute*

Kerala Forest Research Institute, Peechi undertakes research programmes directly linked to protective, productive and social functions of forestry in the State. In the years to come, the Institute will concentrate on social and environmental forestry. The following programmes are

planned by the Institute during Seventh Five Year Plan.

- (i) Techno-economic assessment of plantation forestry.
- (ii) Management of evergreen and semi-evergreen forests.
- (iii) Studies on minor forest produce with special emphasis on the cultivation of medicinal plants, canes, reeds and bamboos.
- (iv) Studies on wild life management.
- (v) Studies on social forestry, especially agro-forestry.
- (vi) Studies on the utilisation of wood.
- (vii) Environmental studies.
- (viii) General studies (Statistical and Economic).

The proposals also include development of infrastructure at Peechi, and the Extension Centre at Nilambur. A field Station is proposed to be established at Parambikulam for undertaking wild life studies. An outlay of Rs. 310 lakhs is proposed in the Seventh Plan. Rs. 46 lakhs have been proposed for the Annual Plan 1985-86 and this includes outlay for spill-over schemes like teak museum and residential quarters.

#### 7. *Centre for Water Resources, Development and Management (CWRDM)*

In the Seventh Plan, CWRDM proposes to take up several research projects, besides completing the on-going ones. It is also proposed to establish three new Divisions in the Scientific Wing in the Plan period. It is also proposed to complete the construction works on the campus. Two regional centres will be established at Central and South Kerala and the Peruvannamuzhi Campus will be developed as a field experiment station. Besides, centralised workshop and laboratory facilities will be created. Construction works during the Plan period include Staff Quarters, Water Supply, Library Building etc. An amount of Rs. 200 lakhs is proposed in the Seventh Plan for completion of existing works and for providing additional facilities. An outlay of Rs. 42 lakhs is proposed in Annual Plan 1985-86. The research projects of the various scientific wings will be funded out of the provision under 'Research Programme' under the sector "Irrigation".

#### 8. *Centre for Development Studies*

The Centre for Development Studies will continue to promote research and teaching in disciplines relevant to development by establishing collaborative relationship with planning and developmental agencies as well as technical, scientific and research institutions. In the Seventh Five Year Plan the Centre proposes to take up research projects on the economy of Kerala and India, as also International Economics. The research projects on the economy of Kerala include Industrialisation of

Kerala, technology diffusion and upgradation, rural energy, agro-based industries, problems of poverty, rural finance, impact of migration, workers' remittances, stagnating agricultural output etc. The Centre will continue its M. Phil and Ph.D. Degree programmes and other short-term training courses. The outlay proposed is for the above research and training programmes and for the provision of additional facilities like library (furniture, staff quarters, hostel annexe etc. An amount of Rs. 210 lakhs is proposed in the Seventh Plan. An amount of Rs. 30 lakhs is proposed for the Annual Plan 1985-86.

#### 9. Council of Scientific and Industrial Research

The outlay is for giving State's share, which has already been committed, to the CSIR Complex, Trivandrum. The entire amount of Rs. 5 lakhs would be provided in the Annual Plan 1985-86.

#### 10. Centre for Earth Science Studies (CESS)

The Centre for Earth Science Studies proposes to take up a number of research projects, besides completing the on-going ones. A computer based data bank would be created incorporating all the oceanographic and marine geological data collected by CESS since its inception. The Centre has also initiated activities in geophysical studies and environmental studies, which it proposes to expand in the Seventh Plan. The new Campus of the Centre would be fully developed in 18.6 acres of land allotted by Government at Akulam in Trivandrum. The library and documentation section and the laboratory would also be developed in the plan period. An outlay of Rs. 400 lakhs is proposed in the Seventh Plan. An amount of Rs. 95 lakhs has been proposed for the Annual plan 1985-86 in order to complete the research projects in progress and to initiate action for setting up infrastructure facilities.

#### 11. National Transportation Planning and Research Centre

This Centre proposes to take up a number of studies during the Seventh Plan in the areas of Urban Transport, Accident Prevention Measures, Environmental Planning, Regional Planning, Studies on Optimisation, Economic Studies, Inland Water Transport, Energy Requirements, Air Transport and Technological Studies. The Centre also proposes to construct buildings for its office and library and provide furniture and equipments. An amount of Rs. 100 lakhs is proposed in the Seventh Plan and Rs. 15 lakhs in the 1985-86 plan to meet the capital requirements of the Centre. The Centre, being a consultancy organisation, has to find external resources for carrying out its research activities.

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#### 12. Tropical Botanic Garden and Research Institute

The Institute, at present, located at Trivandrum, proposes to develop its campus at Palode 40 km from Trivandrum. The campus at Palode extending over 200 hectares will have the research laboratories, administrative wing, herbarium, library etc. It will be developed into a residential one with water supply facilities. During the Seventh Plan period the Institute proposes to carry out research studies in the following branches of plant biotechnology:

- (a) Clonal propagation
- (b) Somatic cell genetics
- (c) Plant development biology
- (d) Phyto chemistry.

The Institute proposes to conduct a comprehensive floristic and taxonomic survey of Kerala and to develop an Arboretum at Palode. A comprehensive collection of rare indigenous and exotic species and their preservation by soil and test-tube culture is planned during the next five years. The Institute also proposes to introduce new plants and start a seed and pollen bank. An outlay of Rs. 415 lakhs is proposed for these activities in the Seventh Plan. An amount Rs. 50 lakhs have been provided in Annual Plan 1985-86.

#### 13. Indian Institute for Regional Development Studies

The Institute proposes to take up a number of Studies in subjects like Regional Development, Foreign Trade, Communications and Development, Industrial Development, Energy, Agricultural Development and Irrigation, and Social Forestry. It also proposes to expand its library facilities and start an Information Division with computer facilities. It is also planned to develop the campus by constructing additional buildings. An outlay of Rs. 40 lakhs has been proposed in the Seventh Plan. An amount of Rs. 6 lakhs is proposed in the Annual Plan 1985-86.

#### II. Environmental Research and Programmes

Adequate attention was not given to environmental research and ecological studies in the past plans. In line with the suggestion in the Planning Commission's Approach document special emphasis will be laid on such studies in the Seventh Plan. A total outlay of Rs. 162 lakhs is earmarked in the Seventh Plan for environmental research and programmes. The details are given below:

##### 1. Environmental Development Schemes of the State Committee

The State Committee on Science, Technology and Environment has a programme of ecological and environmental studies and activities in collaboration with Departments and other agencies enlisting people's involvement. It is proposed to bring out a detailed Report

on Environment. The Committee has programmes to support directly and through the Department of Environment, research projects on Environmental Impact Assessment of Development Projects. Training programmes will be initiated to provide expert manpower for environmental impact—assessment studies and auditing. It is also proposed to conduct eco-development camps of schools, colleges, universities and voluntary agencies. The outlay of Rs. 30 lakhs proposed is for conducting these and similar studies by the Committee in the Seventh Plan. An amount of Rs. 4 lakhs is provided for the purpose in the Annual Plan.

## 2. Environmental Development Schemes—Other Institutions

The State Committee on Science, Technology and Environment would identify institutes and individuals to work on environmental research projects of direct relevance to the State. The following are some of the projects proposed to be taken up during Seventh Plan period.

- (i) Intrusion studies on land and studies on 'Urul Pottal'
- (ii) Integrated programme on fluorosis
- (iii) Rural fuel use and its impact on health.
- (iv) Bio-technology for waste management.
- (v) Environmental toxicology.
- (vi) Microbial methods for waste management.
- (vii) Solid wastes disposal and recycling/reuse
- (viii) Marine pollution research.
- (ix) Wet lands
- (x) Wild life
- (xi) Ecological modelling
- (xii) Grazing lands.
- (xiii) Tropical forest ecosystems.
- (xiv) Mangrove ecosystems.
- (xv) Ethnobiology.

Environmental education programmes will be planned through formal and nonformal systems of education. A curriculum development cell will be formed for production of teaching aids, books, literature etc. It is also proposed to establish an Institute of Environmental Management and Planning to train managers, planners, academicians etc.

An amount of Rs. 70 lakhs is provided to implement the above programmes in the Seventh Plan. The outlay in 1985-86 is Rs. 10 lakhs.

## 3. Environmental Studies on Projects Identified by Other Agencies

The following investigative and developmental research projects have already been identified and proposed by institutions like the Kerala State Pollution Control Board, Agricultural University, Centre for Water Resource Development and Management, Centre for Earth Science Studies and the Directorate of Agriculture. A total outlay of Rs. 62

lakhs will be needed for such studies in the Seventh Plan. The 1985-86 outlay for these studies is Rs. 8 lakhs. The details are given below:—

### (a) Integrated Estuarine Eco-system Study of Kerala

There is a chain of backwaters parallel to the sea coast of Kerala. These are linked by natural or artificial canals. They function as buffer between the sea and inland fresh water. The inter-linked aspects of the eco-system of the backwaters and estuarine range of the rivers is proposed to be studied over a period of two years. A provision of Rs. 5 lakhs is made for this scheme proposed by the Centre for Earth Science Studies. The scheme will be implemented in the third year of the Seventh Plan period.

### (b) Comprehensive Project and Agro-chemical and Environmental Pollution

This project includes ten sub-projects covering hazards of pollution from agro-chemicals, deterioration of water quality in six rivers, hazards of industrial effluence on crops; persistence of pesticides in soil, effect of use of fertilizers and insecticides on the plantations of Western Ghats, pesticide residues in agricultural commodities, water pollution by agricultural chemicals in Kuttanad, pesticide residues in milk, egg and fish in Kuttanad, waiting period for pesticides, and pesticidal efficiency of natural compounds. For the comprehensive study proposed by the Kerala Agricultural University an amount of Rs. 10 lakhs is earmarked in the Plan. The outlay for 1985-86 is Rs. 3 lakhs.

### (c) Integrated Water Shed Management—Soil Erosion and Conservation

The increased agricultural activities deforestation, irrigation, hydel projects, sand collection, etc., are causing soil erosion and therefore the river basin characteristics are being altered. A study on this is sponsored by the Centre for Earth Science Studies and is proposed in the Plan to evolve means for soil conservation in the river basins. The plan outlay for the project is Rs. 5 lakhs.

### (d) Ecological Study of Representative Wells in Kottaparamba

The influence of ecological factors on ground water is proposed to be studied selecting a few wells in Kottaparamba. This project sponsored by the Centre for Water Resources Development and Management is proposed to be carried out in the Seventh Plan period and an outlay of Rs. 2 lakhs is earmarked for this purpose.

### (e) Desalination and Bio-waste Utilisation

New sources of fresh water are being explored. The technological feasibility and economic viability of methods of desalination needs to be studied. Also the treatment of organic wastes, the re-usability of water and the utilization of the bio-waste are proposed to be studied. This project is sponsored by the Centre for Water Resources Development and Management. The Plan outlay for the project is Rs. 11 lakhs.



(f) *Estimation of Soil Pollution in Ernakulam District*

A study of the pollution of soil of Ernakulam District covering such parameters as heavy metals, salinity, alkalinity, acidity and sulphate is proposed by the State Department of Agriculture. The nature of distribution of the pollutants and comparison with unpolluted soil will be done under this study. Source identification of pollutants will also be done. Characteristic gradient maps will be prepared. The relationship between soil texture and retention of nutrients and toxic elements will also be studied. Outlay for this project in the Seventh Plan is Rs. 11 lakhs. The allotment for 1985-86 is Rs. 3 lakhs.

(g) *Pilot Study of Water Pollution by Agricultural Run-off*

The increased usage of fertilizers, insecticides, fungicides, pesticides, herbicides, etc., in agricultural operations has increased the pollutant load of the run-off from the fields. The result is eutrophication and toxicity of the receiving water bodies. This study sponsored by the Kerala State Pollution Control Board is intended to assess the situation and plan control measures. The project is of five year duration, covering data collection, monitoring, assessment and development of control measures. The outlay for this project is Rs. 8.65 lakhs.

(h) *Environmental Map of Kerala*

The Water Act and Air Act stipulate that the State Pollution Control Board should have a comprehensive plan for the prevention and control of water and air pollution. For this the present situation has to be assessed and presented in an easily understandable manner. The areas of environmental conservation/improvement/deterioration have to be identified so that protective and restorative measures can be adopted. For this an environmental map of Kerala has to be prepared. Such a map would indicate the pollution level of different areas and serve as a guide to locate new industries, study the scope of further development of areas, identify most sensitive areas and recommend ban of further industrialisation in heavily polluted areas. This project sponsored by the Kerala State Pollution Control Board will have a cost of Rs. 0.35 lakh.

(i) *Study of Pollution of Cochin Backwaters*

The Cochin backwaters are subject to severe pollution from industries and sewage. It is proposed to assess the pollutant load from different sources, analyse the quality of the backwaters at different locations, collect flora, fauna and mud samples, measure currents, conduct hydrographic survey and bacteriological and bio-degradation studies. The results will be beneficial in taking control measures. The project sponsored by the Kerala State Pollution Control Board is proposed to be carried out during the second and third years of the Seventh Plan. The outlay earmarked for the plan period is Rs. 6 lakhs.

(j) *Study of Effluents from Rubber and Allied Industries*

There are a number of rubber and allied industries in Kerala. Most of these units are in the small scale sector. The effluent problems from these industries are peculiar to Kerala and there is little scope for transfer of technology from elsewhere. The characteristics of the effluent needs to be studied and methods of treatment re-use and utilisation developed. The outlay for this two year project proposed by the Kerala State Pollution Control Board is Rs. 3 lakhs. The allocation for 1985-86 is Rs. 2 lakhs.

III. *Agency for Non-Conventional Energy and Rural Technology (ANERT)*

Major gaps in the area of Science and Technology in Kerala are in the spheres of rural technology and non-conventional energy resources. It is proposed to establish an agency which will co-ordinate and assist projects in these fields, whether they are taken up by Government Universities or research agencies. The focus will be on developing new technologies or adopting available technologies suited to the resource endowments of the State. Preserving the environment and popularising low cost technologies will also constitute important activities of this Agency. An amount of Rs. 600 lakhs is proposed in the Seventh Plan for studies on New Sources of Energy under the power sector. These studies will be sponsored, guided and implemented by this Agency. For the setting up of the Agency an amount of Rs. 50 lakhs is provided in the Seventh Plan. The outlay proposed in 1985-86 is Rs. 20 lakhs.

IV. *Water and Air Pollution Control:*

Pollution control has not received much attention in earlier plans. The absent of long-term planning in this area has caused considerable damage. According to the legislations on the subject, monitoring, surveillance, enforcement, research, mass education and training are the statutory functions of the Kerala State Pollution Control Board. But, owing to financial constraints the Board could take up only a few of its statutory functions, though it has achieved commendable progress in these limited fields of activity. In the Plan period the Kerala State Pollution Control Board has to be given adequate support so that it can perform all its statutory functions under the Water Act, Water Cess Act and Air Act. Also a co-ordinated effort has to be made by the Pollution Control Board, academic institutions and centres of excellence like the CWRDM and CESS in the field of environmental research so that duplication can be avoided and the data from various research projects are made use of in implementation of programmes.

A list of laws in the area of pollution control is given below:—

1. (a) The Water (Prevention and Control of Pollution) Act, 1974 amended in 1978.
- (b) The Water (Prevention and Control of Pollution) Rules, 1976 amended in 1983 and 1984.



2. (a) The Water (Prevention and Control of Pollution) Cess Act, 1977.
- (b) The Water (Prevention and Control of Pollution) Cess Rules, 1978.
3. (a) The Air (Prevention and Control of Pollution) Act, 1981.
- (b) The Air (Prevention and Control of Pollution) Rules, 1984.

There is need for a strong central agency for monitoring and control of water pollution, air pollution and noise pollution.

This agency has to identify short and long term control measures by conducting studies. It is to conduct environmental impact study on all new projects and its consent is to be a pre-requisite for clearance of the projects. The Approach Paper of the Planning Commission lays stress on the following:

- (i) Need for institutional frameworks capable of introducing the concerns of conservation into the development planning process.
- (ii) Need for formulating a National Conservation Strategy.
- (iii) Need for strengthening monitoring, enforcement and research facilities to ensure implementation of the policies and programmes resulting from the strategy.
- (iv) Need for further strengthening the programme of Environmental Research promotion (ERP) with particular emphasis on action oriented co-ordinated projects.

The Kerala State Pollution Control Board has been in existence since 1974. Owing to the limited infrastructure facilities and financial resources, it could carry out only a part of the functions entrusted to it by the legislations. The Board therefore has focused its attention on water pollution caused by industries. As a result the Board could get the water pollution load from industries reduced by 60% over the period 1974-84. But the water pollution caused by effluents from municipalities, agricultural run-off etc., remain to be covered. In 1984 the State Government notified the Rules under the Air (Prevention and Control of Pollution) Act, 1981 and the Board had to immediately take up implementation of air pollution control measures also. Noise pollution control is also to be brought under the purview of the Board. For the implementation of the programmes of the Board an amount of Rs. 438 lakhs is earmarked in the Seventh Plan. The following are the schemes proposed under Water and Air Pollution Control.

(i) *Augmentation of Infrastructure of the Kerala State Pollution Control Board*

For the Board to carry out its various activities as statutorily provided under the various Acts, it has to have a net-work of monitoring stations, laboratories and offices with the required manpower. It

is time the Board's infrastructure is expanded to ensure that sources of environmental degradation are detected in time and preventive/mitigative steps taken. The present set up of the Board comprises a head office, the regional officers, four site officers, one Central Laboratory and one regional laboratory. This set up has to be augmented to cater to the following requisites, to be met in a phased manner.

- (i) There has to be sufficient number of site offices at strategic locations where pollution is experienced/apprehended more.
- (ii) Sub-regional offices in every district.
- (iii) Regional offices for every three districts.
- (iv) Circle offices for south and north Kerala.

The set up proposed at the end of the Seventh Plan envisages besides the head office, two circle offices, four regional offices, eleven sub regional offices, twenty one site offices, a Central Laboratory and four regional laboratories. The Seventh Plan outlay for this scheme is Rs. 336 lakhs. The Plan outlay earmarked for 1985-86 is Rs. 40 lakhs.

(ii) *Establishment of Water and Air Monitoring Stations*

The State Pollution Control Board has to continuously collect qualitative and quantitative data on water and air. Such data form the basis for taking preventive or mitigative action. A net-work of monitoring stations has to be established for this purpose. Wherever possible, these stations will be attached to the site offices. The outlay for the five year period is Rs. 23 lakhs. The outlay for 1985-86 will be Rs. 6.50 lakhs.

(iii) *Air Quality Studies in Industrial Areas*

The major thrust of the Air Act is on the control of air pollution in industrial areas. It is necessary that the Pollution Control Board identifies the pollutants, sources, concentration, distribution, pattern of dispersal and meteorological factors. Based on these data, control measures can be planned. The outlay for this two year project is Rs. 11 lakhs. This project is proposed to be taken up during the 1st and 2nd years of the Plan period. The outlay for 1985-86 is Rs. 7 lakhs.

(iv) *Squad for Checking Air Pollution from Distributed Sources*

According to the Air Act, the State Pollution Control Board has to detect and impose control on the distributed sources of air pollution like burning of fuels and other substances, exhaust from automobiles, etc. The Board is also required to take direct action in exigencies. For this, the Board needs to be equipped with mobile squads. The outlay for the five year period is Rs. 21 lakhs. For 1985-86 the outlay earmarked is Rs. 9 lakhs.

(v) *Pollution Status Survey and Classification of Water Bodies*

The State pollution Control Board is required to maintain and restore the wholesomeness of the water bodies in the State. The quality and quantity of the water bodies have to be continuously monitored.

The Board has to lay down tolerance limits for the effluents from industries, municipalities, etc., depending on the assimilative capacity and use pattern of the water bodies into different grades. This is a continuing exercise. The total outlay for the Seventh Plan is Rs. 20 lakhs. The outlay for 1985-86 is Rs. 8.60 lakhs.

(vi) *Data Bank*

One of the statutory functions of the State Pollution Control Board is collection and dissemination of data. A systematic method of collection, compilation, storage and retrieval of data has to be developed. Such data can be made available to the Board staff and to researchers and organisations in need of the data. The allocation for the scheme in the Seventh Plan is Rs. 10 lakhs. The outlay for 1985-86 is Rs. 3.90 lakhs.

(vii) *Demonstration Plants for Effluent/Emission—Treatment for Small Scale Industries*

Small scale rubber industries, starch industries and handloom industries cause significant pollution of water and air. They find it difficult to meet the cost of treatment methods and cannot engage large concerns as consultants. The pollution problems has to be solved by relatively simple and economic methods of process innovations, effluent treatment and reuse. The small scale industrialists have to be convinced of such methods and the public have to be made aware of it. For this purpose, demonstration plants have to be set up at selected sites. An outlay Rs. 1 lakh is earmarked in the Seventh Plan.

(viii) *Land Pollution Control Schemes*

Industrial discharges, on-site sanitation, sewage disposals, garbage dumping, agricultural operations, mining, etc., are altering the soil characteristics. The source of land pollution needs to be identified, quantified and control measures planned. It is proposed to take up this work during the last two years of the Seventh Plan for which an outlay of Rs. 3 lakhs is made in the Plan.

(ix) *Identification of Noise Pollution Sources and Vulnerable Areas and Formulation of Control Measures*

The Kerala State Pollution Control Board is to take up noise pollution control during the Plan period. It has to develop basic data for this purpose by identifying the major sources of noise pollution, areas and population affected and possible control measures. This project is proposed to be lakh for initiating the scheme is provided in the Plan lakh for initiating the scheme is provided in the plan.

(x) *Encouraging Research Relating to Environmental Pollution*

The Water Act and the Air Act require that the pollution Control Board, in addition to conducting and participating in research, has to encourage research by others. The Board has to evaluate project proposals in this regard and extend financial support. An amount of Rs. 2 lakhs is proposed to be set apart for this in the last two years of the Seventh Plan.

(xi) *Incentive for Pollution Control*

The State Pollution Control Board proposes to encourage pollution control activities by instituting awards for best performance in different categories of industries and municipalities. It is also proposed to give seed loans and soft loans in deserving cases for setting up pollution control system. The anticipated expenditure for the scheme in the Seventh Plan is Rs. 10 lakhs.

## 11.9. Social and Community Services

### *Education*

#### *General Education*

In the Seventh Plan, priority will be given to universal elementary education for children in the age group 6-14. The aim is to raise the enrolment ratio to 100% in the age group 6-14 by the end of the plan period. Emphasis will also be laid on increasing enrolment of girls from existing level of 89% to 100% (age group 6-14). Efforts would also be made to raise the enrolment ratio of scheduled castes and scheduled tribes to the level of general enrolment ratio.

The future policy of opening new schools should be made on the principle of educational backwardness and local needs. Schools should be sanctioned only in such places where it is absolutely needed, based on an intensive survey for identifying the school-less habitations and the habitations which have inadequate schooling facilities. The emphasis in the Seventh Plan will be on qualitative improvement of education.

In spite of planned efforts for decades now, in the public sector a large number of schools are run in old and unsafe buildings. In the Seventh Plan, suitable measures are to be taken to accommodate maximum number of schools in their own buildings. Education should have a closer link with employment and needs of the economy. A radical change in the present traditional type of education is necessary. The adoption of curriculum to the needs of the employment market and vocationalisation of secondary education would help to a certain extent in solving the present problem of educated unemployment. The objective will be to start vocational courses in 300 High Schools during the Seventh Plan period.

It is estimated that there would be about 14 lakhs of children in the age group 3-5 in the State. Provision of pre-school education for at least 50 per cent of the children will involve heavy financial burden on the part of the Government. At present most of the Pre-primary/Nursery Schools in the State are run by voluntary agencies. It is not advisable for Government to directly undertake the responsibility of pre-primary education. Government have already taken steps to upgrade the skills of teachers in the pre-primary sector and standardise the programmes in the Pre-primary schools by issuing general guide lines and establishing model schools. The objective in the Seventh Plan is to have one model pre-primary school in each of the 153 educational sub-districts.

The details of schemes proposed under different levels of education are shown below:

### 1. *Elementary Education*

#### *Minimum Needs Programme*

#### I. *Construction of Buildings and Staff Quarters (TSP)*

Twenty one L. P. Schools are functioning in the Tribal Sub Plan area. Provision of minimum site and buildings to these schools is envisaged under this scheme. With a view to tackle the problem of accommodation to teachers in the tribal areas, provision is also included for the construction of staff quarters. The Seventh Plan outlay for this scheme is Rs. 50 lakhs. The 1985-86 outlay is Rs. 10 lakhs.

#### 2. *Construction of Buildings for LP/UP Schools*

Most of the primary schools in the State are housed in old and dilapidated structures. Schools run in temporary sheds are also common. Several schools do not have sites of their own and are run in rented buildings. The scheme is for construction of class rooms and buildings for old L. P. and U. P. Schools in the Public Sector. The scheme also includes provision for construction works for improving the facilities in Primary Schools. The outlay for the Seventh Plan is Rs. 900 lakhs. The 1985-86 outlay is Rs. 130 lakhs.

#### 3. *Supply of Furniture to LP/UP Schools*

Supply of adequate furniture to meet backlog in the existing schools is proposed under this scheme in the Seventh Plan. The outlay of Rs. 150 lakhs for the Seventh Plan is also for supply of furniture to the L. P. Schools in the Tribal Sub Plan areas. The 1985-86 outlay is Rs. 25 lakhs.

#### 4. *Improvement of Facilities (Provision of Teaching Aids other than Laboratory Equipment)*

This scheme aims at improving the physical facilities in primary schools by providing necessary equipment, teaching aids and other items required in primary schools. The construction part will be met under the scheme 'Construction of buildings for L. P./U. P. schools'. The outlay in the Seventh Plan for this scheme is Rs. 50 lakhs. The outlay for 1985-86 is Rs. 5 lakhs.

#### 5. *Removal of Backwardness including Education of Girls*

The objective of this scheme is identification of backward pockets where enrolment ratios especially those of girls are poor. The scheme envisages intensive programme by the Education Extension Officers for raising the enrolment ratios in these regions. In the Seventh Plan it is proposed to identify more such centres in the educationally backward regions for which an outlay of Rs. 50 lakhs is provided. The provision for the Annual Plan 1985-86 is Rs. 10 lakhs.

### 6. *Pre-primary Education*

Recently, Government have adopted the policy of restructuring the present system of pre-primary education by the introduction of uniform syllabus and appointment of trained teachers. It is proposed to have one model pre-primary school in each of the 153 educational sub districts by the end of the Seventh Plan period. In 1984-85, 31 schools were opened, one each in the 31 educational districts. An outlay of Rs. 270 lakhs is provided for the Seventh Plan. Expenditure towards Pre-primary Teacher's Training Institute is also included under this provision. The provision for the Annual Plan 1985-86 is Rs. 40 lakhs.

#### 7. *Financial Aid to Panchayats for Starting Pre-primary Schools*

An outlay of Rs. 50 lakhs is proposed for extending aid to Panchayats for running the new pre-primary schools to be started in the Seventh Plan. Amount earmarked for 1985-86 is Rs. 10 lakhs.

### 8. *Institute of Primary Education*

The scheme visualises training programmes for school teachers with a view to update the knowledge of the teacher in the subject he handles. It is proposed to strengthen the academic and administrative wings of the Institute of Primary Education suitably. The amount of Rs. 50 lakhs provided is to meet the salary cost of additional staff appointed and for the development programmes connected with primary education. The outlay for Annual Plan 1985-86 is Rs. 7 lakhs.

### 9. *NCERT Assisted Schemes--State Share*

Provision of inservice education and organisation of programmes of general nature like symposia, panel discussion, camps etc., for professional teachers are the main ingredients of the scheme. The entire expenditure will be met by the NCERT and State Government on a 50:50 basis. During the Seventh Plan period it is proposed to start 10 more centres of continuing education so as to have one centre each in every revenue district for which an amount of Rs. 20 lakhs is provided. The outlay of the Annual Plan 1985-86 is Rs. 4 lakhs.

### 10. *UNICEF Assisted Programme*

Curriculum Renewal Project, Comprehensive Access to Primary Education, Developmental Activities in Community Education and Participation are the schemes sponsored under the scheme. Initial expenses are to be met by the State, even though the whole expenditure is borne by UNICEF. The Seventh Plan outlay for the scheme is Rs. 10 lakhs out of which an amount of Rs. 2 lakhs is provided for 1985-86.

### 11. *Non-formal Education*

Efforts at providing non-formal education for the age group 6-14 has real relevance particularly in backward areas and in relation to weaker sections. Suitable programmes are required to promote enrolment and retention and for promotion of re-entry of dropout pupils. In the Seventh Plan, an amount

of Rs. 10 lakhs is provided for non-formal education centres in selected areas where the problem of drop-outs is acute. The outlay for 1985-86 is Rs. 2 lakhs.

#### 12. *Work Experience Programme in Primary Schools Including Socially Useful Productive Work*

Work Experience Programme is intended to develop basic attitudes towards work and basic skills in the children. Till now Work Experience Programme and socially useful productive work were treated as separate schemes and separate outlays were also provided. In the Seventh Plan, a total outlay of Rs. 75 lakhs is provided for both these schemes. The proposed amount is to meet the expenditure on salary of instructors, construction of workshops, purchase of furniture, equipment, raw materials, etc., and for giving necessary inservice training to teachers and also for other items of expenditure connected with the implementation of these two schemes. The outlay for 1985-86 is Rs. 15 lakhs.

#### 13. *Improvement of Science Education*

This scheme provides for the supply of necessary equipment in primary schools and for programmes for improving the quality of teachers through inservice programmes and other items of expenditure related to this programme. In the Seventh Plan, the scheme for improvement of laboratory facilities, will also form part of this scheme under a separate sub-head. The Seventh Plan outlay is Rs. 50 lakhs of which Rs. 10 lakhs is the share of the Annual Plan 1985-86.

#### 14. *Upgrading of Departmental L.P. Schools into U.P. Schools*

The scheme envisages upgradation of Departmental L.P. Schools into U.P. Schools for purposes of achieving the goal of universalisation of primary education. An amount of Rs. 100 lakhs is provided for the purpose. The share of the Annual Plan 1985-86 is Rs. 20 lakhs.

### II. *Secondary Education*

#### 15. *Strengthening of Staff in Large Secondary Schools*

The headmasters of secondary schools at present do not get sufficient time for academic supervision as a result of increasing duties and responsibilities assigned to them. In the Seventh Plan it is proposed to appoint one Headmaster instead of a teacher, in large secondary schools for effective academic supervision. The Seventh Plan outlay for the scheme is Rs. 40 lakhs. The outlay for 1985-86 is Rs. 5 lakhs.

#### 16. *Buildings and Facilities*

The scheme is for meeting backlog of construction of class rooms and supply of equipment and furniture to the existing departmental high schools. An amount of Rs. 380 lakhs is provided in the Seventh Plan for the scheme. Of this Rs. 50 lakhs is earmarked for 1985-86.

#### 17. *Furniture*

The provision under this scheme is for supply of furniture to the high schools. The proposed outlay is Rs. 50 lakhs and of this Rs. 6 lakhs is for 1985-86.

#### 18. *Improvement of Science Education Including Supply of Laboratory Equipment to Departmental schools*

The programme visualises the conduct of training programmes, workshops, seminars and discussions for teachers for the preparation of instruction materials, manuals etc. The Seventh Plan outlay of Rs. 75 lakhs also includes provision for the supply of laboratory equipments to Departmental Secondary Schools. The share of the Annual Plan 1985-86 is Rs. 10 lakhs.

#### 19. *Provision of Teaching Aids other than Laboratory Equipments.*

The provision is for the supply of teaching aids for subjects like Social Studies, languages etc. An amount of Rs. 25 lakhs is provided in the Seventh Plan. The outlay for Annual Plan 1985-86 is Rs. 2 lakhs.

#### 20. *Work Oriented Education*

Under Work Oriented Education Programme practice in trade is given to high school students with a view to providing a vocational bias in their education. Work experience is normally given in garment making, home science, tailoring, printing, agriculture, spinning, electronics, photography, fruit preservation, chalk making, book binding, rattan work, etc. Continuance and extension of this scheme to more number of schools is the main objective in the Seventh Plan. Payment of salary for home science teachers appointed under half a million job programme is also included in the Seventh Plan provision of Rs. 100 lakhs. An amount of Rs. 15 lakhs is earmarked for 1985-86.

#### 21. *Vocational Guidance Programme*

The programme of occupational information service to high school students through the trained career masters is the main content of the scheme. The Seventh Plan provision of Rs. 10 lakhs is for equipping the career information centre in each Secondary School and also to provide incentives to career masters for their guidance activities. The outlay for 1985-86 is Rs. 2 lakhs.

#### 22. *Development of School Libraries*

The Seventh Plan provision of Rs. 50 lakhs is towards purchase of books and furniture necessary for School Libraries. The share of the Annual Plan 1985-86 is Rs. 8 lakhs.

#### 23. *Examination Reforms*

Organisation of workshops and training for paper setters for public examinations are the two programmes visualised under this scheme. Amount provided in the Seventh Plan is Rs. 10 lakhs of which the outlay for the first year is Rs. 2 lakhs.

#### 24. *Revision of Curriculum* ...

Preparation of syllabus, workshop, preparation of handbooks study of public examination question papers, printing of extra reading materials, monthly meetings of teachers etc., are the activities envisaged under this scheme. The Seventh Plan outlay for the scheme is Rs. 65 lakhs. The outlay for 1985-86 is Rs. 10 lakhs.

#### 25. *Popularisation of Science Literature*

The scheme Popularisation of Science Literature is for bringing out suitable publications useful to students to make them interested in Science. It is also proposed to purchase a press. The amount provided in the Seventh Plan is Rs. 50 lakhs. An amount of Rs. 8 lakhs is set apart for Annual Plan 1985-86.

#### 26. *Introduction of Vocational Courses in Selected Schools and Upgrading Them*

The ultimate objective of vocationalisation should be to strengthen the technical content of the educational system in the technical content of the educational system in the State in a manner that will enable matriculates/post matriculates find employment in different occupations. A variety of non academic courses of technical education and training which are employment oriented and directly useful to students are suggested to be introduced. The scheme will be extended to 300 schools during the Seventh Plan period in a phased manner. Amount provided for the scheme is Rs. 850 lakhs. Provision for 1985-86 is Rs. 140 lakhs.

#### 27. *Creation of Scholarship Unit and Enhancement of Scholarships*

To co-ordinate the activities of the scholarship programme a separate scholarship unit in the Directorate is proposed. Enhancement of the number as well as the rate of scholarships is envisaged. A provision of Rs. 65 lakhs is made for these purposes. The outlay for 1985-86 is Rs. 15 lakhs.

#### 28. *Educational Research and Training*

The Scheme has been evolved for encouraging existing training and research programmes to determine their effectiveness and also to decide on the changes to be made. It is also proposed to take up training programmes for educational administrators at different levels to strengthen the implementation and improvement of the programme. Amount earmarked in the Seventh Plan is Rs. 15 lakhs. Provision for 1985-86 is Rs. 3 lakhs.

#### 29. *State Institute of Education*

Besides strengthening the academic and administrative wings of the Institute, the programme envisages conduct of seminars and inservice programmes and also construction of a hostel and a guest house for the Institute. The SIE is proposed to be strengthened on the model of NCERT. A permanent Curriculum Development Cell is proposed to be formed immediately. Seventh Plan provision for these purposes is Rs. 70 lakhs of which Rs. 14 lakhs is earmarked for 1985-86.

#### 30. *Institute of Science*

The State Institute of Science was established as an important wing of the State Institute of Education for fostering qualitative improvement programmes in science education in the State. Expenditure for conducting inservice courses in science and arrangements for the conduct of the State level science fair are also to be met from this provision. The outlay for the Seventh Plan is Rs. 25 lakhs and provision for 1985-86 is Rs. 5 lakhs.

#### 31. *Award of Scholarships to Scheduled Caste Students (SCP)*

The Seventh Plan provision of Rs. 50 lakhs is for the award of scholarships to Scheduled Caste students in Upper Primary and High Schools. The outlay for 1985-86 is Rs. 10 lakhs.

#### 32. *Coaching Classes to Scheduled Caste Students (SCP)*

Conduct of special coaching classes for the benefit of Scheduled Caste students of Standards VIII, IX and X are envisaged under this scheme. An amount of Rs. 100 lakhs is provided in the Seventh Plan of which Rs. 20 lakhs is the share of the Annual Plan 1985-86.

#### 33. *Award of Scholarships to Scheduled Tribe Students (TSP)*

Under this scheme scholarships will be provided to the Scheduled Tribe students. Amount earmarked in the Seventh Plan is Rs. 7 lakhs. Annual Plan outlay for 1985-86 is Rs. 1.50 lakhs.

#### 34. *Coaching Classes for Scheduled Tribe Students*

An outlay of Rs. 7 lakhs is provided for conducting special coaching classes for the benefit of Scheduled Tribe students. The outlay for 1985-86 is Rs. 1.50 lakhs.

#### 35. *Population Education—State Share*

The scheme envisages the introduction of population education as a subject in school curriculum while incorporating suitable lessons in text books, provision of guidelines and training the teachers. Expenditure of the Population Education Cell in the State Institute of Education will also be met from this provision. The Seventh Plan outlay is Rs. 10 lakhs and the Annual Plan outlay for 1985-86 is Rs. 2 lakhs.

### III. *Teacher Education*

#### 36. *Inservice Training to Primary School Teachers*

The provision is to meet the expenditure towards the training programmes of primary school teachers. The provision in the Seventh Plan is Rs. 100 lakhs of which the share of the Annual Plan 1985-86 is Rs. 15 lakhs.

#### 37. *Inservice Training to Secondary School Teachers Including Language Teachers*

The object of the scheme is to conduct training programmes for secondary school teachers including language teachers. Outlay provided in the Seventh Plan is Rs. 65 lakhs. The provision for Annual Plan 1985-86 is Rs. 10 lakhs.

### 38. *Improvement of Training Schools including L. T. T. Schools*

The proposed amount of Rs. 25 lakhs is to equip the Teacher Training Schools with necessary facilities including the L. T. T. Centres. The provision in the Annual Plan 1985-86 is Rs. 5 lakhs.

### IV. *Adult Education*

#### 39. *Adult Education (MNP) (Including Programmes under SCP and TSP)*

The scheme is meant for imparting education to the illiterate in the age group 15-35 numbering about 30.5 lakhs in Kerala according to 1981 census. The Plan provision is for continuing the existing programmes such as the Adult Education Cells in Directorate and in the Secretariat, expenditure towards Adult Education Board and Committee, publicity and propaganda, purchase of equipments, incentive awards, opening of model centres for Scheduled Caste/Scheduled Tribe population and other connected expenditure. Amount provided in the Seventh Plan is Rs. 50 lakhs. The outlay for the Annual Plan 1985-86 is Rs. 8 lakhs.

### V. *Other Programmes*

#### 40. *Improvement of Facilities in Special Schools*

In Kerala there are at present 10 special schools having standards upto VII for imparting education to the deaf and the blind. But the facilities existing in these schools are highly inadequate. The combined education of both the blind and the deaf in the same school also creates problems. The proposed amount of Rs. 60 lakhs is for the bifurcation of the combined schools and to provide necessary facilities to the existing schools during the Seventh Plan period. The outlay for 1985-86 is Rs. 10 lakhs.

#### 41. *Opening of Special Schools*

It is proposed to start one school each for the deaf and the blind in those districts where there are no such schools at present. The Seventh Plan provision of Rs. 150 lakhs is to meet the recurring and capital costs for starting such schools. The Annual Plan (1985-86) provision is Rs. 20 lakhs.

#### 42. *Development of Sanskrit Education*

Award of scholarships to students, financial assistance to Sanskrit pundits under indigent circumstances, conduct of Sanskrit festivals, and conduct of orientation courses to Sanskrit teachers are the important programmes visualised under the development of Sanskrit education. Amount earmarked in the Seventh Plan is Rs. 27 lakhs of which Rs. 5 lakhs is the share of the Annual Plan, 1985-86.

#### 43. *Production and Distribution of Text Books and Note Books*

The scheme is for improving the machinery at the district level for more speedy and timely distribution of text books and note books. Expenditure towards construction of District Text Book Depots and purchase of vehicles is also included under the scheme. The Seventh Plan provision is Rs. 84 lakhs and 1985-86 outlay is Rs. 15 lakhs.

#### 44. *Appointment of Hindi Teachers in Non-Hindi Speaking Areas—State Share*

This is a 50% centrally assisted scheme. The provision is made for the improvement of teaching of Hindi in non-Hindi speaking States by meeting the salary cost of teachers. An amount of Rs. 50 lakhs is proposed for the Seventh Plan of which Rs. 10 lakhs is the outlay for the Annual Plan 1985-86.

### *University Education*

There are 174 arts and science colleges in the State today with a total student strength of 1.82 lakhs. A new university, namely Gandhiji University came into existence on 2nd October, 1983. The university has 68 affiliated colleges including one medical college, one engineering college and one law college with a total student population of 150,000 and faculty strength of 5000.

During the Seventh Plan period the emphasis will be on the consolidation and qualitative improvement of university education in the State.

#### I. *Development of Universities*

The assistance proposed for the universities is for completing essential infrastructure development of the Universities of Kerala, Calicut and Gandhiji and the consolidation of departments/courses which are now in existence. In the allocation of grants to universities, Gandhiji University deserves more financial support, as unlike the other two universities, it needs land and buildings also. An outlay of Rs. 800 lakhs is proposed as assistance to the three universities of Kerala, Calicut and Gandhiji in the Seventh Plan.

An outlay of Rs. 160 lakhs is provided as assistance to universities in the 1985-86 Plan.

#### II. *Development of Colleges*

##### A. *Department of Collegiate Education*

###### 1. *Direction and Administration*

The outlay of Rs. 3 lakhs proposed is for the purchase of computer facilities, and training essential staff additionally needed.

An amount of Rs. 0.45 lakh is proposed for 1985-86.

###### 2. *Purchase of Furniture for Deputy Directorate*

The provision of Rs. 3 lakhs is for the purchase of furniture for the zonal offices under the Department of Collegiate Education. This outlay will be needed in the first year of the Plan.

###### 3. *Staff Cost in Government Colleges—Starting of new Government Colleges/Evening Colleges*

The outlay of Rs. 20 lakhs provided is for the starting of two new Government Colleges, one at Munnar in Idukki district and the other at Alleppey. During the Seventh Plan period these new colleges will conduct only pre-degree classes.

An outlay of Rs. 3 lakhs is provided for this scheme in 1985-86.

#### 4. *Upgradation of Colleges*

The provision of Rs. 20 lakhs is for the salary of staff newly appointed in connection with the upgradation of Government Colleges.

In the 1985-86 plan Rs. 3 lakhs is proposed for the purpose.

#### 5. *Starting of new Courses in Government Colleges*

During the Seventh Plan period it is proposed to start not more than 40 courses at the pre-degree, degree and post-graduate levels. The outlay of Rs. 15 lakhs provided is for the purpose of meeting the salary and other expenses in connection with the starting of new courses in Government Colleges.

A provision of Rs. 2.25 lakhs is made for the starting of new courses in Government Colleges in 1985-86.

#### 6. *Construction of Buildings for Government Colleges and Hostels*

Capital works under collegiate education have been neglected for a long time. The 'spilled over' construction work is estimated to be Rs. 118 lakhs. The outlay of Rs. 500 lakhs proposed is for completing all the 'spilled over' construction work and for taking up the construction of buildings which were budgeted during the Sixth Plan period but not taken up and for new works if there are savings.

A provision of Rs. 200 lakhs is made for the construction of buildings for Government colleges and hostels in the 1985-86 Plan.

#### 7. *Minor Works*

The outlay of Rs. 25 lakhs proposed is for additions to existing buildings and repair of Government colleges and hostels.

An amount of Rs. 3.75 lakhs is proposed for this in the 1985-86 Plan.

#### 8. *Staff Cost in Private Colleges*

It is estimated that nearly 94 courses at pre-degree, degree and post-graduate levels are to be sanctioned during the Seventh Plan period in private colleges. The outlay of Rs. 120 lakhs proposed is for meeting the staff cost during the Plan period.

In 1985-86 an amount of Rs. 15.45 lakhs is proposed for meeting the staff cost in private colleges consequent on the starting of additional courses and upgradation of junior colleges.

#### 9. *Expansion of Libraries in Government Colleges*

The Seventh Plan outlay of Rs. 20 lakhs under this scheme is for the purchase of library books and storage racks in Government Colleges.

A provision of Rs. 3 lakhs is made for 1985-86.

#### 10. *Purchase of Furniture for Government Colleges*

The amount of Rs. 40 lakhs provided is for the purchase of furniture for Government Colleges

during the Seventh Plan period. Priority in allotment will be given to new colleges and newly upgraded colleges.

In 1985-86 Rs. 60 lakhs is provided for this purpose.

#### 11. *Expansion of Laboratory Facilities*

Of the 40 Government Colleges, 17 have science subjects. The laboratories in 3 junior colleges are quite ill-equipped. These have to be developed during the Seventh Plan period. Besides, the laboratories in existing colleges also have to be suitably equipped. The Seventh Plan outlay of Rs. 20 lakhs proposed is for the purchase of essential laboratory equipment for Government Colleges.

As amount of Rs. 3 lakhs is proposed in 1985-86.

#### 12. *Conduct of Study Tours*

Study tour is an integral part of the syllabus in science faculties like biology, chemistry, geography, geology etc. The provision of Rs. 10 lakhs is for meeting the expenses connected with the conduct of study tours.

A provision of Rs. 1.50 lakhs is made for study tours in 1985-86.

#### 13. *Book Bank Scheme in Government Colleges*

The proposed outlay of Rs. 10 lakhs is for organising book banks in Government Colleges. Under the scheme the needs of junior colleges and newly upgraded colleges are proposed to be given priority.

In 1985-86 Rs. 1.50 lakhs is proposed for the scheme.

#### 14. *Student Amenities*

The outlay of Rs. 9 lakhs is meant for the provision of canteen and dining room facilities for college students and one television set each in 12 Government hostels.

In 1985-86 Rs. 1.35 lakhs is provided for increasing student amenities.

#### 15. *Scholarships to Encourage Outstanding Students*

An analysis of SSLC results in the past three years reveals that about 3000 students score 80% or more marks each year. A large number of these students study physics, chemistry, mathematics and biology. Barely half of these students are able to avail themselves of the various scholarship schemes at the pre-degree level. This is because the income of the parents of the remaining students exceeds the prescribed limit of Rs. 6000 per annum. Under the scheme it is proposed to cover those students whose parent's income is up to Rs. 15,000 per annum. The present scheme of district merit awards to post-matric, post-inter and post-graduate students will be continued in the Seventh Plan. The outlay of Rs. 15 lakhs



proposed is for continuing the existing scholarship schemes and increasing the coverage to outstanding students whose parents' income is up to Rs. 15,000 per annum.

A provision of Rs. 2.25 lakhs is made for this in 1985-86.

#### 16. *Development of Under-Graduate and Post Graduate Educational Facilities*

The outlay of Rs. 15 lakhs is for the payment of matching grant to UGC assisted schemes to improve educational facilities in Government Colleges at the under-graduate and post-graduate levels.

An amount of Rs. 2.25 lakhs is provided for this scheme in 1985-86.

#### 17. *UGC Assisted Schemes—Construction Works*

This scheme is intended to give matching contribution to construction works in Government Colleges assisted by University Grants Commission.

The outlay for the Seventh Plan is Rs. 74.85 lakhs. The Annual Plan (1985-86) outlay is Rs. 11.23 lakhs.

#### 18. *Physical Education Colleges*

The provision of Rs. 10 lakhs is for the development of play-grounds, purchase of library books and setting up of a physiotherapy unit and the creation of facilities for first aid in the physical Education College, Calicut. It is also proposed to create a post of full-time doctor to teach subjects like anatomy, physiology and health education. The outlay is for meeting the expenditure on the above schemes as well as for staff appointed in connection with the starting of new courses in physical education.

In 1985-86 Rs. 1.50 lakhs is provided for the above scheme.

#### 19. *Faculty Development and Research*

The scheme envisages the development of research in major Government Colleges and facilities for special training to teachers. The scheme also includes conducting of workshops for teachers, arrangements for guest lectures for post-graduate students, inservice training to teachers and financial aid to teachers going outside the State for presenting papers in national conferences and seminars. The outlay provided for this scheme in the Seventh Plan is Rs. 9.15 lakhs.

In 1985-86 Rs. 1.37 lakhs is provided for the scheme.

#### 20. *Maintenance of Play-grounds and Sports Facilities*

Under this scheme the Principals of Colleges which have playgrounds and sports facilities will be allowed to spend money on repairs and maintenance. The outlay in the Seventh Plan is Rs. 2 lakhs.

In 1985-86 Rs. 0.30 lakh is provided for this purpose.

#### 21. *Purchase of Sports and Games Equipments*

Under this scheme funds will be allotted to College Principals for the purchase of sports and games equipment to ensure a regular programme of physical activities for college students. The Seventh Plan outlay is Rs. 2 lakhs.

The outlay for 1985-86 for this scheme is Rs. 0.30 lakh.

#### 22. *Planning Forums*

The old scheme will be continued in the Seventh Plan. But category B Planning Forums alone will be assisted @ Rs. 1600 per college. The Seventh Plan outlay for this scheme is Rs. 2 lakhs.

In 1985-86 an outlay of Rs. 0.30 lakh is provided for the activities of these Planning Forums.

#### 23. *Shift System in Government Colleges*

The outlay of Rs. 10 lakhs proposed is for starting additional batches in those colleges where the shift system has been introduced. The salaries and other expenses of staff appointed for the starting of new batches will be met from this provision.

In 1985-86 Rs. 1.50 lakhs is proposed for this scheme.

#### 24. *Special Component Plan*

##### (a) *Remedial Course*

In the Seventh Plan the present scheme of remedial course at pre-degree level is proposed to be continued. It is also proposed to extend the scheme to degree level in colleges with science subjects. The outlay of Rs. 25 lakhs is for meeting the expenditure of the existing scheme of remedial courses and the proposed expansion.

In 1985-86 Rs. 3.75 lakhs is proposed for remedial courses.

##### (b) *Special Coaching in Sports and Games*

The outlay of Rs. 5 lakhs proposed is for giving special coaching in sports and games to scheduled caste/scheduled tribe students in arts and science colleges. Under this scheme, remuneration to physical education lecturers, stipends to students and money required for the purchase of equipments are included.

In 1985-86, Rs. 0.75 lakh is proposed for the scheme.

#### B. *Other Colleges*

##### 1. *Law Colleges*

The facilities now available in the law colleges at Trivandrum, Ernakulam and Calicut are proposed to be developed during the Seventh Plan. The outlay of Rs. 40 lakhs proposed is for the purchase of furniture, strengthening of libraries



and taking up construction of buildings to accommodate the additional courses in the Law Colleges at Trivandrum, Ernakulam and Calicut.

In 1985-86 Rs. 6 lakhs is proposed for this scheme.

## 2. National Cadet Corps

With the establishment of the Southern Air Command and the Naval Academy in the State, more facilities will be available to improve the training given to the N. C. C. cadets in Kerala. These opportunities are proposed to be utilised during the Seventh Plan period by providing more State support for the N. C. C. activities in the State. The outlay of Rs. 50 lakhs proposed is for essential construction activities, purchase of international class boats for imparting training to N. C. C. Naval Cadets and for N. C. C. coverage in the districts of Kasargode, Wynad, Malappuram and Idukki.

In 1985-86 Rs. 7.50 lakhs is provided for this scheme.

## III. State Institutes

### 1. State Institute of Languages

The provision of Rs. 70 lakhs is to meet the expenditure in connection with the production of literature, publication of dictionaries and reference books, expansion of library facilities, construction of essential buildings and the purchase of vehicles.

An amount of Rs. 10.50 lakhs is provided for these activities in 1985-86.

### 2. State Institute of Encyclopaedic Publications

The outlay proposed viz., Rs. 30 lakhs is for the continuance of the existing activities of the Institute. It is proposed to take up publication of encyclopaedias of literature, social sciences, folklore, life sciences and physical sciences, by the Institute. Provision is also made for undertaking the construction of building for the Institute.

In 1985-86 Rs. 4.50 lakhs is provided for these activities of the Institute:

### 3. State Institute of Children's Literature

The outlay proposed viz., Rs. 25 lakhs is for continuing the existing activities of the Institute and for taking up new schemes.

An outlay of Rs. 3.75 lakhs is provided for the Institute in 1985-86.

## Art and Culture

The role of the State Government in this field is limited to providing patronage and incentive to the institutions and organisations which are doing service for the cultural advancement of the people. While this approach may help in the growth of contemporary arts, there is need for special encouragement to traditional arts. Kerala has a rich heritage of

plastic and performing arts. It has several highly developed traditional arts which do not enjoy the popularity of contemporary arts. These traditional arts forms cannot thrive on public support alone and therefore deserve substantial assistance from the Government. During the period of planned economic development, the Government could not do much for the promotion of cultural activities. The Sahitya Academy, the Sangeetha Nataka Academy and the Lalitha Kala Academy were set up by the Government in 1956, 1958 and 1962 respectively. The Kerala Kalamandallam is also given annual grants. The Government policy of allocating relatively small amounts to art and culture needs to be corrected. The action recently taken by the Government to constitute a Department exclusively for the development of art and culture is a first step in this direction.

A short description of the various schemes proposed to be taken up during the Seventh Plan period under 'art and culture' is given below:

### 1. Music Colleges and Academies

The Swathi Thirunal College of Music, Trivandrum Chembai Vaidyanatha Bhagavathar Memorial Music College, Palghat, and RLV College of Music and Institute of Fine Arts, Thrippunithura are the three music institutions run by the Government.

In addition, some of the regular colleges affiliated to our Universities (eg. Women's College, Trivandrum and Government College, Chittur) also conduct degree courses in music. The services of visiting professors are being utilised in subjects like Vocal Music, Violin, Veena, Mridangam, and Kathakali Vesham. An outlay of Rs. 50 lakhs is provided in the Seventh Plan for the continuation of the activities of the Music Colleges and for the creation of additional facilities. The outlay set apart in the Annual Plan for 1985-86 is Rs. 10 lakhs.

### 2. Public Library, Trivandrum

The State Central Library, Trivandrum, occupies a pivotal position in the library set up of the State. The major programmes envisaged during the Seventh Plan period are the construction of the building for Children's Library, purchase of reprographic equipment for the State Central Library and introduction of the scheme of inter-library loan of books between the Central Library and District Libraries. The present public libraries at Ernakulam and Calicut will be given financial assistance with a view to developing them as good Regional Libraries. Necessary steps will also be taken to establish a Deposit Library as a separate wing of the Public Library. According to the delivery of books (Public Libraries) Act of 1954 the Government is receiving at the Publishers' cost all the books and periodicals published in Kerala. There is no proper institutional arrangement, at present, to preserve such publications and they are not kept properly. The proposed Deposit library will preserve the books and periodicals printed in Kerala for future reference. An amount of Rs. 75 lakhs is earmarked for this scheme in the Seventh Plan. The 1985-86 outlay is Rs. 8 lakhs.

### 3. Kerala Grandhasala Sangham

The Kerala Grandhasala Sangham, with nearly 4100 libraries affiliated to it, is the co-ordinating agency in the State's library movement. Most of the village libraries have been functioning as literary centres. The following are the activities of the sangham in the field of non formal education.

- (i) Financial assistance to the affiliated libraries for the purchase of books.
- (ii) Conducting literary classes.
- (iii) Production of literature for the neoliterates.
- (iv) Diffusion of new knowledge among the masses through discussions, seminars and cultural functions.
- (v) Distribution of books at the doors of the village folk through the Bell Bicycle Library Scheme.
- (vi) Conducting in-service training to library workers.
- (vii) Organising Reference Centres in selected village libraries and
- (viii) Publication of the Weekly 'Sakshara Keralam'

An amount of Rs. 20 lakhs is provided in the plan to continue the above programmes. The outlay for 1985-86 is Rs. 3 lakhs.

### 4. Archives

The Archives Department has three regional offices located at Trivandrum, Ernakulam and Calicut. During the Seventh Plan period, the Department proposes to carry out the following programmes:--

- (i) Completion of the construction work of modern archival buildings.
- (ii) Acquisition of records of historical value from other States and Delhi.
- (iii) Purchase of equipment and materials for better preservation of records.
- (iv) Air conditioning of a portion of the building to be completed so that old records could be preserved properly.
- (v) Publication of certain important Gadjan and Palmleaf records.
- (vi) Exhibition of historical records at certain selected Centres.
- (vii) Providing facilities for archival research and
- (viii) Providing additional accommodation in regional offices at Ernakulam and Calicut.

An amount of Rs. 100 lakhs is set apart in the Seventh Plan for the above items of work. As the archives building has to be completed, essential equipment purchased, and air conditioning done early, an amount of Rs. 70 lakhs is earmarked in the 1985-86 Annual Plan.

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### 5. Archaeology

The Archaeology Department has five museums under the control, viz., Padmanabhapuram Palace, Krishnapuram Palace and the Archaeological Museums at Ernakulam, Trichur and Calicut. The Department has also taken up the organisation and development of the following centres.

- (i) Numismatic Study Centre, Kottarakara.
- (ii) Pazhassi Kudeeram Project, Mananthody.
- (iii) Ethnological Museum, Hill Palace, Trippunithura.
- (iv) Rural Arts Centre, Ettumanoor.
- (v) Archaeological Workshop, Mavelikara.
- (vi) Maintenance Unit, Trivandrum.
- (vii) Kottarakara Thampuran Memorial Museum.
- (viii) Hill Palace, Trippunithura.
- (ix) Folk Arts Centre, Kanhangad.
- (x) Folk Arts Centre, Kovalam.

In addition to the maintenance of the five museums under the Department's control, it proposes to take up the following programmes in the Seventh Plan:

- (i) Development of the Kottarakara Thampuran Memorial Museum of Classical Arts, Kottarakara. The necessary land has to be acquired and the building constructed. Facilities for the display of articles have also to be developed.
- (ii) Development and maintenance of Hill Palace Trippunithura and
- (iii) Maintenance and up-keep of the protected monuments including Mangaladevi.

In the Seventh Plan an amount of Rs. 300 lakhs is set apart for these activities of the Archaeology Department. The 1985-86 annual plan outlay is Rs. 30 lakhs.

### 6. Kerala Gazetteers

Kerala Gazetteers Department is engaged in the preparation of the State Gazetteer for Kerala. The State Gazetteer is to serve as a veritable store house of authentic information covering the various aspects of human life in the State. An outlay of Rs. 10 lakhs is earmarked for the activities of the Department in the Seventh Plan. The outlay for 1985-86 is Rs. 2 lakhs.

### 7. Development of Museums and Zoos

The Department of Museums and Zoos is in charge of a museum and zoo complex with a botanic garden, art museum, natural history museum, and an art gallery at Trivandrum, a regional institution in Trichur with a zoo, botanic garden, an art museum and a multipurpose museum, and an art gallery and Krishna Menon Museum at Calicut established in

1975. The following are the major continuing programmes.

- (i) Building for Shri Chitra Art Gallery at Trivandrum.
- (ii) Sprinkler Water Supply to Botanic Garden at Trivandrum.
- (iii) Construction of Art Museum at Calicut.
- (iv) Construction of compound wall for the acquired land at Calicut.
- (v) Improvements to Trichur Zoo.

Of these the major work relates to the construction of the Shri Chitra Art Gallery building.

The present Zoo at Trivandrum has only a small area of 45 acres. There is little scope for expansion of the zoo. It is necessary to shift the present zoo to a sub urban area. A place suitable for this purpose has been located and a project report is under preparation.

Other schemes to be taken up during the Seventh Plan period are the establishment of a mini zoo at Calicut, a zoological park at Malampuzha and a mini-zoo and park near Kottayam. A total amount of Rs. 300 lakhs is earmarked for the programmes of the Department of Museums and Zoos in the Seventh Plan. The outlay for 1985-86 is Rs. 35 lakhs.

#### 8. Kerala Sahithya Academy

Publication of good Malayalam books and translation of books from other Indian languages into Malayalam, translation of Malayalam books into English and other Indian Languages and publication of standard works on literary history and criticism constitute the main programmes of the Academy. The activities of the Academy also include preparation of books for reference. The Academy publishes three periodicals, two in Malayalam and one in English. An outlay of Rs. 10 lakhs is included in the Seventh Plan for the Academy. The outlay for 1985-86 is Rs. 2 lakhs.

#### 9. Kerala Sangeetha Nataka Academy

As a part of its co-ordinating and promotional activities the Sangeetha Nataka Academy organises periodical drama festivals and performances of folk arts. It also gives awards to deserving artistes. The Academy has also set up a Theatre at Trichur. One of the major functions of the Academy is the preservation and documentation of the folk and tribal performing arts. For this purpose a documentation unit in filming and recording, a folklore museum and library are also essential. A beginning has been made to develop these facilities in the Academy in the Sixth Plan. The construction work which could not be completed during the Sixth Plan period has to be completed in the Seventh Plan. The outlay for the Academy in the Seventh Plan is Rs. 25 lakhs. The amount is for completion of the construction programme and other activities. The outlay for 1985-86 is Rs. 4 lakhs.

#### 10. Kerala Lalithakala Academy

This Academy will concentrate on the two activities, sculpture and painting. Apart from traditional and modern arts, certain neglected art forms like 'Kalamezhuthu' (floor painting) will be encouraged by occasional competitions and by organising short term courses. At present the Academy has no building of its own. It has plans for purchasing the building in which it is now housed at Trichur. The artistes attached to the Academy will be given higher emoluments. The outlay for the academy is Rs. 15 lakhs in the Seventh Plan. The outlay for 1985-86 is Rs. 3 lakhs.

#### 11. Kerala Kalamandalam

Kerala Kalamandalam offers courses in Kathakali, Koodiyattom, Mohiniyattom, Ottarthullal, Bharata Natyam, Mridangam and Timila. Recently courses in Kuchipudi and Kaikottikali were introduced. Kalamandalam is the premier institution in the State where artistes from other parts of India and from abroad come to see and learn Kathakali. But the facilities available there are inadequate to meet the basic requirements of the staff and students. Therefore the following programmes are proposed for the Seventh Plan period:

- (1) Construction of hostel buildings and staff quarters.
- (2) Enhancement of emoluments to the artistes attached to the Academy.
- (3) Acquisition of Vallathol House.
- (4) Production of documentary films on Kathakali.
- (5) Construction of Kalaries (Class rooms).
- (6) Developing Water Supply system.
- (7) Starting of Sanskrit Section.
- (8) Starting Carnatic Music Section.
- (9) Propagation of Koodiyattom
- (10) Starting of Publication Division.
- (11) Raising the Endowment amount of Vallathol Foundation.

A higher provision is allocated with a view to enabling the Academy provide higher emoluments to the artistes attached to it. The Seventh Plan outlay is Rs. 100 lakhs and the outlay for 1985-86 is Rs. 15 lakhs.

#### 12. Financial Assistance to Men of Arts and Letters

This scheme aims at providing pension to poverty stricken writers and artistes. An outlay of Rs. 85 lakhs is provided for the scheme in the plan. The allocation for 1985-86 is Rs. 15 lakhs.

#### 13. Cultural Publications Department

The Department of Cultural publications started functioning from July 1983. This Department will publish books of cultural value. The following are the functions of the Department.

- (i) Publication of books of cultural and classical value.

- (ii) Publication of comprehensive and authentic biographies of eminent Keralites. These will be translated and published in Hindi and English also.
- (iii) Publication of a monthly journal, "Samskara Keralam."
- (iv) Re-publication of rare books of cultural and classical value. There will be English and Hindi versions also.
- (v) Compilation of the complete musical works of Maharaja Swathi Thirunal and other Kerala Composers.
- (vi) Publication of a detailed cultural history of Kerala.
- (vii) Publication of complete works of Sankaracharya, Melppatthoor Bhattathiripad, Vilvamangalam Swamikal etc.
- (viii) Publication of monographs on significant aspects of Kerala Culture.

A major programme proposed to be undertaken by the Department during the plan period is the publication of an Anthology of Malayalam poetry in Malayalam, English and Hindi. Malayalam poems from ancient to modern times will be selected, compiled and published in five volumes.

The Department and its publications store are in rented buildings. To avoid recurring expenditure on rent, land has to be acquired and a new building constructed. An outlay of Rs. 250 lakhs is provided in the plan for the construction of the buildings and other programmes of the Department. The outlay for 1985-86 is Rs. 30 lakhs.

#### 14. Kathakali (Thekkankalari) Koodiyattom

In addition to the Kalamandalam, 'Margi' at Trivandrum also conducts training courses, in Thekkankalari. In the Seventh Plan a provision of Rs. 15 lakhs is earmarked for the development of Thekkankalari and Koodiyattom in the State. The artistes attached to the institution will be given higher emoluments during the plan period. The outlay for 1985-86 is Rs. 2 lakhs.

#### 15. Memorials to Eminent Men of Arts and Letters

There are now five memorials financed by the Government viz. Thunchan Memorial at Tirur, Kunchan Memorials at Ambalapuzha and Killikurimangalam, Asan Memorial at Thonnakkal and Govinda Pai Memorial at Manjeswar. These Memorials should be developed and preserved as centres of study and research with special emphasis on those branches of literature in which these eminent men distinguished themselves. The Asan Memorial Committee has already drawn up schemes along these lines and is doing good work to popularise the works of Asan. The progress is slow in the case of other memorials. Some urgent work like repairing of the old buildings is very essential. An outlay of Rs. 5 lakhs is set apart for this scheme in the plan. The outlay for 1985-86 is Rs. 1 lakh.

#### 16. Non-recurring Grants to Cultural Activities

There are a number of voluntary organisations in the State like Samastha Kerala Sahitya Parishad,

Sahitya Pravarthaka Co-operative Society, Kerala History Association etc., which are engaged in the promotion of art and literature. There are also organisations like various Kathakali Clubs and Fine Arts Societies functioning in different parts of the State. An outlay of Rs. 5 lakhs is provided in the plan for giving non recurring grants to such organisations against specific schemes. The outlay for 1985-86 is Rs. 1 lakh.

#### 17. Irayimman Thampi Rangasala ...

An art complex consisting of training facilities in Gurukula style for traditional arts with a theatre of medium size for Kathakali, a small theatre for Koodiyattam and an open air theatre for other performing art forms are essential for the capital city of Trivandrum. The proposed complex should be in the traditional architectural style of Kerala. A provision of Rs. 10 lakhs is made in the plan for such a complex—Irayimman Thampi Rangasala—in the Seventh Plan. The outlay for 1985-86 is Rs. 2 lakhs.

#### 18. Assistance to Kerala Film Development Corporation

##### (a) Promotion of Children's Film and Theatre

Agencies and individuals capable of producing good children's films should be assisted financially through the Kerala State Film Development Corporation Limited. For this purpose an amount of Rs. 5 lakhs is earmarked in the Seventh Plan. In 1985-86 the outlay will be Rs. 1 lakh.

##### (b) Production of Films on Art and Culture

Several States, including Kerala, have recently started the production of specialised films. The Kerala State Film Development Corporation has set up modern technical facilities for the production of all types of specialised films. The resources of the Corporation should be used to exploit the power of cinema for social progress, particularly in the fields of art and culture. Such films can effectively meet the needs of television as well. Films will greatly help to achieve national integration in addition to popularising the cultural heritage of Kerala. The Kerala State Film Development Corporation will be provided an amount of Rs. 15 lakhs for this purpose in the Seventh Plan. The outlay for 1985-86 is Rs. 2 lakhs.

##### (c) Training in Films and Television

It is essential that proper training is imparted in the production of films and television. This would provide opportunities to young talents in the State work in the fields of films and television, within the State and outside. The Chithranjali Film Studio of the KSFDC is a modern, self contained film production centre with the technical facilities required to impart training. Additional facilities required would be confined to a few items of equipment, staff support, a modern institute building and hostel. An amount of Rs. 30 lakhs is earmarked in the Plan for this item. The Plan outlay for 1985-86 is Rs. 5 lakhs.

19. *Documentation of Kerala Style of Recitation of Vedas*

Kerala has a unique style in the recitation of Vedas, which needs to be preserved. Chanting of the Vedas should be video taped and filmed both for preservation and for teaching. This should be done urgently as there are only very few people left in the State who can recite in the traditional way. Assistance should be given to those who teach vedas. In the Seventh Plan an amount of Rs. 5 lakhs is provided for this scheme. The 1985-86 outlay is Rs. 1 lakh.

20. *Bharath Bhavan*

It is proposed to set up a "Bharth Bhavan" at Trivandrum for promoting national integration. People from different parts of India have and work in Trivandrum. Most of them have their own cultural associations. By and large they have enriched the cultural life of the city in a number of ways. Festivals like Durage Pooja, Deepavalli and Holi are also celebrated by different associations which present their traditional art forms and cultural programmes before the art loving people, Trivandrum. This enables the Keralites to understand and appreciate the culture and arts of other parts of India. This should go a long way in promoting emotional integration and National Unity. A major handicap which comes into the way of the functioning of these cultural associations in Trivandrum is the lack of a common centre where they could all meet and present their cultural programmes. The setting up of a Bharath Bhavan is intended to fulfil this long felt need. An outlay of Rs. 45 lakhs is earmarked in the Seventh Plan for this scheme. The outlay for 1985-86 is Rs. 4 lakhs.

21. *Gurukula Type of Training in Vastu Vidya*

The number of carpenters who are well versed in the traditional art of 'Vastu Vidya' is getting reduced. But the knowledge and skill of these expert carpenters need be preserved through suitable measures Government therefore proposes to train young carpenters in vastu vidya by establishing a vastu vidyalaya where Gurukula type of training will be given in traditional architecture, sculpture and painting. The Seventh Plan outlay for this programme is Rs. 5 lakhs. The 1985-86 outlay is Rs. 1 lakh.

22. *Grant-in-aid to Institutes Imparting Training in Journalism and Mass Communication*

Mass communication covers all the mass media including theatre films, television, photography, posters and the press. Training in some of these fields is being given by the Department of Journalism of Kerala University, the School of Drama of the Calicut University and by the Institute of Journalism of the Trivandrum Press Club. An outlay of Rs. 5 lakhs provided is to assist institutes which give training in Journalism and mass communication. The 1985-86 outlay, Rs. 1 lakh.

23. *Kshethra Kalapeetom, Vaikom*

The plan provision is for grants to the 'Kashethra-kala Peetom' (Institute of Temple Arts) at Vaikom.

The aim of the Institute is to develop it into a centre that would popularise and impart training in all aspects of temple arts. The Institute will also organise workshops and seminars on various aspects of temple arts and help compile authentic treatises on these disciplines. It will co-operate with the Central and State Academies, Cultural Departments of Central and State Governments and other cultural organisations at the National and International level for the development of Indian Culture. An amount of Rs. 5 lakhs is earmarked in the Seventh Plan and the 1985-86 outlay is Rs. 1 lakh.

24. *Jawhar Bal Bhavans*

The scheme is for continuing the activities of Jawhar Bal Bhavans. The outlay provided in the Seventh Plan is Rs. 10 lakhs. Rs. 2 lakhs is provided in the annual plan, 1985-86.

**Technical Education**

During the Fourth and Fifth Plan periods the strategy adopted in the field of technical education was one of consolidation of achievements by way of improvements of standard and quality. No new technical institutions were started during this period. With the opening up of employment opportunities for technically qualified personnel in Gulf countries during the latter half of seventies the need for starting new technical institutions was keenly felt. Therefore in the Sixth Plan period attempts were made to widen the sphere of technical education by introducing new courses, increasing the annual intake in some of the institutions and by providing adequate facilities in the existing institutions.

The technical educational institutions in the State consists of 5 Engineering Colleges (2 Government Colleges and 3 Private Colleges) one Regional Engineering College, 20 Polytechnics and 25 Junior Technical Schools. In addition there are 3 Fine Arts institutions, 14 Government commercial institutions, 40 recognised institutions conducting Kerala Government Commercial Certificate Examination courses, 26 Government and 100 recognised institutions conducting courses in tailoring and garment making, book-binding, weaving, carpentry, printing etc. There are also 15 pre-vocational training centres which provide technical education in selected trades to drop-outs from schools. Facility for post graduate education in engineering exists in the two Government Engineering Colleges and in the Regional Engineering College.

During the Seventh Plan period it is proposed to start two more Engineering Colleges. Fuller exploitation of the already started institutions in the sector will be made. Emphasis will be laid on qualitative improvement and starting of a few new courses in the existing institutions. The various programmes proposed in the plan are outlined below:

A. *Technical Education*

1. *Construction of Building for Directorate*

The Directorate of Technical Education is now housed in an old building as well as in a few other rented buildings. Therefore in the Seventh Five

Year Plan, construction of administrative buildings for the Directorate of Technical Education at Trivandrum is proposed to be given priority. For this purpose an outlay of Rs. 30 lakhs is proposed.

A provision of Rs. 10 lakhs is made for the year 1985-86.

## 2. Junior Technical Schools

The consolidation of facilities in the existing Junior Technical Schools and Pre-vocational Training Centres through modernisation of workshops, increasing student amenities and library development is proposed under the scheme. Besides, the plan provision is intended for acquiring land, construction of buildings and purchase of equipment for the Junior Technical Schools started during the Sixth Plan period.

It is also proposed to establish 16 new Junior Technical Schools which will be located in backward and unrepresented areas of the State. The target is to have at least one Junior Technical School in each taluk of the State by the end of the Plan period.

An aggregate outlay of Rs. 300 lakhs is proposed for the plan period. An outlay of Rs. 40 lakhs is provided for the Annual Plan 1985-86.

## 3. Government Polytechnics

The facilities in the 16 polytechnics including 3 Women's Polytechnics and one Institute of Printing Technology established prior to the Sixth Plan have to be improved by replacing obsolete and old equipments. Besides, provision is included for providing land and buildings for Polytechnics at Kalpetta, Palai, Vennikulam and Kalamassery, buildings for Polytechnics at Palghat Muttom, Kothamangalam.

Considering the large demand for admissions to polytechnics and the need for giving representation to backward and unrepresented areas of the State it is proposed to start Polytechnics at Alleppey and Kasargode and Women's Polytechnic at Kottayam. In order to implement the above items an outlay of Rs. 420 lakhs is proposed in the Plan. The Annual Plan provision for 1985-86 is Rs. 50 lakhs.

## 4. Assistance to Private Polytechnics

The scheme envisages giving assistance to Private Polytechnics for the improvement of laboratory and other infrastructure facilities. An outlay of Rs. 20 lakhs is proposed for this scheme in the Seventh Plan. The outlay for the Annual Plan, 1985-86 is Rs. 4 lakhs.

## 5. Government Engineering Colleges

Over the last few years the admissions to the two Government Engineering Colleges have increased considerably without adequate laboratory, workshop, class room, hostel and other facilities.

Obsolete equipments have to be replaced. Also new equipments have to be added to the new laboratories and workshops. The activities of the special centres in the College of Engineering Trivandrum have to be improved with additional equipment. The general facilities like library, hostel and student amenities have to be expanded and modernised. The programmes like industrial liaison, industrial residency, management education, part-time degree course and M.B.A. evening course have to be continued and new part-time courses introduced as found necessary. Taking into account the growing demand for admissions to engineering degree courses the present intake of 1990 in the engineering colleges has to be increased. Hence it will be necessary to start two more Engineering Colleges in the State during the Seventh Plan period.

An outlay of Rs. 720 lakhs is proposed for the plan for modernisation of facilities in the Engineering Colleges at Trivandrum and Trichur, improving the facilities in the special centres at the College of Engineering Trivandrum, construction of hostel for Engineering College, Trivandrum and starting two new Engineering Colleges. The outlay proposed for 1985-86 is Rs. 75 lakhs.

## 6. Assistance to Regional Engineering College, Calicut

The plan provision of Rs. 30 lakhs is intended for construction of compound wall, renovation of water supply system, development of roads and erection of a diesel generator set in the Regional Engineering College, Calicut. For 1985-86 an amount of Rs. 4 lakhs is proposed.

## 7. Assistance to Private Engineering Colleges

A provision of Rs. 25 lakhs is proposed for payment of grants to the three private engineering colleges at the approved rate on the total cost of development and expansion, construction of buildings, purchase of equipment, modernisation of laboratories, development of library and diversification of courses. The allocation for 1985-86 is Rs. 4 lakhs.

## 8. Food Craft Institutes—State Share

There is a Food Craft Institute at Kalamassery with two extension centres at Calicut and Trivandrum.

An outlay of Rs. 40 lakhs is proposed as State's share for new food craft institutes at Calicut, Kottayam and Trivandrum. The 1985-86 annual plan provision for the scheme is Rs. 5 lakhs.

## 9. Extension Centre of T.T.T.I. Kalamassery

A provision of Rs. 10 lakhs is made for curriculum development activities and construction of a building for the extension centre of Technical Teachers Training Institute at Kalamassery. An amount of Rs. 1 lakh is proposed for the year 1985-86.

#### 10. Kerala State Science and Technology Museum

The Kerala State Science and Technology Museum is proposed to be developed into a leading museum with emphasis on traditional as well as modern technology. A provision of Rs. 40 lakhs is proposed for fabrication of exhibits, landscaping and construction of buildings and structures for space science gallery, building science gallery, mechanical power gallery, electrical and electronics gallery and children's science park. For taking up the activities in 1985-86 an amount of Rs. 5 lakhs is provided.

#### 11. College of Fine Arts and Fine Arts Institutions

Improvement of studio facilities, development of library, provision of audio-visual aids and construction of buildings for museum, art gallery and auditorium in the College of Fine Arts, Trivandrum and consolidation of facilities in the Fine Arts Institutes at Mavelikkara and Trichur are the activities proposed under this scheme. In order to carry out the above activities an amount of Rs. 50 lakhs is provided in the Seventh Plan. The Annual Plan allocation for 1985-86 is Rs. 7 lakhs.

#### 12. Institutes for Diploma In Commercial Practice

A plan provision of Rs. 25 lakhs is proposed for improvement of facilities in the existing 14 commercial institutes, construction of buildings for selected institutes and starting of new institutes during the plan period. An amount of Rs. 3 lakhs is provided for the Annual Plan 1985-86.

#### 13. Tailoring and Garment Making Training Centres and Industrial Schools.

An outlay of Rs. 10 lakhs is earmarked in the Seventh Plan for providing additional facilities in the existing centres/schools and also for starting new centres in backward areas. The provision for 1985-86 is Rs. 1 lakh.

#### 14. Apprenticeship Programme

This scheme is for the implementation of apprenticeship training of graduates and diploma holders, conduct of supervisory and career development programmes, activities connected with industry-institution collaboration, industrial residency activities and training of fresh diploma holders in Foreman Training Institute, Bangalore. An outlay of Rs. 25 lakhs is provided for continuing the programme in the plan period. An amount of Rs. 3 lakhs is proposed for 1985-86.

#### 15. Revision of Staff Structure

A provision of Rs. 30 lakhs is made for revising the staff pattern and fixing the work-load for the teaching staff of Polytechnics and for the non-teaching and administrative staff of Engineering Colleges and Polytechnics. The outlay proposed for 1985-86 is Rs. 5 lakhs.

#### 16. Diversification of Courses

To keep pace with the manpower requirements in emerging areas of technology it will be necessary to start new courses at post graduate, undergraduate,

diploma, post diploma, post SSLC, and Certificate levels during the plan period. Degree course in computer science, computer technology, building technology, transportation engineering, textile engineering, ceramic and glass technology, cinematography, art ceramics, textile design and environmental engineering and diploma/post diploma courses in mineral sand technology, pulp and paper technology, production engineering maintenance engineering, welding technology, fertilizer technology, plastics technology etc., are proposed to be started. The Seventh Plan outlay proposed for diversification of courses is Rs. 30 lakhs. An amount of Rs. 5 lakhs is allocated for 1985-86.

#### 17. Merit Promotion for Teachers in REC, Calicut and Other Centrally Sponsored Schemes—State Share

The State Government have to meet 50% of the expenditure of the merit promotion scheme for teachers in the Regional Engineering College, Calicut and the post-diploma course in computer application in Central Polytechnic, Trivandrum. Similar schemes are also anticipated in the Seventh Plan. A provision of Rs. 10 lakhs is included as State share of the Centrally Sponsored Schemes under technical education. Under this scheme an amount of Rs. 1 lakh is proposed for 1985-86.

#### 18. Construction of Staff Quarters

A provision of Rs. 20 lakhs is made for construction of staff quarters for teachers. An amount of Rs. 3 lakhs for this scheme is earmarked for 1985-86.

#### 19. Faculty Development

Outlay improvement programmes through full-time, part-time and short-term training courses are envisaged under this scheme. In the Plan an outlay of Rs. 40 lakhs is proposed for deputation of polytechnic teachers for post graduate studies, for deputation of engineering college teachers for M. Tech. and Ph. D programmes, for continuing the doctorate programme at the College of Engineering, Trivandrum and extending it to the Engineering College, Trichur, for retraining of staff in emerging areas of technology etc. An outlay of Rs. 5 lakhs is proposed for 1985-86.

#### 20. Special Component Plan—Technical Education

A provision of Rs. 20 lakhs is proposed for continuation of the free supply of text books, instruments, uniforms, calculators, sewing machines, typewriters, tool kits etc., to scheduled caste students, remedial courses and special training programmes. Improvement of existing TGMT centres for SC/ST and starting of new centres are also proposed under the scheme. A provision of Rs. 3 lakhs is made in the Annual Plan 1985-86.

#### 21. Tribal Sub Plan—Technical Education

Free supply of text books, instruments, uniform etc., to scheduled tribe students is envisaged. In the Seventh Plan an amount of Rs. 5 lakhs is earmarked for this scheme. The 1985-86 outlay is Rs. 1 lakh.

## B. Cochin University

In the Seventh Plan emphasis will be given to consolidation and strengthening of the existing science and technology departments and schools in the University of Cochin. The University will be converted into a major organisation under Science and Technology. The Constitution of the University will be revised in order to effect this change.

Taking into account the mandate given to the University to develop technologies appropriate to the State and to the nation, teaching and research programmes in subjects like computer science and technology, ocean sciences and engineering, materials science, post harvest technology, chemical technology, sophisticated instrumentation, maintenance and manufacturing engineering and extension programmes are proposed to be started during the Seventh Five Year Plan period.

An outlay of Rs. 500 lakhs is made towards a financial assistance to the Cochin University for the plan period. The provision is for the consolidation of existing departments and schools of science and technology, starting new centres in identified critical areas, emerging technologies and areas of weakness, filling up gaps and strengthening facilities in areas of weakness. The provision for 1985-86 is Rs. 100 lakhs.

## Sports and Youth Services

### 1. Physical Education--Sports/Youth Welfare

Improvement of physical education in schools, development of scouting and guiding, continuance of youth welfare board, conduct of youth festivals etc., are the programmes envisaged under this scheme. Expenditure on sports schools/sports divisions will also be covered under this. Amount provided in the Seventh Plan is Rs. 400 lakhs. The outlay for 1985-86 is Rs. 25 lakhs.

### 2. Assistance to Sports Council

The Kerala Sports Council is the agency to implement programmes for the development of games and sports outside the educational institutions. The activities of the Sports Council include the conduct of coaching programme for students and rural youth, sponsoring of the State teams for participation in the national/zonal championships and all India coaching camps, providing assistance to sports schools, sports divisions in schools and sports hostel in colleges, construction of stadium etc. For the various activities of the Sports Council funds are provided by the State in the form of grants under the Plan. The construction of the Sports Complex and Indoor Stadium at Trivandrum is to be carried out by the Government directly. The cost of construction of the training centre (Rs. 3 crores) and the competition centre in the Sports Complex (Rs. 16 crores) would be of the order of Rs. 19 crores. The estimated cost of the indoor stadium is Rs. 90 lakhs.

In the Seventh Plan it is proposed to construct training centre of the Sports Complex and the Indoor Stadium at Trivandrum. An outlay of Rs. 400 lakhs is set apart for this purpose.

An outlay of Rs. 200 lakhs is set apart for carrying out the developmental activities of the Council including grant-in-aid during the Seventh Plan period. The provision in the Annual Plan is Rs. 75 lakhs.

## Medical and Public Health

India, as a signatory to the W. H. O. is committed to achieve 'Health for all by 2000 A. D.' Kerala has been formulating policies and programmes to promote rural health and achieve this goal by the end of this century. The main strategies adopted in the earlier plans were provision of basic health care to the rural masses, control or eradication of all major communicable diseases, control of population explosion, development of health man-power, provision of safe water supply, provision of nutritional services, improvement of sanitation through health education etc. In spite of the enviable achievements of Kerala in the maintenance of high health status of the people, some factors cause concern while formulating programmes for the next Plan.

(1) Although the State as a whole has achieved the norm of one bed per thousand population in 1969-70, the bed-population ratio is below the norm in Idukki, Malappuram, Palghat, Wynad, Quilon and Cannanore Districts.

(2) The distribution of hospitals and beds is not uniform and based on the needs of different regions.

(3) There are variations in the provision of facilities in institutions.

(4) There is disproportionate emphasis on the establishment of curative centres like dispensaries, hospitals etc., especially in urban areas.

The High Power Committee (Pai Committee) appointed by the State Government suggested following norms and efforts are being made to achieve these norms:

District Hospital:	500 beds
Taluk Headquarters	
Hospitals:	200 beds (for every four lakhs population)
Primary Health Centre:	30 beds (every 80,000 population)
Basic Health Units:	10 beds.

The Committee recommended as an immediate step, provision of 200 beds per lakh of population for all types of treatment including 75 beds for ordinary treatment. While drawing up proposals for the Seventh Plan the drawbacks of the existing health delivery system and also the recommendations of the Pai Committee were taken into account. The approach is more weighted in favour of the concept 'health by the people'. The major schemes included under the Allopathic System of medicine are improvement of health care facilities at the primary, taluk, district and State level the implementation of minimum needs programme which include Community Health Centres, P.H. Centres



Community Worker Scheme, Sub Centres, Subsidiary Centres, etc., national and public health programmes etc. Priority has been given to the completion of spillover schemes which would need an outlay of about Rs. 150 lakhs. On the whole an outlay of Rs. 28 crores is proposed for implementation of the Allopathy schemes in the Seventh Plan and Rs. 6.2 crores in 1985-86.

The schemes in operation have been categorised under four heads viz, Minimum Needs Programme, improvement of health care facilities, control of communicable diseases and other health schemes including laboratory services. The schematic details are furnished below:

#### A. Allopathy

##### I. Minimum Needs Programme (Allopathy)

The primary health care to the rural population is delivered through the minimum needs programme which include the following programmes for which an outlay of Rs. 731 lakhs is proposed for 1985-90. This includes a provision of Rs. 86 lakhs for S. C. P. and Rs. 92 lakhs for T S P and Rs. 118.25 lakhs for 1985-86 of which Rs. 17 lakhs each is set apart for S.C.P and T.S.P.

##### (1) Strengthening of Existing and Opening of New P.H. Centres and Sub Centres

An amount of Rs. 381 lakhs is set apart for this in the Seventh Plan. The allotment for 1985-86 is Rs. 72 lakhs and of this the allotment for S.C.P and TSP. are Rs. 86 lakhs and Rs. 92 lakhs for the Seventh Plan and Rs. 17 lakhs each for the annual plan. The norm fixed for a P.H. Centre is one for every 80,000 population and the requirement estimated by the end of the Seventh Plan is 318 (for the rural population) which could be achieved only in a phased manner. The target envisaged for the Seventh Plan is 25 out of which 20 will be achieved by the conversion of the existing Government hospitals (with more than 30 beds and less than 60) and ten will have to be newly established. The yearly target is given below:—

Year	Conversion			New PHCs		
	Conversion of GDs into PHCs	Financial Outlay NR R (Rs. lakhs)	Opening of New PHCs.	NR	R	(Rs. lakhs)
1985-86	4	10	2	2	30	5
1986-87	4	10	4	2	30	10
1987-88	4	10	6	2	30	15
1988-89	4	10	8	2	30	20
1989-90	4	10	10	2	30	25
Total	20	50	30	10	150	75

Name of P.H.Cs. (1985-86)	Districts	Conversion of G.D. into PHC.
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Kasaragode	G.D.	(1) Mawgalpady
Cannanore	„	(2) Chithira-paramba (S1)
Kozhikode	„	(3) Ulleri (S.C.)
Alleppey	„	(4) Vettakal

##### New P.H.Cs.

Cannanore	(1) Omannoor Panchayat
Pathanamthitta	(2) Erathur Panchayat
Quilon	(3) Vettikavala Panchayat
Trivandrum	(4) Navaikulam Panchayat

Further, construction of the existing 5 P.H. Centres will have to be taken up during the Seventh Plan for which an amount of Rs. 75 lakhs will be needed. Altogether an amount of Rs. 381 lakhs and Rs. 72 lakhs has been proposed for 1985-90 and 1985-86 respectively for this item which would include the expenditure for the opening and construction of (existing) sub centres. The operational cost of the lady health workers and supervisors have to be met from the 100% centrally sponsored family welfare programme.

##### (2) Subsidiary Health Centres (SHC)

This is a new scheme introduced in the Sixth Plan. With its introduction, there is a ban on starting rural dispensaries and the existing ones are to be converted into rural health centres. The SHCs take care of not only curative but also preventive and educative aspects of the health delivery system for a population of 20,000. It is proposed to start 60 subsidiary health centres at the rate of 12 per year by converting the existing rural dispensaries. One centre out of this (each year) would serve the tribal population. An amount of Rs. 100 lakhs is required for the period 1985-90 and Rs. 14.25 lakhs for 1985-86. Out of this Rs. 7.75 lakhs and 0.95 lakhs will be the share of TSP for 1985-90 and 1985-86 respectively. The list of subsidiary health centres proposed for 1985-86 is given below:—

District	Name of G.D. and Panchayat
Kasargaode	G.R.D. Vellarikundu
Cannanore	„ Adoor
„	„ Udayagiri
„	„ Kottiyoor
Kozhikode	„ Kodiyathoor
„	„ Kolathoor
Trichur	„ Poyya
„	„ Varandara-ppally
Ernakulam	„ Cheruvathoor
Alleppey	„ Edathura
„	„ Panavally
Kottayam	„ Parathode

(3) *Community Health Centre (CHC)*

The object of this scheme which was started in the Sixth Plan is to have one C.H.C. for every four primary health centres. For this upgradation, the selected PHCs have to be provided with 30 beds each and additional inputs of medical and public health specialists in order to function as referral PHCs or Community Health Centres as envisaged by the Government of India. The outlay proposed for the scheme for 1985-90 is Rs. 50 lakhs for 10 CHC and for 1985-86 Rs. 5 lakhs.

(4) *Drugs for Existing Sub Centres*

The existing provision for the purchase of medicine for sub centre is Rs. 2000. As per the recommendations of the Tenth Joint Conference the amount has to be enhanced to Rs. 5000. The outlay proposed for the Seventh Plan is Rs. 100 lakhs and the allotment for 1985-86 is Rs. 17 lakhs.

(5) *Community Health Worker Scheme*

The scheme introduced by the Government of India envisages the training of members of the local community in health and health delivery, so as to impart the basic knowledge about health care to the local people.

During the Sixth Plan period a modified form of community health workers' scheme was introduced in two districts. On reconsideration, it is suggested to have the original community health workers' scheme in all the districts except those selected for IPP, in a phased manner. A sum of Rs. 100 lakhs is provided for the scheme in the Seventh Plan and Rs. 10 lakhs in the Annual Plan for 1985-86.

*Improvement of Health Care and Delivery System*

The main task in the field of health care and delivery system in the Seventh Plan would be the rectification of the regional imbalances prevalent mainly in the provision of beds. The objective is to provide a minimum of 200 beds to taluk headquarters hospitals and 500 beds to district hospitals. An additional number of 3400 beds is required to raise the bed strength of 34 taluk headquarters hospitals to 130 each and of 5 district hospitals to 500 each. (Idukki, Kozhencherry and Kasaragode). Further, taluk headquarters hospitals are to be opened at Mallappally, Ranni and Adhoor (Kasaragode District). District Medical Offices at Trivandrum and at the newly formed districts are very essential.

In the Seventh Plan the 13 fisheries dispensaries run by the Fisheries Department will be taken over by the Health Services Department. The Seventh Plan outlay also includes provision for the introduction of the three-shift system for nurses in hospitals, improvement of beach hospital and other hospitals of Kozhikode and improvement of hospitals at Kuttanad area. The spillover works costing Rs. 150 lakhs have also to be completed.

The outlay proposed for this in the Seventh Plan is Rs. 990 lakhs, of which the allotment for 1985-86 is Rs. 157.50 lakhs. Details of schemes included are given below:

37/4830/MC.

*Nursing Education*

The present annual intake of nurses is 270 and the nurse-bed ratio of 1:6 has to be raised to 1:5 for which an additional 4271 nurses are required.

It is proposed to open two more schools of nursing in the Seventh Five Year Plan. An outlay of Rs. 195 lakhs is earmarked for the purpose in the Seventh Plan and for 1985-86 the outlay will be Rs. 16.50 lakhs.

The requirement of funds for the schemes included under the head 'Improvement of health care and delivery system' is shown separately below:

Scheme	(Rs.lakhs)	
	Annual Plan 1985-86	Seventh Five Year Plan 1985-90
1. Taking over the fisheries dispensaries by the DHS at the rate of recurring expenditure of Rs. 0.65 lakh/year	8.00	40.00
2. Improvement of hospitals rectifying the regional imbalances by raising bed strength at Taluk and District hospitals, improvement in Specialities including physical, medical rehabilitation units provision for the commission of already sanctioned hospitals, introduction of 3 shift system in hospital for nurses, improvement of beach hospital and other hospitals at Kozhikode and improvement of hospitals including mobile dispensaries at Kuttanad area	50.00	300.00
3. Opening of District Medical Stores with vehicles at Trivandrum and for the new district formed during the Sixth Plan	3.00	15.00
4. Opening of three new taluk headquarters hospitals and district hospitals	15.00	75.00
5. To improve the existing facilities by providing laundries to the District hospitals and major special hospitals	3.00	15.00
6. X-ray plants in taluk headquarters hospitals	3.00	15.00
7. Other major equipment to hospitals	5.00	50.00
8. Blood bank for 4 district hospitals and 2 or 3 taluk headquarters hospitals	2.00	21.00
9. Ambulance van to District and Taluk Head Quarter hospitals	5.00	25.00

10. New mobile Repair and Maintenance units	3.00	15.00
11. Improvement of Mental Hospitals at Trichur, Trivandrum and Calicut.	12.00	64.00
13. Spillover schemes—cost of completion	30.0	150.00
14. Nursing education and stipend for nursing students	16.50	195.00
15. Limb fitting centres at District Hospitals, Trivandrum and Calicut	2.00	10.00
Total	157.50	990.00

### III. Improvement of Hospitals and Dispensaries (For 5 Year Plan)

1. Opening of new Taluk Quarters District Hospitals	Head and	Taluk Hospitals: Ranni, Mallappally Adhoor (Kasargode)
2. To improve the existing facilities by providing laundries to the Hospitals and Major Special Hospitals	Special	District Hospitals: 1. Idukki (Painavu Kozhencherry and Kanchangad Kozhikode—
3. To improve the existing facilities by providing laundries to the District Hospitals and Major Special Hospitals		Beach hospital Alleppey—District Hospital Quilon—District Hospital
4. X'ray Plants in Taluk Quarters Hospitals	Head	District Hospital, Alleppey, Taluk Head Quarters Hospitals of Sulthan Battery, Adimali, Pulinkunnu and Haripad
5. Other Major equipments to the Hospitals		Sulthan Battery, Adimali, Chennannur and Pulinkunnu
6. Blood Bank for 4 District Hospitals and Taluk Quarters Hospitals—Vythiri, Manarghat, Chawaghat and Pulinkunnu.	Head	District Hospital, Painavu (Idukki) ,, Manantoddey, ,, Kozhencherry ,, Kanhangad
7. Ambulance Van		T.H.Q. Hospital:  Tellicherry Mavelikkara, Badagara and Kasargode

### 11. Medical Education (Including Homoeopathy and Ayurveda)

The greater attention paid to the development of medical and public health services during the past Plans has contributed to a significant improvement of the medical and health care system in Kerala. Several of the indicators of health like birth rate, death rate, infant mortality rate, bed population ratio etc., reveal that Kerala occupies a pre-eminent position among the Indian States.

A number of capital projects are still in progress and are at various stages of construction. These will spillover to the Seventh Plan necessitating higher investment in the Plan. Consolidation of existing schemes and increase in facilities in the concerned institutions are necessary to improve the quality of health care. As medical science is rapidly developing, newer methodology and services need to be established to keep pace with the advance. Health care delivery systems need supporting services like Nurses, Laboratory Technicians, Radiographers etc. There is considerable deficiency of paramedical personnel. Training facilities for these personnel have to be increased. Medical research should be related to common health problems of the State. Research of this nature is to be given emphasis. The research findings can be utilised in the preventive, promotive, curative and rehabilitative health care. Infectious diseases, especially Gastro-enteritis pose recurring health problems in Kerala. Medical units catering to this speciality have not developed so far to the required extent. Chronic degenerative diseases like cancer, cardio-vascular disorders etc., are emerging as health problems in the State. There is need to develop the advanced specialities like cardiology, cardiovascular surgery, neurology and neuro-surgery, nephrology and genito-urinary surgery, haematology, gastro-enterology endocrinology, genetics and immunology in selected centres. Rising standards of medical care need post-graduate trained personnel. The number of seats existing is not sufficient to meet the demand, and hence the intake for post-graduate medical courses has to be increased. Shortage of herbs for preparation of Ayurvedic medicines also exists.

The objectives for the formulation of the proposals under medical education are:

- (1) provision of outlay on capital projects in progress so that the majority of them can be completed by the end of the Seventh Plan.
- (2) Consolidation and increase of facilities in existing institutions aimed at improving quality of health care,
- (3) Enhancement of training facilities for paramedical personnel.
- (4) Increase in post-graduate training facilities.
- (5) Setting up of a State Board of Medical Research for channelling, encouraging, and providing incentives for research schemes related to the health problems of the State.
- (6) Development of advanced specialities in selected centres.

- (7) Establishment of a Centre for advanced studies and research in Ayurveda.
- (8) Establishment of a herbaria in Ayurveda so that shortage of herbs for Ayurvedic medicines can be minimised.
- (9) Establishment and development of the speciality of 'Sports Medicine'.
- (10) Setting up of a workshop and mobile unit for maintenance and repair of bio-medical equipment.

The following schemes are proposed for the Seventh Five Year Plan under Medical Education and Research.

#### *Modern Medicine (Allopathy)*

##### *Continuing Schemes*

#### 1. *Directorate of Medical Education*

The Directorate of Medical Education was formed in 1983 for the purpose of bringing the Medical Colleges in this State under unified control, and co-ordinating the training programmes in these colleges. It is now housed in a rented building. The site for a permanent building for the Directorate has been located and building plans already drawn. The Plan provision of Rs. 70 lakhs is for construction of the building for the Directorate and creation of additional facilities. The 1985-86 Annual Plan provision is Rs. 12 lakhs.

#### 2. *Medical College, Trivandrum*

The provision of Rs. 280 lakhs made in the Plan is for completing the capital projects. auditorium-cum-examination hall, additional block of ladies hostel, casualty block of the collegiate hospital, extension to paediatrics block, starting of a unit in Paediatric Pathology, Centre for Respiratory Allergy, staff quarters etc., and for consolidating and developing the existing facilities of the Departments of the College, including increase in Post graduate training facilities and expansion of the press. The outlay for 1985-86 is Rs. 46 lakhs.

#### 3. *Medical College, Kottayam*

The Plan outlay of Rs. 550 lakhs for the Medical College, Kottayam, is for construction work essential for the development of the College. Construction of the various blocks of the college building, roads, additional block to Ladies Hostel, workshop, staff quarters etc. and consolidation and development of facilities in the various Department of the college (including increase in post-graduate training facilities) are envisaged in the Plan. The outlay for 1985-86 is Rs. 70 lakhs

#### 4. *Medical College, Alleppey*

New construction works necessary for the development of the college have to be undertaken during the Seventh Plan period. For this purpose an amount of Rs. 550 lakhs is earmarked in the Plan.

The programmes include construction of hospital building, additional floor to college building, ladies hostel, staff quarters, men's hostel. The plan outlay

is also for consolidation and development of the various Departments including improvement in Post-graduate training facilities. The outlay for 1985-86 is Rs. 70 lakhs.

#### 5. *Medical College, Calicut*

The outlay of Rs. 280 lakhs is for the construction of hospital for Chest Diseases, staff quarters and for completion of construction already in progress. The outlay will also be used for the consolidation and development of existing facilities including improvement of post-graduate training facilities. The outlay for 1985-86 is Rs. 46 lakhs.

#### 6. *Medical College, Trichur*

The Medical College, Trichur started functioning in the year 1982-83. Hence this scheme was not included at the time of formulation of the Sixth Plan (1980-85). The outlay of Rs. 750 lakhs earmarked in the Seventh Plan is for the construction of college and collegiate hospital buildings, hostels, staff quarters, roads etc., and for the purchase of equipments and provision of facilities for this newly started college to meet the requirements of the Medical Council of India. The outlay set apart for 1985-86 is Rs. 110 lakhs.

#### 7. *Limb Fitting Centres at Trivandrum, Calicut and Kottayam*

The provision of Rs. 20 lakhs is for enhancement of facilities for the existing centres and construction of a building for the centre at Kottayam. Three new centres at the District Hospitals are to be brought under the control of the limb fitting centre attached to the Medical College. Rs. 7 lakhs is provided in the Annual Plan for 1985-86.

#### 8. *Institute of Mental Health and Neuro Sciences*

For construction of necessary buildings and for the continuance of this Institute an outlay of Rs. 30 lakhs is set apart in the Plan. The provision made in the annual plan for 1985-86 is Rs. 5 lakhs.

#### 9. *Nursing Education*

The provision of Rs. 170 lakhs is for the construction of College buildings and accommodation for the nursing students at Kottayam and Calicut, starting of M.Sc. (Nursing) course at Trivandrum, purchase of equipment for the newly started colleges continuing the nursing education programmes. The outlay for 1985-86 is Rs. 30 lakhs.

#### 10. *College of Pharmaceutical Sciences*

For the construction of additional floor to the college, and improvement of existing facilities, the provision of Rs. 25 lakhs is made in the plan. The outlay for 1985-86 is Rs. 15 lakhs.

#### 11. *Re-orientation of Medical Education*

This scheme is to re-orient Medical Education to give a rural bias, instead of the present urban and hospital based training. For this purpose, students and faculty are to be stationed at primary health centres for training.

The outlay in the Seventh Plan (Rs. 60 lakhs) is for construction of dormitory type accommodation as envisaged in the scheme and for improvement of facilities at the concerned primary health centres. The outlay for 1985-86 is Rs. 15 lakhs.

#### 12. *Generators in Medical College Hospitals*

The outlay of Rs. 5 lakhs in the Seventh Plan is for installation of small generators in Medical College Hospitals. The amount earmarked for the scheme in 1985-86 is Rs. 1 lakh.

#### 13. *Regional Cancer Centre, Trivandrum*

The outlay of Rs. 150 lakhs is for payment of grant-in-aid to the Regional Cancer Centre, Trivandrum to enable the Centre to enhance its facilities and to construct necessary buildings. The Annual Plan outlay for 1985-86 is Rs. 30 lakhs.

#### 14. *Dental Colleges at Trivandrum and Calicut.*

The provision of Rs. 90 lakhs in the Seventh Plan is to equip suitably the new Dental College at Calicut and also to improve the facilities of the two Dental Colleges at Trivandrum and Calicut. The Annual Plan outlay for 1985-86 is Rs. 25 lakhs.

#### 15. *Training of Teachers and Continuing Medical Education*

For enabling teachers in Medicine, attend conferences, training courses etc., within and outside the country in order to keep abreast of new knowledge and techniques in Medical sciences and communicate the results of their own research, the provision of Rs. 10 lakhs has been made. The provision included in the annual plan 1985-86 is Rs. 2 lakhs.

### II. *New Schemes*

#### 16. *Establishment of Infectious Disease Units.*

Infectious diseases continue to pose a baffling problem to the State. In the Medical Colleges of Kerala, there are no full fledged Units of infectious diseases. The need for this is recognised, and therefore this new scheme is proposed for inclusion in the Seventh Plan. An outlay of Rs. 20 lakhs is proposed for the Seventh Plan and Rs. 4 lakhs in the annual plan for 1985-86 for this purpose.

The objectives of the scheme are:—

- (a) establishment of infectious diseases units in all Medical Colleges of the State, which should ultimately become full-fledged departments.
- (b) development of one of the Centres into a full-fledged department with an Infectious Disease Hospital.
- (c) development of the units as Research Centres.
- (d) starting of Post-graduate course in the subject and
- (e) conducting orientation courses for doctors to update their knowledge on this subject.

#### 17. *State Board of Medical Research*

At present, adequate attention is not bestowed on Medical Research in Kerala. Medical Research should be related to the common health problems of the State. The results of research can be utilised to modify constantly the health care delivery systems in the State. Therefore it is proposed to set up a State Board of Medical Research and create a fund for research, which will be operated by the Board.

Development of advance specialities is necessary in the light of rapid advances in Medical Sciences in order to improve the quality of medical care. The proposed Board can recommend the selection of the Medical College for the development of each of the specialities, taking into account the outlays, existing facilities, regional problems etc.

The plan provision of Rs. 15 lakhs is for establishment of the State Board of Medical Research, and creation of a fund for research, related to local problems of the State. The share of annual plan 1985-86 is Rs. 3 lakhs.

#### 18. *Development of Advanced Specialities*

Chronic degenerative diseases like cardio-vascular disorders and cancer have become serious health problems in the State. There is therefore a need for specialities in different areas. While the development of such specialities in every medical college in a desirable objective, limitations of finance, skilled manpower and substantial cost of equipment, and running expenses make selectivity in this area essential. Such selection in each advanced speciality in the medical colleges can be done by the State Board of Medical Research, taking into account the funds available the existing facilities and the regional problems.

The advanced specialities identified under this scheme are Cardiology, Cardio-thoracic surgery, Neurology, Neuro surgery, Nephrology and transplant unit, Plastic and reconstructive surgery, Gastroenterology, Haematology, Endocrinology and metabolism, genetics and immunology.

An outlay of Rs. 50 lakhs is proposed for equipping the selected centres with full range of diagnostic and therapeutic equipment, appointing necessary staff and provision of facilities for efficient service to patients. Rs. 10 lakhs is proposed for the annual plan 1985-86.

#### 19. *Enhancing Paramedical Training Facilities*

Projections on the availability and requirements of certain categories of para-medical personnel, show that there will be shortages of Nurses, Medical Laboratory Technicians, Ophthalmic Assistants, Radio-graphers and Pharmacists in the Seventh Plan period. There is need to increase the training facilities. Though some of the facilities in the Medical Colleges can be utilised, there is need for additional institutions which conduct such courses and where seats have to be considerably increased. It is proposed to increase the intake at the Trivandrum and Calicut Medical Colleges, and to start one or two of the courses in the other Medical Colleges with smaller intake. Space

requirements will be adequate at the Trivandrum Medical College. It is proposed to construct a building for this purpose at the Calicut Medical Colleges. The provision of Rs. 15 lakhs is for payment of part-time allowances to staff of the Medical Colleges engaged in the training, purchase of additional equipments and construction of a building at Calicut Medical College. An amount of Rs. 3 lakhs is set apart for 1985-86.

#### 20. *Establishment of a Sports Medicine Laboratory*

Though Kerala has an enviable performance in the field of sports, performance in the international areas has not reached the desired level. The performance level can be bettered further if scientific methods of training, sports physiology and Bio-chemistry, are adopted. Evaluation of individuals are necessary in a Sports Medicine Laboratory for designing or modification of training schedules, to attain maximum level of performance. At present there exists no such evaluation. Coaches, athletes, physical educators, officials, and doctors have little knowledge of the concept and the importance of sports medicine in increasing performance levels. Nations which rank high in the international sports areas have well developed speciality of sports medicine. Trained doctors in Sports Medicine are not available in Kerala. It is therefore proposed to establish a Sports Medicine Laboratory at the Medical College, Trivandrum and to train two doctors in this speciality. The outlay of Rs. 5 lakhs proposed is for implementing the above scheme. The outlay of the annual plan 1985-86 is Rs. 2 lakhs.

#### 21. *Workshop and Mobile Unit for Maintenance*

Biomedical instruments are part of the facilities of Medical Colleges. Several such instruments including electronic equipments today remain idle for long periods, for want of maintenance and repairs. Sophisticated equipments are required for development of diagnostic and therapeutic facilities for efficient patient care. It is therefore proposed to set up a workshop and mobile unit for maintenance and repairs of bio-medical instruments. An outlay of Rs. 10 lakhs is for the purchase of equipments, and spare parts purchase and equipping the mobile unit, payment of salaries to staff, and training of the staff in bio-medical instrumentation. An amount of Rs. 7 lakhs will be utilised for the above purpose in 1985-86.

### III. *Control of Communicable Diseases*

For the successful implementation of the various on-going schemes, the multi-purpose health worker scheme will have to be implemented in full swing. Health problems like respiratory illness of the children, diseases due to parasites etc. should also be taken up during the Seventh Plan period in addition to the programmes like diarrhoea control and control of blindness started during the Sixth Plan period. Besides 100% Centrally Sponsored Programmes there are a number of 50% Centrally Sponsored Schemes under this category.

The State share of implementing the schemes to combat communicable diseases in the State is Rs. 424 lakhs in the Seventh Plan and the amount required for the year 1985-86 is Rs. 89 lakhs.

37/4830/MC.

Of this the general sector schemes account for Rs. 393 lakhs and Rs. 81.80 lakhs respectively.

#### 1. *National T.B. Control Programme—State Share*

This scheme is included under 20 point programme. It is conducted through District T. B. Centres and T.B. Clinics. At present the State has 10 T.B. Centres. In the Sixth Plan 3 T.B. clinics with 36 beds have been opened. The objectives of the programme in the Seventh Plan are:

- (i) detection of cases from all levels is from the lowest basic unit
- (ii) strengthening the treatment activities so that cure rate can be raised from the existing 40% to 80%.
- (iii) arranging supply of sufficient anti-TB drugs to the patients through District TB Centres and clinics and other institutions.
- (iv) opening district TB Centres for the newly formed districts. (Wynad, Idukki, Pathanamthitta and Kasargode).
- (v) meeting the additional requirement of equipments and replacing the old set of major equipments. (State share 50%).

The provision to be set apart for the above is as follows:

Year	Additional operational cost (Rs. lakhs)	For medicine etc. (State Share) (Rs. lakhs)
1985-86	1	5
1985-90	5	25

#### 2. *National Malaria Eradication Programme*

The programme is in the maintenance phase in Kerala though there are recent cases of incidence in Malappuram and Alleppey Districts. The active and passive surveillance, preventive measures and follow up are the main components of the programme. It is proposed to carry out the surveillance and spray operations through the multi purpose workers during the Seventh Plan period. Moreover, strengthening of peripheral services including laboratory services and inter-state meetings to discuss the important cases are also intended to be undertaken during the plan period. The requirement of funds will be as follows:

	1985-86 (Rs. lakhs)	1985-90
Operational cost (Additional Zonal Malaria organisation)	10.00	50.00
For medicine, equipments etc., excluding operational cost (50% Central assistance)	5.00	25.00

An amount of Rs. 75 lakhs is proposed for the scheme during 1985-90 and Rs. 15 lakhs for 1985-86.

#### 3. *National Filariasis Control Programme (NFPCP)*

Out of the 6 million endemic population of the State, 2 1/2 million could be covered through NFPCP.

The objective of the programme is to cover the entire population exposed to the risk of this infection. During the Seventh Plan period 60 more clinics are required to ensure the anti-larval measures detected and for the treatment of micro-filarial carriers. The amount required is show below:

	1985-86 (Rs. lakhs)	1985-90
Operational cost	8.00	45.00
Medicines and equipment (50% Central assistance)	9.00	9.00

#### 4. Control of Diarrhoeal Diseases

Acute diarrhoeal disease is one of the major causes of morbidity and mortality in children below the age of 5. The objective of the scheme is to achieve effective control of the disease through proper and effective implementation of oral rehydration therapy (ORT), training of medical and para medical personnel, and education to the mother and community. The aim is to bring down the mortality rate of this disease to 50%. An amount of Rs. 50 lakhs is proposed for 1985-90, of which Rs. 10 lakhs is for 1985-86.

#### 5. Sexually Transmitted Diseases

The programme includes serological screening of all pregnant women in suspected cases, training of medical and para medical personnel, provision for health education and periodical survey to assess the magnitude of the problem. Clinics for the treatment of sexually transmitted diseases have to be established especially at the hospitals in tribal areas. To start 3 STD clinics during the plan period, the outlay required is Rs. 10 lakhs. An amount of Rs. 10 lakhs is proposed for 1985-90 of which Rs. 1 lakh is proposed for 1985-86.

#### 6. Training and Employment of Multipurpose Health Workers Scheme and Provision for last year of IPP

The norm is one female health worker for every 5000 population in plain areas and one for every 2000 population in hilly areas. An additional number of 305 female health workers is required by the end of Seventh Plan. Three more schools are to be opened to meet the requirement. There is 100% Central assistance for the scheme.

The norm for the male health workers is also the same as that of female workers. Training and employment of male health workers is a 50% Centrally assisted scheme. Rs. 160 lakhs is the State's share for 1985-90 and Rs. 30 lakhs for 1985-86.

In addition an amount of Rs. 20 lakhs is set apart for SCP and Rs. 5 lakhs for TSP for 1985-90 and Rs. 5 lakhs and Rs. 1 lakh respectively for 1985-86.

#### 7. Immunisation Programme

The immunisation programme was started in the State in 1978-79 covering 33 NES Blocks. In 1982-83 the programme covered all the NES Blocks in the State. The object of the programme is to protect the children against communicable diseases like diphtheria, whooping cough, tetanus, measles, polio and T.B. from infancy.

The target is to immunise 80% of the infants every year. An amount of Rs. 20 lakhs is allocated in the Seventh Plan of which—Rs. 5 lakhs and Rs. 1 lakh is allotted for S.E.P. and T.S.P. respectively—to carry out the programmes. The amount provided for 1985-86 is Rs. 4 lakhs. From this Rs. 1 lakh will be spent for the benefit of S.C. and Rs. 0.20 lakh for Tribals.

### Indian Systems of Medicine

#### B. Ayurveda

An outlay of Rs. 4.5 crores is required for the implementation of various schemes under Ayurveda during the Seventh Plan. The schematic details are given below:

##### 1. Opening of New Ayurvedic Dispensaries

The Department's aim is to provide an Ayurveda Dispensary in every Panchayat within the shortest time possible. Considering the huge outlay required for the scheme it is proposed to achieve the target within a span of 25 years. Accordingly 95 dispensaries (75 in general sector and 10 each for SCP and TSP), will be opened during the Seventh Plan period for which an outlay of Rs. 95 lakhs is proposed. The share of the general sector schemes is Rs. 75 lakhs out of which Rs. 15 lakhs is proposed for 1985-86.

##### 2. Upgrading of Dispensaries into Hospitals in Rural Areas

It is necessary to upgrade dispensaries in the remote rural areas into hospitals with inpatient facilities in order to meet the requirement of the rural masses. An amount of Rs. 25 lakhs is proposed for the Plan period and Rs. 5 lakhs for 1985-86.

##### 3. Opening of Taluk Hospitals

This is a new scheme in the place of Opening of New Ayurveda Hospitals in Rural Areas. A large number of Taluks in the State are without a Taluk Headquarters hospital. It is proposed to open 10 hospitals with bed strength of 50 each during the plan period. The amount proposed for the purpose is Rs. 60 lakhs and that for 1985-86 is Rs. 10 lakhs.

##### 4. Construction of Nurses Quarters

The scheme is for the construction of 12 Nurses Quarters in rural areas where accommodation facilities are very poor and for this an amount of Rs. 15 lakhs is set apart. During 1985-86, Rs. 3 lakhs will be earmarked for the scheme.

##### 5. Starting of Mobile Dispensaries

Mobile Dispensaries are more beneficial in remote rural areas where travelling facilities for the public are poor. At present there are three mobile dispensaries under the Department of Indian Systems of Medicine. Five more Mobile Units (including a floating dispensary) are to be started during the plan period for which an outlay of Rs. 15 lakhs is earmarked. Out of which, Rs. 6 lakhs is proposed for 1985-86.

6. *Improvement of Health Care Facilities at Rural, District and State Level*

The scheme includes the following programmes for the improvement of facilities in hospitals and dispensaries for which an amount of Rs. 240 lakhs is proposed for the Seventh Plan. The outlay for Annual Plan 1985-86 is Rs. 44 lakhs.

(a) *Strengthening of Administrative Wing in the Directorate*

In order to strengthen the administrative machinery in the Directorate to cope with additional work to be carried out an amount of Rs. 10 lakhs is proposed. Additional Staff for four wings viz. Audit, Vigilance, Planning and Statistics are proposed. For 1985-86 an amount of Rs. 2 lakhs is proposed.

(b) *Opening of District Offices at Pathanamthitta, Kasargode and Wynad*

At present there are only eleven District Offices. Three more District Offices have to be opened one each at Pathanamthitta, Kasargode and Wynad during the Plan period. An outlay for Rs. 10 lakhs is proposed for the scheme and Rs. 2 lakhs for 1985-86 is proposed.

(c) *Starting of Mental Hospital*

The Ayurveda Mental Hospital, Kottakkal, is the only such institution in the State at present. An outlay of Rs. 25 lakhs is proposed for starting three Mental Hospitals in other parts of the State during 1985-90 and for acquisition of land and construction of building for the Mental Hospital, Kottakkal. The provision for Annual Plan 1985-86 is Rs. 5 lakhs.

(d) *Purchase of Vehicles*

At present only four District Offices are provided with jeeps. Since almost all dispensaries are located in rural and remote areas, vehicles are to be provided for the remaining districts also for which an amount of Rs. 10 lakhs is proposed for the Seventh Plan of which Rs. 2 lakhs is for the Annual Plan 1985-86.

(e) *Construction of Building for the Directorate*

The Directorate of Indian Systems of Medicine is now functioning in a building in the campus of the Ayurveda College, Trivandrum. As it is necessary to construct a building to accommodate the office an outlay of Rs. 10 lakhs is proposed for construction of building during the plan period. Rs. 2 lakhs is proposed for 1985-86.

(f) *Development of District Hospitals*

The scheme replaces "Raising the status of existing hospitals into district hospitals and raising the bed strength of existing District Hospitals". The aim of the new scheme "Development of District hospitals" is (1) to establish district hospital with a bed strength of 100 at district quarters where there are no District hospitals at present and (2) for raising the bed strength of existing District hospitals to 100. An outlay of Rs. 85 lakhs is proposed for implementation of this scheme in the Seventh Plan and Rs. 16 lakhs is the requirement for 1985-86.

(g) *Starting of Speciality Unit in Existing Hospitals*

An outlay of Rs. 10 lakhs is proposed for starting speciality units such as Visha, Netra, Marma Panchakarma etc. in 25 hospitals during the Seventh Plan period and an amount of Rs. 1 lakh is earmarked for 1985-86.

(h) *Establishment of District Stores*

This scheme is in the place of the scheme in the Sixth Plan "Improvement of Central Store and establishment of District Stores". It is proposed to organise District Stores attached to all District offices. An outlay of Rs. 15 lakhs is proposed for the Seventh Plan period. Rs. 3 lakhs is required during 1985-86.

(i) *Opening of Panchakarma Hospital*

At present facilities for doing Panchakarma treatment are available only in a very few hospitals numbering less than six. Experience shows that the arrangement does not work to the expected level. Private hospitals which afford such treatment extract heavy charges from the patients and it is often complained that poor patients are deprived of the treatment for want of few items at the Government hospitals. The scheme envisages starting of a separate full fledged state level Panchakarma hospital in the State and for the development of the Panchakarma hospital already sanctioned. The outlay Rs. 25 lakhs is proposed for the purpose and the share of annual plan 1985-86 is Rs. 5 lakhs.

(j) *Opening of Nature Cure Hospital*

At present there is only one Nature Cure hospital in the State and it is located at Varkala in Trivandrum District. The Nature Cure System of treatment has gained immense popularity and there are demands from several parts of the State to start such hospitals. Hence one more hospital is proposed to be opened in the State during the plan period. The outlay proposed for the purpose is Rs. 5 lakhs for the Seventh Plan and Rs. 1 lakh for 1985-86.

(k) *Starting of Marma Hospital*

At present there is only one Marma hospital and it is in Trivandrum District. There are demands from the public to start similar hospitals in other parts of the State. Hence it is proposed to start three Marma hospitals in various parts of the State during the Seventh Plan period. The outlay proposed for the purpose is Rs. 5 lakhs for the Seventh Plan and Rs. 1 lakh for the first year.

(l) *Establishment of an Agency for Cultivation and Collection of Medicinal Plants in Forest Areas*

One of the reasons for the soaring prices of Ayurveda medicines now a days is the scarcity of raw drugs. If raw drugs at cheaper price are made available to the manufacturers the prices can be brought down. The only way to provide adequate raw drugs is to start sufficient number of medicinal plant farms and grow more varieties of plants in forest area by involving Scheduled Tribes. Though there is a Tribal Co-operative Society under the Tribal



Welfare Department to collect forest produce for delivery to the Pharmaceutical Corporation (IM) Trichur, it did not prove to be an effective agent in the cultivation and collection of medicinal plants. It is proposed to constitute an Agency in the form of a fully owned Government Corporation to assist the Tribal people in the cultivation of medicinal plants in forest area and collection of medicinal plants and other forest produce. The outlay proposed for the purpose is Rs. 15 lakhs for the Seventh Plan period and Rs. 1 lakh for 1985-86.

(m) *Encouragement of Yogic Culture*

Practising of Yogasana is found to be an effective treatment for curing certain diseases like asthma. Such facilities for Yogasana treatment are now available in the Ayurveda College Hospital, Trivandrum only. Under this department there are no such facilities. In order to promote this system of treatment Yoga wards attached to the District hospitals have to be started. For this Rs. 5 lakhs is proposed for the Seventh Plan period and Rs. 1 lakh for 1985-86.

(n) *Opening of Siddha Hospital and Dispensaries and Unani Dispensaries*

At present there are only five Siddha Dispensaries in the State. But dispensaries and hospitals under Unani system of treatment is not at all available in the State under Government control at present. It is proposed to open 15 Siddha dispensaries, and 5 Unani dispensaries during the plan period. The amount required for the purpose is Rs. 10 lakhs. The target for 1985-86 is Rs. 2 lakhs.

7. *Special Component Plan M.N.P.—Opening of Hospitals and Dispensaries*

It is proposed to open 10 dispensaries during the plan period and 2 dispensaries during 1985-86. The outlay proposed is Rs. 10 lakhs for the Seventh Plan period and Rs. 2 lakhs for the year 1985-86.

8. *Tribal Sub Plan—Opening of Dispensaries*

It is proposed to open 10 dispensaries for the benefit of scheduled tribes. The amount required for the purpose is Rs. 10 lakhs for the plan period and Rs. 2 lakhs for 1985-86.

*Education*

*Continuing Schemes*

1. *Ayurveda College, Trivandrum*

The outlay of Rs. 30 lakhs made in plan is for the enhancement of facilities to fulfil the requirements as specified in the centralised B.A.M.S. syllabus, purchase of equipment, staff car, provision of a cash counter etc. An amount of Rs. 6 lakhs is proposed for the scheme in 1985-86.

2. *Ayurveda College, Tripunithura*

The various teaching departments of this college for undergraduate education have to be developed according to the syllabus of the Central Council of the

Indian System of Medicine. An outlay of Rs. 30 lakhs is for the above. The provision in the annual plan, 1985-86 is Rs. 5 lakhs.

3. *Construction of Hostels, Staff Quarters, Pharmacy, Hospitals etc. for the Ayurveda Colleges at Trivandrum and Tripunithura*

An amount of Rs. 40 lakhs has been provided for the construction of buildings, roads etc. for the Ayurveda College, Trivandrum. This includes additional buildings for the college, and collegiate hospital, Ayurveda pharmacy, Hostel, staff quarters, overhead tank, sheds for vehicles etc. and concreting and black-topping of roads.

For the Ayurveda College, Tripunithura, an amount of Rs. 160 lakhs has been provided. The provision is meant for construction of buildings for hostel, accommodation for various Departments Auditorium and Administrative Block. This provision also includes the amount needed for the acquisition of land for establishing a hospital with 350 beds, and for construction of the hospital building.

An outlay of Rs. 32.50 lakhs is proposed for Annual plan 1985-86.

4. *Grant-in-aid to Private Ayurveda Colleges at Shoranur and Ollur and Assistance to Ayurveda College, Kottakkal*

The private Ayurveda Colleges in Kerala, situated at Kottakkal, Ollur and Shoranur are admitting students from the common selection list of the Entrance Examination for Medical Education. The appointment of teachers, payment of their salary etc. have to be treated similar to those of other private colleges affiliated to the concerned University. The outlay of Rs. 25 lakhs is for providing grant-in-aid to these Colleges, and to meet the expenditure on account of direct payment to the teaching and non-teaching staff of these colleges, and to strengthen the administrative wing in the Ayurveda College, Trivandrum to supervise the work concerned. An amount of Rs. 4 lakhs is earmarked for 1985-86.

5. *Expansion of the Collegiate Hospital, Trivandrum*

The provision of Rs. 20 lakhs made in the plan is for increasing the bed strength in the Collegiate Hospital, Trivandrum and the Maternity Hospital, Poojappura, purchase of ambulance and jeep, installation of power laundry, and strengthening of staff in the medical, paramedical and administrative wings for the efficient functioning of the said hospitals. An amount of Rs. 4 lakhs is earmarked for the year 1985-86.

6. *Paywards for Collegiate Hospitals*

An amount of Rs. 8.5 lakhs has been provided for the Ayurveda College, Trivandrum to construct paywards to the Collegiate Hospital, and the Maternity Hospital, Poojappura and for necessary facilities in the paywards. For the Ayurveda College, Tripunithura an amount of 1.5 lakhs has been provided for the creation of facilities in the paywards and purchase of equipment. The outlay of Annual plan 1985-86 is Rs. 2 lakhs.

7. *Publication Division in the Ayurveda College, Trivandrum*

It is necessary to strengthen the technical and administrative wings of the Publication Division for

printing and publishing text books in Ayurveda, convening workshops etc. A provision of Rs. 10 lakhs has been made for this purpose in the Seventh Plan.

The outlay for 1985-86 is Rs. 2 lakhs.

#### 8. *Training of Pharmacists and Nurses*

It is necessary to award stipend to the para-medical trainees such as nurses, pharmacists etc. selected for training. Also, necessary staff in the teaching and administrative wings have to be provided for conducting the training courses. A provision of Rs. 10 lakhs has been made for the above purpose.

An amount of Rs. 2 lakhs has been provided for 1985-86.

#### 9. *Training in Prakrithi Chikitsa etc.*

The plan outlay of Rs. 2.50 lakhs is to impart training in the counterparts of Indigenous Medicines, such as Prakirithi Chikitsa, Siddha etc. in the Ayurveda College, Trivandrum, and to award stipends to the trainees.

An amount of Rs. 0.50 lakh is proposed for 1985-86.

#### 10. *Acquiring and Preserving Manuscripts, Preparing Text-books and Expanding College Libraries*

An amount of Rs. 3.5 lakhs has been provided for the Ayurveda College, Trivandrum for the purchase of books, furniture, and vehicles and meeting the expenses in connection with the collection of manuscripts.

The library of the Ayurveda College at Trippunithura has to be developed properly by enriching it with more books in Ayurveda. A provision of Rs. 2.5 lakhs has been made for this purpose.

An amount of Rs. 1 lakh is proposed for 1985-86.

#### 11. *Specialisation in Ayurveda Branches, Condensed Degree Courses, and Continuing Degree Course in Pharmacy*

The outlay of Rs. 11 lakhs proposed in the plan is for giving specialised education in the various subjects of Ayurveda to the teachers of Government Ayurveda Colleges, arranging scholars in different specialities to impart training, conduct orientation courses, and convening seminars. It is also proposed to continue the schemes viz., condensed degree courses, B. Pharm (Ay.) Degree course, and to start new degree courses such as B.Sc. (Nursing) in the Ayurveda College, Trivandrum.

The Ayurveda Colleges at Trivandrum and Trippunithura are provided with amounts of Rs. 8.5 lakhs and Rs. 2.50 lakhs respectively for implementing the above programmes.

An amount of Rs. 2 lakhs is proposed for the scheme in 1985-86.

#### 12. *Refresher Courses for Medical Teaching and Para-Medical Staff, Ayurveda College, Trivandrum.*

The outlay of Rs. 2.50 is to give refresher training in the different subjects to the para-medical staff, teachers and medical officers working in the Ayurveda College, Trivandrum and the Department of Indian systems of Medicine.

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An amount of Rs. 0.50 lakh is proposed for 1985-86.

#### 13. *Post graduate-cum-Research Centre, Poojappura, Trivandrum including Model Demonstration Garden for Herbs.*

The outlay of Rs. 28 lakhs proposed is for improving the facilities of the Centre, including cultivation and preservation of rare plants. The outlay also includes provision for construction works. The outlay for Annual Plan 1985-86 is Rs. 6 lakhs.

#### II. *New Schemes*

#### 14. *Collegiate Herbal Gardens at Trivandrum and Trippunithura*

Establishment of the Herbal Gardens will enable students of Ayurveda College especially to identify the numerous indigenous drugs, and to procure the cultivation of rare and valuable species which are fast diminishing. The knowledge of genuine herbs is essential for the students to prevent the growing practice of drug adulteration and using substandard quality in the manufacture of ayurvedic medicines. The outlay of Rs. 10 lakhs made in the Seventh Plan is for acquiring sufficient land in a suitable locality, planting medicinal herbs and vehicles for arranging the work. An amount of Rs. 2 lakhs is proposed for the scheme in 1985-86.

#### 15. *Institute of Advanced Studies and Research in Ayurveda*

The activities of the present Pharmacognosy Unit, Poojappura, the Botanical and Model Demonstration Garden, the Drug Standardisation Unit, the Yoga and Parakrithi Chikitsa Unit, and the Post Graduate-cum-Research Centre in Ayurveda, Trivandrum can be taken over by the proposed Institute of Advanced Studies and Research in Ayurveda Laboratories and other facilities have also to be provided.

The outlay of Rs. 15 lakhs proposed in the plan is for construction of buildings, salaries to the additional staff required and purchase of equipments and medicines. An amount of Rs. 3 lakhs is earmarked for 1985-86.

#### 16. *Establishment of Siddha College in Kerala*

A Siddha College in Kerala is a long felt need of the State. It is therefore proposed to start a college for advanced study in the Siddha system of medicine. The outlay of Rs. 10 lakhs provided above is for this purpose. Of this Rs. 2 lakhs is for the Annual Plan. 1985-86.

#### 17. *Starting of Post Graduate Courses in Ayurveda Colleges at Trippunithura and Kottakkal.*

An outlay of Rs. 25 lakhs proposed in the plan is for starting post graduate courses in Government Ayurveda College, Trippunithura, (Kayachikitsa and Balachikitsa) and in the Ayurveda College, Kottakkal (mental diseases and agadathantra (Visha)). The amount earmarked in the Annual Plan 1985-86 is Rs. 5 lakhs.

*Homoeopathy*1. *Minimum Needs Programme*(i) *Opening of Homoeo Rural Dispensaries*

The intention is to provide one Homoeo Dispensary at least in each Panchayat on a phased manner. The target fixed for the Seventh Plan is 90 dispensaries for which the amount proposed is Rs. 90 lakhs.

It is proposed to start 15 Homoeopathic dispensaries during 1985-86. The outlay set apart for this purpose is Rs. 17.50 lakhs.

2. *Hospital and Dispensaries*

This scheme which is intended for improving health care facilities at Taluk, District and State Levels comprises the following items. The amount proposed for the same during the Seventh Plan is Rs. 104 lakhs and the amount earmarked for the Annual Plan is Rs. 27 lakhs.

1. *Strengthening of Administrative Machinery in the Directorate*

The provision of Rs. 5 lakhs proposed for the Seventh Plan is to strengthen the Directorate and to establish a publicity wing to educate the advantage of the Homoeopathic system of treatment and the facilities rendered to the public by the Department.

The outlay for the year 1985-86 is Rs. 2 lakhs.

2. *Starting of District Offices*

At present there are only two District Offices under this Department. District Offices in all Districts are necessary for the efficient control. It is proposed to start 5 District Offices during the Seventh Plan period and the provision of Rs. 5 lakhs is to achieve this objective.

During 1985-86 it is proposed to start two district offices and Rs. 2.50 lakhs is earmarked for this purpose.

3. *Building for Directorate*

The Directorate is now functioning in a rented building. The outlay of Rs. 7 lakhs proposed for the Seventh Plan is for constructing a building for the Directorate.

The outlay of Rs. 1 lakh is earmarked for this purpose during the year 1985-86.

4. *Opening of Taluk Hospitals*

The objective of the scheme is to start 25 bedded Homoeo Hospitals in all the Taluks in the State in stages. The target for the Seventh Plan is to start 10 taluk hospitals. The total provision is Rs. 35 lakhs

The outlay for the year 1985-86 is Rs. 7 lakhs and it is for starting 2 Taluk hospitals with 25 beds each.

5. *Increasing Facilities such as Increasing Bed Strength and Providing Modern Equipment in District and Taluk Hospitals*

The objective of the scheme is to enhance the bed strength in existing hospitals, to provide modern equipments and facilities such as Clinical Laboratory, X-ray, E.C.G. etc. in the hospitals so as to facilitate easy diagnosis of diseases. The target fixed for the Seventh Plan is enhancement of beds in the District and Taluk Hospitals to 200, starting of one Clinical Laboratory and one x-ray clinic. The outlay proposed is to achieve this.

The amount proposed for the Seventh Plan is Rs. 5 lakhs and for 1985-86 is Rs. 2 lakhs and it is for enhancement of bed strength in existing Homoeo Hospitals by 25 beds.

6. *Opening of District Hospitals*

At present there are no District Hospitals in Pathanamthitta, Calicut and Kasargode Districts. It is intended to start District Hospitals with 25 beds each in those Districts during Seventh Plan period and for that purpose a provision of Rs. 15 lakhs is proposed of which Rs. 5 lakhs is for the construction of buildings.

The amount earmarked for 1985-86 is Rs. 5 lakhs.

7. *Co-operative Society for Manufacture of Homoeo Medicines and Starting of a Drug Unit in the Public Sector*

At present the Homoeopathic medicines required for the Hospitals and dispensaries are purchased from the Kerala State Homoeopathic Co-operative Pharmacy at Alleppey, 51% of the share capital of which is held by Government. The above Society is not sufficient to meet the requirements of the department. A drug manufacturing unit in the public sector is necessary to make available quality medicines at minimum price. The amount of Rs. 5 lakhs proposed in the Seventh Plan is for contributing to the share capital of the Co-operative Society as well as to establish a drug manufacturing unit in the public sector.

The outlay, Rs. 1.00 lakh is set apart in 1985-86.

8. *Construction of Building for Existing Hospitals and Dispensaries*

At present the construction works of one hospital building and 7 dispensary buildings are nearing completion. It is proposed to construct one hospital building and 8 dispensary buildings besides the completion of the above spill over works during the Seventh Plan period. An amount of Rs. 20 lakhs is proposed for this purpose during the Seventh Plan.

The amount earmarked for the year 1985-86 is Rs. 3 lakhs

9. *Purchase of Departmental Vehicles*

At present the District Medical Offices are not provided with Departmental vehicles. It is proposed to purchase two jeeps for the use of the District Medical Officers and one Delivery Van for the Central Homoeo Store attached to the Directorate, during the Seventh Plan. The amount proposed is Rs. 4 lakhs.

In 1985-86 an outlay of Rs. 2 lakhs is proposed for purchasing two jeeps in the existing two District Offices.

#### 10. *Refresher Course to Medical Officers*

During the Seventh Plan period 15 refresher courses are proposed to be conducted to the Medical Officers on the developments and achievements of Homoeopathy. The amount required for this purpose during the Seventh Plan is Rs. 3 lakhs.

It is proposed to conduct 3 refresher courses in 1985-86 for which an outlay of Rs. 1.50 lakhs is proposed.

#### C. *Homoeopathy*

##### *Continuing Schemes*

#### 1. *Homoeopathic Degree College and Hospital, Trivandrum*

The Seventh Plan outlay of Rs. 200 lakhs proposed is for the construction of the Trivandrum Homoeo College and Collegiate Hospital Buildings, Hostels, purchase of equipment etc. An amount of Rs. 35 lakhs is set apart for the year 1985-86.

#### 2. *Homoeopathic Degree College and Hospital at Calicut*

For completing the construction of the Calicut Homoeo College and Collegiate Hospital buildings, starting construction of Hostels, Staff Quarters etc. enhancing the bed strength of the Hospital and improving the existing facilities, an amount of Rs. 185 lakhs is provided in the plan. For the Annual plan 1985-86 an amount of Rs. 35 lakhs is made.

##### *New Schemes*

#### 3. *Starting Post Graduate Degree Course in Homoeopathy in the Homoeopathic Medical College, Calicut.*

Today there is no Post Graduate Degree Course in Homoeopathy in Kerala. Acute deficiency of teaching staff therefore exists in the Homoeopathic Medical Colleges. It is therefore proposed to start Post Graduate Degree Course in the Homoeopathic Medical College at Calicut. The outlay of Rs. 15 lakhs proposed is for providing increased facilities and awarding stipend to students etc. An amount of Rs. 3 lakhs is earmarked for the year 1985-86.

##### *Other Health Schemes*

The Seventh Plan outlay for Other Health Schemes, which include Laboratory Services is Rs. 625 lakhs. The amount set a part for 1985-86 is Rs. 156 lakhs.

##### *Prevention of Food Adulteration and Augmentation Laboratory Services*

#### (i) *Chief Government Analyst Laboratory.*

The State Analyst Laboratory and the Regional Analytical Laboratories is a Central subject enforced by the State Government through Health Services Department. It has been included under the new 20 Point Programme as item 19. A proper machinery is needed which consists of enforcement

machinery, laboratory services and prosecution of offenders. An amount of Rs. 68 lakhs is required for the above purpose during the Seventh Plan and Rs. 22 lakhs in 1985-86.

#### (ii) *Food Administration (Augmentation)*

Additional requirement of 30 Food Inspectors with necessary staff will have to be met during the Seventh Plan for which an outlay Rs. 57 lakhs is proposed and the allotment for the annual plan 1985-86 is Rs. 13 lakhs.

#### 2. *Drugs Control*

Drugs Control Department plays a vital role in the health care of the people by ensuring availability of quality drugs. Control over quality of drugs has to be exercised through enforcement of law which necessitates licensing of all drugs manufacturing and selling units, testing the quality of drugs manufactured, sold and distributed and prosecution against offenders. The main task to be accompanied during the Seventh Plan are.

1. Strengthening the Inspectorate on the lines recommended by the Task Force appointed by the Central government.
2. Providing vehicles and telephones to all Drugs Inspector's offices in a phased manner.
3. Strengthening the intelligence branch and
4. Construction of animal house for the Drugs Testing laboratory and converting the laboratory into a full fledged one.

Strengthening of the Inspectorate staff is to be effected in 1985-86 which envisages the implementation of the two schemes viz licensing of all private hospitals and exercising full control over their functioning as provided in the Drugs and Cosmetics Act and licensing of all bloodbanks (Government and Private). An outlay of Rs. 40 lakhs is proposed for the above in the Seventh Plan of which Rs. 10 lakhs is earmarked for 1985-86.

#### 3. (1) *Health Education and Publicity*

The objective of the scheme is to strengthen the existing Health Education Bureau. Community participation has to be enlisted through wide spread and intensive mass media activities. The outlay of Rs. 35 lakhs proposed is for the above purpose and the share of the annual plan 1985-86 is Rs. 8 lakhs.

#### (ii) *Health Card for School Children*

This scheme of Health Card for School Children which was started in 1980-81 is being implemented in the State for the comprehensive physical examination of the entire school going children of the State and for the provision of curative and corrective measures. At present school medical examination is attached to 13 district hospitals and 9 T.H.Q. hospitals. From the experience so far in this field, it is found impossible to achieve even 60% of the target with the existing facilities. A minimum number of 300 doctors and

22 vehicles are required against the existing number of 186 doctors and 15 vehicles. An additional number of 114 doctors, 35 nursing assistants and 7 vehicles is required during the Seventh Plan for which an outlay of Rs. 500 lakhs is proposed to which the share of the annual plan 1985-86 is Rs. 60 lakhs.

#### 4. Health Statistics and Research

For effective planning and development of health activities, a sound health intelligence system is imperative. At present this system suffers in both quality and quantity for want of adequate staff at the Directorate and peripheral level to ensure reliability and punctuality. The outlay of Rs. 5 lakhs proposed is for the above purpose and Rs. 1 lakh is the share of annual plan 1985-86

#### 5. Public Health Laboratories

The health laboratory services form an integral part of general health services. It consists of State Laboratory Complex, district laboratories attached to T.H.Q. hospitals, PH Centres and Government dispensaries. It is proposed to develop the laboratory services at regional, district, THQ and PH Centre level, during the Seventh Plan for which additional staff, equipments, chemicals and other facilities are required. Modification of the calfshed to an animal house and maintenance of workshop is an immediate necessity. The outlay of Rs. 60 lakhs proposed will be utilised for the above items in the Seventh Plan.

1. Development of State Laboratory Rs. 8 lakhs
2. Developm at Trivandrum and Calicut—Rs. 4.25 lakhs.
3. Opening of Laboratories in the 5 newly formed districts—Rs. 30 lakhs.
4. Opening of Laboratories in one Taluk each in new districts and the development of existing laboratories in Taluk Hospitals Rs. 17.75 lakhs.

The amount set apart for 1985-86 is Rs. 12 lakhs.

#### 6. Chemical Examiner's Laboratory

The Seventh Plan outlay proposed for the scheme is Rs. 50 lakhs of which the share of the annual plan is Rs. 28 lakhs. The Chemical Examiner's Laboratory caters to the need of Judiciary in the prosecution of crimes. Examination of about 15,000 articles involved in various crimes are being carried out in a year in this laboratory. The scheme pertaining to the Department are (1) construction of a separate building for the Central Chemical Examiner's Laboratory at Trivandrum, and establishment of 2 Regional Laboratories at Ernakulam and Calicut. Administrative sanction has been accorded for the above and the work has already been started. The construction work of the Regional Laboratory, Calicut is nearing completion and it has to be equipped in the Seventh Plan so that it can start functioning. Similarly the construction of Regional Laboratory, Ernakulam is expected to be over by 1985-86 and it has also to be equipped. The provision is intended for the above and also for the purchase of a departmental vehicle for the use of Chief Chemical Examiner to Government.

#### 7. Scheme for Improvement of Medical Services in Rural and High Density Areas

The objective of the scheme is to encourage voluntary organisations in setting up new hospital dispensaries in rural areas where the existing medical care facilities are inadequate. The assistance will be (1) for setting up of hospitals with a maximum bed strength of 30 (2) the non recurring expenditure will be shared by the Central Government and State Government. This assistance would primarily be for purchase of land, construction of building for hospital, operation theatre, wards etc. The Central Government, the State Government and the institutions shall contribute in the following proportion.

1. Construction (other than residential accommodation and equipment.

Central Government	40%
State Government	40%
Institution	20%

2. Construction—residential accommodation

Central Government	50%
State Government	35%
Institution	15%

An amount of Rs. 10 lakhs is proposed for the Seventh Plan as State's share and Rs. 2 lakhs for 1985-86.

#### New Schemes (Homoeo)

1. Starting of Mobile and Floating Dispensaries

The outlay of Rs. 5 lakhs is to start one mobile dispensary and one floating dispensary to render medical facilities to the people who are isolated in the Islands of Kuttanad, Vypeen etc. during the Seventh Plan. Out of the total outlay proposed a sum of Rs. 2 lakhs is required for starting one mobile and one floating dispensary during the year 1985-86.

2. Starting of Regional Homoeo Medical Stores

It is proposed to start two Regional Homoeo Medical Stores at Ernakulam and Calicut for which the amount of Rs. 2 lakhs is proposed for the Seventh Plan and Rs. 1 lakh for the first year of the Plan, 1985-86.

3. Construction of Staff Quarters and Building for Drug Unit

At present the hospitals and dispensaries under this department do not have staff quarters. It is intended to construct to staff quarters and a building for Drug unit during the Seventh Plan period.

An outlay of Rs. 5 lakhs is proposed for the Seventh Plan. It is proposed to construct 4 staff quarters in 1985-86 for which an amount of Rs. 2 lakhs is set apart.

4. Medical Relief Camps

It is intended to conduct medical relief camps for short periods at certain selected centres to educate the public about the principles of prevention of diseases.

During the Seventh Plan, 25 such camps are proposed to be conducted and the amount of Rs. 1 lakh is for that purpose.

An amount of Rs. 0.50 lakh is earmarked for conducting 15 Medical Camps during 1985-86.

5. *Acquisition of Land for Existing Hospitals and Dispensaries and for the Directorate.*

Most of the institutions under this department including the Directorate are functioning in rented buildings. The objective of the scheme is to acquire land so that buildings could be constructed for such institutions and during the Seventh Plan. Acquisition of 10 plots is targeted for which an outlay of Rs. 10 lakhs is proposed.

The target for the year 1985-86 is the acquisition of 2 plots for which amount earmarked is Rs. 2 lakhs.

*VII Employees State Insurance*

*Directorate of Insurance Medical Services (State Share)*

During the Sixth Plan period the State share was utilised for strengthening the administrative machinery at the headquarters, starting of regional offices continuance of the existing hospitals and dispensaries and opening of new dispensaries

It is proposed to open the following dispensaries in 1985-86 in order to increase the coverage of employees: Full time dispensaries at Neyyattinkara, Ezhucone, Chengavanam and Mavelikkara and Part-time dispensaries at Thiruvalla and Chengaunnur. The dispensaries at Koothuparamba, Muvattupuzha, Thalipparamba, Wadakkancherry and Payyannur for which administrative sanction has already been accorded by Government have to be opened during the Seventh Plan. Further, the expenditure on equipment and staff of the three hospitals at Feroke, Thotada and Palghat has to be met by the State Government.

The outlay proposed for the scheme in the Seventh Plan is Rs. 30 lakhs, of which Rs. 6 lakhs is earmarked for 1985-86.

**Sewerage and Water Supply**

The Decade 1981-1990 is observed as the International Drinking Water Supply and Sanitation Decade. The objectives and targets proposed for the Decade are as follows:—

(i) *Urban Water Supply.*—It is proposed to cover 100% of the urban population with the basic minimum needs of safe water supply.

(ii) *Urban Sanitation.*—80% of the urban population in all cities and towns is proposed to be covered including 100% coverage for Class I cities with sewerage and swerage treatment facilities and low cost sanitation methods in other towns.

(iii) *Rural Water Supply.*—The proposal is to cover 100% of the rural population.

(iv) *Rural Sanitation.*—It is proposed to cover at least 25% of the rural population with sanitary toilet facilities.

37/4830/MC.

The objectives of the Seventh Plan have been set to achieve the above targets. For achieving the above targets investment of the order of Rs. 600 crores would be required. A total State sector outlay of Rs. 200 crores is provided for sewerage and water supply.

The following are the Seventh Plan programmes:

*Survey and Investigation*

(a) *Strengthening of Execution Units and Reorganisation*

A large number of schemes are under execution and more schemes are proposed to be taken up during the Seventh Plan. A number of schemes are proposed to be taken up with World Bank assistance, and assistance from bilateral agencies such as the Netherlands and Danish Governments. To implement such a large plan the organisational set up of the Kerala Water & Waste Water Authority has to be strengthened, since the existing staff will be inadequate to cope with the increased work load. A new organisation structure has been recommended by the World Bank appraisal mission. The Seventh Plan outlay for the scheme is Rs. 100 lakhs.

The allocation for the Annual Plan 1985-86 is Rs. 30 lakhs. This provision is for continuing the Planning Cell attached to the Authority, strengthening the machinery for implementation of Plan Schemes, re-organisation of the Authority, purchase of vehicles, setting up of a statistical unit and establishing a hydrological unit.

(b) *Investigation, Planning and Design Units, and Strengthening of Design Units*

For the realisation of the Seventh Plan objectives, a large number of schemes have to be investigated and detailed designs drawn up. The outlay of Rs. 120 lakhs proposed is for strengthening the existing units. The allocation made for 1985-86 is Rs. 50 lakhs. This is for strengthening investigation, planning and design units, creation of additional units necessary for implementation of plan schemes and for the purchase of required vehicles.

3. *Research Wing*

For undertaking research on the various aspects such as water quality control, operation and maintenance problems, etc. a research wing is necessary. The outlay for the proposed cell is Rs. 2 lakhs. In 1985-86 the outlay will be Rs. 1 lakh.

4. *Training Programmes*

An outlay of Rs. 5 lakhs is proposed for imparting training to the personnel of the K.W.W.A. on various aspects of Public Health Engineering and Water Management. The outlay for 1985-86 is Rs. 1 lakh.

5. *Machinery and Equipment*

An outlay of Rs. 1 lakh is provided for this item in the Seventh Plan.

*Sewerage Schemes*

(a) *Spillover Scheme*

For the four spillover schemes an outlay of Rs. 534 lakhs is proposed in the Seventh Plan.

### 6. Calicut Sewerage Scheme

This scheme is designed to cover an area of 45 sq.km. in Calicut Town. It is intended to serve a population of 90,000 and is estimated to cost Rs. 483 lakhs. The anticipated expenditure on the scheme upto the end of Sixth Plan is Rs. 277 lakhs. The scheme is to be completed by 1987-88 and the outlay proposed is Rs. 239 lakhs. The scheme is now under execution with L.I.C. loan assistance and is expected to be completed in 1987-88.

### 7. Quilon Sewerage Scheme

This scheme is intended to provide sewerage facilities in the most densely populated areas of Quilon Municipal Town. It is designed to serve a population of 95,000 and is estimated to cost Rs. 468 lakhs. The anticipated expenditure up to the end of Sixth Plan is Rs. 250 lakhs and the outlay proposed for the Seventh Plan is Rs. 218 lakhs. This is also an LIC Aided Scheme and is to be completed in 1987-88.

### 8. Trivandrum Sewerage Scheme

The scheme has been designed to serve an additional area of 15 sq. km. from the area hitherto remaining uncovered. The scheme when completed will benefit a population of 70,000. The estimated cost of the scheme is Rs. 4.80 lakhs and the anticipated expenditure upto the end of the Sixth Plan is Rs. 433 lakhs. An outlay of Rs. 47 lakhs is proposed for Seventh Plan for the completion of the scheme during 1986-87. The scheme is now under execution with L.I.C. loan assistance.

### 9. Guruvayoor Sewerage Scheme.

The scheme which has been in progress for quite sometime could not be completed so far due to delay in land acquisition for the location of the treatment plant. The scheme is intended to provide sewerage facilities to the entire Guruvayoor Township. The outlay proposed for the Seventh Plan is Rs. 30 lakhs.

In the Annual Plan for 1985-86 a total amount of Rs. 250 lakhs is earmarked for sewerage schemes in Calicut and Trivandrum Corporations including C Block of Trivandrum drainage, Guruvayoor Township and Quilon Municipality.

#### (b) New Schemes

The following new sewerage schemes were proposed to be taken up during the Sixth Plan period. Though these schemes were proposed in the Sixth Plan, they could not be taken up. For the two new schemes, viz. Palghat and Kottayam, the Seventh Plan outlay is Rs. 400 lakhs.

### 10. Palghat Sewerage Scheme

The scheme is proposed to be taken up with L.I.C. loan assistance and is estimated to cost Rs. 350 lakhs. The scheme is intended to cover the most densely populated areas within the town. The outlay proposed in the Seventh Plan is Rs. 200 lakhs.

### 11. Kottayam Sewerage Scheme

An outlay of Rs. 200 lakhs is proposed in the Seventh Plan for this scheme which is to be taken up with L.I.C. loan assistance. The scheme is estimated to cost Rs. 450 lakhs and will spill over to the next plan. The scheme is proposed to be taken up in 1987-88 with L.I.C. loan assistance.

#### Low Cost Sanitation Programme

### 12. Distribution of E.S.P. Type Latrines

The scheme envisages the supply of E.S.P. type squatting slabs at subsidised rates to the economically weaker sections, especially the harijans. The outlay in the Seventh Plan is Rs. 30 lakhs and in the 1985-86 Annual Plan Rs. 10 lakhs.

#### World Bank Aided Low Cost Sanitation Projects

It is proposed to take up low cost sanitation in urban and rural areas with World Bank loan assistance. The details are given below:—

### 13. UNDP Project for Low Cost Sanitation

#### (a) Urban areas

As part of the UNDP programme for the introduction of low cost pour flush water seal latrines, it is proposed to provide sanitary facilities in the following few municipalities.

- |                   |                  |
|-------------------|------------------|
| (i) Attingal      | (ii) Badagra     |
| (iii) Kasargode   | (iv) Mavelikkara |
| (v) Moovattupuzha | (vi) Palai       |
| (vii) Ponnani     | (viii) Punalur   |
| (ix) Shoranur     | (x) Trichur      |

The scheme is estimated to cost Rs. 513 lakhs and is proposed to be taken up in the Seventh Plan period with loan assistance from the World Bank. The outlay proposed for 1985-86 is Rs. 65 lakhs.

#### 14. Rural Areas

It is proposed to introduce low cost sanitation facilities in selected Panchayats under the UNDP Programme, with World Bank loan assistance. The outlay proposed for the Seventh Plan is Rs. 502 lakhs.

#### Urban Water Supply

### 15. Spillover Schemes

The outlay proposed is for the completion of the remaining works of Greater Cochin Water Supply and Sewerage Scheme, Chalakudy, Punalur, Tirur, Vaikom, construction of Storage Dam at Peppara, Cranganore, Angamali and other spill over schemes. An outlay of Rs. 700 lakhs is proposed in the Seventh Plan. In the Annual Plan 1985-86 the provision proposed is Rs. 236 lakhs.

### 16. Pathanamthitta Water Supply Scheme

The anticipated expenditure upto the end of the Sixth Plan is Rs. 78 lakhs. The outlay proposed in the Seventh Plan for the completion of the Scheme is Rs. 25 lakhs.

### 17. *Thodupuzha Water Supply Scheme*

The outlay proposed for this spill over scheme is Rs. 25 lakhs. The anticipated expenditure upto the end of the Sixth Plan is Rs. 178 lakhs. The scheme is scheduled to be completed in 1985-86.

### 18. *Thrippunithura Water Supply Scheme*

The estimated cost of the scheme is Rs. 126 lakhs and an outlay of Rs. 41 lakhs proposed is for the completion of the scheme by 1986-87.

For all the spillover schemes under Water Supply an amount of Rs. 347 lakhs is earmarked in the Annual Plan for 1985-86.

#### *New Schemes*

It is proposed to take up water supply schemes in Nedumangad, Chengannur, Kothamangalam, Ponnani, Chowghat, Shoranur, Manjeri and Varkala with L.I.C. loan assistance and to complete them during the Seventh Plan period. It is also proposed to take up Idukki and the augmentation of Cannanore, Badagara, Alleppey Water Supply Schemes, Greater Trivandrum and Greater Calicut Water Supply Schemes with L.I.C. loan assistance. Idukki, Greater Trivandrum and Greater Calicut Water Supply Schemes will spill over to the next plan. The outlay in the Seventh Plan for all the new schemes together is Rs. 3228 lakhs. In the Annual Plan for 1985-86 the outlay will be Rs. 50 lakhs for new schemes and Rs. 236 lakhs for Augmentation Schemes.

### 19. *Nedumangad Water Supply Scheme*

This scheme is estimated to cost Rs. 344 lakhs. The outlay in the Seventh Plan is for the completion of the scheme.

### 20. *Chengannur Water Supply Scheme.*

The outlay proposed in the Plan is Rs. 103 lakhs and this is for the completion of the scheme.

### 21. *Kothamangalam Water Supply Scheme*

The scheme is estimated to cost Rs. 241 lakhs and an outlay of Rs. 241 lakhs is proposed in the Seventh Plan for completing the scheme.

### 22. *Ponnani Water Supply Scheme*

The outlay proposed in the Seventh Plan is Rs. 325 lakhs. This is for completing the scheme during the plan period.

### 23. *Chowghat Water Supply Scheme*

The scheme is proposed to be completed in the Plan and for this purpose an outlay of Rs. 409 lakhs is proposed.

### 24. *Shornur Water Supply Scheme.*

The scheme is proposed to be completed in 1990-91. An outlay of Rs. 150 lakhs is proposed in the Seventh Plan for works connected with this scheme.

### 25. *Manjeri Water Supply Scheme*

The Manjeri Water Supply Scheme is estimated to cost Rs. 453 lakhs. The entire scheme is proposed

to be completed during the Seventh Plan period and for this an outlay of Rs. 453 lakhs is proposed in the Seventh Plan.

### 26. *Varkala Water Supply Scheme.*

The outlay of Rs. 102 lakhs proposed in the Plan is for the completion of the scheme during the Seventh Plan period.

### 27. *Cannanore Water Supply (Aug.) Scheme*

Since the existing Cannanore Water Supply Scheme is in urgent need of augmentation, a provision of Rs. 75 lakhs has been made in the Seventh Plan.

### 28. *Badagara Water Supply (Aug.) Scheme.*

The outlay proposed in the Seventh Plan is Rs. 38 lakhs and this is for completing this scheme.

### 29. *Alleppey Water Supply (Aug.) Scheme*

Outlay of Rs. 20 lakhs proposed is for completing the Alleppey Augmentation Scheme.

### 30. *Greater Trivandrum Water Supply Scheme (Aug.)*

The total cost of this scheme is Rs. 900 lakhs. It may not be possible to complete this scheme during the Seventh Plan period. An outlay of Rs. 350 lakhs is proposed in the Seventh Plan.

### 31. *Greater Calicut Water Supply Scheme (Aug.)*

It is proposed to commence the works relating to this scheme in the Seventh Plan and complete it during the next plan period. An outlay of Rs. 350 lakhs is provided in the Seventh Plan.

### 32. *Water Supply To Idukki Township*

This scheme was originally proposed to be taken up with World Bank loan assistance. Now it is proposed to take it up without assistance from the World Bank. The outlay proposed for this scheme in the Seventh Plan is Rs. 68 lakhs. The total estimated cost of this scheme is Rs. 268 lakhs.

### 33. *Completion of Partially Commissioned Schemes (Aug.)*

The outlay of Rs. 50 lakhs proposed is for the completion of balance works on the partially commissioned schemes and augmentation schemes which have spilled over to the Seventh Plan period.

### 34. *Improvements to Existing Schemes (Aug.)*

The Plan provision is for the improvements to some of the existing schemes which are in urgent need of improvement. An outlay of Rs. 50 lakhs is proposed for this purpose in the Plan.

#### *Rural Water Supply Schemes*

For the rural water supply schemes under MNP an amount of Rs. 11819 lakhs is proposed in the Seventh Plan. This is inclusive of both L.I.C. aided and other schemes. The 1985-86 outlay is Rs. 1347 lakhs.



### 35. *Rural Water Supply Schemes (L.I.C.) Aided*

A number of schemes are now under execution with LIC loan assistance. In addition to these, some more schemes are proposed to be taken up with L.I.C. loan assistance. The outlay proposed in the Seventh Plan for these schemes is Rs. 600 lakhs. The outlay for 1985-86 is Rs. 250 lakhs.

### 36. *Other Rural Water Supply Schemes (Continuing and New)*

These schemes are non L.I.C. aided schemes expenditure of which are met from the State's own resources. Extensions from municipal schemes to adjacent panchayats are also to be met from the State Plan provision. The Plan outlay earmarked is Rs. 200 lakhs and this is for the completion of the on going schemes, Sabarimala Water Supply Scheme, Kuttanad Water Supply Schemes etc. which are in progress and old accelerated rural water supply schemes which have spilled over. The 1985-86 outlay is Rs. 100 lakhs.

### 37. *Improvements to Existing Rural Water Supply Schemes*

The plan provision of Rs. 20 lakhs is meant for effecting improvements to the existing schemes as and when found necessary. The outlay in 1985-86 is Rs. 10 lakhs.

### 38. *Special Repairs and Maintenance*

The Seventh Plan outlay proposed is Rs. 15 lakhs and this is intended for carrying out special repairs to schemes which need repair and maintenance. The outlay in 1985-86 is Rs. 5 lakhs.

#### *World Bank Aided Schemes*

It is proposed to take up to Quilon Water Supply (Aug.) Scheme, Kottayam Water Supply (Aug.) Scheme, Water Supply to Greater Cochin Development area, Vilappil Water Supply Schemes, Comprehensive Water Supply Schemes to Chithara, Kadakkal, comprehensive water supply scheme to Adoor and adjoining panchayats and comprehensive water supply scheme to Vadavucode-Puthencruz with World Bank loan assistance. The World Bank's final appraisal mission has already appraised these schemes. It is expected that credit flow will commence from 1985-86. All these schemes are proposed to be commenced and completed during the Seventh Plan period. The total cost of the World Bank aided water supply schemes is Rs. 7633 lakhs and this amount is earmarked in the Plan.

### 39. *Quilon Water Supply (Augmentation) Scheme*

The existing water supply scheme to Quilon Town is inadequate to meet the present demand and it is proposed to take up an augmentation scheme to serve Quilon Municipal Town and six panchayats. This scheme is estimated to cost Rs. 2008 lakhs and the outlay proposed is Rs. 2008 lakhs. For this World Bank assisted scheme the outlay in the Annual Plan for 1985-86 Rs. 86 lakhs.

### 40. *Kottayam Water Supply (Aug.) Scheme*

This scheme is intended to serve four panchayats adjacent to Kottayam Municipal Town and is estimated

to cost Rs. 674 lakhs. The Plan outlay proposed is Rs. 674 lakhs. The scheme is proposed to be completed during Seventh Plan period with World Bank loan assistance. The Annual Plan outlay for 1985-86 is Rs. 30 lakhs.

### 41. *Water Supply Schemes to Greater Cochin Development Area*

The Seventh Plan outlay proposed for the scheme is Rs. 3101 lakhs. The scheme is designed to serve 12 panchayats within the Greater Cochin Development area. It is proposed to be commissioned during the Seventh Plan period with World Bank loan assistance. The outlay for 1985-86 is Rs. 135 lakhs.

### 42. *Vilappil Water Supply Scheme*

The estimated cost of the scheme is Rs. 132 lakhs. It is proposed to be completed with World Bank loan assistance. This scheme helps to provide water supply to Vilappil Panchayat. The Plan outlay for 1985-86 will be Rs. 6 lakhs.

### 43. *Comprehensive Water Supply Scheme to Chithara*

The scheme is designed to serve four panchayats and is estimated to cost Rs. 579 lakhs. The outlay proposed in the Seventh Plan is Rs. 579 lakhs. The Plan outlay for 1985-86 is Rs. 23 lakhs.

### 44. *Comprehensive Water Supply Scheme to Adoor and adjoining Panchayats*

The Seventh Plan outlay proposed for this scheme is Rs. 757 lakhs. This scheme will benefit six Panchayats. The 1985-86 Annual Plan outlay is Rs. 35 lakhs.

### 45. *Water Supply Scheme to Vadavucode-Puthencruz*

This scheme is designed to benefit four panchayats and is proposed to be implemented with World Bank assistance. The outlay proposed in the Seventh Plan is Rs. 382 lakhs. The Plan outlay for 1985-86 is Rs. 17 lakhs.

#### *Bilateral Schemes*

Comprehensive water supply schemes to Vakkom-Anjengo and Nattika Firka are now under execution with bilateral assistance from the Netherlands Government. Also six more schemes viz., Cheriyanadu, Koipuram, Thrikunnapuzha water supply schemes and comprehensive water supply scheme to Kundara and adjoining panchayats, comprehensive water supply scheme to Mala and adjoining panchayats and comprehensive water supply scheme to Pavaretti and adjoining panchayats are proposed to be taken up and completed with bilateral assistance from the Netherlands Government during the Seventh Plan period. It is proposed to take up comprehensive schemes with bilateral assistance from the Danish Government and these schemes are comprehensive water supply scheme to Cheekode and adjoining panchayats, comprehensive water supply scheme to Edappal and adjoining panchayats and comprehensive water supply schemes to Kolancherry and adjoining panchayats. Some new schemes are also proposed for bilateral assistance from Netherlands. These include Pathanapuram, Thalavoor, Koodal, Malappally, Cheranallor, Kanhambra, Kodencherry, and

Thavanhal. The total outlay for all the bilateral schemes together in the Seventh Plan is Rs. 2470 lakhs.

(a) *Schemes under Execution*

46. *Comprehensive Water Supply Scheme to Vakkom-Anjengo.*

This scheme is now under execution with bilateral assistance from the Netherlands Government and will benefit 5 panchayats. A provision of Rs. 10 lakhs is made in the Seventh Plan for the completion of the scheme.

47. *Comprehensive Water Supply Scheme to Nattika Firka*

The estimated cost of this scheme which is now under execution with bilateral assistance from the Netherlands Government is Rs. 674 lakhs. This scheme is designed to serve nine panchayats. The anticipated expenditure upto the end of the Sixth Plan is Rs. 451 lakhs. The outlay proposed for Seventh Plan is Rs. 223 lakhs for completing the scheme. The outlay earmarked in the Annual Plan for 1985-86 is Rs. 193 lakhs.

(b) *Schemes under Consideration of Donar Countries*

Agreements are expected to be entered into shortly with the Netherlands Government in respect of Cherianadu, Koipuram, Kundara, Mala and Thrikkunnapuzha schemes. All these schemes are proposed to be completed during the Seventh Plan period itself. The proposed outlay for these schemes are as follows:

48. *Water Supply Scheme to Cherianadu*      Outlay for 1985-90—Rs. 72 lakhs. Outlay for 1985-86 Rs. 17 lakhs.

49. *Water Supply Scheme to Koipuram*      Outlay for 1985-90—Rs. 92 lakhs. Outlay for 1985-86 Rs. 27 lakhs.

50. *Comprehensive water supply to Kundara and adjoining panchayats*      Outlay for 1985-90—Rs. 718 lakhs. Outlay for 1985-86—Rs. 128 lakhs.  
(This scheme is designed to serve 7 panchayats)

51. *Comprehensive water supply scheme to Mala Annamada etc.*  
(This scheme is designed to serve 6 panchayats)  
Outlay for 1985-90—Rs. 341 lakhs  
Outlay for 1985-86—Rs. 101 lakhs.

52. *Water Supply scheme to Thrikkunnapuzha*  
Outlay for 1985-90 is Rs. 14 lakhs.  
Outlay for 1985-86 is Rs. 5 lakhs.

The following schemes are proposed to be taken up with financial assistance from the Danish Government and completed during the Seventh Plan period:

53. *Comprehensive Water Supply Scheme to Cheekode and adjoining panchayats*  
(The scheme is designed to serve 10 panchayats)  
Outlay for 1985-90—Rs. 150 lakhs

54. *Comprehensive Water Supply Scheme to Epappal and 4 adjoining panchayats*

Outlay for 1985-90—Rs. 250 lakhs  
Outlay for 1985-86—Rs. 94 lakhs

55. *Comprehensive Water Supply Scheme to Kolancherry and adjoining panchayats*

Outlay for 1985-90 Rs.—500 lakhs  
Outlay for 1985-86 Rs.—150 lakhs

The scheme is designed to serve 8 panchayats.

56. *Comprehensive Water Supply Scheme to Pavaratty Challissery*

This scheme is under the consideration of the Netherlands Government. It is proposed to be taken up with bilateral assistance from the Netherlands Government during the Seventh Plan period.

The outlay proposed is Rs. 750 lakhs and will benefit 17 Panchayats.

57. *Dutch Bilateral Aid to New Schemes*

New schemes at Pathanapuram, Thalavoor, Kooda dal, Mallappally, Cheranalloor, Kanhanbra, Kodencherry and Thavanhal are posed for bilateral assistance from Netherlands Government. A total outlay of Rs. 100 lakhs is earmarked for these schemes in the Seventh Plan.

58. *Comprehensive Water Supply Scheme to Payyannoor and adjoining panchayats*

This scheme is estimated to cost Rs. 1516 lakhs. The Seventh Plan outlay proposed is Rs. 121 lakhs. This scheme will be continued during the next plan period.

59. *Open Dug Wells*

A provision of Rs. 10 lakhs is made in the Seventh Plan for providing drinking water facilities through open wells where piped water supply is not economically feasible. The 1985-86 outlay for this scheme is Rs. 4 lakhs.

*Special Component Plan*

60. *Open Dug Wells*

This scheme envisages provision of drinking water facilities through open draw wells in areas not served by piped water supply. Wells will be provided in all Scheduled Castes/Tribe colonies and the colonies under one lakh housing scheme, remote backward villages and places where there is concentration of the economically weaker sections of the community. It is also intended to provide financial assistance to Harijans and other weaker sections to construct parapet walls to prevent contamination of wells. The outlay proposed in the Seventh Plan for this scheme is Rs. 100 lakhs. Of this an amount of Rs. 16 lakhs will be spent in 1985-86.

61. *Other Water Supply Schemes Benefiting Harijans*

Water supply schemes exclusively for the benefit of Harijans are being implemented under this programme. An outlay of Rs. 1250 lakhs is proposed for

this scheme for continuing the water supply schemes already taken up for execution and for taking up new schemes. In 1985-86 an outlay of Rs. 290 lakhs is proposed.

#### 62. E.S.P. Type Latrines

The plan provision is for distribution of E.S.P. type squatting slabs exclusively to scheduled caste. The outlay proposed in the Seventh Plan is Rs. 60 lakhs. An outlay of Rs. 20 is made in the Annual plan for 1985-86.

#### 63. UNDP Project for Low Cost Sanitation (Rural)

An outlay of Rs. 1 lakh is proposed in the plan for the formulation of a detailed feasibility report on low cost sanitation for Harijans colonies. The scheme will be posed for aid under bilateral or international agencies.

#### Tribal Sub Plan

#### 64. Protected Water Supply to Tribal Areas

Schemes exclusively for the benefit of tribals in the tribal sub plan areas are proposed to be implemented under this programme. The outlay proposed is for continuing the scheme now under execution and for taking up new schemes. The outlay proposed in the Seventh Plan is Rs. 380 lakhs. An outlay of Rs. 60 lakhs is proposed in the Annual Plan 1985-86.

#### 65. Open Dug Wells

The provision is for continuing the scheme for providing drinking water supply exclusively to scheduled tribes through open draw wells in areas not served by piped water supply. The outlay proposed is Rs. 25 lakhs. The 1985-86 outlay for this scheme will be Rs. 10 lakhs.

#### 66. Distribution of E.S.P. Type Latrines

A provision of Rs. 40 lakhs has been made for the distribution of E.S.P. type squatting slabs. In 1985-86 plan an amount of Rs. 10 lakhs is earmarked for the scheme.

#### 67. U.N.D.P. Project for Low Cost Sanitation (Rural)

The outlay proposed is Rs. 1 lakh. The outlay proposed is for the formulation of detailed feasibility report on the sanitation scheme for tribal areas and posing the scheme for external assistance. The plan outlay will be spent in 1985-86.

#### 68. Bore Wells With Hand Pumps

The UNICEF has presented two powerful drilling rigs to construct tube wells for drinking water supply. The outlay is for the construction of tube wells using rigs and installing suitable pumps for optimum utilisation. The outlay proposed in the Seventh Plan is Rs. 200 lakhs and Annual Plan 1985-86 is Rs. 80 lakhs which will be spent on schemes under Special Component Plan and Tribal Sub Plan.

In addition to this some of the schemes proposed under Rural Water Supply (MNP) will also benefit Harijans and Scheduled Tribes. Thus the total outlay proposed for the Special Component Plan and Tribal Sub Plan is estimated at Rs. 2830 lakhs in the Seventh Plan and Rs. 623 lakhs in the Annual Plan 1985-86.

## Sewerage and Water Supply

Seventh Five Year Plan 1985-90

Item	Amount (Rs. in lakhs)
1. Strengthening of execution units and reorganisation	100
2. Investigation, Planning etc.	120
3. Research wing	2
4. Training Programme	5
5. Machinery and Equipment	1
	228
<i>Sewerage Schemes</i>	
<i>Spillover schemes</i>	
6. Calicut Sewerage scheme	239
7. Quilon "	218
8. Trivandrum "	47
9. Guruvayoor "	30
	534
<i>New Schemes</i>	
10. Palghat Sewerage scheme	200
11. Kottayam "	200
	400
<i>Low cost sanitation</i>	
12. Distribution of E.S.P. type slabs	30
13. U.N.D.P. Urban Low cost sanitation	513
14. U.N.D.P. (Rural)	500
	1043
<i>Urban Water Supply</i>	
15. Spill over scheme	700
16. Pathanamthitta Water Supply scheme	25
17. Thodupuzha "	25
18. Thrissur "	41
	791
<i>New Schemes</i>	
19. Nedumangad Water Supply Scheme	344
20. Chengannur "	103
21. Kothamangalam "	241
22. Ponnani "	325
23. Chowghat "	409
24. Shoranur "	150
25. Manjeri "	453
26. Varkala "	102
27. Cannanore(Aug.) Water Supply Scheme.	75
28. Badagara (Aug.) "	38
29. Alleppey (Aug.) "	20
30. Greater Trivandrum "	350
31. Greater Calicut "	350
32. Idukki "	68
33. Partially commissioned scheme (Completion)—(Aug.)	50
34. Improvements to existing (Aug.) schemes	50
	3128

*Rural Water Supply Scheme*

35.	L.I.C. aided Rural Water Supply scheme	600
36.	Other R. W. S. S. (continuing & new ones)	200
37.	Improvements to existing schemes	20
38.	Special repairs and maintenance (including drought relief works)	15
		<hr/> 835 <hr/>

*World Bank Schemes*

39.	Quilon Water Supply Scheme (Aug.)	2008
40.	Kottayam W.S.S. (Aug.)	674
41.	G.C.D.A. W.S.S.	3101
42.	Vilappil "	132
43.	Chithara "	579
44.	Adoor W.S.S.	757
45.	Puthencruz W.S.S.	382
		<hr/> 7633 <hr/>

*Bilateral Schemes*

46.	Vakkom Anjengo W.S.S.	10
47.	Nattika Firka "	223
48.	Cheriyannadu "	72
49.	Koipuram "	92
50.	Kundara "	718
51.	Mala "	341
52.	Thrikunnapuzha "	14
53.	Cheekode "	150
54.	Edappal "	250
55.	Kolacherry "	500
56.	Thalavoor Koodul Mallapally Cheranallor Kanhmbra Kodencherry Thavanhal	100
57.	Pavaratty Water Supply Scheme	750
58.	Payyannur "	121
59.	Open dug wells "	10
		<hr/> 3351 <hr/>

*Schemes Benefiting Harijan Colonies*

60.	Open dug wells	100
61.	Other R.W.S.S.	1250
62.	E.S.P. Type Latrines	60
63.	U.N.D.P. low cost sanitation	1
		<hr/> 1411 <hr/>

*Schemes Benefiting Tribal Colonies*

64.	Protected water supply to tribal areas	380
65.	Open dug wells	25
66.	E.S.P. type latrines	40
67.	U.N.D.P. low cost sanitation (Rural)	1
		<hr/> 446 <hr/>
68.	Bore wells with hand pumps	200
		<hr/> 2000 <hr/>
Total (Seventh Plan)		20000

*ANNUAL PLAN 1985-86*

Sl.No.	Item	Proposed outlay (Rs. in lakhs)
1.	Direction & Administration	30
2.	Survey & Investigation	50
3.	Research & Training	2
4.	Sewerage	250
5.	Distribution of E.S.P. Type latrines	10
6.	Urban low cost sanitation	65
7.	Water Supply Spillover scheme	347
8.	do. New schemes	50
9.	do. Augmentation schemes	236

*World Bank Schemes*

10.	Quilon Water Supply (Aug.) scheme	86
11.	W.S. to Kottayam	30
12.	W.S. to G.C.D.A.	135
13.	W.S. to Vilappil	6
14.	C.W.S.S. to Chithara	23
15.	C.W.S.S. to Adoor	35
16.	C.W.S.S. to Puthencruz	17
17.	Completion of partially commissioned scheme	25
18.	Improvements to existing schemes	30
19.	R.W.S.S. Scheme	250
20.	Other R.W.S. Schemes continuing/new ones	100
21.	Improvements to existing schemes	15
22.	Bilateral schemes C.W.S.S. to Vakkom-Anjengo, Nattika-Firka	193
23.	W.S. to Kundara	128
24.	W.S. to Koipuram	27
25.	C.W.S.S. to Mala and adjoining panchayats	101
26.	W.S. to Cheriyannadu	17
27.	W.S. to Thrikunnapuzha	5
28.	W.S. to Kolacherry and adjoining panchayats	150
29.	W.S. to Edappal and adjoining panchayats	94
30.	Open dug wells	4
31.	E.S.P. type latrines	20
32.	Other R.W.S.S. benefiting harijans	290
33.	Open dug wells	16
34.	UNDP project for the low cost sanitation	2
35.	R.W.S.S. benefiting tribals	60
36.	Open dug wells	10
37.	E.S.P. Type latrines	10
38.	UNDP, project for low cost sanitation	1
39.	Bore wells with hand pumps	80
Total--Annual Plan (1985-86)		<hr/> 3000 <hr/>

## Housing

In the housing sector in Kerala there is a multiplicity of agencies and schemes. While it is necessary to have adequate number of agencies for achieving optimum efficiency, and to reach a comparatively large number of people, the schemes have to be rationalised and streamlined. It is also necessary to evolve appropriate type designs based on climatic conditions, topography of land, culture of the people, availability of indigenous raw materials, and cost considerations. The strategy of financing in the housing sector is to maximise the resources available through regular plan sources, supplemented by institutional finance. Institutional finance from All India financial institutions is not often forthcoming adequately due to the rigid norms which are often difficult to comply with, in the conditions prevailing in Kerala. It is therefore necessary to tap the internal resources also to the maximum extent.

The lower income groups have practically no access to institutional finance for housing. Indirect funding is available to these categories through HUDCO and L.I.C. But HUDCO finance is available only to housing agencies for projects which conform to cost ceiling, and L.I.C. finance is channelised through State Government or Apex Housing Societies. The economically weaker sections have therefore to be helped substantially by the Government.

The absence of an integrated approach to infrastructure development, like provision of water supply, sewerage, drainage, electricity etc. is due to lack of proper coordination between the various agencies concerned. In order to overcome this problem, there should be prior consultation with the various agencies responsible for providing infrastructure facilities.

Considering the magnitude of the housing problem in the State, the amount spent in the earlier plans has fallen far short of the requirements. Therefore an outlay of Rs. 100 crores is proposed for the various housing schemes in the Seventh Plan. This outlay is inclusive of Rs. 10 crores, for the World Bank Project. A brief description of the housing schemes in the Seventh Plan is given below:

### *I. Housing Schemes for Economically Weaker Sections*

#### *(i) Co-operative Housing Scheme for Economically Weaker Sections*

This scheme sponsored jointly by the Government of Kerala, Kerala State Housing Board, and the Kerala State Co-operative Bank was started in 1978, for construction of houses for the economically weaker sections of the Community in rural areas. Any person whose annual income is less than Rs. 4200 and who owns a house site, but does not have a house of his own is eligible for assistance under this scheme. The composition of the present pattern of assistance is HUDCO loan of Rs. 3000, Co-operative Bank loan of Rs. 800, Government grant of Rs. 500 and the beneficiary share of Rs. 1700 for a house. The estimated cost of a house is Rs. 6000. It is proposed to construct 80,000 houses under this scheme, and for this a provision of Rs. 400 lakhs is earmarked in the plan. The outlay for 1985-86 is Rs. 50 lakhs. The number of houses targeted for construction is 10,000 houses.

#### *(ii) Subsidised Aided Self Help Housing Scheme for the Economically Weaker Sections with the Co-operation of Voluntary Agencies.*

The subsidised aided self help housing scheme for economically weaker sections, for the construction of 25,000 houses was launched in 1983-84, and subsequently incorporated in the Sixth Plan. This scheme has evoked wide response from all sections of society. It is proposed to continue the scheme in the Seventh Plan with an increased outlay.

According to the scheme each beneficiary will be given a loan of Rs. 3000 by the Housing Board, a grant of Rs. 1000 by the State Government, and a contribution of Rs. 1000 by voluntary agencies for the construction of a house costing not less than Rs. 6000. The balance amount will have to be met by the beneficiaries themselves by way of cash, labour, materials etc. The beneficiaries should have their own land measuring at least 60 m<sup>2</sup>, and have to construct houses based on approved plans and specifications. The voluntary agencies have to sponsor at least ten beneficiaries at a time, and offer their contribution in advance. The HUDCO loan is repayable over a period of nine years with 5% interest.

A physical target of constructing 40,000 houses at an overall cost of Rs. 2400 lakhs is proposed for the Seventh Plan period. An amount of Rs. 400 lakhs is provided in the Plan as Government share towards the subsidy portion of the scheme. The outlay for 1985-86 is Rs. 100 lakhs. This will enable construction of 10,000 houses.

#### *(iii) Occupation Linked Housing Scheme for Economically Weaker Sections by Public Agencies*

This new housing scheme is to benefit the workers engaged in the traditional industries of Kerala. A large segment of the handloom workers, coir workers, cashew workers, beedi workers, plantation workers, palmyra climbers, handicrafts workers etc. come within the purview of the economically weaker sections. There are separate public agencies devoted solely for the welfare of these target groups and, the scheme is expected to be implemented through these agencies with loans made available by HUDCO, either direct, or through the Kerala State Housing Board.

The scheme is to be implemented on an aided self help basis. The composition of the assistance will be a HUDCO loan of Rs. 3500, a Government grant of Rs. 1500 and a beneficiary share of Rs. 1000 for constructing a house costing not less than Rs. 6000. An amount of Rs. 500 lakhs is earmarked as the grant portion of the State Government for the construction of 33000 houses during the Seventh Plan period. The 1985-86 State sector outlay will enable construction of 3300 houses of this category. The outlay for 1985-86 is Rs. 50 lakhs.

#### *(iv) Skeletal Houses*

This new scheme is to provide to these belonging to the E.W.S. category the shell or skelton of the houses with the plinth, pillars, and roof, in addition to drinking water and sanitary latrines. The beneficiaries should undertake internal and external improvements and expansion as and when they find it possible to do

so with their own resources. The idea is to provide them with at least a shelter. Each house will cost about Rs. 4000 of which Rs. 2000 will be the loan made available from HUDCO. The Government will provide a subsidy of Rs. 1500 per house, and the remaining Rs. 500 has to be borne by the beneficiary in the form of cash or labour. The scheme will be confined to urban areas, or urban agglomerations where squatter settlement exists. The physical target is 20000 skeletal houses at a total estimated cost of Rs. 8 crores. The commitment on the part of the State Government in the Seventh Plan period will be Rs. 300 lakhs. The outlay in 1985-86 is Rs. 30 lakhs and this will enable the construction of 2000 skeletal houses.

(v) *Kerala State Development Corporation for SC/ST—  
Financial Assistance for Housing*

The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes has already implemented four housing schemes. These schemes were implemented with financial assistance from HUDCO, and subsidy from Government. The Corporation has drawn up a fifth housing scheme for the construction of 10,000 houses. It is scheduled to be implemented during the Seventh Plan period. The amount of Rs. 600 lakhs is provided for giving financial assistance for the implementation of the scheme in the form of subsidy, interest on loans, and for administrative and supervision charges during the Seventh Plan period. The outlay for 1985-86 is Rs. 100 lakhs.

(vi) *Tribal Area Sub Plan*

This scheme is for providing houses to all tribal families in the State in a phased manner. However preference will be given to the construction of houses in the five tribal project areas of Attappady, Mananthody, Nilambur, Idukki and Punaloor. Housing was a major component in the tribal sub plan implemented in these five tribal project areas of the State with hundred percent Central assistance. But subsequently housing was not considered as an economic activity and the Central Government declined to give any financial assistance for the housing schemes in the tribal project areas since 1983-84. The outlay of Rs. 100 lakhs earmarked in the Seventh Plan is for continuing the housing programme for tribals. The 1985-86 Annual Plan outlay is Rs. 20 lakhs.

II. *Low Income Group Housing Scheme*

This scheme, started in 1954, envisaged financial assistance by way of loan to persons who do not own a house, and whose income does not exceed Rs. 7200 per year. The maximum loan admissible was 14500 or 80% of the cost of building and site. In the initial years the scheme was quite popular. But subsequently with the introduction of newer schemes, which were found to be better from the point of view of procedure, availability, loan amount, interest rate etc. the scheme failed to evoke adequate response. Hence, as a step to discontinue the scheme, a lump sum provision of Rs. 20 lakhs is earmarked to honour the prior commitments already made under the scheme. The outlay in 1985-86 is Rs. 10 lakhs. It is proposed to wind up this scheme in 1986-87.

III. *Middle Income Group Housing Scheme*

The object of this scheme, launched in 1959, is to provide housing loans to people whose annual income falls between Rs. 7200 and Rs. 18000. Loans are restricted to a maximum of Rs. 27500 or 80% of the cost of the house, and is repayable in 300 monthly instalments with 8% interest.

The scheme is at present implemented by the Board of Revenue through the District Collectors from the allotments provided in the annual budgets. It is proposed to make certain changes in the financing pattern of the scheme in the Seventh Plan. The scheme will be operated in collaboration with the H.E.F.C. so that the resources provided by the State Government can be multiplied by additional resources provided by the H.E.F.C. The H.E.F.C. has indicated its willingness to provide three times the amount deposited to them by Government. An amount of Rs. 100 lakhs is provided in the plan anticipating that Rs. 300 lakhs will be made available by H.E.F.C. to cater to the housing needs of a larger number of people belonging to the middle income group. The outlay provided for 1985-86 is Rs. 20 lakhs.

IV.(i) *Rental Housing Scheme*

This scheme was introduced in 1959 to construct houses or flats, and give them to State Government employees on rental basis. The scheme at present is operated by two agencies, the State P.W.D. and the Kerala State Housing Board. The Housing Board was brought into the picture anticipating institutional finance from HUDCO, upto the extent of 70% of the project cost. But as finance from HUDCO is not forthcoming in time the Board has to depend mainly on State finance.

An amount of Rs. 600 lakhs is provided in the Seventh Plan to complete the works already taken up by the two implementing agencies, to take up new housing schemes in all district head-quarters with a view to expand the coverage of the scheme, and to undertake construction of multistoried walk-in flats at the P.M.G. Office compound and observatory hill compound of Trivandrum, in accordance with master plan prepared for the same. The payment of annuity to the Kerala State Housing Board for the houses already constructed by them earlier under the scheme has also to be met from this allotment. The Annual Plan outlay for 1985-86 is Rs. 80 lakhs.

(ii) *Construction of Working Man's Hostels for Government Employees*

This scheme is for the construction of working men's hostels for Government employees. At present male employees are finding it difficult to obtain accommodation at district and taluk headquarters. The non availability of adequate accommodation at reasonable rates reduces not only their efficiency in work, but also attendance in office. The State Government and voluntary organisations, with the help of Central Social Welfare Board etc. have constructed hostels for working women in most of the important localities, while the accommodation needs of the working men have been neglected till now.

An assessment made by the Government through the District Collectors about the requirements of hostels for working men revealed that 38 hostels, with an accommodation capacity of about 6835 persons are urgently required. Government lands for this purpose have been identified in certain localities. An amount of Rs. 300 lakhs is provided in the Seventh Plan to undertake construction of hostels in Government lands at district and taluk headquarters where the accommodation problem is acute. The 1985-86 outlay for this scheme is Rs. 40 lakhs.

(iii) *The Government Residential Quarters*

Government as employer is bound to provide residential quarters to certain categories of officers at their places of work. The provision is to complete the works already undertaken in the earlier plan, and to take up new construction works of an urgent nature. The Seventh Plan outlay for this scheme is Rs. 160 lakhs and the outlay for 1985-86 is Rs. 20 lakhs.

V. (i) *Slum Clearance and Rehousing Scheme*

The Chengalchoola slum improvement scheme at Trivandrum to provide flat type accommodation to 700 families is the only major slum improvement and housing scheme taken up by the Government. Nearly 330 flats have already been completed and handed over for occupation. The remaining works under this scheme are at different stages of completion. The provision of Rs. 15 lakhs in the Seventh Plan is for completing the scheme. The outlay in 1985-86 is Rs. 10 lakhs.

(ii) *Upgradation of Marginal Settlement and Improvement to Houses Under the One Lakh Housing Scheme.*

The scheme is implemented at present by local bodies with the assistance provided by Government in the form of loans and grants to families in rural areas for the upgradation of their existing substandard houses. While retaining the status quo in the Seventh Plan, the scheme will be aimed mostly for the upgradation of houses constructed under the one lakh housing scheme.

There are approximately 48,000 houses now under the one lakh housing scheme of which about 25% require improvement or repairs. It is proposed to bring about repair/improvements to these houses in a phased manner over a period of years to make them alright. Besides common facilities will also have to be provided where they do not exist now. An amount of Rs. 50 lakhs is provided in the Plan to undertake these activities. At the modest rate of Rs. 2000 per house, it is targeted to repair/improve about 2500 houses within the next five years. The provision for the Annual Plan 1985-86 is Rs. 10 lakhs.

VI. *Land Acquisition and Development*

The scheme was evolved with a view to make available developed building plots at reasonable price in selected urban areas to economically weaker sections. It will solve to a certain extent the housing and slum clearance problems besides stabilising urban land prices. At present the scheme is implemented in Ernakulam and Calicut districts only. It is proposed to extend the scheme to other districts also. The

Seventh Plan provision is Rs. 50 lakhs for this purpose. The 1985-86 Annual Plan provision is Rs. 10 lakhs.

VII. *Village Housing Project Scheme*

This scheme envisages financial assistance for house construction to residents of selected villages on an aided self help basis. As identical schemes with greater advantages to the beneficiaries are being implemented, physical achievement during the Sixth Plan period under this scheme has been low. Hence as a prelude to the discontinuance of the scheme a provision of Rs. 20 lakhs is made to meet commitments under the scheme. The outlay for 1985-86 is Rs. 10 lakhs.

VIII. *House Sites to Landless Workers in Rural Areas.*

Under this scheme, developed plots in small and medium colonies having access to roads, drinking water, drainage, individual sanitary latrines etc. will be distributed to landless families in rural areas. The emphasis will be to equip such colonies with basic civic amenities. This scheme is implemented at present in selected panchayats. Fifty per cent of the house sites will be distributed to persons belonging to scheduled castes and scheduled tribes.

An outlay of Rs. 1000 lakhs is provided for continuing the scheme during the Seventh Plan period. The average cost per house site on development of infrastructure facilities would come to around Rs. 2000. It is targeted to distribute 50,000 house sites within the next five years. In the Annual Plan for 1985-86 an amount of Rs. 150 lakhs is provided. This will enable the distribution of 7500 house sites.

(i) *Construction of Huts/Houses to Rural Workers*

This scheme aims at providing financial assistance for the construction of houses to people who have been allotted house sites under the scheme "house sites to landless workers in rural areas". The scheme is implemented at present by providing an assistance of Rs. 4000 per house of which Rs. 3000 is loan and Rs. 1000 grant. The rate of interest is 8% and the period of repayment is 25 years.

The content of the scheme will be modified in the Seventh Plan so as to bring this category of applicants within the purview of the "subsidised aided self help housing scheme for the economically weaker sections with the co-operation of voluntary agencies". Such a change will be advantageous to the beneficiaries besides facilitating the Government to cater to the housing needs of about 40,000 persons with the provision of Rs. 400 lakhs earmarked for the scheme in the Seventh Plan. The Annual Plan outlay for 1985-86 is Rs. 50 lakhs.

IX. *Police Housing Scheme*

Certain norms approved by the Government, regarding housing of police personnel makes it obligatory on the part of the Government to provide housing barrack accommodation to them. The Government has been striving to achieve these norms by utilising funds under the plan and non-plan. The provision of Rs. 300 lakhs made in the Plan is for completing the

ongoing works, to take up new works, and also to pay annuity to the Kerala State Housing Board for the flats constructed under this scheme. The outlay for 1985-86 is Rs. 50 lakhs.

*X. (i) Kerala State Housing Board*

The main activity of the Kerala State Housing Board, a statutory body constituted in 1971, is the implementation of public housing schemes, making use of the resources raised from financial institutions. The Board has several schemes which are important from the point of view of serving the housing needs of the community, but which do not qualify for assistance by HUDCO, due to the operation of their rigid norms which cannot be satisfied in certain cases owing to the conditions prevailing in our State, like high land, labour and material cost. Hence, sources of finance other than HUDCO assume very great importance. In recognition of this fact, and to even out the fluctuations in the receipt of institutional finance, the quantum of public borrowing allotted to the Housing Board is increased to Rs. 1400 lakhs in the Seventh Plan. The borrowing limit in 1985-86 is Rs. 200 lakhs.

*(ii) Kerala Co-operative Housing Federation*

The Kerala Co-operative Housing Federation, registered in 1970, is engaged in raising funds from financial institutions, and distributing the same to the 205 affiliated primary housing societies, to be advanced in turn to their individual members for the construction of houses. The Federation has a programme to assist the construction of 20,000 houses within the next five years (Seventh Plan) at an estimated loan commitment of Rs. 6000 lakhs, as given below:

Year	No. of houses	Anticipated loan (Rs. in lakhs)
1985-86	3330	1000
1986-87	3660	1100
1987-88	4000	1200
1988-89	4340	1300
1989-90	4670	1400
<b>Total</b>	<b>20000</b>	<b>6000</b>

The Government have to contribute towards the share capital base of the Federation, in order to enable it to borrow the required funds from the LIC of India, which is the major source of finance. The LIC gives loans at the rate of twelve times the paid up capital. So the share capital base of the Federation has to be strengthened considerably, and a provision of Rs. 300 lakhs is earmarked for this purpose. At times finance from LIC may not be forthcoming as anticipated and to make good any shortfalls or delay, an amount of Rs. 400 is also earmarked towards the market borrowing of the Federation. Thus the Seventh Plan outlay for this scheme is Rs. 700 lakhs. The outlay earmarked for 1985-86 is Rs. 100 lakhs.

*(iii) House Building Advance to Government Servants*

All State Government employees who had completed five years of service are eligible for advance under the house building advance scheme. As the procedure for obtaining the loan, interest rate and repayment schedule are favourable, there is consider-

able demand for this advance. The requirement under the scheme for clearing pending applications, and to entertain the applications that will be received during the Seventh Plan period is estimated to be around Rs. 70 crores. But owing to limitation of funds an amount of Rs. 1200 lakhs alone is provided for continuing the scheme during the Seventh Plan period. The outlay for 1985-86 is Rs. 300 lakhs.

*(iv) Government Servants/Policemen Housing Co-operative Societies*

The outlay of Rs. 135 lakhs provided in the plan is for the share capital contribution and loans to Government Servants/Policemen's housing co-operatives. The scheme is also intended to provide interest subsidy to reduce the rate of interest charges on the member borrowers of these societies. A sum of Rs. 25 lakhs is provided in the annual plan for 1985-86.

*(v) Housing Scheme for Industrial Workers*

The amount of Rs. 25 lakhs provided is for implementing housing schemes for industrial workers, drawing loan assistance from HUDCO, and also for the maintenance of houses constructed earlier under the subsidised industrial housing scheme. The annual plan provision for 1985-86 is Rs. 5 lakhs.

*(vi) Kerala School Teaching and Non-Teaching Staff Welfare Society for Housing*

The provision of Rs. 200 lakhs in the Plan is meant for providing margin money to the society for strengthening its capital base and borrowing capacity so that loans from HUDCO and LIC are made available to build houses to its members. The annual plan provision for 1985-86 is Rs. 50 lakhs.

*(vii) Housing for MLAs*

The House Committee of the Kerala Legislative Assembly has recommended a housing scheme for the Members of the Legislative Assembly. The Government has accepted this recommendation. The scheme envisages provision of a loan of Rs. one lakh or 75% of the cost of construction whichever is less to a member for constructing a new house, if he does not have a house of his own. The provision of Rs. 15 lakhs is for implementing the scheme. The outlay for 1985-86 is Rs. 3 lakhs.

*(viii) World Bank Project*

The State Government has formulated project for World Bank assistance in housing and urban development of Kerala. The project has been framed to support all-round improvements in the three major regions of Trivandrum, Cochin and Calicut. The project envisages the development of about 37,000 serviced residential and small business plots, upgrading the slum areas benefiting 29,000 households, besides improving water supply, sewerage, sanitation, drainage, urban transport etc. The total project cost is estimated at Rs. 100 crores. The proposed funding pattern is as follows:—

World Bank loan	Rs. 50 crores
HUDCO "	Rs. 25 crores
State Government Share	Rs. 25 crores
<b>Total</b>	<b>Rs 100 crores</b>



Besides area development and slum upgradation, the project also covers other sectors like urban services, urban transport and other infrastructure facilities. A part of the State Government share of Rs. 1000 lakhs is provided under this sector for this scheme in the Seventh Plan. The amount earmarked in the 1985-86, Annual Plan viz., Rs. 25 lakhs is for initial expenses connected with the project.

(ix) *Applied Research in Low Cost Housing*

At a time when cost of house building materials are soaring, it is essential to find new, cheap and indigenous substitutes to reduce houseconstruction cost. The amount of Rs. 10 lakhs provided in the Seventh Plan is for encouraging research in low cost housing and constructing and demonstrating experimental houses. The annual plan provision for 1985-86 is Rs. 2 lakhs.

### Urban Development

The spread of education, health, communication facilities and changes in the consumption pattern all helped to increase urban characteristics even in interior rural areas and therefore there is sharp increase in demand for provision of urban services such as transport, communication, water and sanitation, solid waste disposal, area development and urban renewal. Urbanisation is expected to grow faster in the future. At present the Town Planning Department, Municipalities and Development Authorities are involved in urban development. The Kerala Urban Development Finance Corporation gives loans for implementing remunerative schemes of urban local bodies. The State Town and Country Planning Board has been set up to guide and advice the different urban planning authorities and to co-ordinate their activities. In the Seventh Plan the Development Authorities are expected to play an increasingly larger role in the urban development programmes compared to earlier plans. The schemes implemented by the Town Planning Department and other programmes will be further strengthened during the Seventh Plan period. A short description of programmes included in the Seventh Plan under this head is provided below:—

I (a) *Kerala Urban Development Finance Corporation (KUDFC)*

The KUDFC, a Public Limited Company, gives financial assistance to urban local bodies by way of loans and advances. Upto 1983-84 the Company disbursed an amount Rs. 2320.40 lakhs and assisted about 360 schemes. During the Seventh Plan period the Corporation has to redeem debentures to the tune of Rs. 660 lakhs and it has also proposed issue of debentures. In the Seventh Plan an outlay of Rs. 800 lakhs is provided to assist KUDFC in its market borrowing and to contribute to its share capital.

The allocation in the Annual Plan for 1985-86 is Rs. 150 lakhs.

(b) *Urban Development Authorities*

*Assistance to three Major Development Authorities*

(i) *Greater Cochin Development Authority*

The provision is for assistance to the Greater Cochin Development Authority for its Rs. 94 crore comprehensive development Plan envisaged to be implemented during the Seventh Plan period. The main

sources of funds the Authority contemplates other than debentures are assistance from HUDCO, LIC etc. During the Seventh Plan period it is proposed to acquire and develop 174.13 hectares of land. Also it is envisaged to construct 1002 houses and make available developed house plots to about 2200 beneficiaries. Besides, 14000 persons will be covered under housing loans. The outlay provided in the Seventh Plan is Rs. 360 lakhs and of this Rs. 70 lakhs is for 1985-86.

(ii) *Calicut Development Authority*

The Calicut Development Authority has a Plan for Rs. 2431 lakhs in Seventh Plan period and the provision is towards assistance to market borrowing of the Authority. Rs. 1800 lakhs is earmarked for land acquisition and development and the rest is for schemes like housing, urban renewal etc. The proposed outlay is Rs. 233 lakhs and for 1985-86 an amount of Rs. 45 lakhs is provided.

(iii) *Trivandrum Development Authority*

The Trivandrum Development Authority has prepared a plan for Rs. 5577 lakhs for the Seventh Plan and the provision is towards assistance to market borrowing. Of the total outlay, the Authority has earmarked Rs. 3000 lakhs for the land bank scheme. Another Rs. 1200 lakhs is for urban renewal schemes in TDA areas. The outlay proposed in the Seventh Plan is Rs. 225 lakhs and provision for 1985-86 is Rs. 40 lakhs.

(c) *Financial Assistance to Other Urban Local Bodies for*

*Non Remunerative Town Improvement Scheme*

The objective of the scheme is to make available financial assistance to urban local bodies in the form of loans and grants for their non-remunerative undertakings such as construction of office buildings, town halls, roads, drainage, maternity and child welfare centres, libraries, parks, stadia etc. During the Sixth Plan period 56 schemes of the Municipalities were assisted. During Seventh Plan period it is proposed to assist 100 schemes taken up by the Municipalities. Of the total outlay of Rs. 100 lakhs, Rs. 20 lakhs is for 1985-86.

II. *Town and Regional Planning (Town Planning Department)*

(1) *District Planning Units*

District Planning Units are functioning in 11 districts in the State at present. Though sanction for the Alleppey unit has been accorded as early as in 1981 it has not yet started functioning. It is proposed that the unit at Alleppey, Wynad and Kasargod will be started during the Seventh Plan period. The proposed outlay of Rs. 100 lakhs is for the continuance and strengthening/reorganisation of the existing units and for starting new ones. The provision for 1985-86 is Rs. 10 lakhs.

(2) *Master Plans for Agro-Industrial Centres, Urban Areas and Tourist Centres*

The Master Plans serve as the broad framework for evolving suitable development projects/programmes for the overall growth of the concerned region. The

Town Planning Department has already completed preparation of 16 Master Plans. It is proposed to take up preparation of Master Plans for 19 Municipal areas and Centres during the Seventh Plan period. The proposed outlay for 1985-86 is Rs. 5 lakhs out of Rs. 50 lakhs provided for the Seventh Plan period.

(3) *Preparation of Urban Traffic and Transportation Plans to Synchronise with Urban Land Use Plans and Preparation of Traffic Operation Plans for Urban Areas*

At present Urban Traffic and Transportation Plans are prepared by NATPAC on the basis of a contract executed by the Government of Kerala. As traffic and transportation planning is a part of Urban Development Planning and is the responsibility of the Town Planning Department, it is proposed to create the Urban Traffic and Transportation Cell in the Town Planning Department and the provision is for the above purpose. The outlay earmarked for the scheme is Rs. 15 lakhs in the Seventh Plan and provision for 1985-86 is Rs. 3 lakhs.

(4) *Implementation of Statutory Development Plans in Urban Areas and Regions—Financial Assistance (Other than GCDA, CDA and TDA areas)*

There are six development authorities other than GCDA, CDA and TDA in the State over and above the municipalities and township committees concerned with urban development. The outlay provided is for the following schemes:—

- (a) financial assistance for establishment charge of all Development Authorities (other than GCDA, CDA & TDA) (Grant-in-aid) (Rs. 80 lakhs);
- (b) financial assistance to Development Authorities (other than CDA, GCDA and TDA) for implementation of statutory town planning schemes 50 per cent grant-in-aid and 50 per cent loan (Rs. 200 lakhs);
- (c) financial assistance to Municipalities and Township Committees for implementation of sanctioned town planning schemes 50 per cent grant and 50 per cent loan (Rs. 300 lakhs).

Of the total outlay of Rs. 580 lakhs for the Seventh Plan period the provision for 1985-86 is Rs. 74 lakhs

(5) *Reorganisation of Headquarters Office*

It is proposed to reorganise the Headquarters office of the Town Planning Department into seven functional divisions such as Development Plan Division, Project Division, Research and Standards Division, Detailed Plan Division, Local Area Project Division, Planning Administration Division and Traffic and Transportation Division. The outlay allotted in the Plan is Rs. 25 lakhs. In 1985-86 an amount of Rs. 5 lakhs is provided.

(6) *Preparation of State Spatial Development Plan*

The objective of the scheme is the preparation of comprehensive development plan for the whole State locating important growth centres and evolving policies for infrastructure development. The outlay of Rs. 25 lakhs proposed is for the continuance of the scheme. The provision in the 1985-86 Plan is Rs. 5 lakhs.

(7) *State, Town and Country Planning Board*

The State, Town and Country Planning Board was constituted to guide, control and monitor the formulation of the State Spatial Development Plan. The provision of Rs. 8 lakhs is for strengthening the Board and 1985-86 provision is Rs. 1.5 lakhs.

(8) *State Evaluation and Monitoring Cell*

Evaluation of Master Plans and Town Planning Schemes are done by the State Evaluation and Monitoring Cell. The outlay of Rs. 7 lakhs is for the continuance and strengthening of the Cell. A provision of Rs. 1 lakh is made in the 1985-86 plan.

(9) *Scheme for Development of Growth Centres*

The object of the scheme is for making research studies to identify growth centres in backward districts of the State. Creation of employment opportunities, provision of infrastructure facilities and other amenities in the backward districts can be planned on the basis of such studies. The outlay proposed is for giving financial assistance to concerned bodies in the respective backward districts. An outlay of Rs. 10 lakhs is provided in the Seventh Plan. In the Annual Plan for 1985-86 the outlay provided is Rs. 2 lakhs.

(10) *Urban and Regional Information System including Preparation of Maps for Urban Planning through Aerial Photography*

A provision of Rs. 5 lakhs is made for the continuance of the scheme, Urban Land Use Surveys and Urban Regional Information Cell. Aerial survey of the urban area is proposed to be taken up in the first year along with the survey of the State proposed by the State Land Use Board. Mapping work will be carried out during the remaining period of the Plan. The provision in 1985-86 is Rs. 1 lakh.

(11) *Training and Research*

A provision of Rs. 12 lakhs is made for imparting training the Engineering/architect graduates and the diploma holders of the Department of Town Planning and giving training to the apprentices. The outlay for 1985-86 is Rs. 3 lakhs.

(12) *Integrated Development of Small and Medium Towns—State Share*

This scheme was introduced as a Centrally sponsored scheme with the objective of improving and developing the small and medium towns within the framework of integrated development plans being drawn up.

The components eligible for central assistance on matching basis are: land acquisition and development, traffic and transportation, low cost sanitation, and development of markets and industrial estates. Government of India have selected the following nine towns out of 17 project reports submitted:

- (1) Guruvayoor, (2) Kottayam, (3) Trichur, (4) Kayamkulam, (5) Tellicherry, (6) Tirur, (7) Changanacherry, (8) Badagara and (9) Malappuram. It is proposed to take up the following 15 towns during the Seventh Plan period.

(i) Palghat, (ii) Pathanamthitta, (iii) Kasaragod, (iv) Muvattupuzha, (v) Kothamangalam, (vi) Perumbavoor, (vii) Neyyattinkara, (viii) Varkala, (ix) Punalur, (x) Thodupuzha, (xi) Manjeri, (xii) Ponnani, (xiii) Chalakudi, (xiv) Palai and (xv) Cannanore.

An outlay of Rs. 400 is provided to meet the State share. Towards provision for the year 1985-86 an amount of Rs. 90 lakhs is set apart.

#### *New Schemes*

##### *Financial Assistance to Urbanising Panchayats*

There are 136 urbanising panchayats in the State which are facing problems identical to that of municipalities. The proposed outlay is for implementing the following schemes in urbanising panchayats as given below:

- (a) Preparation of outline development plans and and DTP Schemes (Rs. 5 lakhs).
- (b) Financial assistance for implementation of sanctioned DTP schemes (Rs. 40 lakhs).

Of the proposed outlay of Rs. 45 lakhs for 1985-86, Rs. 1 lakh is proposed under scheme (a) and 3 lakhs under scheme (b)

##### *III. Environmental Improvement of Slums (M.V.P)*

The objective of the scheme is to eradicate slums in urban areas and improve the slums by providing water supply, street lighting and communication facilities. It is envisaged to cover 1.25 lakh slum population during the Seventh Plan period. The pattern of assistance is 50% loan and 50% grant to urban local bodies for implementing the programme. The outlay earmarked in the Seventh Plan is Rs. 500 lakhs. For 1985-86 an amount of Rs. 75 lakhs is proposed.

#### **Information and Publicity**

Kerala has a well developed mass communication system with more than eighty newspapers and a large number of periodicals, four radio stations and several T.V. transmitting centres. The Public Relations Department is the main agency charged with the function of information and publicity in the State. The programmes included in the Seventh Plan are indicated below:

##### *1. Press Information Services*

###### *(a) Press Tours*

The provision made in the Seventh Plan is for organising conducted press tours, for the exchange of journalists with other States and rental charges for transport for Press men. The outlay in the Seventh Plan is Rs. 7.50 lakhs. The outlay for 1985-86 is Rs. 2 lakhs.

###### *(b) Press Academy*

The Press Academy at Cochin is an autonomous body constituted for training, research etc. in journalism. The construction of a building complex for the Academy is in progress. The Academy is also engaged in the

study and analysis of the growth of Malayalam journalism, and preparation of a history of Malayalam journalism. It will publish books and research papers. It will also give financial assistance to deserving journalists, and provide pension to journalists in distress. The provision in the Seventh Plan is Rs. 140 lakhs and of this nearly two thirds is for construction and other capital assets. The outlay for 1985-86 is Rs. 23 lakhs.

##### *2. Field Publicity*

###### *(a) Strengthening of the Field Publicity Organisation*

District field publicity units will be given projects, vehicles and films during the plan period. The plan provision for this is Rs. 20 lakhs. The outlay for 1985-86 is Rs. 6 lakhs.

###### *(b) Exhibitions*

The Department regularly participates in exhibitions and fairs to project the achievements and various activities in the State. The Department also organises and coordinates the participation of the State Government and the Kerala Pavilion at New Delhi. The State has a permanent area, to house the Kerala Pavilion. The State Government has to build the structures, decorate it and maintain it. About Rs. 6 lakhs has to be paid to Trade Fair Authority every year as rent for the space allotted to Kerala Pavilion. A provision of Rs. 110 lakhs is provided in the Seventh Plan under exhibitions. The outlay for 1985-86 is Rs. 14 lakhs.

##### *3. Cultural Affairs—Song and Drama Services*

The following are the components of this scheme:—

###### *(i) Interstate Exchange of Cultural Troupes*

This joint programme of the Government of India and State Government is for the exchange of cultural troupes belonging to different States.

###### *(ii) Professional Drama Award*

To encourage Malayalam plays and play actors Government gives annual awards for the best play, best actor etc.

###### *(iii) Mohiniyattom Award*

To encourage Mohiniyattom, the classical dance form of the State, awards are given to artistes.

###### *(iv) Floats and Folk Dance for the Republic Day Celebrations at New Delhi*

This is for participation in the Republic Day Parade at New Delhi with a float and folk dances in the Pageantry.

###### *(v) Programmes on Special Occasions*

At the time of the visit of dignitaries, entertainment programmes are presented as part of hospitality.

###### *(vi) National Integration Cultural Festival*

National Integration Week is organised with film festivals, music concerts and dance programmes of different regions.

(vii) *Folk Arts Centre*

A centre for the documentation, recording and exhibition of the various traditional and folk arts of the State is proposed to be set up.

The provision is Rs. 65 lakhs in the Seventh Plan. The 1985-86 outlay is Rs. 10 lakhs.

4. *Photo Service**Photo Publicity—Advertising and Visual Publicity*

A Video Unit including the establishment of a colour processing laboratory at the Directorate and Photographic Units at Quilon, Kottayam, Trichur and Cannanore are proposed. The outlay proposed in the Seventh Plan for this scheme is Rs. 21.50 lakhs. The 1985-86 outlay is Rs. 6 lakhs.

5. *Display Advertisements*

The advertisement section of this Department needs to be properly equipped. Wide publicity to the welfare and developmental activities of the Government by issuing attractive display advertisements in popular dailies, periodicals and other publications in and outside the State is proposed in the plan. The provision of Rs. 25 lakhs made in the Plan is for issuing display advertisements and other programmes under this scheme. The outlay of 1985-86 is Rs. 6 lakhs.

6. *Information Centres*

The Information Centres of the Department enable people get information on the policies and programmes of the Government. Such Centres are at present functioning in Trivandrum, Quilon, Kottayam, Ernakulam, Trichur, Palghat, Malappuram and Calicut. It is proposed to start information centres at Alleppey, Idukki, Pathanamthitta, Cannanore and Kasargode and to strengthen the existing ones. Pamphlets, folders, etc., are being distributed by the information centres. Opening of information counters attached to the showrooms of "Kairali" in Madras, Bombay and the Tourist Complex at Kovalam is also contemplated. The Seventh Plan provision under this scheme is Rs. 25 lakhs. The outlay for 1985-86 is Rs. 5 lakhs.

7. *Films*

Films have come to stay as media in the spheres of education, entertainment, instruction and information. Public relations work needs to be fully supplemented by this media. Short films, documentaries and feature films on different aspects of our social matrix, and those which will replenish the values of the society are proposed to be produced. Newsreel unit are proposed to be set up at Ernakulam and Calicut. A short film unit is envisaged at Trivandrum. The outlay for the scheme in the Seventh Plan is Rs. 76.50 lakhs. An outlay of Rs. 15 lakhs is provided in the 1985-86 Annual Plan.

8. *Publications*(a) *Publicity Materials*

Posters, pamphlets, booklets, wall calendars, etc., will be produced for bulk distribution. This scheme

also includes production and distribution of the departmental journals, and also publication of information series on different topics relating to plan formulation. Publications on the socio-economic effects of Plan implementation are also envisaged. Printing facilities are available at Government level at the Text Book Press at Thrikkakkara. Such facilities are also expected to be made available at Mannanthala (Trivandrum) with the commissioning of the new press. It is proposed to utilise such facilities and make the publicity materials attractive and modern. The Seventh Plan provision for this scheme is Rs. 40 lakhs. The 1985-86 provision is Rs. 8 lakhs.

(b) *Publication of Books*

The scheme is for getting books written on important cultural, educational and social topics and for revision of books published earlier. A provision of Rs. 14 lakhs is made in the Seventh Plan for this scheme. The Annual Plan outlay for 1985-86 is Rs. 3 lakhs.

9. *Training of Field Publicity Officers*

Officers of the Department are deputed to various institutions in India, for being trained in the operation of the various media of mass communication, advertisements, printing and layout and exhibitions. A provision of Rs. 2 lakhs is made in the Plan. The outlay for 1985-86 is Rs. 0.25 lakh.

10. *Welfare Fund for Journalists—(Government Contribution)*

The Kerala State Welfare Fund for Journalists has been created for giving financial assistance to the working journalists and their dependents in distress. The assistance at present ranges from Rs. 150 to Rs. 250 per head. It is necessary to extend the payment to more persons and also raise the assistance. The Plan outlay for this scheme is Rs. 27.50 lakhs. The outlay for 1985-86 is Rs. 6 lakhs.

11. *Welfare Fund for Cine Artistes—(Government Contribution)*

This scheme is for giving financial assistance ranging from Rs. 150 to Rs. 300 per head per mensem to the Cine Artistes in distress. The rate of assistance has to be revised suitably during the course of the Plan period. A provision of Rs. 22.50 lakhs is made in the Plan as Government contribution to the above fund. The outlay for 1985-86 is Rs. 5 lakhs.

12. *Special Component Plan—Community Listening Sets*

The Plan provision of Rs. 3 lakhs is for grant of subsidy to panchayats for installing radio sets in areas predominantly occupied by Harijans. The outlay for 1985-86 is Rs. 1 lakh.

13. *Tribal Sub Plan—Songs and Drama*

This scheme is for grant of subsidy to panchayats for installing radio sets in tribal areas and tribal pockets. The Seventh Plan outlay for this scheme is Rs. 0.50 lakh. The outlay earmarked for 1985-86 is Rs. 0.10 lakh.

## Labour and Labour Welfare

### I. Education and Training

#### A. Craftsmen Training

In the Seventh Plan emphasis is laid on the consolidation and modernisation of facilities in the Industrial Training Institutes. Practical and theoretical instruction in I.T.Is will be improved. The facilities for apprenticeship training in the non-I.T.I. trades and the arrangements for placement and training of apprentices in the areas with inadequate facilities will be improved. Staff training facilities will be provided within the State by upgrading and diversifying of facilities available in institutions like Advanced Vocational Training Institutes and offering assistance to centrally run institutions like Regional Vocational Training Institutes and Model I.T.Is. Employment oriented post-I.T.I. courses and intensive training courses which have proved to be successful and are in high demand are to be diversified into new areas and trades. As the Craftsmen Training Scheme caters mostly to poor people, more government institutes will be started in places which need them.

To provide more employment opportunities for women more facilities for training women are to be provided in the Seventh Plan. Self Employment Oriented post-I.T.I. courses will be diversified and made production oriented. "Earn while you learn" scheme will be introduced in Industrial Training Institutes. For certain trades under the Apprenticeship Training for which there is good employment potential, like chemicals, printing, photography, leather craft etc., and for which basic training facilities are not available, training facilities will be set up.

The schemes proposed under craftsmen training are the following:—

#### 1. Consolidation and Strengthening of Industrial Training Institutes and starting of New Institutes

For the different programmes under this head the Seventh Plan outlay will be Rs.410 lakhs. The provision in the 1985-86 Annual Plan will be Rs. 70 lakhs.

##### (i) Machinery and Equipment

N.C.V.T. had not given permanent affiliation to the I.T.Is. started during the Fifth and Sixth Plan periods as they were short of equipment according to the standard list prescribed by N.C.V.T. Because of this, training standards are said to have gone down.

Therefore, importance will be given in the Seventh Plan for the procurement of all items prescribed in the standard list. The average estimated cost of tools and equipment required for one unit is about Rs. 2 lakhs. There are 38 units in the four new I.T.Is. started in August, 1983. Only part of the machinery and equipment has been procured. Apart from this there are 137 units in the I.T.Is. started previously during the Fifth and Sixth Plan periods. Only about 50% of the machinery and equipment are available in these I.T.Is.

With a view to modernise and improve the standard of training in the I.T.Is, NCVT has revised the syllabus of all trades, introducing a number of modern subjects and equipment. The new syllabus is to be introduced immediately. Modern machinery and equipments in about 600 units in 21 ITIs are to be procured. The introduction of new syllabus will necessitate the arrangement of workshops, their setting up, addition and alteration to existing installation etc.

More than 30% of the machinery and equipment remain idle at a time due to faults and breakdowns. It is proposed to provide sufficient number of electrical, electronic and mechanical millwrights in the I.T.Is. to carry out the repairs and put the machines to continuous use. Tools and equipment required for the millwright and a central laboratory are proposed to be provided. In the event of major repair works, millwrights from different I.T.Is. will be deputed as teams.

In the Seventh Plan an outlay of Rs.130 lakhs is proposed for replacing old and obsolete machinery and equipment, and providing additional machinery required due to revision of syllabus and development of millwrights. The 1985-86 outlay for machinery and equipment is Rs.25 lakhs.

##### (ii) Civil Works

The Institutes at Kasargod, Areacode, Calicut, Kalpetta, Mala, Pallickathode, Kattappana, Chennerkara and Women I.T.Is. at Calicut, Quilon and Kazhakuttom do not have their own buildings. They are now housed in temporary sheds and rented buildings. Land has been acquired for the I.T.Is. at Calicut, Areacode, Pallickathode and Kattappana. Land has been donated for the I.T.I. at Kalpetta by Krishna Menon Trust. The Quilon Municipality has agreed to donate the required land for the Women's I.T.I., Quilon. Land needs to be acquired for the I.T.Is. at Kasargod, Mala and Chennerkara and the Women I.T.Is. at Calicut and Kazhakuttom. The I.T.I. building at Areacode is nearing completion and will be completed in the Sixth Plan. Provision for buildings is required for the I.T.Is. at Kasargod, Calicut, Kalpetta, Pallickathode, Kattappana, Mala, Chennerkara and Women I.T.Is. at Calicut, Quilon and Kazhakuttom. Additional workshop buildings and class-rooms are required for the I.T.Is. at Dhanuvachapuram, Trivandrum, Attingal, Quilon, Chengannoor, Ettumanoor, Kalamassery, Chalakudi, Malappuram and Cannanore. Besides, hostel buildings are necessary for the I.T.Is. at Trivandrum, Attingal, Chennerkara, Pallickathode, Kattappana, Kalpetta, Calicut, Kasargode and Women I.T.Is. at Kazhakuttom, Quilon and Calicut. Staff quarters are required for the I.T.Is. at Trivandrum, Attingal, Chennerkara, Pallickathode, Kattappana, Mala, Areacode and Calicut and Women I.T.Is. at Kazhakuttom, Quilon and Calicut.

The electric wiring in the workshops in the older I. T. Is., done about 15 years back, and therefore needs to be replaced. With the introduction of new syllabi, new connections will have to be given to new installations and equipment.

An aggregate outlay of Rs.130 lakhs is proposed in the Seventh Plan for Civil Works including Institute buildings, construction of additional workshops, staff quarters and rewiring of old workshops. The Annual Plan (1985-86) outlay for this purpose is Rs. 20 lakhs.

(iii) *Expansion of Existing I.T.Is.*

The I.T.Is. at Chenneerkara, Pallickathode, Kattappana, Mala, Areacode, Kalpetta and Kasargode and Women I.T.Is. at Kazhakuttom, Quilon and Calicut have a seat strength of less than 250. In most of the other I.T.Is. the strength is more than 600. Therefore minor institutes have to be upgraded to the status of major institutes in the Seventh Plan. An amount of Rs.25 lakhs is proposed for the purpose in the Seventh Plan. In 1985-86 the outlay is Rs. 5 lakhs.

(iv) *Improvement of Theoretical Instruction*

In order to improve the quality of teaching in the I. T. Is, library facilities, audio-visual equipment like overhead projectors, slides, tapes, charts, models, printed diagrams etc., are proposed to be procured for all the I.T.Is. An outlay of Rs. 10 lakhs is proposed in the Seventh Plan. The outlay in 1985-86 is Rs. 2 lakhs.

(v) *Starting of New I.T.Is.*

There is demand for new I.T.Is in regions, where there are none. Hence it is proposed to start new I.T.Is. in such areas. More Women I.T.Is. are also envisaged to be started in the districts where there are no Women I.T.Is. The proposal is to start 10 I.T.Is during the Seventh Plan period and for the purpose an outlay of Rs. 65 lakhs is provided. The target for 1985-86 is to start two new I.T.Is. and for this an outlay of Rs. 10 lakhs is provided.

(vi) *Diversification of Trades*

As technology changes, the need for training in modern trades has increased. The trades in the I.T.Is have therefore to be modified to meet changing demands. It is proposed to introduce new units and new trades with job opportunities in some of the I.T.Is. during the plan period and for the purpose an outlay of Rs. 20 lakhs is provided. For implementing the scheme an outlay of Rs. 3 lakhs is proposed for 1985-86.

(vii) *Post I.T.I. Courses*

The object of the scheme is to give intensive training to Ex-I.T.I. trainees to make them proficient enough for self-employment. At present there is an intensive training course with two units for plumber trainees. For the trainees of Electronics, Radio & Television, T. V. Technicians etc. courses are conducted at Trivandrum. These courses have been found to be useful and are in demand. Similar training courses are proposed to be conducted in trades like carpentry, blacksmithy, welding, motor mechanism, etc. More units of Plumber and T. V. Technician courses are proposed to be started in other places. For expansion of the post-ITI courses an outlay of Rs. 15 lakhs is proposed in the Seventh Plan. An amount of Rs. 2 lakhs is provided in 1985-86.

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(viii) *Model I.T.I.*

There is a model I.T.I. functioning since 1983 at Calicut. The Central Government meets the capital and recurring expenditure, but the State Government has to provide the required land and temporary accommodation till the completion of the building by the Government of India. An amount of Rs. 15 lakhs is provided in the Seventh Plan for meeting the land acquisition charges and payment of rent. The outlay in 1985-86 is Rs. 3 lakhs.

2. *Regional Vocational Training Institute for Women*

This is a project set up by the Government of India with the assistance of Swedish International Development Agency. Under the project, a R.V.T.I. has been started at Kazhakuttom in Trivandrum. According to the agreement, the State Government has to provide land and buildings required for the Institute. The land has already been acquired. The Plan provision is for the construction of the building according to design approved by Government of India. An outlay of Rs. 30 lakhs is proposed for the Seventh Plan for construction of buildings for the R.V.T.I. Kazhakuttom. The amount proposed for 1985-86 is Rs. 8 lakhs.

3. *Advanced Vocational Training System*

This scheme for specialised training for industrial workers is implemented with the assistance from U.N.D.P. and I.L.O. The State Government has to provide the indigenous machines, workshop facilities, class rooms and teaching staff.

In the Seventh Plan, additional equipment, tools etc., have to be purchased and laboratories for the trades such as Marine Diesel, Welding, Electrical Maintenance and Machanic Maintenance have to be provided. It is proposed to introduce new trades of induction to Engineering Technology, Maintenance of Automotive Equipments, and Engineering Inspection and other new trades as suggested by N.C.V.T. The staff of the A.V.T.S. are to be provided special training in the latest techniques of handling modern machinery and equipment by sending them to outside establishments such as Central Training Institute and Advanced Training Institute. Special courses are also proposed to be conducted in the modular pattern in the A.V.T.S. for the training of instructors. For this, additional equipment and facilities as per N.C.V.T. norms have to be provided.

The proposed outlay of Rs. 30 lakhs for the Seventh Plan is for updating the existing courses, introducing new courses, providing new tools and equipments, A.C. rooms, laboratories and for meeting the expenditure for giving training to the instructors in outside establishments. The annual plan outlay for 1985-86 for the scheme is Rs. 8 lakhs.

4. *Special Component Plan*

This is a scheme for giving special training for scheduled caste and scheduled tribe candidates. At present there is a scheme to provide training to 144 scheduled caste and scheduled tribe students in 9 trades in 9 I.T.Is. There is also another scheme for giving training to the SC and ST candidates for the two year diploma course in foremanship training in production

and industrial management in the Foreman Training Institute, Bangalore. It is proposed to start new special training schemes for the benefit of scheduled caste and scheduled tribe candidates, during the Seventh Plan. Therefore an outlay of Rs. 10 lakhs is proposed for continuing the scheme during the Seventh Plan. The outlay proposed for 1985-86 is Rs. 2 lakhs.

### B. *Apprenticeship Training*

In order to provide facilities for implementing the apprenticeship training scheme, Related Instruction Centres have been set up in eight districts. There are no Related Instruction Centres in the remaining districts. Therefore it is proposed to start R.I. Centres in the remaining districts. The R.I. Centres at Trivandrum and Kalamassery are over-crowded with a large number of establishments and apprentices. These centres are proposed to be upgraded in the Seventh Plan period.

Though 134 trades have been designated and brought under the Apprenticeship Act, 1961, basic training facilities are available in 40 trades only, resulting in the non-engagement of apprentices in most of the remaining trades. Apprentices can be trained in the remaining trades, only by setting up basic training centres. Chemical, Leathercraft, Photography, Photomechanic, Printing, Catering are the trades which need basic training centres. It is also proposed to start basic training centres in such trades during the plan period.

In the Seventh Plan an outlay of Rs. 20 lakhs is proposed for upgrading the R.I. Centres at Trivandrum and Kalamassery, providing R. I. Centres in the districts where the facilities are not available and introducing basic training facilities for selected trades. The plan provision for 1985-86 is Rs. 3 lakhs.

## II *Employment Services*

### 1. *Establishment of Town/Taluk Employment Exchanges*

In order to improve service and to cope with the increasing number of applicants in the Live Register of Employment Exchanges, this scheme was introduced. During the Sixth Plan period 18 Town Employment Exchanges were started. It is proposed to start 35 Town Employment Exchanges during the Seventh Plan in a phased manner, i.e. 7 units in a year. Of the total outlay of Rs. 85. lakhs provided in the Seventh Plan, the 1985-86 outlay is Rs. 15 lakhs.

### 2. *Strengthening of Employment Market Information Programme*

The Employment Market Information Programme aims the collection, compilation and dissemination of reliable information on employment in the different sectors of the State. The Employment Exchanges at Trivandrum, Quilon, Ernakulam, Kozhikode and Cannanore district have been strengthened in earlier plans. It is proposed that during the Seventh Plan period, the Alleppey, Kottayam, Idukki, Trichur, Palghat and Malappuram units have to be strengthened. An outlay of Rs. 8 lakhs is proposed in the Seventh Plan, of which Rs. 1.5 lakhs is for the year 1985-86.

### 3. *Strengthening of Vocational Guidance Programme*

The objective of the scheme is to render assistance to individuals in solving problems related to vocational planning and occupational choice. Vocational guidance units have been started in all Divisional/District Employment Exchanges except for Pathanamthitta and Wynad. It is proposed to strengthen the units in Alleppey, Idukki and Malappuram districts and start new units in Pathanamthitta and Wynad during the Seventh Plan. An outlay of Rs. 8 lakhs is proposed in the Seventh Plan. The outlay in 1985-86 is Rs. 1 lakh.

### 4. *Establishment of Coaching-cum-guidance Centres—SC/ST*

The objective of the Scheme is to establish coaching-cum-guidance centres for the benefit of scheduled caste and scheduled tribe applicants appearing for competitive examinations. The proposal is to set up such units in all five districts during the Seventh Plan. Regional level units are functioning already in Trivandrum and Palghat. Of the outlay of Rs. 11 lakhs earmarked in the Seventh Plan, Rs. 2 lakhs is intended for the year 1985-86.

### 5. *Self-Employment—Guidance Unit at District Employment Exchange (State Share)*

In the Seventh Plan an amount of Rs. 3 lakhs is set apart for self-employment guidance unit at District Employment Exchange at Quilon. The outlay in 1985-86 is Rs. 0.50 lakh.

### 6. *Establishment of Special Units for Placement of Physically Handicapped Persons.*

The objective of the scheme is to establish Special Cells in the employment exchanges to cater to the special needs of the handicapped applicants. During the Sixth Plan units were started in Quilon, Kottayam and Trichur District Offices and Divisional Employment Exchange at Kozhikode. It is proposed that during the Seventh Plan such Special Cells have to be set up in the remaining districts. An outlay of Rs. 5 lakhs is earmarked for the Seventh Plan and provision of 1985-86 is Rs. 1 lakh.

## III. *Labour Welfare*

### (i) *Enforcement of Minimum Wages to Agricultural Workers*

The objective of the scheme is to enforce the provisions of the Agricultural Workers Minimum Wages Act, 1948 and Kerala Agricultural Workers Act, 1974 by the Labour Department. The Kerala Agricultural Workers Act contains provisions for the appointment of Inspectors and Tribunals for the enforcement of the Act. This is item (5) of the Twenty Point Programme and is a 50% Centrally sponsored programme. An outlay of Rs. 4 lakhs is made for the continuance of the scheme and provision for 1985-86 is Rs. 0.6 lakh.

### *General Labour Welfare Schemes*

### 2. *Labour Welfare Fund Board*

The Labour Welfare Fund Board is a statutory body constituted for promoting the welfare of the workers coming under the purview of the Labour



**Welfare Fund Act, 1975.** The employees covered by the Act have to contribute fifty paise and every employer should contribute Re. one per worker every half year. Such contributions and the matching contribution by the Government constitute the resources of the Fund for its welfare programmes. The programmes to be implemented by the Board are (i) award of scholarships for higher educational to the children of workers, (ii) payment of compassionate relief to the dependents of employees dying in harness, (iii) provision of vocational training to children of workers, (iv) opening of welfare centres etc.

An outlay of Rs. 40 lakhs is provided in the Seventh Plan. The provision in 1985-86 is Rs. 6 lakhs.

### 3. *Welfare Fund for Cashew Workers*

The objective of the scheme is to extend financial assistance to the workers/dependents as scholarships, stipends, medical reimbursement and ex-gratia payment at Rs. 5000 each for fatal accidents. The proposed outlay of Rs. 7 lakhs in the Seventh Plan is towards Government contribution to the Fund. The provision for 1985-86 is Rs. 1 lakh.

### 4. *Welfare Fund for Coir Workers*

This scheme envisages payment of assistance to coir workers/dependents in the State towards scholarships, stipends, medical reimbursement and ex-gratia payment for death etc. The proposed outlay of Rs. 4 lakhs towards Government contribution to the Fund. The outlay for 1985-86 is Rs. 0.8 lakh.

### 5. *The Kerala Coconut Palmyrah and Arecanut Tree Climbers Welfare Scheme*

This scheme is for providing ex-gratia payment at Rs. 5000 each to the workers in the event of fatal accidents and permanent total disability following the accident in the course of their occupation. Since the introduction of the scheme from 1-4-1979, 1236 applications were received and payment has been made for 511 cases.

The outlay proposed in the Seventh Plan is Rs. 25 lakhs and provision for 1985-86 is Rs. 4 lakhs.

## IV. *Institutions*

### 1. *Institute of Labour and Employment*

It is proposed to strengthen the activities of this Institute by organising training programmes and establishing new departments during the Seventh Plan period. The proposed outlay of Rs. 20 lakhs is for the continuance and strengthening the research and training programmes of the Institute. The provision for 1985-86 is Rs. 4 lakhs.

### 2. *Overseas Development Employment Promotion Consultants Ltd.*

The Overseas Development and Employment Promotion Consultants Ltd. is a Joint Stock Company registered in 1977 fully owned by the Government with an authorised share capital of Rs. 100 lakhs.

The company aims at promoting employment in foreign countries, backing up industrial ventures abroad, raising the necessary financial resources from Indians working abroad for projects in India and promoting exports from India.

The schemes of the Company are capable of attracting investments from overseas Indians. The proposed outlay of Rs. 20 lakhs is for payment of service charges to the company for its placement services and also for providing margin money to the company for undertaking its ventures. The provision for 1985-86 is Rs. 4 lakhs.

### 3. *Rehabilitation Plantation Corporation Ltd. (share capital)*

The provision of Rs. 60 lakhs is towards share capital contribution to the Rehabilitation Plantation Corporation. The outlay for 1985-86 is Rs. 11 lakhs.

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

The population of scheduled castes in Kerala according to 1981 Census is 25.49 lakhs. They constitute 10.02% of the total population of the State in 1981 as against only 8.3% in 1971. The percentage of literacy among them according to 1981 census is 56 against the literacy rate of 70% for the population as a whole. The corresponding percentages as per 1971 census were 40 and 60 respectively. In the earlier Five Year Plans the Government laid special emphasis on educational programmes of the scheduled castes and as a result there had been notable increase in the enrolment of Scheduled Caste students. The enrolment ratio of Scheduled Caste students in primary classes has reached almost the same level as that of the total population. Besides maintaining this tempo in enrolment the Seventh Plan will have to give emphasis on programmes aiming at reducing drop-out rates in different classes. Pre examination Training Centres will be strengthened by providing adequate facilities and teaching staff so as to help needy students equip themselves for competitive examinations. The system of giving special coaching to Scheduled Caste students in different classes will be encouraged.

The Harijan Welfare Department implements development schemes meant exclusively for scheduled castes and other backward classes. The Department has District Welfare Officers and Taluk Welfare Inspectors at field level to implement the schemes. The Seventh Plan programmes of the Harijan Welfare Department have been drawn up taking into account the changed role of the Department with the introduction of decentralised planning in respect of Special Component Plan programmes. The Department has to lay greater emphasis on the following:—

- (i) extension activities including conscientisation of the Scheduled Castes of their rights and duties as also the opportunities available to them.
- (ii) identification of target groups and their problems.
- (iii) monitoring the implementation of various programmes benefiting scheduled castes and



- (iv) collection, compilation and reporting of data in respect of plan programmes for scheduled castes.

The departmental personnel engaged in implementing Harijan Welfare Programmes will be given proper training. It is also proposed to introduce the system of beneficiary cards and maintenance of Habitat Registers throughout the State in a phased manner for monitoring the progress of Special Component Plan Programme. In the Seventh Plan the Department will give special importance to those schemes which help improve the basic needs of the Scheduled Castes like education and housing. Training programmes implemented by the Department will be continued so as to increase the employment opportunities to scheduled castes. Assistance will be extended for Scheduled Castes to start self employment units.

A brief description of the various schemes proposed for the development of Scheduled Castes in the Seventh Plan (1985-90) and in the Annual Plan 1985-86 is given below:

#### A. Welfare of Scheduled Castes

##### *Educational Programmes*

#### 1. *Pre-matric Scholarships and Stipends*

This scheme is intended for the payment of lumpsum grants and stipends to scheduled caste students in the pre-matric classes to meet the expenses for study materials, dress, etc. At present a lumpsum grant of Rs. 7 per month is paid to a child at the primary level, Rs. 20 at standards 1 to 3 and amounts ranging from Rs. 25 to 80 at standards from 4 to 10. It is intended to enhance the current rates of stipend in view of the increase in the cost of books and materials. It is expected that there will be a substantial increase in the number of scheduled castes students in the coming years. Taking these factors into account an outlay of Rs. 140 lakhs is proposed for this item in the Seventh Plan. The outlay proposed for 1985-86 is Rs. 21 lakhs.

#### 2. *Special Incentives to Talented Students*

This scheme aims at encouraging the scheduled caste students to achieve higher levels of performance in public examinations as well as in sports and games. The incentives at present vary from Rs. 100 to Rs. 500 depending on the course of study. It is intended to raise these rates in view of the increased costs. Besides, it is proposed to extend the award of these incentives to students in standards VIII, IX and X and also to students securing second class in arts subjects at the college level. Special incentives will also be given to scheduled caste students showing outstanding performance in sports and games. An outlay of Rs. 5 lakhs is proposed in the Seventh Plan and Rs. 0.75 lakh for the Annual Plan 1985-86.

#### 3. *Boarding Grants*

This scheme is for the payment of boarding grants to scheduled caste students residing in hostels which provide subsidised food and lodging facilities. The present monthly rate per incumbent is Rs. 85. It is proposed to increase the rates of grants in view of

the increase in the cost of living. This together with the increase in the number of hostels will require an outlay of Rs. 10 lakhs for this programme in the Seventh Plan. The allotment for 1985-86 is Rs. 1.50 lakhs.

#### 4. *Tutorial System in Schools and Colleges*

This scheme replaces an earlier scheme for special coaching classes, the scope of which was limited to Engineering Colleges and Polytechnics. Hence forth this scheme will have larger coverage comprising schools (from VIII standard onwards) as well as arts, science and professional colleges and polytechnics. In Arts and Science colleges, professional colleges and polytechnics, Professors with the assistance of other teachers, and in schools teachers will organise special coaching classes to students in the subjects in which they fail or are below the average. In addition to remuneration, incentive awards will be given to the college and school teachers who conduct the classes and ensure success of the students in the examinations. Special awards for those who help students get first class is also envisaged. An outlay of Rs. 20 lakhs is proposed in the Seventh Plan. The outlay for 1985-86 is Rs. 3 lakhs.

#### 5. *Cosmopolitan and Welfare Hostels*

An outlay of Rs. 240 lakhs is earmarked in the Seventh Plan for the running of the Cosmopolitan and Welfare Hostels under the Harijan Welfare Department. Starting of 10 new Cosmopolitan Hostels (of which five will be for girls) and 30 Welfare Hostels (15 for girls) is also envisaged under the scheme. Also, funds for the construction of six more Cosmopolitan Hostels and ten more Welfare Hostels for boys are to be provided from this outlay. The rates of assistance will also be increased corresponding to the rise in cost of living.

In order to improve the standards of these hostels the introduction of an efficient management system with full time resident tutors, wardens etc, is envisaged. An Advisory Committee consisting of Headmasters of feeder schools, representatives of parents of inmates and departmental officers will visit the hostels periodically and give suggestions on better running of the hostels.

In 1985-86 two Cosmopolitan Hostels (one for girls) and six welfare hostels (three for girls) will be started. Also, one Cosmopolitan Hostel and two Welfare Hostels will be constructed during the first year. The outlay earmarked for 1985-86 is Rs. 36 lakhs.

#### 6. *Adult Education*

In addition to raising the literacy level of the adult population, it is necessary to impart social education to them. The existing Adult Education Centres in the State will be renamed as Centres of Audio-Visual Education (CAVE). Additional centres will also be started during the Seventh Plan period. These centres will be supplied with modern audio visual aids of learning. Conduct of seminars, camps for adults and repairs to centres will also be necessary. Study tours for selected groups of people is necessary to expose them to developments and achievements made in the rest of the country. The plan provision is Rs. 5 lakhs. The 1985-86 outlay is Rs. 0.75 lakh.

### 7. *Establishment of Model Residential Schools*

Scheduled Caste students do not get opportunities for undergoing the type of training and education that are imparted in high standard residential schools like the public schools though quite a number of them are functioning in the State and outside. To fill this gap the establishment of two model residential schools in the pattern of the public schools is proposed under the Seventh Plan. One school will be set up in north Kerala and the other in south Kerala. An amount of Rs. 25 lakhs is provided for the scheme in the Seventh Plan.

Steps required for establishing the schools will be initiated during the first year of the Plan itself. An outlay of Rs. 3.75 lakhs is provided for 1985-86.

### 8. *Dormitories and Study Facilities*

The environment in many of the Scheduled Caste homes is admittedly not conducive to children undergoing studies. This is considered as the main reason for the high level of drop-outs among the scheduled caste students. One way of reducing the problem is to offer enough reading facilities to these children outside their homes. Dormitories or common buildings with a minimum of necessary facilities should be provided in as many harijan concentrations as possible. The students will be under the control and supervision of a warden or a senior teacher who will help them in their studies.

During the Seventh Plan period a modest beigning will be made in this direction by starting one dormitory in each District. It is planned to construct pucca sheds for such dormitories in harijan concentrations where land is available. It will also be necessary to improve the atmosphere and facilities in the Scheduled Caste homes. The outlay of Rs. 5 lakhs proposed is intended for the above purposes. The outlay for 1985-86 is Rs. 0.75 lakh.

### *Centrally Sponsored Scheme*

#### 9. *Girls Hostels — State Share*

It is proposed to construct four Cosmopolitan Hostels and 10 Welfare Hostels for girls during the Seventh Plan period. An outlay of Rs. 130 lakhs is provided for this programme.

In 1985-86 it is proposed to construct three welfare hostels for girls at a cost of Rs. 19.50 lakhs.

#### 10. *Book Banks in Professional Colleges and Polytechnics State Share*

An outlay of Rs. 10 lakhs is proposed in the Seventh Plan for this programme which is intended for making available costly text books and study materials to scheduled caste students attending professional colleges. Some of the professional colleges were brought under this scheme during the Six Plan period. It is now proposed to cover all the remaining professional colleges and polytechnics in the State during the Seventh Plan period. It is also intended to provide revised editions of the books already available and also new books for these colleges. The Seventh Plan outlay for this scheme is Rs. 10 lakhs. The 1985-86 outlay is Rs. 1.50 lakhs.

#### 11. *Coaching and Allied Scheme — State Share*

An outlay of Rs. 15 lakhs is provided in the State Sector for this Centrally Sponsored Scheme. The scheme covers the Pre-examination Training Centres intended for training candidates who appear for competitive examinations. During the Seventh Plan period all the Pre-Examination Training Centres in the State will function under this scheme and will be strengthened suitably. The standard of instruction given in these Centres will be improved during the plan period. Also, a focal agency which, will have control over all the Pre-Examination Training Centres in the State will be established. This agency will appoint competent persons to handle classes and give training to needy scheduled caste candidates. Hostel facilities for students undergoing training will also be provided. The provision for the Annual Plan 1985-86 is Rs. 2.25 lakhs.

### *Economic Programmes*

#### 12. *Harijan Co-operatives*

This scheme envisages organisation of new co-operatives for Harijans. The existing co-operatives will also be developed. Multipurpose service co-operative societies will be organised. These will include societies for undertaking essential domestic services like plumbing and wiring etc., societies for conducting Mini Bus Services wherever possible and societies for the purchase and cultivation of agricultural land (especially relatively cheap wet lands) by traditional scheduled caste agricultural labourers. An outlay of Rs. 80 lakhs is proposed in the Seventh Plan for this scheme. The 1985-86 outlay is Rs. 12 lakhs.

#### 13. *Training in Trades*

This scheme envisages imparting of training to scheduled caste persons in areas having adequate employment opportunities for the skilled people. Training can be imparted in heavy duty driving, PBX/Telex operation, automobile repairs (especially two/three wheeler repairs), repair of agricultural tools, machinery and equipments, computer programming and console operation, stuffed toymaking, cosmetology etc. Imparting training in entrepreneurial skill development, conduct of market surveys and product design, etc., could also be done. The proposed outlay in the Seventh Plan is Rs. 10 lakhs. The provision in 1985-86 is Rs. 1.50 lakhs.

#### 14. *Financial Assistance as Margin Money for Self-employment Ventures.*

This scheme aims at assisting all technically or traditionally trained scheduled castes in various crafts skill/trades, to set up self-employment ventures. The outlay of Rs. 200 lakhs in the Seventh Plan is also meant for providing assistance to Harijan families engaged in traditional occupations like mat weaving, basket making etc., and professionally qualified persons like doctors, engineers, dentists, advocates, laboratory technicians etc., to set up their own practice/business. The maximum amount of assistance in all cases will be Rs. 5000 but this will be limited to 50% of the project cost. The amount so released will have to be utilised as margin money for obtaining institutional

finance. No direct financing from Department is envisaged. Any venture will be assisted only after a detailed project report is prepared with ensured forward and backward linkages and viability ascertained. The outlay proposed for 1985-86 is Rs. 30 lakhs.

#### 15. *Integrated Development of Most Backward Harijan Habitats*

This scheme envisages identification of the most backward Harijan habitats in each district on the basis of socio-economic indicators and drawing up and implementing development plans for these habitats, after assessing their specific problems and needs. The first phase viz., identification of habits, assessment of problems and needs and preparation of plans will take place during 1985-86, the first year of the plan period. The actual implementation of schemes will begin from the second year of the plan (1986-87). While the primary responsibility for the first phase of the programme rests with the Harijan Welfare Department, participation of relevant departments under Special Component Plan is also envisaged under the scheme. The outlay of Rs. 40 lakhs in the plan is for the aforesaid tasks and subsequent co-ordination efforts. The outlay for 1985-86 is Rs. 6 lakhs.

#### 16. *Production and Training Institutes*

The outlay of Rs. 50 lakhs made in the plan is for running and re-organising production-cum-training Institutes and Training Institutes on the lines envisaged by the Technical Committee constituted by the Government for reorganising the training programme of the Harijan Welfare Department. This committee suggested introduction of modern trades which will open up new avenues of self-employment. Cost of modernising the existing trades and starting of new trades will be from the plan provision. The provision made for 1985-86 is Rs. 7.50 lakhs.

#### 17. *Programmes for Development of Adaptive Technology for Scheduled Castes*

The main planks of these programmes are (i) field programmes on technology demonstration and utilisation and (ii) technology generation and adaptation. Since this is a new approach there is need for evolving programmes specially suited for scheduled castes. Initially it is proposed to start the task of identifying scheduled caste occupation groups their present tools and techniques, the available stock of improved tools and techniques, the gap between the two and possible ways of enabling adoption of the better technology by the occupation groups. The last of these items would entail field demonstration as well as other publicity efforts.

Secondly, there will be efforts to develop better technology and tools for the identified occupation groups. An outlay of Rs. 5 lakhs is provided to meet the expenditure on this scheme in the Seventh Plan. The outlay for 1985-86 is Rs. 0.75 lakh.

### *Social Programmes*

#### 18. *Construction of Houses*

The provision of financial assistance by way of grant and loan to scheduled castes for construction of houses is envisaged under this scheme. The assistance will be restricted to scheduled castes families having an annual income of less than Rs. 4200. The implementing agency will be the Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes. At present the cost of a house is fixed at Rs. 6000. It is proposed to enhance this to Rs. 10,000. Out of this amount Rs. 4000 will be subsidy and Rs. 5000 loan and the balance amount of Rs. 1000 will be beneficiaries contribution. The amount of subsidy and loan will be released in three instalments viz. Rs. 2000 (as advance), Rs. 4000 (basement level), and Rs. 3000 (roof level). An outlay of Rs. 200 lakhs is proposed in the Seventh Plan period for this scheme. The outlay for 1985-86 is Rs. 30 lakhs.

#### 19. *Improvement of Housing Facilities, Environment and House Sites, Including Raising and Strengthening of the Base in Water-logged Areas.*

The Seventh Plan outlay of Rs. 145 lakhs is for providing financial assistance by way of grant and subsidy to improve housing facilities (like hygienic lavatories, bathrooms, electrification and drinking water) in scheduled caste habitats or in individual households. Improvement of house sites including raising the level and strengthening the basement of the houses in waterlogged regions like Kuttanad, Kole lands etc. are also included under this scheme. The provision is also for environmental improvement of scheduled caste habitats. The outlay for 1985-86 is Rs. 21.75 lakhs.

#### 20. *Provision of Common Facilities in Areas of Harijan Concentration*

The outlay of Rs. 50 lakhs made in the Seventh Plan is for construction of common facility centres like community halls in harijan concentrations. Expenditure for construction of kiosks for installing radios or television sets and such other buildings serving a common purpose for the community will also be met from the plan provision. Preference will be given to places where common lands are available. The outlay for 1985-86 under this scheme is Rs. 7.50 lakhs.

#### 21. *Block Level Extension Programme*

The Harijan Welfare Department has at present Block Extension Officers in 68 Blocks. The outlay of Rs. 25 lakhs in the Plan is meant for continuing the scheme in the Seventh Plan. It is also proposed to streamline and improve their functioning. The Block level extension centre set up will function as a centre of guidance for scheduled castes which will provide information on programmes for their development. The preparation and maintenance of beneficiary cards, habitat and family registers, collection of information, thrift campaigns etc. will be the other functions of the units. The outlay earmarked for 1985-86 is Rs. 3.75 lakhs.

## 22. *Provision of Colour Television Sets in Harijan Habitats.*

The provision is for installing television sets in common facility centers in the Harijan Habitats. An outlay of Rs. 10 lakhs is proposed in the Seventh Plan and Rs. 1.50 lakhs for 1985-86.

## 23. *Assistance for Marriages, Major Ailments etc.*

Many scheduled caste families surrender their assets for paltry amounts in order to fulfill family obligations like marriage of girls, medical treatment etc. In order to render financial help to extremely poor scheduled caste girls to get married, the scheme envisages to provide a grant of Rs. 2000 to the parents/guardians of the girls to cover the expenses for conducting the marriage. The outlay of Rs. 10 lakhs in the plan will also be used to assist extremely poor scheduled castes to meet the expenses incurred in connection with major medical treatment. Actual expenses subject to a maximum of Rs. 500 per family incurred for medical treatment will be reimbursed. The outlay for 1985-86 is Rs. 1.50 lakhs.

## 24. *Seasonal Day Care Centres*

This scheme envisages provision of seasonal Day Care Centres for the up keep of children of agricultural labourers who work in waterlogged areas of Kole lands of Ponnani and Trichur and Punja lands of Kuttanad during the agricultural operations. Such day care centres will generally function during peak seasons of agricultural operations. The centres will function in rented houses near the work places and will be in charge of persons engaged on contract. An outlay of Rs. 5 lakhs is proposed in the Seventh Plan. The amount earmarked for 1985-86 is Rs. 0.75 lakh.

### *Purchase of Vehicles*

## 25. *Audio Visual Equipments etc. and Setting up an Electronic Data Processing Unit in the Harijan Welfare Department.*

The publicity wing of the Harijan Welfare Department will have to be provided with a vehicle, necessary audio visual equipments, public address systems etc. It is also proposed to set up an electronic data processing unit including a micro processor for compilation and analysis of data and efficient management of information flow. Besides, it is proposed to procure an electronic typewriter, photo-copier filing cabinets and other modern office equipments. Necessary provision is also included for the introduction of beneficiary cards system through out the State in a phased manner for monitoring the progress of Special Component Plan programmes. Conduct of training for the personnel of the Department for skill upgradation and exposure to modern approaches to administration and management is also envisaged under this scheme. An outlay of Rs. 60 lakhs is proposed for implementing the above programmes during the Seventh Plan period.

In 1985-86, it is proposed to procure a photo-copier electronic typewriter, filing cabinets etc. required for the headquarters office. The Publicity Wing will also be provided with a vehicle, audio-visual equipments and public address system. The beneficiary cards for monitoring the Special Component

Plan schemes will be introduced in three district during the year. An outlay of Rs. 9 lakhs is proposed for 1985-86.

### *Centrally Sponsored Scheme*

## 26. *Enforcement of PCR Act—State Share*

This Centrally Sponsored Scheme aims at promoting social and cultural integration of the scheduled castes with the rest of the society and bringing them into the mainstream. It is found that even with the posting of the Special Police Squad, enforcement of PCR Act has not been possible in a satisfactory way in Chittur and Kasargod taluk of the border districts of Palghat and Kasargod. The main reason for this is the inability of scheduled castes in approaching the Police with complaints, partly arising from their inherent inhibitions. To help these people it is essential that two special officers of the Harijan Welfare Department are posted in Chittur and Kasargod. The scheduled caste victims can approach those officers with their complaints and the officers can directly deal with the police to effect remedial measures. The officers may themselves initiate action in deserving cases besides propagating on protection of civil rights.

Exhibition of hoardings depicting the evils of untouchability, staging of drainas, conduct of seminars, conscientisation campaigns, assistance to voluntary organisations etc. are also envisaged as part of the programme.

The present functioning of the publicity wing of the Department from Trivandrum and Calicut is insufficient and lacks co-ordinated efforts. It is therefore necessary to re-organise the publicity Wing. A periodical publication is to be started to highlight the issues involved in the process of social integration. Expenditure relating to the observance of Social Solidarity Fortnight, Tourism Week celebrations, folk arts festival grants to artistes, literary workshops, assistance for the publication of the works of scheduled castes, production and purchase of films etc. connected with social and cultural integration of the scheduled castes with the rest of the society, could be met from the outlay. Grant to couples of inter-caste marriage who face economic hardships due to social isolation will also be met from the outlay. A total amount of Rs.60 lakhs is earmarked for the programme in the Seventh Plan. The outlay for 1985-86 is Rs. 9 lakhs.

### *B. Welfare of Scheduled Tribes*

According to 1981 census, the scheduled tribe population in Kerala is 2.61 lakhs or 1.03% of the total population. Though the literacy rate of scheduled tribes in Kerala (37.79%) is slightly higher than the all India general literacy rate, it is way behind Kerala's literacy rate. The isolation of tribal people may be one of the reasons for this low literacy level. In the case of isolated communities like Muduvans, Kurichians, and semi-nomadic tribes 'ashram type' schools would still be justifiable in view of their isolation.

In the Seventh Plan the outlay proposed under Tribal Welfare is for educational programmes, training schemes and providing additional facilities for the departmental institutions, funds for infrastructure

development and drinking water facility funds for economic development programmes are expected from the general sector flow, special central assistance and institutional finance. The entire tribal population whether living in the Sub-Plan area or outside will be covered by suitable programmes.

The details of the schemes proposed to be taken up by the Tribal Welfare Department during the plan period are given below:

#### (1) *Strengthening of Administrative Machinery*

In view of the introduction of decentralisation in the planning process of tribal development programmes and introduction of tribal development projects, reorganisation of the Department of Tribal Welfare is necessary. The Project Reports of all the I.D. Projects were prepared during the Sixth Plan period. Full fledged offices of these Projects will start functioning in the Seventh plan. Hence, for the effective implementation of the Plan programmes a reorganisation of the administrative set up is essential. A sum of Rs. 25 lakhs is proposed for 1985-90 for meeting the expenditure on purchase of vehicles and office equipment. The outlay for 1985-86 is Rs. 5 lakhs.

#### 2. *Planning and Statistical Cell*

The Planning and Statistical Cell in the Tribal Welfare Department is at present working with only a skeleton staff. The plan provision of Rs. 10 lakhs is for strengthening the Planning and Statistical Wing for efficient monitoring at State/Project level. An outlay of Rs. 2 lakhs is proposed for 1985-86.

#### 3. *Training of Departmental Personnel.*

This scheme is intended for arranging refresher inservice training to the officers working in the Tribal Welfare Department. The Seventh Plan outlay for the scheme is Rs. 2.50 lakhs and the 1985-86 Annual Plan outlay Rs. 0.50 lakh.

#### 4. *Publicity Wing*

The plan provision of Rs. 10 lakhs is for meeting the expenses of the publicity wing of the Department. The outlay for 1985-86 is Rs. 2 lakhs.

#### 5. *Improvement of Infrastructure Facilities*

It will be possible to attract funds available under programmes like NREP and IRDP for the improvement of infrastructure facilities in the tribal areas. But there is no restriction on the proportionate expenditure on cost of materials used under this programme. So the outlay of Rs. 10 lakhs provided in the plan is to meet the excess cost of materials so that funds can be used for works in tribal area

#### 6. *Tribal Hostels*

This scheme aims at providing boarding and lodging facilities to scheduled tribe students. Many of the hostels are now functioning in rented buildings. It is proposed to construct buildings for seven hostels and to start ten new hostels during the Seventh Plan period. A total outlay of Rs. 60 lakhs is suggested for this scheme in the Seventh Plan. An amount of Rs. 9 lakhs is provided for 1985-86 to commence construction and to start two new hostels.

#### 7. *Balawadies and Creches*

Buildings for 100 balawadies will be constructed under RLEGP by the Development Department. This provision is to meet the extra material/labour cost involved in the construction. The outlay for the Seventh Plan is Rs. 15 lakhs. In 1985-86, buildings for 20 balawadies will be constructed at a cost of Rs. 3 lakhs.

#### 8. *Grants to Voluntary Organisations*

This scheme is intended for giving assistance to voluntary organisations for the construction of buildings, to run hospitals, residential schools, balawadies etc. in tribal areas for the benefit of scheduled tribes. The assistance is limited to 50% of the total cost of construction. The outlay in the Seventh Plan for this scheme is Rs. 6 lakhs and that for 1985-86 is Rs. one lakh

#### 9. *Assistance to Students Studying in Tutorials*

The scheme is for giving stipend and tuition fees to scheduled tribe students who failed in the S.S.L.C. examination and are studying in tutorials. The provision of Rs. 30 lakhs proposed in the Seventh Plan is for giving assistance to 3000 students during the plan period. In the Annual Plan 1985-86, 600 students will be benefited by this scheme. An outlay of Rs. 30 lakhs is proposed in the Seventh Plan and Rs. 6 lakhs in the Annual Plan for 1985-86.

#### 10. *Girls Hostels—State Share*

Under this Centrally sponsored scheme an outlay of Rs. 60 lakhs is provided for construction of buildings to run girls' hostels. It is proposed to construct buildings for 15 hostels during the Seventh Plan period. For the year 1985-86 an amount of Rs. 12 lakhs is provided for this purpose.

#### 11. *Boarding Schools*

This is a new scheme proposed with a view to giving special tuition and intensive training to scheduled tribes students. Three public school model residential schools are proposed to be started in 1985-86, mainly for students belonging to most backward tribal communities. The plan outlay of Rs. 30 lakhs is to meet the expenditure for establishing the schools, construction of building and providing lodging facilities. The 1985-86 outlay is Rs. 5 lakhs.

#### 12. *Tutorial System*

This new scheme is for giving special tuition to scheduled tribe students studying in schools. It is linked up with some incentives to teachers as follows:—

(i) At the eighth and ninth standard level, standard remuneration will be calculated according to the number of students. (ii) At the S.S.L.C. level a standard remuneration and incentive will be fixed for the teachers conducting the tuition classes and for the Headmaster based on the percentage of pass of scheduled tribe students at the S.S.L.C. and on the number of first classes. (iii) Separate awards

to the best school, best students and rank holders in all the districts. (iv) Incentive awards to teachers who prepare students to National Talent Search Examination.

The outlay of Rs. 10 lakhs earmarked for the scheme also includes provision for extending the scheme to scheduled tribe students studying in Arts, Science and Professional Colleges. Under the scheme additional incentives will be given to teachers and students belonging to most backward tribals like Adiyans, Paniyans, Kadars, Kurumbas etc. The outlay for 1985-86 is Rs. 2 lakhs.

#### 13. *Dormitories*

The family surroundings of scheduled tribe students are not conducive to pursuit of their studies. If dormitories with proper supervision and guidance are available these students will be able to make use of them and concentrate on their studies. Under this scheme dormitory facilities will be provided for tribals students in selected panchayats. An outlay of Rs. 5 lakhs is proposed in the Seventh Plan for this scheme. The plan provision for 1985-86 is Rs. one lakh.

#### 14. *Training Centres*

Three production-cum-training centres are now functioning under the Tribal Welfare Department for giving training to scheduled tribes in weaving, rattan work and carpentry. During the Seventh Plan period separate training centres will be opened to train educated scheduled tribe youths for self employment. Diversification of trades will be introduced. In 1985-86 two such centres will be started. The amount required for the construction of building for the training centres is also included under the scheme. The Seventh Plan allocation for the scheme is Rs. 10 lakhs and the allocation for the first year of the Plan will be Rs. 2 lakhs.

#### 15. *Colonisation*

This scheme is for settling semi-nomadic tribals such as Kadars, Kurumbas, Cholanaickens, Kattunaickens etc., in forest lands or lands set apart for this purpose. A provision of Rs. 25 lakhs is made for establishing five colonies during the Seventh Plan. Two of the colonies will be set up in 1985-86 at a cost of Rs. 10 lakhs.

#### 16. *Training in Popular Trades*

This is a scheme introduced during Sixth Plan period for giving training to tribal youths in motor driving, repair of pumpsets etc. The duration of training is six months. It is proposed to extend the training facilities to different regions and to fix the period of training according to the requisites of the trade. The proposed outlay of Rs. 25 lakhs in the Seventh Plan is for continuing this scheme and to impart training to 1500 scheduled tribe candidates. The outlay for 1985-86 is Rs. 5 lakhs.

#### 17. *Hamlet Development Programme*

For the integrated development of tribal hamlets, selected programmes will be implemented in the individual hamlets. Programmes like supply of

goats, construction of wells, provision of electricity etc. will be implemented in accordance with the necessity of individual hamlets. Housing component, if any, will be included under the housing scheme. During Seventh Plan period 35 hamlets are proposed to be taken up for the implementation of this scheme. The outlay for the Seventh Plan will be Rs. 180 lakhs and that for 1985-86 Rs. 38 lakhs.

#### 18. *Financial Assistance to Small Entrepreneurs*

This scheme is for giving assistance at the rate of Rs. 2000 to scheduled tribes for schemes like starting petty shops, cycle shops, electrical units etc. During the period 1985-90, 500 tribal entrepreneurs are proposed to be assisted for starting petty shops, cycle shops etc. An outlay of Rs. 10 lakhs is proposed in the Seventh Plan. The physical target for 1985-86 is 100 and financial target Rs. 2 lakhs.

#### 19. *Rehabilitation of Bonded Labourers*

This Centrally sponsored scheme aims at establishing colonies and collective farms for the rehabilitation of released bonded labourers. An amount of Rs. 25 lakhs is provided as the State share of this scheme. The outlay for 1985-86 is Rs. 5 lakhs.

#### 20. *Training of Tribal Women in Home Science*

As the Seventh Plan lays special emphasis on programmes of women's development it is proposed to give training to tribal women in Home Science. A provision of Rs. 5 lakhs is proposed for the scheme in the Seventh Plan and Rs. 1 lakh in 1985-86.

#### 21. *Housing*

This scheme is intended for providing assistance to scheduled tribe families for the construction of houses. It is proposed to construct the houses using local available materials. Altogether 1,500 new houses are proposed to be constructed during the period 1985-90 in addition to the spillover works. In 1985-86, 300 new houses will be constructed. The outlay for the Seventh Plan for this scheme is Rs. 135 lakhs. The provision for 1985-86 is Rs. 27 lakhs.

#### 22. *Repairs of Existing Houses and Wells of Tribes*

A large number of houses have already been constructed for scheduled tribes under various housing schemes. But the tribal people are not able to attend to major repair works. It is therefore necessary to provide funds for the repair of the existing houses and wells owned by Scheduled Tribe families. The Seventh Plan provision for this scheme is Rs. 12 lakhs. The outlay for 1985-86 is Rs. 2.60 lakhs.

#### 23. *Benefit Oriented Camps*

It is proposed to organise medical camps and campaigns in tribal settlements for the health check-up and also to make scheduled tribes aware of their rights and privileges in society. An outlay of Rs. 4.50 lakhs is proposed in the Seventh Plan to organise 100 benefit oriented camps. The outlay for 1985-86 is Rs. 0.90 lakh.

#### 24. Mini Theatre/Cultural Centres

Under this scheme five Mini Theatres/Community Centres are proposed to be constructed in tribal concentrations. The outlay for the Seventh Plan under this scheme is Rs. 10 lakhs. The proposed outlay of Rs. 2 lakhs for 1985-86 is to meet the cost of construction of one cultural centre.

#### 25. Construction of Residential Quarters

This scheme is intended for the construction of residential quarters for the field staff of the Department with a proposed outlay of Rs. 25 lakhs. During the Seventh Plan period 50 quarters are proposed to be constructed and of these ten will be constructed in 1985-86 at a cost of Rs. 5 lakhs.

#### 26. Land Acquisition for Institutions

This scheme is for meeting the cost of acquisition of land intended for construction of Departmental institutions and staff quarters. Most of the Departmental institutions are now functioning in rented buildings. Without adequate accommodation facilities the working of these offices is considerably affected. A provision of Rs. 20 lakhs made in the plan for the acquisition of land for the construction of office buildings. The provision for 1985-86 is Rs. 4 lakhs.

#### 27. Construction of Sub-Office Buildings

The provision of Rs. 40 lakhs is for meeting the expenditure for the construction of offices functioning under Tribal Welfare Department. The outlay made for the Annual Plan of 1985-86 is Rs. 5 lakhs.

#### G. Welfare of Other Backward Classes

##### Educational Concessions and Boarding Grants

The plan provision of Rs. 35 lakhs is for giving educational concessions to students belonging to Other Backward Classes for pursuing pre-matric studies and also for the payment of boarding grants to such students residing in subsidised hostels. The outlay made for the Annual Plan 1985-86 is Rs. 5.25 lakhs.

#### D. Others

##### 1. Kerala State Development Corporation for Christian Converts

The scheme is to extend financial assistance to the Corporation by way of share contribution, grants and loans. The Seventh Plan provision under the scheme is Rs. 10 lakhs. The outlay for 1985-86 Rs. 1.50 lakhs.

##### 2. Kerala Institute for Research, Training and Developmental Studies of Scheduled Castes & Scheduled Tribes

The Institute was established in 1979 as a successor to the Tribal Research and Training Centre established in 1970. This specialised centre for research and evaluation is entrusted with the task of (i) conducting action oriented anthropological studies on culture, life and developmental problems of various tribal communities in the State, (ii) imparting training to officials and non-officials working particularly in tribal areas to understand the life and culture for scheduled castes and scheduled tribes (iii) evaluating programmes undertaken for scheduled castes and scheduled tribes and

(iv) classification of communities. The workload of the Institute (KIRTADS) has increased considerably. KIRTADS has been attending 300 to 400 cases of classification of communities including a number of petitions every year. Therefore KIRTADS will have to be reorganised and strengthened by appointing experienced and competent persons. In 1983-84 land for the construction of the headquarters office building was acquired. The outlay provided is the state share for the scheme and will be utilised for the construction of the headquarters building, strengthening the Department and for taking up following studies:—

- (i) Displacement of tribals on account of construction of dams (hydro-electric projects, irrigation projects and industrial projects)
- (ii) Socio-economic-cultural constraints in the development of Scheduled Castes and backward communities in Kerala.
- (iii) Studies on the functions of Girijan co-operative societies of Wynad.
- (iv) Studies on the primitive tribes.
- (v) Tribal health and medicines among scheduled tribes of Kerala.
- (vi) Ethnological study on various groups among scheduled tribes.
- (vii) Studies on eradication of untouchability
- (viii) Bonded labour system.
- (ix) Evaluation study on I.T.D. Projects at Mananthody Idukki and Nilambur.
- (x) Studies suggested by Government of India.

The outlay for the Seventh Plan is Rs. 100 lakhs. The provision in 1985-86, viz. Rs. 15 lakhs, is mainly for the construction of the office building and strengthening the Department. State outlay proposed for individual items in the Seventh Plan is indicated below:—

	State Share (Rs. in lakhs)
1. Headquarters office and staff quarters (construction)	45.00
2. Furniture	2.50
3. Vehicle	1.00
4. Typewriters, stencil duplicator and calculators	0.50
5. Workshop and Seminars	2.50
6. Salary etc.	15.50
7. Strengthening the Department	7.50
8. Research wing and fellowship	5.00
9. Training Wing	5.00
10. Auxiliary Wing	5.50
Total	100.00

##### 3. Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes

The Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes was registered as a Government Company in 1972 with its headquarters at Trichur. The authorised share capital of the Corporation was Rs. 2 crores, but was raised to Rs. 10 crores in



1980-81. Contribution as grant-in-aid to State Government for investment in the capital from the Central Government was received in the ratio 49:51 between Centre and State. At present there are five regional offices of the Corporation functioning at Trivandrum, Kottayam, Trichur, Palghat and Cannanore. The Corporation has taken up housing programmes and programmes for the economic development of scheduled castes and scheduled tribes. The outlay of Rs. 500 lakhs provided in the plan is for giving assistance to the Corporation by way of share capital contribution of the State Government. The outlay for 1985-86 is Rs. 75 lakhs.

The Corporation has proposals for taking up the following schemes during the Seventh Plan period with funds from the various sources such as institutional finance, HUDCO etc.

- (i) Supply of autorickshaws on hire purchase system.
- (ii) Loan for small business, trades etc.
- (iii) Loan for the purchase of agricultural land
- (iv) Assistance to co-operative societies.
- (v) Loan for the purchase of machinery.
- (iv) Supply of sewing machines.
- (vii) Foreign employment scheme.
- (viii) Margin money for starting industries in the mini industrial estates.
- (ix) Housing scheme
- (x) Starting of vehicle body building unit
- (xi) Establishment of lorry service stations.
- (xii) Construction of office buildings.
- (xiii) Strengthening of the administration of the Corporation.

### Social Welfare

The social welfare programmes implemented in the State in the earlier plans were by and large curative or ameliorative in nature. Attempts were made in the Sixth Plan to integrate the welfare and developmental services. The programmes intended for the welfare and development of children and women also received priority in the Sixth Plan.

The strategy in the Seventh Plan is to expand the social welfare activities giving importance to preventive and developmental programmes. Health-care, education training, employment and rehabilitation of the vulnerable sections will be given due emphasis. The ICDS projects under implementations at present in 60 blocks provide a package of services to women and children such as supplementary feeding, health education, immunisation, medical check up, referral services, functional literacy for adult women and non formal pre-primary education. The strategy is to start ICDS projects in more blocks so as to bring a larger number belonging to the target group under ICDS by the end of the Seventh Plan. This package of services under ICDS with the large scale immunisation programme under Nutrition Bureau would help to lower the present level infant mortality rate of 39 substantially. Higher priority is being given to employment generation programmes for women linked with the scheme vocational training. Besides the scheme for self employment of women, vocational training facilities in modern as well as traditional trades are also envisaged. The revised scheme of 'Employment and Developmental

projects for women envisages provision of employment to over 10,000 women during the Seventh Plan period by involving women's organisations.

A scheme for expansion of vocational training facilities under industrial units in Destitute Homes is also envisaged in Seventh Plan as a part of the strategy for involvement of destitutes' development programmes. The industrial units attached to the Children's Homes and Special Schools have to be continued and expanded with the objective of imparting vocational training to the juvenile delinquents. Emphasis is laid on training and employment of handicapped persons. The voluntary organisations will be involved and a scheme for the payment of financial assistance to them for the establishment of multi-category workshops for employment and training of handicapped persons is to be implemented. The self employment programme for disabled is proposed to enable them to engage themselves in some sort of trade or business suited to their residual capacity. More Homes for the Aged and infirm persons have to be started and grants to orphanages and assistance to mentally retarded children in private institutions have to be continued. Homes for the care and protection of the cured mental patients have to be started during the plan period. The social welfare programmes under Seventh Plan in the State can be broadly grouped into:

- (i) Education, employment and welfare of the handicapped.
- (ii) Child welfare
- (iii) Women's welfare
- (iv) Welfare of the poor and destitutes.
- (v) Probation and after Care Services and
- (vi) Correctional Services

The target group of these programmes are the blind the deaf, the orthopaedically handicapped, mentally retarded, orphans, children, women, destitutes, aged juvenile delinquents and probationers and ex-convicts

#### A. Welfare of the Handicapped

##### 1. Assistance to Mentally Retard Children in Private Institutions

The scheme aims at extension of financial aid to the deserving mentally retarded children studying in private institutions/voluntary organisations whose annual family income do not exceed Rs. 6000 will be paid Rs. 60 per month as scholarship and Rs. 40 as dress allowance and at Rs. 20 as school requisite allowance a year. The scheme provides payment of 50% of such aids to children whose family income falls between Rs. 6,000 and Rs. 8,000 a year. About 150 children will be benefited by the scheme. The provision for the Seventh Plan is Rs. 5 lakhs and of this Rs. 1 lakh is for 1985-86.

##### 2. Self Employment Programme for the Handicapped

The object of the scheme is to extend financial assistance to the physically handicapped persons for undertaking some petty trades or business suited to their residual capacity in order to enable them earn their live lihood. The scheme will benefit 200 persons per year during the Seventh Plan. A provision of Rs. 8 lakhs is made in the Seventh Plan and Rs. 1.0 lakh will be for 1985-86.



### 3. Home for the Handicapped

The scheme envisages provision of two Homes for the Handicapped. The two homes now in operation in the State is not sufficient to cope with the increasing number of homeless handicapped persons. The proposed two Homes can provide accommodation for 40 persons in each home. An outlay of Rs. 12 lakhs is proposed for the construction of the two Homes during the Seventh Plan and Rs. 3 lakhs is earmarked for 1985-86.

### 4. Grant-in-aid to the Handicapped Persons Welfare Corporation

The Handicapped Persons' Welfare Corporation is a specialised agency constituted with the objective of generating employment opportunities for the handicapped and rendering various services for their rehabilitation and welfare. During the plan period the Corporation has planned to implement the following schemes and the proposed outlay is Rs. 43 lakhs. The provision for 1985-86 is Rs. 8 lakhs. The following are the schemes included.

#### (i) Mechanised Bakeries

The Corporation has been asked by Government to start three mechanised bakeries in Kerala. It is proposed to start two projects and the cost including buildings will be Rs. 16 lakhs. The units can provide employment to 30 handicapped persons. The project is more a job oriented one than a profit generating one. An outlay of Rs. 3 lakhs is proposed in the Seventh Plan.

#### (ii) Building for Bakery at Trivandrum

The present bakery at Trivandrum is housed in a rented building. A permanent building is proposed at the Industrial Development Plot at Kulathoor, Trivandrum. The cost of the building is estimated as Rs. 3 lakhs. The proposed outlay for the scheme is Rs. 3 lakhs in the Seventh Plan.

#### (iii) Wood Working Unit

The scheme is for the manufacture of wooden furniture required for Government Departments. The unit can provide employment to 12 handicapped persons. The proposed outlay is Rs. 1 lakh in the Seventh Plan.

#### (iv) Sheltered Workshops/Production-cum-training Centres for the Disabled

The objective of the scheme is to provide training and employment to disabled by establishing multicategory workshops. Each workshop will offer employment to 50 disabled persons. It will also provide training facilities to 15-20 disabled persons. The investment cost for one workshop is worked out Rs. 10 lakhs. The Corporation will obtain bank loan for the working capital and part of the fixed capital. The proposed outlay for the two projects to be taken up during the Seventh Plan period is Rs. 11 lakhs.

#### (v) Production Centres

Three production centres for the manufacture of consumable items is proposed during the Seventh Plan period. The total cost required is worked out at Rs. 25 lakhs. Three centres can together provide employment to 45 handicapped persons. The units, though not

labour intensive, are anticipated to earn good margin of profits. The outlay proposed is Rs. 4 lakhs in the plan.

#### (vi) Housing Scheme for the Handicapped Persons

This scheme is proposed to be implemented on a phased programme and every year 200 families will be assisted. Families in the low income group having 2 cents of land of their own will be the beneficiaries. An amount of Rs. 6,000 is estimated for the construction and financing pattern is Rs. 4000 by HUDCO, Rs. 1,000 as loan from Corporation and Rs. 1000 as contribution of the beneficiary. The proposed outlay in the Seventh Plan is Rs. 15 lakhs.

#### (vii) Assistance to Co-operative Societies and Small Scale Industrial Units run by Handicapped Persons

This scheme envisages extension of financial assistance by way of hire purchase of machinery to co-operative societies and small scale industries units run by voluntary organisations and handicapped persons at the rate of Rs. 15,000 to Rs. 20,000 a unit. An amount of Rs. 6 lakhs is provided in the Seventh Plan.

The total investment for the seven schemes proposed to be undertaken by the Corporation during the plan period is worked out as Rs. 96 lakhs out of which Rs. 53 lakhs will be raised from institutional finance and participation by beneficiaries and the balance of Rs. 43 lakhs has to be contributed by State Government under the plan. Expenditure on the projects by source is given below:

#### Expenditure on the Projects by Source

(Rs. in lakhs)

Projects	From Institutions and members	From state Government under plan	Total Cost
1. Production Centres	4	4	8
2. Sheltered workshops	9	11	20
2. Bakery (Mechanised)	13	3	16
4. Building for bakery at Trivandrum	..	3	3
5. Wood working unit	3	1	4
6. Housing scheme for handicapped persons	24	15	39
7. Assistance to Co-operative Societies and S.S.I. units run by handicapped persons	..	6	6
Total	53	43	96

### B. Women's and Children's Welfare Programmes

#### (a) Child Welfare

##### 1. Creches -cum-Day-Care Centres in Unorganised Sector

The objective of this scheme is to provide better care and feeding to children below 3 years and enable the poor women undertake gainful outdoor work to

supplement their family income. It is proposed to start 100 Day Care Centres in places where fishermen, bricks and tile workers, cashew, coir and handloom workers are engaged in their occupations. The programme will be implemented by extending financial assistance to voluntary organisations. An outlay of Rs. 10 lakhs is provided in the Seventh Plan. An amount of Rs. 2 lakhs is earmarked for the Annual Plan 1985-86.

#### 6. Assistance to Voluntary Organisations for Pre-school Education

This scheme envisages provision of financial assistance to the voluntary organisations for the purchase of toys, teaching aids, furniture etc., at a rate of Rs. 1000 per institution. The target is provision of assistance to 1000 pre-primary school institutions during the Seventh Plan period. The Seventh Plan outlay for the scheme is Rs. 7 lakhs. An amount of Rs. 1.50 lakhs is proposed for the Annual Plan for 1985-86.

#### 7. Integrated Child Development Service—State Sector

Integrated Child Development Service Programme was started in the State in 1975 under Central Sector with 100% Central assistance and under the State Sector with state finance availing of UNICEF assistance. At present there are 24 State Sector projects and 37 central sector projects in the State.

The package of services under ICDS includes supplementary nutrition, immunisation, health check-up, referral services, nutrition education, pre-school education etc. The target group of the programme is primarily children in the vulnerable age group of 0 to 6 years and pregnant and nursing mothers. When new ICDS projects are introduced in the State, Blocks which are not having ANP may be selected for the purpose which number about 27.

The outlay proposed is Rs. 300 lakhs for the continuance of the State sector project and for starting new projects. The provision for 1985-86 is Rs. 35 lakhs.

#### (b) Women's Welfare

##### 8. Socio Economic Programme for Women

The objective of the scheme is to extend financial assistance to women of low income group to start some petty trade or business and enhance their family income. During the Seventh Plan period 95 Blocks which are the most backward ones will be selected. From each Block 100 women will be identified and every beneficiary will be given financial assistance of Rs. 1000. The outlay proposed in the Seventh Plan is Rs. 95 lakhs. An amount of Rs. 15 lakhs is required for the Annual Plan 1985-86.

##### 9. Employment and Development Project for Women

The objective of the scheme is to generate employment opportunities for women in the lower strata of society through voluntary organisation of women. Though a scheme for employment of women through voluntary organisations was introduced in Sixth Plan the objectives of the scheme could not be fully achieved because of the lack of training facilities and other

supporting services. Now a comprehensive scheme for training women has been evolved in collaboration with TRYSEM, Working Women's Welfare Society, the Nehru Youth Club etc. It is proposed to organise Women's Development Societies at Block level under the Charitable Societies Act. The CDPO in each Block/ICDS Project will be the Ex-officio president of the society. The following are the schemes proposed:

Trade	No. of units	Estimated cost	Employment
1. Tailoring and Garment Making Units	50	5.00	110
2. Handloom Weaving Units	4	8.50	100
3. Food Processing Units	25	3.75	130
4. Vegetable Fish and Eggs Marketing	35	2.25	70
5. Bamboo and Fibre Articles Making	10	1.00	25
6. Manufacture of Hosiery Units	5	0.50	10
7. Dairy Units	50	2.50	100
8. Laundry, Dry Cleaning Units	25	5.00	200
9. Tea Shops, Hotels etc.	50	5.00	200
<b>Total</b>	<b>254</b>	<b>33.50</b>	<b>1005</b>

An outlay of Rs. 33.50 lakhs is provided in the Seventh Plan and of this Rs. 20 lakhs is for fixed capital. The outlay required for the Annual Plan 1985-86 is Rs. 3 lakhs.

##### 10. Scheme for Training and Rehabilitation of Women in Distress—State Share

The scheme envisages payment of financial assistance for voluntary organisations, for the training and rehabilitation of women in distress. The financing pattern is that 45% of the total cost is met by Central Government, 45% by State Government and 10% by sponsoring agency. The Kerala Working Women's Welfare Society is now involved in the implementation of schemes of this type during the Sixth Plan period. It is proposed to assist 100 such units during the Seventh Plan period and a sum of Rs. 18 lakhs is proposed for the programme. The programme will benefit 5000 women. The provision for 1985-86 is Rs. 3 lakhs.

##### 11. Working Women's Hostels

The objective of the scheme is to extend aid for the construction of working women's hostels. The provision of Rs. 10 lakhs is for completing the four hostels taken up during the Sixth Plan period. The outlay for 1985-86 is Rs. 2 lakhs.

##### 12. Grant-in-aid to Working Women's Welfare Society

A Working Women's Welfare Society has been registered under the Societies Registration Act with the object of constructing Working Women's hostels.

and to undertake other economic activities for the welfare and development of women. For matching contribution to the Working Women's Welfare Society by Government an outlay of Rs. 10 lakhs is provided in the Seventh Plan and of others Rs. 2 lakhs is for 1985-86.

### C. Welfare of Poor and Destitute

#### 13. Grant-in-aid to Orphanages—State Share

The scheme envisages payment of grant-in-aid to voluntary organisations for the care, protection, education, and training to orphans and destitute children and also for providing grant-in-aid for the construction of buildings. This is a centrally sponsored scheme with 50% central assistance. About 250 institutions benefiting some 1850 inmates will have to be given the maintenance grant-in-aid at the rate of Rs. 60 per child per month during the plan period. Besides maintenance cost, salaries of the staff and the rent of the building are also to be met from the provision proposed. The proposed outlay of Rs. 40 lakhs towards is State's share for the scheme. An outlay of Rs. 8 lakhs is provided for Annual Plan 1985-86.

#### 14. Industrial Units in Destitute Homes/Abalamandirs

The objective of the scheme is to enable the destitutes to participate in productive activities by providing vocational training etc. The existing industrial units for the destitute and the poor started under the previous plans are inadequate to cope with the increased number of inmates in Destitute Homes or Abalamandirs, homes for the aged, shelters for waifs and strays, foster homes, beggar homes etc. Additional units have to be started in these institutions to provide vocational training to the destitutes and divert them to productive channels. It is proposed to start 40 additional units and Rs. 20 lakhs is provided in the Seventh Plan. The outlay for 1985-86 is Rs. 4 lakhs.

#### 15. Buildings for the Social Welfare Institutions

Various social welfare institutions started under the previous plans are all housed in rented buildings. For accommodating these institutions for various categories of destitutes a scheme for constructing suitable buildings with minimum facilities may be implemented during Seventh Plan period. Government land if available may be utilised for the construction of these buildings. It is proposed to construct five buildings one in each year of the plan period. In each building 50 persons are anticipated to be accommodated. The outlay provided is Rs. 35 lakhs in the Seventh Plan. An amount of Rs. 7 lakhs is provided for 1985-86.

#### 16. Home for Cured Mental Patients

The accommodation of cured mental patients has posed a problem to the Mental Hospital authorities for long. The relatives of these cured mental patients are reluctant to receive them back after their prolonged life in mental hospitals. Moreover the mental health of the cured persons is liable to constant deterioration due to co-existence with other mental patients. Therefore, it is proposed that at least two homes one at

Trivandrum and another at Calicut to be started to accommodate 50 persons in each with a reasonable standard of facilities.

Of the total outlay of Rs. 38 lakhs provided in the Seventh Plan, an outlay of Rs. 10 lakhs is for 1985-86.

### D. Correctional Services

#### 17. Strengthening of Probation Services

The probation service is rendered under provisions of the Probation of Offenders Act. Twenty nine posts of Probation Officers have been sanctioned so far and the servicing has to be strengthened suitably to cope with the Government of India directive to appoint at least one Probation Officer for every 2 Criminal Courts. Accordingly 15 posts of Probation Officers are to be additionally provided with supporting staff in the Seventh Plan. The outlay of Rs. 12 lakhs is proposed to continue the existing probation service and strengthening it. The provision in 1985-86 is Rs. 2.50 lakhs.

#### 18. Industrial Units in Government Children's Homes and Special Schools/Balamandirs

The objective of the scheme is to accelerate the process of rehabilitation of the inmate in Government Children's Homes and Balamandirs by expanding the existing training facilities in the 6 industrial units attached to the Children's Homes. In addition to the industrial units, a printing and book binding unit in the Government Children's Home and special school, Calicut, is also proposed to be started during the Seventh Plan period. About 350 children will get the benefit of training in these institutions. The outlay provided in the Seventh Plan is Rs. 7 lakhs. An amount of Rs. 2 lakhs is provided in the 1985-86 Annual Plan.

#### 19. After Care and Follow-up Services

The objective of the scheme is to extend financial aids to the deserving ex-convicts and probationers enabling their social rehabilitation, by starting some industry, trade or business. A sum of Rs. 1,500 to Rs. 2,000 has to be extended to each beneficiary and the programme is intended to benefit 60 persons every year. A provision of Rs. 5 lakhs is made in the Seventh Plan. An amount of Rs. 1 lakh is provided in the Annual Plan 1985-86.

#### 20. Implementation of Children Act

The Kerala Children's Act 1972 and the Kerala Children's Rules 1976 were brought into force with effect from 1-4-1978. According to the Kerala Children's Act and Kerala Children's Rules, Government have to maintain Children's Homes and Special Schools, Observation Homes etc. There are also children's courts in all the Districts except two. In order to speed up the implementation of the provisions of the Act and the Rules a special unit has been formed at the headquarters. The outlay of Rs. 5 lakhs provided is for the continuance of the scheme under Children's Act. The outlay required for 1985-86 is Rs. 1 lakh.

**Others****21. Special Component Plan**

It is proposed to implement the following programmes under Special Component Plan:

- (a) Pre-matric scholarship for Physically Handicapped students in I to VII Std.,
- (b) Socio-economic programme for women,
- (c) Employment and Development Projects for women,
- (d) Scheme for training and rehabilitation,
- (e) Creches-cum-Day Care Centres in the unorganised sector for women in distress.

A total outlay of Rs. 85 lakhs is provided in the Seventh Plan for this scheme. The outlay for 1985-86 is Rs. 18 lakhs. The following are the components of the Special Component Plan.

**(a) Pre-matric Scholarships for Physically Handicapped Students:**

The provision is meant for payment of scholarship to physically handicapped students in Std. I to VII belonging to scheduled castes. A disabled child in lower primary standard is paid a monthly scholarship at the rate of Rs.30 plus a school requisite allowance of Rs. 25 per year. At the upper primary level an amount of Rs. 45 as monthly scholarship and Rs. 40 per year as school requisites is paid. The scheme will benefit 5500 physically handicapped students. The Seventh Plan outlay proposed is Rs. 20 lakhs.

**(b) Socio-economic Programme for Women**

This is a component of the scheme "Socio-economic Programme for Women" under Women's Welfare. The outlay proposed is to extend financial assistance for self-employment of 4500 women belonging to Scheduled Castes. The outlay proposed is Rs. 45 lakhs in the Seventh Plan.

**(c) Employment and Development Projects for Women**

The outlay proposed is to extend the benefits of the scheme "Employment and Development Projects for Women" exclusively to women belonging to scheduled castes. Under this scheme development projects will be started in areas predominantly occupied by scheduled castes. The provision made is Rs. 10 lakhs in the Seventh Plan.

**(d) Schemes for Training and Rehabilitation of Women in Distress**

The outlay proposed is for extending the benefits of the scheme "Training and Rehabilitation of Women in Distress" to about 400 women belonging to scheduled castes by starting production-cum-training centres in areas having concentration of scheduled castes. The Seventh Plan outlay proposed is Rs. 5 lakhs.

**(e) Creches-cum-Day Care Centres in Unorganised Sectors**

The scheme "Creches-cum-Day Care Centres in unorganised sectors" is proposed to have special component for the benefit of scheduled castes. The outlay proposed is for starting 250 creches for the benefit of Scheduled Castes under the Scheme during the plan period to benefit 7500. The proposed outlay in the Seventh Plan is Rs. 5 lakhs.

**22. Tribal Sub-Plan**

The following schemes are to be implemented in Tribal Sub Plan areas for the benefit of women belonging to scheduled tribes with an outlay of Rs. 15 lakhs during the Seventh Plan. The provision for 1985-86 is Rs. 3 lakhs. The following are the two components of the Tribal Sub Plan.

**(i) Socio-economic Programme for Women**

Under this scheme each unemployed tribal woman will be paid Rs. 1000 each for starting any petty trade or business. The target is to extend financial assistance to 500 women of the above category during the plan period. An outlay of Rs. 5 lakhs is required to achieve the above target.

**(ii) Employment and Development Projects for Women**

Attempts will be made during the plan period to organise productive activities for the welfare of tribal women. The scheme is anticipated to benefit about 500 tribal women during the plan period. The proposed Seventh Plan outlay is Rs. 10 lakhs.

**Nutrition**

The State is implementing various nutrition programmes to combat malnutrition among children and pregnant and lactating mothers. The programmes introduced on various occasions without proper co-ordination has resulted in overlapping, duplication of beneficiaries, and the neglect of some backward areas. The Government have decided to lay special stress on the nutrition programme in the coming years. The Integrated Child Development Service (ICDS) will be the only nutrition programme for pre-school children and pregnant and lactating mothers in future, even though the Applied Nutrition Programme (ANP) will continue in a few non-ICDS Blocks till the ICDS is extended to these Blocks. State, District and Block Level Committees will be constituted to provide effective co-ordination and efficient implementation of the nutrition programme in the State.

The nutrient content of feeding will be rationalised in collaboration with the State Nutrition Bureau. The production programme under ANP implemented by Development Department will be extended and streamlined through the network of Mahilasamajams which number about 1000 in the State. In Seventh Plan it is proposed to take up an extensive nutrition education programme.

The food component of mid-day meal, in L.P. Schools has till now been met by CARE since its introduction in 1961. CARE has informed its decision to withdraw its assistance for 9 lakhs children from

November 1984. Therefore it is necessary to provide adequate funds in the plan to purchase food materials for 9 lakh children. The major thrust of nutrition programme in the State is extension of ICDS Programme to health education and production of food materials. The following are the programmes envisaged under the Seventh Plan:—

#### I. *Special Nutrition Programme in ICDS*

1. *Integrated Child Development Service (ICDS) Scheme* is financed by Central Government except supplementary nutrition programmes which has to be financed by the State Government under the State's Minimum Needs Programme. The Commitment of the State in each central ICDS project is worked out as Rs. 11.5 lakhs per year. An outlay of Rs. 673.20 lakhs is proposed for the continuance of the existing projects and for starting new projects in the Seventh Plan. The outlay for 1985-86 is Rs. 105 lakhs.

#### 2. *Special Nutrition Programme (Outside ICDS)*

##### (i) *SNP in Urban Areas*

The objective of this scheme is to supplement the diet of eligible beneficiaries with 5 to 6 gms. of protein and 250 to 300 calories of energy per day-at a rate of 30 paise per beneficiary. S.N.P. will here after be continued only in urban areas not covered by I.C.D.S. programme. Therefore the upgradation of the SNP centres will be made giving priority to Non-ICDS and Non-ANP blocks which number only 27. In the Seventh Plan, 2200 SNP Centres are proposed to be upgraded as Anganawadies involving 2,20,000 beneficiaries. An outlay of Rs. 150 lakhs is earmarked for the plan period. The outlay for 1985-86 is Rs. 20 lakhs.

##### (ii) *Applied Nutrition Programme (ANP) and Composite Programme for Women and Pre-School Children (CPWP)*

The objective of ANP is to provide education in nutrition, child care, family planning, production of nutritionally valuable local foods like vegetables, fruits, eggs etc., and supplementary feeding to pre-school children and pregnant and lactating mothers. There will be 1.9 lakh beneficiaries spread over the remaining 63 Non-ICDS Blocks under ANP. There is also CPWP programme in 27 Non-ICDS Non-ANP Blocks. The proposed outlay in the Seventh Plan is Rs. 150 lakhs towards the running of CPWP programme and Rs. 25 lakhs for A.N.P. programmes. The 1985-86 outlay for these two programmes is Rs. 25 lakhs.

##### (iii) *Integrated Health Package Programme*

The objective of the scheme is to provide supplementary feeding, conduct of baseline survey, immunisation, medical checkup, referral services, education in health nutrition and environmental sanitation etc. An outlay of Rs. 50 lakhs is proposed for supplementary feeding in 27 blocks (other than ICDS and ANP blocks) and continuance of other activities. The outlay for 1985-86 is Rs. 10 lakhs.

Total outlay required for the above three programmes outside ICDS is worked out at Rs. 375 lakhs in the Seventh Plan. A sum of Rs. 55 lakhs is earmarked for 1985-86 Annual Plan.

#### III. *School Mid-day-Meal Programme*

The food materials for the school meals programme in operation since 1961 were supplied by the CARE. The CARE has informed its decision to withdraw its assistance to 9 lakhs beneficiaries from November, 1984 onwards. CARE materials will be available for feeding only about 6.5 lakhs children during Seventh Plan period. Therefore in order to continue the school-mid-day meal programme for the 9 lakh children who will not get CARE food assistance, an amount of Rs. 3200 lakhs is provided in the Seventh Plan. Separate provision is made under special component plan for school children belonging to Scheduled Castes. The provision for 1985-86 is Rs. 500 lakhs.

#### IV. *Special Component Plan*

Under the Special Nutrition Programme in ICDS and outside ICDS, special feeding centres are in operation in areas predominated by scheduled castes. Necessary provision to continue the programme is made in the plan, under school mid-day-meal programme. About 50% of the beneficiary children belong to scheduled castes. An outlay of Rs. 3025 lakhs is proposed in the Seventh Plan and Rs. 485 lakhs for 1985-86 under Special Component Plan.

#### V. *Tribal Sub Plan*

The following three programmes are proposed under Tribal Sub Plan.

##### (i) *Nutrition Kitchen in Tribal Areas under State Nutrition Bureau:*

The object of this scheme is to establish nutrition kitchens in tribal concentrated blocks, dissemination of knowledge on nutrition etc. It is proposed to start the programme in 35 Primary Health Centres. An outlay of Rs. 21 lakhs is proposed in the Seventh Plan.

##### (ii) *Tribal ICDS at Attappady:*

The nutrition component of the Tribal ICDS at Attappady has to be met from the resources under State Plan. An outlay of Rs. 15 lakhs is required for the scheme during the plan period at the rate of Rs. 3 lakhs per annum.

##### (iii) *Tribal Sub-Plan under School Mid-day-Meal Programme*

In order to continue and strengthen this programme so as to cover 11700 tribal children an amount of Rs. 152 lakhs is required in the Seventh Plan. Considering the high level of malnutrition and under-nutrition among the tribal children per capita daily ration worth Rs. 1 has to be provided in the plan.

##### (iv) *Tribal Sub-Plan under ANP*

An outlay of Rs. 7.80 lakhs is provided in Tribal Sub-Plan under ANP for supplementary feeding for the exclusive benefit of 800 beneficiaries.

Total outlay required for the above programmes under the Tribal Sub Plan during the plan period is worked out as Rs. 195.80 lakhs. The outlay required for Annual Plan 1985-86 is Rs. 38.50 lakhs.

VI. *Others**State Nutrition Bureau*

The programmes initiated by the Nutrition Bureau during the previous plans have to be continued in the Seventh Plan. The total outlay earmarked for State Nutrition Bureau in the Seventh Plan is Rs. 31 lakhs. The outlay for 1985-86 is Rs. 8 lakhs.

The following are the programmes proposed to be implemented under the State Nutrition Bureau:

(i) *Building for Nutrition Bureau*

The Nutrition Bureau proposes to construct a building to accommodate the nutrition laboratory, nutrition museum, class room, audio-visual room etc. An outlay of Rs. 16 lakhs is provided in Seventh Plan for this purpose.

(ii) *Purchase of Equipment, Chemicals and Books for Nutrition Bureau*

For accelerating and rationalising the activities of the Bureau equipments such as UV spectro photometer, reaction rate photometer, automatic food analyser, refrigerator, macrowave oven etc., are necessary. The equipments will enable measurement of cholesterol among people, and help study the effect of coconut protein on cholesterol, loss of nutrients on cooking and vitamin 'A' status of people etc. The proposed outlay in the Seventh Plan is Rs. 7 lakhs.

(iii) *Prophylaxis Against Nutritional Anaemic*

The prophylaxis programme against Vitamin 'A' deficiency and anaemia started in 1970 is to be continued as moderate and severe anaemia (haemoglobin level below 9 and 7 g/dl) are still as high as 30% and 10% respectively. An outlay of Rs. 1 lakh is required to undertake proper monitoring and evaluation.

(iv) *Nutrition Education*

It is necessary to provide nutrition education through film shows, newspaper advertisements, publication of pamphlets, holding of seminars, conducting classes for various categories of people etc. An outlay of Rs. 5 lakhs is proposed for this item.

The details of outlay for various activities proposed under State Nutrition Bureau during the Seventh Plan period are given below:

	<i>Rs lakhs</i>
1. Building for Nutrition Bureau	16.00
2. Purchase of equipment, chemicals books etc. for Nutrition Bureau	7.00
3. Prophylaxis against nutritional anaemia	3.00
4. Nutrition Education	5.00
<b>Total</b>	<b>31.00</b>

11.10 **Other Programmes****General Economic Services**1. *Planning Board*

The State Planning Board is the central agency in the State charged with the responsibility of formulation of long term, medium term and annual plans of the State. The Board continually undertakes studies on the various aspects of the State's economy including the financial and material resource potential, with a view to improving the planning process. The headquarters office of the State Planning Board has to be strengthened suitably in order to enable it to carry out effectively the increasing responsibilities which devolve on it.

The Government of Kerala has recently issued orders for the phased decentralisation of planning functions to the district and lower levels. The district planning units will have to shoulder heavy responsibilities as a result of this. The units in the districts are now thinly staffed and will have to be strengthened considerably to take up the functions now envisaged. The following schemes are, therefore, proposed under the Planning Board.

(i) *Strengthening of the State Planning Board and District Planning Units- State Share*

The State Planning Board at present has the following divisions:-

1. Agriculture Division
2. Projects Division
3. Industries Division
4. Transport Division
5. Social Services Division
6. District Planning Division
7. Evaluation Division
8. Economics Division
9. Perspective Planning Division
10. Data Bank

The Social Services Division, at present attends to the work relating to a large number of subheads such as education, health, water supply, housing, nutrition, welfare of backward classes and social welfare. It is necessary to organise separate divisions at least for the major areas of health and education and to develop specialisation in these areas. The Data Bank also has to be strengthened.

The district planning units in the districts are at present provided with a nucleus staff only. It is now proposed to start the formulation of district plans from 1985-86. This would necessitate the presence of subject matter specialists in the district planning units. It is, therefore, proposed to strengthen the district planning units by appointing technical personnel such as an Agronomist and Engineer. The co-ordination and integration of district plans with the annual plans of the State will greatly enhance the workload of the District Planning Division in the head office. This Division, therefore, is proposed to be strengthened suitably.

An outlay of Rs. 100 lakhs is provided in the Seventh Plan as the State Share of the Scheme. In the annual plan of 1985-86, the outlay will be Rs. 25 lakhs.

(ii) *Electronic Data Processing in the State Planning Board*

At present, the Data Bank functioning in the State Planning Board, has no facility for modern and scientific storage and retrieval of information. It is essential that the Data Bank is provided with a minicomputer and the requisite peripheral equipment. The Central Planning and Monitoring Unit in the State can also utilise this computer facility for the timely preparation of progress statements.

An outlay of Rs. 30 lakhs is provided in the Seventh Plan for this purpose. The provision in the annual plan 1985-86 is Rs. 20 lakhs.

(iii) *Data Processing System in the Districts*

Data for the districts and lower levels will be an essential pre-requisite for the detailed planning exercises at that level. It is, therefore, necessary to build up over the next two or three years, a suitable data processing system in the district planning offices. This will also be useful for processing of data collected through surveys and studies. Quick and timely preparation of monitoring reports at the district level will also be facilitated, if such a system is built. It is, therefore, proposed to organise a data processing system in the district planning offices, during the Seventh Plan period for which an outlay of Rs.75 lakhs is included. This will be taken up only during the second year of the plan.

(iv) *Printing Unit in the State Planning Board*

Considerable difficulty is now being experienced in getting printed the reports, papers and statistical compilation of the State Planning Board, because of the increasing pressure of work in the Government Press. Further, only a limited number of copies of such publications are required. Under the circumstances, it is advisable to instal an electronic typewriter and a printing machine in the State Planning Board. An outlay of Rs.6 lakhs is proposed in the Seventh Plan for this purpose. The entire amount is required in 1985-86.

(v) *Surveys and Studies*

Besides the data available from the surveys of the Department of Economics and Statistics, it will be necessary to carry out in-depth studies on various economic and social aspects, so that the findings would be of use in the preparation of plans as well as their implementation. With the implementation of decentralised planning, such studies will have to be undertaken to understand specific district level problems also. An outlay of Rs.29 lakhs is provided in the Seventh Plan for State level studies, of which Rs.5 lakhs is set apart for 1985-86. The district level studies will be undertaken only in later years. But an amount of Rs.42 lakhs is provided in the Seventh Plan.

(vi) *Consultancy*

There is need to hire in the services of Consultancy organisations, to undertake studies of a specialised nature necessary for formulating policies. An outlay of Rs. 34 lakhs is provided for this purpose in the Seventh Five Year Plan.

(vii) *Plan Publicity*

The State Planning Board has been carrying on plan publicity in a limited manner by publishing and distributing publicity materials and by partaking in exhibitions. It is necessary to adopt more modern techniques of publicity. It would be desirable to acquire a projector and to develop visual aids for plan publicity. The Seventh Plan provision for this purpose is Rs.25 lakhs. An outlay of Rs.4 lakhs is provided in the annual plan for 1985-86.

(viii) *Acquisition of Land and Construction of a Building for the Office of the State Planning Board.*

The State Planning Board is now housed in four different rented premises, creating considerable difficulties in the day to day working of the department. It is, therefore, proposed to acquire the requisite land and to construct a building for the Planning Board. The Seventh Plan outlay for this purpose is Rs. 75 lakhs of which Rs.40 lakhs is provided for the annual plan of 1985-86.

2. *Monitoring and Evaluation*(i) *Strengthening of Evaluation Machinery in the State Planning Board.*

The evaluation division of the State Planning Board, at present, conducts evaluation studies on selected plan projects and programmes. The field work for such studies is done by the investigators of the Department of Economics and Statistics. These investigators are generally matriculates and are not always capable of undertaking probing investigations. The State Planning Board has recently appointed one Research Assistant in each district for doing field investigations of evaluation studies. These personnel possess post-graduate qualifications in Mathematics/Statistics or Economics. Besides this, the evaluation unit in the head office has also to be strengthened. The outlay of Rs.20 lakhs provided in the Seventh Plan is for meeting the salary of the above staff. In the annual plan for 1985-86 an amount of Rs.2 lakhs is provided.

(ii) *Monitoring Units*

The Central Planning and Monitoring Unit attached to the Planning and Economic Affairs Department attends to the work relating to the monitoring of plan programmes. There are also monitoring units which are working in a few other departments. It is necessary to strengthen the monitoring units to cope with the increasing workload. It is also necessary to set up monitoring units in a few more implementing departments. In the Seventh Plan, an outlay of Rs.15 lakhs is provided for this purpose. An amount of Rs.1 lakh is provided in the Annual Plan for 1985-86.

(iii) *Manpower Planning Units*

Manpower planning units are now working in six major implementing departments of Government. There is also an apex unit in the Department of Economics & Statistics charged with the responsibility of guiding and co-ordinating the work of the different departmental units. It is necessary to provide more staff to the existing units and also to set up such units

in a few other departments. A provision of Rs.10 lakhs is made for this purpose in the Seventh Plan. The outlay for 1985-86 is Rs.1 lakh.

### 3. Secretariat Economic Services

#### (i) District Development Councils

An outlay of Rs.30 lakhs is provided in the Seventh Plan and Rs.5 lakhs in the annual plan for 1985-86 for meeting the travelling allowances of members of the District Development Councils and related incidental expenditure.

#### (ii) Publication of District Plans and Other District Level Reports

An outlay of Rs.14 lakhs is provided in the Seventh Plan for the above scheme. The provision for 1984-85 is Rs.2.5 lakhs. Besides the annual plans for the districts, it will be necessary in the context of the decentralisation of planning functions to publish more and more reports at the district level. The provision is for this purpose.

#### (iii) Institute of Management in Government

The Institute conducts management development programmes and training, mainly for Government servants and employees of public sector corporations. It is also an approved research institute, carrying on research and studies in management and related problems. It is necessary to support this Institute and develop it into self-sufficient unit. Out of the provision of Rs.60 lakhs in the Seventh Plan, Rs.10 lakhs is provided in the annual plan for 1985-86.

#### (iv) Implementation of Malayalam as Official Language

The programme of implementation of Malayalam as official language has not made the desired degree of progress because of many reasons important among them being the paucity of funds to provide Malayalam typewriters in Government Offices. An outlay of Rs.25 lakhs is provided in the Seventh Plan for this purpose, the provision for 1985-86 being Rs.4 lakhs.

#### (v) Export Promotion Cell

An export promotion cell has been set up in the State to undertake regular studies regarding export potential and performance, so that suitable measures can be devised for the promotion of exports from Kerala. An amount of Rs.10 lakhs is provided in the Seventh Plan for continuing this unit, the outlay for 1985-86 being Rs.1 lakh. The Cell is now functioning in the Industries Department of the Government Secretariat.

### 4. Economic Advice and Statistics

The Department of Economics and Statistics is the agency responsible for the collection and compilation of data on the different aspects of the State's economy. Though significant progress has been made in developing the State Statistical System during the earlier Plan periods there are still gaps in the availability of quality data on a wide range of subjects. Such data gaps become apparent when attempts are made

to formulate development programmes at the district and block levels. Therefore some schemes and surveys have to be taken up during the Seventh Plan period to fill the urgent data gaps and to improve the quality of data. A brief account of the schemes proposed in the Seventh Plan is given below:

#### I Improvement of Data Collection System

##### A. Continuing Schemes

###### (i) District Statistical Units

The importance of planning at the district and block levels has been accepted by both the Central and State Governments. The Sixth Conference of the Central and State Statistical Organisations recommended that strengthening of the statistical machinery at the district and lower levels should be taken up as a core scheme in the Seventh Plan. An amount of Rs. 35 lakhs is proposed for this scheme in the Seventh Plan. The allocation for 1985-86 is Rs. 8 lakhs.

###### (ii) State Income Unit

The fifth Conference of the Directors of Central and State Statistical Organisations stressed the need to collect and interpret data on local bodies/commercial undertakings at the State level on a Census basis by the State Statistical Services. At present owing to limitation of staff the data are being collected only on sample basis. It is therefore proposed to strengthen the State Income Division by creating a public sector finance Unit. The total outlay provided for strengthening the State Income Division in the Seventh Plan is Rs.18 lakhs. The outlay for the Annual Plan 1985-86 is Rs.2.50 lakhs.

###### (iii) Purchase of Vehicles

In order to facilitate efficient inspection of field work, it is necessary to provide vehicles to the district statistical units. This scheme was included in the Sixth Plan but only three vehicles could be purchased. A provision of Rs. 23 lakhs is made in the Seventh Plan for the purchase of vehicles. An outlay of Rs. 7.50 lakhs is proposed in 1985-86.

###### (iv) Design of Surveys and Studies Unit

A unit was set up in 1982-83 for designing surveys and studies and preparing schedules and instructions. The outlay required in the Seventh Plan for continuing this unit is Rs.7 lakhs. The outlay earmarked for 1985-86 is Rs.1.20 lakhs.

###### (v) Strengthening of Prices Unit

The Prices Division is responsible for the collection, compilation, analysis and dissemination of prices and related data. An outlay of Rs. 40 lakhs is earmarked for this scheme in the Seventh Plan. The outlay for 1985-86 is Rs. 9 lakhs.

###### (vi) Mechanical Tabulation Unit

The Department has a Mechanical Tabulation Unit consisting of conventional machines. The Plan outlay for this continuing scheme is for the purchase of punch cards and for meeting the maintenance



expenditure of the punching machines. The amount provided for the mechanical tabulation unit in the Seventh Plan period is Rs.7 lakhs. The outlay for the Annual Plan 1985-86 is Rs. 1 lakh.

(vii) *Inservice Training of Statistical Personnel*

This scheme is intended for giving necessary training to the personnel working in the Department. An outlay of Rs.10 lakhs is provided in the Seventh Plan for continuing this scheme. The outlay for 1985-86 is Rs. 1.30 lakhs.

B. *New Schemes*

(i) *Setting up of a Computer Division in the Directorate of Economics and Statistics*

One of the major problems faced by the Department of Economics and Statistics is the processing, storage and retrieval of the large volume of data collected. There is undue delay in processing the data collected through Census and surveys and in most cases the tabulation is not done in a comprehensive manner. Further due to practical difficulties in keeping the schedules and records in safe storage, reliable data are often lost with the passage of time. To overcome these difficulties it is proposed to set up a Computer Division with a small computer in the place of the existing mechanical tabulation unit. An outlay of Rs.33 lakhs is provided in the Seventh Plan for this scheme. An amount of Rs.5 lakhs is made in the Annual Plan 1985-86.

(ii) *Setting up of a Training Unit in the Directorate of Economics and Statistics*

The functioning of a sound and efficient statistical system in the State depends to a great extent on the technical efficiency of the personnel employed in the Department. With the expansion in the activities of the Department during recent years, there has been a large intake of new staff and it is necessary to upgrade the skills of these personnel, through training. Based on the recommendations of the Central Statistical Organisation it is proposed to conduct, annually 8 training courses, each of six weeks' duration for the staff of and below the level of Statistical Inspector. In each course 40 persons will be trained. For this purpose a regular training unit is proposed to be set up in the Directorate of Economics & Statistics. The outlay for establishing a Training Unit and for conducting the training courses in the Seventh Plan is Rs.27 lakhs. The outlay for the Annual Plan 1985-86 is Rs. 5.40 lakhs.

(iii) *Re-organisation of Library*

The Department of Economics and Statistics, not only supplies data generated by it through surveys and studies, but also collects data from secondary sources and make them available to various departments, public undertakings, research institutions, research scholars etc. The staff of the Directorate have to equip themselves for the conduct of Studies and report preparation. This calls for a good library manned by qualified persons. An amount of Rs.10 lakhs is provided for this scheme in the Seventh Plan. The outlay for 1985-86 is Rs.3 lakhs.

(iv) *Setting up of a Social Statistics Division*

The Department has no Social Statistics Division for the collection and interpretation of data relating to education, health, social welfare, culture, community development etc. Such a Unit is necessary to maintain a data bank on social statistics, to fill up the data gaps and to prepare social indicators. The Committee to review the National Statistical System recommended the need for a full fledged Social Statistics Division in the State Department of Economics and Statistics. The outlay for this scheme is Rs. 12 lakhs in the Seventh Plan. An outlay of Rs. 3 lakhs is provided in the Annual Plan 1985-86.

(v) *Industrial Statistics Unit*

At present the major source of industrial statistics in the State is the Annual Survey of Industries and it covers only the factories registered under the Factories Act. The major gap in the data base in this sector pertains to the unregistered units which account for a substantial proportion of production and employment. To fill this gap the existing Industrial Statistics Unit in the Directorate has to be suitably strengthened. The outlay proposed for this scheme in the Seventh Plan is Rs.10 lakhs, out of which Rs. 2 lakhs is allocation for 1985-86.

(vi) *Co-ordination and Publication Division*

The Co-ordination and Publication Division of this Department is primarily concerned with the co-ordination of the work in the statistical units of other departments and preparation of various publications. This Division needs to be strengthened so as to meet the increasing demand for data from the various departments of the Central and State Governments, Universities, Research Organisations, Research Scholars, etc. The Section should be provided with facilities for taking photo copy of important papers and reports. The outlay earmarked for this Division in the Seventh Plan is Rs. 7 lakhs. The allocation for 1985-86 is Rs. 1 lakh.

(vii) *Housing Statistics Cell*

At present the housing data relating to the private sector is collected only from Municipalities and Corporations. The Scheme proposed is to extend the coverage to the entire State by collecting statistics on house construction undertaken in rural areas also. It is also proposed to construct Index Numbers of Building Cost for each district as suggested by the National Building Organisation and the Ministry of Housing. The outlay proposed for the implementation of this Scheme in the Seventh Plan is Rs.20 lakhs. An amount of Rs.2 lakhs is proposed in the Annual Plan 1985-86.

(viii) *Vital Statistics Unit—Extension of the System of Spot-checks to all Municipalities and Townships*

A system of spot checks was introduced in the Corporations, Municipalities and Towns to estimate the correct vital rates after taking into account the extent of under-registration and events occurring outside. At present, the system of spot checks is carried out only in the three Corporations, 30 Municipalities and Guruvayoor Township. This system needs to

be introduced in the remaining 13 municipalities/townships. An amount of Rs.10 lakhs is earmarked for this Scheme in the Seventh Plan. The outlay in 1985-86 is Rs. 1 lakh.

## II. Surveys and Studies

### A. Continuing Schemes

#### (i) Survey on the Cost of Cultivation and Marketing Surplus of Important Agricultural Commodities

The main objective of the scheme is to build up estimates of the Cost of Cultivation and Marketable Surplus of important crops viz., paddy, coconut, arecanut, pepper, tapioca, banana, ginger and cocoa. The scheme has added importance in view of the decision of the Government to appoint a Prices Commission. The outlay provided for the continuance of the scheme is Rs.22 lakhs. The allocation for 1985-86 is Rs.4.50 lakhs.

### B. New Schemes

Besides the regular surveys undertaken by Department, it is necessary to take up adhoc studies and surveys for obtaining data on important aspects of the State's economy. A list of such studies/surveys is given below:

- (i) Survey on capital formation in the unorganised sector
- (ii) Survey on the utilisation of foreign remittances to Kerala
- (iii) Study of self employment ventures
- (iv) Survey on Small Industrial Units
- (v) Unemployment Survey
- (vi) Goods Traffic Survey
- (vii) Household Consumption Survey.

An amount of Rs.75.50 lakhs is provided in the Seventh Plan for this purpose. The outlay for 1985-86 is Rs.7 lakhs.

## III Centrally Sponsored Schemes

#### (i) Timely Reporting Survey (EARAS)—State's share

The scheme of Establishment of an Agency for Reporting Agricultural Statistics (EARAS) was introduced in the State in 1975-76 as a variant of the Timely Reporting Survey prevalent in the reporting States. The scheme aims at the estimation of land used for various purposes, area under different crops and the production of crops. The design adopted for the survey provides estimates at taluk level for paddy and district level for other crops.

Estimates for lower units such as village, firka or block are now being demanded by various agencies. Therefore the present set up of the EARAS scheme has to be modified in such a way as to provide estimates at the lower levels. The total cost of continuance of the scheme would be Rs.860 lakhs in the Seventh Plan. The State's share for this scheme is Rs. 430 lakhs in the Seventh Plan and Rs. 75 lakhs in 1985-86.

#### (ii) Sample Survey for the Study of Constraints in the Transfer of New Technology under Field Conditions

This scheme sponsored by the Indian Council of Agricultural Research (ICAR) came into operation in 1984-85. The project aims at developing a suitable methodology for studying the effect of different components of new technology for achieving higher productivity of land, determining the extent to which the potential of high yielding varieties has been achieved under field conditions and identifying and investigating constraints and difficulties in the transfer of new technology and suggesting remedial measures. The State share for the Seventh Plan is Rs. 3.50 lakhs. The outlay for the year 1985-86 is Rs.0.60 lakh.

## Other Economic Services

### 1. Regulation of Weights and Measures

The Department of Weights and Measures is the agency authorised to regulate the weights and measures in the State and to enforce the various provisions of the Act and Rules. The various Divisions and District Inspectorates in the State are carrying the work of verification of weights and measures in the various trading establishments, initial verification of new weights, verification of working standard for carrying out surprise and routine inspection of trading and other premises etc. An amount of Rs. 100 lakhs is provided for the operation of the Department during the Seventh Plan period. The outlay in 1985-86 is Rs. 18.05 lakhs.

## General Services

### 1. Stationery and Printing

#### Government Press

A decision has been taken by Government that the Mannanthala Press should be started in 1985. Government have accorded sanction for the construction of a building at Mannanthala for the Press at a cost of Rs. 54.5 lakhs. Other items of work proposed to be taken up during the Seventh Plan period include construction of Press buildings at Quilon, Cannanore, Vazhoor and Wynad. The total cost of machinery to be installed in Government Press, mannanthala is estimated at Rs. 45 lakhs (both Letter Press and Offset Printing). Government have entered into an agreement with H.M.T. Ltd., for setting up of the Press with their help.

During 1985-86 over Rs. 200 lakhs is required for the purchase of machinery proposed to be installed in the new Government Press, Mannanthala.

The total Seventh Plan outlay required for Government Press is Rs. 700 lakhs. An outlay of Rs. 2 crores is set apart for 1985-86 for the purchase of essential machinery items for the Mannanthala Press.

### 2. Public Works

#### Public Building Programme

Public Building Construction Programme includes building construction activities of all Government Departments such as the Judiciary, Legislature, Sales Tax, Revenue, Police, Excise, Fire Force, Treasury etc., which do not have separate plan proposals. At present

many Government Offices are housed in rented buildings which do not have adequate facilities to accommodate the staff. Substantial sums of money are paid every year as rent by the Government. In addition, some of the Government offices are functioning in buildings which require urgent reconstruction. As a result of the increased tempo of development activities, many of the Departments are expanding. These Departments need additional accommodation. All these factors point to the need for a scientific and systematic programme of public building construction in the State.

An efficient organisational set up is essential for the effective implementation of public building construction programme. At present building programmes are handled by various agencies like P.W.D., Housing Board, Rural Development Board, Kerala State Construction Corporation, Universities etc. For proper implementation and achieving economy and speed, adoption of a uniform procedure in the design and construction is essential. This can be achieved by drawing specialists from a specialised agency like P.W.D. In the P.W.D. itself an exclusive wing for 'building construction' could be set up. Designs could be prepared in the Central Design Cell utilising latest techniques. A Research and Development Wing could continually up-date the process of design and construction, in line with latest trends in the field in the advanced countries of the world.

An outlay of Rs. 5000 lakhs is allotted for Public Works Building Programmes in the Seventh Plan. Of

this an amount of Rs. 1500 lakhs is for spillover payments. A large number of building works have been taken up in the past and owing to insufficient provisions many bills are pending payment. An outlay of Rs. 1688 lakhs is set apart in the 1985-86 Annual Plan for Public building works programme. Of this, Rs. 1000 lakhs is for meeting the expenditure on pending bills including those of the Collegiate Education Department.

### 3. *Public Distribution System—Kerala State Civil Supplies Corporation*

The Kerala State Civil Supplies Corporation was incorporated under public sector in the year 1974, under the Companies Act, 1956. The Corporation's role is to regulate the market prices of essential commodities so that essential commodities reach the ultimate consumers at reasonable price. The Corporation distributes commodities through its depots located in all the taluks of Kerala. The sale of consumer items is made through 140 Maveli stores including 3 mobile Mavelis, 1135 Sahakarana Mavelis, 150 Kerala Stores, 12000 A. R. Ds., 102 three wheelers and Super -Market in Ernakulam. The Corporation has also three outlets for vegetables, five petrol bunkers, two outlets for kerosene oil and one for cooking gas. During festival seasons like Onam, Christmas and Bakrid, through the temporary festival markets, the Corporation opens special sales counters in order to check the rise in prices of essential goods. An outlay of Rs. 100 lakhs is provided in the Seventh Plan for the execution of essential infrastructure facilities such as transport, storage etc., by the Corporation. The outlay for 1985-86 is Rs. 15 lakhs.

## FINANCIAL RESOURCES

In the development strategy followed so far in the national plans, the public sector has been assigned a leading role. The public sector investments account for a major share in the aggregate investments in the economy. The Seventh Plan approach document of the Planning Commission states that over the five year period 1985-90 the aggregate investment at 1984-85 prices may be of the order of Rs. 3,20,000 crores of which public sector investment would be Rs. 1,50,000 crores. This would call for a stupendous effort at raising resources during the Plan period.

12.2 The calculations of the Planning Commission are based on the assumption of a 26% savings rate in the economy. The role of the Central and State Governments in mobilising financial resources for the Plan has also been emphasised by the Commission. According to the Approach document "the required resources have to be mobilised in a manner which minimises dependence on external resources or on deficit financing which has a high inflationary potential. In order to do this the public sector will have to generate more internal resources through improvements in efficiency and productivity". It also observes that tax collection can be raised, even without raising rates, by widening the tax net and toning up administration. Some of the other measures suggested are strict controls on Government consumption expenditure, restraints on elitist consumption, mobilisation of resources from the rural sector and incentives for savings.

12.3 The State's Seventh Plan envisages a State Sector outlay of Rs. 3300 crores over the period 1985-90. The sources of finance for the State's Plan consist of: (1) the State's own budgetary resources; (2) Central assistance by way of grants and loans; and (3) funding by institutional agencies. The first two are directly linked to the public sector plan while the third one mainly provides finance for private sector investments.

12.4 The State's own budgetary resources consist of: (1) balance from current revenues at current rates of taxation; (2) contribution of public sector undertakings towards financing of the Plan at prevailing rates of prices and fares; (3) market borrowings by the State Government and State enterprises; (4) State's share of small savings collections, (5) net accretions to State Provident Funds; (6) balance of miscellaneous capital receipts over non-plan disbursements; (7) direct participation of financial institutions like RBI, LIC etc., in State's development programmes and (8) additional resource mobilisation.

12.5 The item one above represents the balance available from current revenues after deducting the non-plan commitments. The earlier Finance Commissions used to categorise Kerala as a deficit State eligible for grant-in-aid under Article 275 of the Constitution to meet the non-plan revenue gap. The State Government represented to the Eighth Finance Commission that the non-plan revenue gap during the five year period 1984-89 would be of the order of Rs. 2692 crores. The Commission's assessment of the gap was only Rs. 635 crores. The State Government argued before the Commission that the grant-in-aid should cover expenditure under the two major welfare programmes

currently being implemented in the State viz., (1) Unemployment Assistance Scheme and (2) Agricultural Worker's Pension Scheme which together would involve budgetary commitments of the order of Rs. 50 crores per annum. But this has not been granted by the Commission. According to the calculations of the Commission there will be a small revenue surplus for the State after devolution of taxes as far as the non-plan revenue position is concerned. But according to present calculations there will be a substantial deficit on this account.

12.6 As far as the State enterprises are concerned, barring a few exceptions all of them are running at a loss. Upto the end of 1983-84 the State Government has invested as equity Rs. 162 crores in public sector Corporations and Companies. The amount of out-standing instalments of loans and interests that are overdue from the state public undertakings works out to nearly Rs. 95 crores. These defaults in the payment of taxes, interests, loan instalments and dividends indicate the extent to which the State finances have been affected by public enterprises. The Eighth Finance Commission has stipulated that during the five years 1984- to 1989 the Transport Corporation should give a return of 3% after taxes and depreciation, that manufacturing and commercial public enterprises should give a return of 5% on investment and that the Electricity Boards should be able to pay fully the electricity duty and interest charges at 7%. It is on this basis that the finances of the State have been assessed by the Commission. This may require both revisions of tariff and prices on the one hand and reductions in working expenses on the other. A Public Enterprises Board has been formed in the State and the question of improving the management of the State enterprises will be taken up on a priority basis during the Seventh Plan period.

12.7 Regarding market borrowings, since the liquidity of the institutional funds has shown phenomenal increase in recent years, it would be possible to mobilise a substantial sum in this regard for financing the Seventh Plan. The open market borrowings of the Centre and the State Governments constituted only 10.4% of the public sector outlay in the First Five Year Plan and gradually increased during the successive Five year Plans and had reached around 20% in the Sixth Plan. At the same time the percentage share of the States in market borrowings shows a declining trend during this period. It ranged between 10% to 17% during the different plan periods upto 1978-79, but remained at the low level of about 10% thereafter.

12.8 The State Government would therefore urge the Planning Commission to formulate rational guidelines for the sharing of the market borrowings. Since in the Seventh Plan the development burden on the States would increase substantially it is only fair that resources raised by market borrowings are shared in a large measure with the States. At the present level, Kerala's share in market borrowings for the period 1985-90 would be around Rs. 266 crores. Unless it is substantially stepped up, the State may not be in a position to implement a plan of the size now proposed, viz. Rs. 3300 crores.

12.9 The small savings and State Provident Funds are the other two items on which the State has registered substantial improvements in recent years. The average annual collections under small savings have crossed Rs. 21 crores. The net accretion of State Provident Funds along with savings deposits brings a revenue of Rs. 36 crores per annum. In the coming years substantial increases are anticipated as there will be an upward revision of the salary of the employees on the basis of the Pay Commission's Report.

12.10 The State has generally been performing well in the matter of raising resources through additional taxation. Except during the Fourth Plan period the performance of the State has always exceeded the targets fixed by the Planning Commission. In the Sixth Plan period the State would be able to raise a total amount of Rs. 110 crores through additional taxation. In the Seventh Plan also the State may have to resort to additional taxation measures in order to raise additional resources.

12.11 The tax administration needs to be streamlined and intensive efforts made for raising additional resources through taxation of land and agriculture during the Seventh Plan period. There is also scope for rationalising the present Sales Tax rate structure. Another potential source for raising additional resources

is revenue collections under the head 'stamps and registration fees' by initiating measures for the prevention of undervaluing of properties in the sale deeds. It is also necessary to tap the non-tax sources such as fees, service charges etc.

12.12 Central assistance would be a crucial factor in determining the size of the State's Seventh Plan. An analysis of the ratio of central assistance to State Plan expenditure over the past plan periods shows a declining trend, thereby implying that the relative quantum of central assistance to the State has been becoming smaller with the successive Five Year Plans. As regards the distribution of central assistance it is time a review of the existing criteria based originally on the Gadgil Formula is made. It may also be mentioned here that though the Central assistance is said to be distributed on the basis of the revised Gadgil Formula the amount that comes within the purview of the formula is only 50% of the total assistance, the balance being earmarked for various purposes.

12.13 A clear picture of the financial resources for the State's Seventh Plan will emerge only after the details of financing the national plan become available. The estimates of State's own resources for financing the plan will be worked out and submitted to the Planning Commission separately.

## ANNUAL PLAN, 1985-86

The proposed size of the State's Seventh Plan is Rs. 3300 crores. The outlay proposed for the 1985-86 Annual Plan is Rs. 549 crores. This constitutes 16.6% of the total outlay. In the allocation of funds for various programmes included in the Annual Plan for 1985-86 the following criteria have been adopted:

- (i) Adequate provision has been made for centrally sponsored schemes so that the State gets the full benefit of the additional assistance from the Centre. Such Centrally Sponsored Schemes which are mainly financed by the State Government and the Central Government on an equal sharing basis (50% each) include important programmes such as the I.R.D.P., N.R.E.P., I.C.D.S., Schemes for Scheduled Castes/Tribes, Health and Urban Development Schemes, schemes in Agriculture, such as the coconut development schemes or pulses development schemes, social forestry, schemes for fisheries and fish landing centres, coir development schemes of the Coir Board, among others. Many of these schemes are intended to help the rural poor.
- (ii) In recent years, many projects/schemes in the state have been chosen for external aid. These include schemes such as the World Bank-assisted Multi-State Cashew Development Project, the Kerala Agricultural Extension Project (KAEP), the forthcoming NAEP (National Agricultural Extension Project), the Kallada Irrigation Scheme, the Social Forestry Project, the International Population Project, the bilaterally assisted Water Supply schemes, the existing and forthcoming World Bank assisted Water Supply Schemes and the forthcoming Agricultural-Marketing Project and perhaps the Pooyan kutty and Lower Periyar Power projects and the Housing Project. Adequate provision has been made for the externally aided projects already under implementation and those which have been approved;
- (iii) The L.I.C. has been giving the State assistance in the area of water supply and drainage systems, transport and housing. Adequate funds have been provided in the state plan for schemes assisted by L.I.C.: and
- (iv) Adequate provision has been made for those sectors/schemes where public borrowing is involved.

13.2 Apart from these certain other allocations have also been protected in the State Plan:

- (i) About 9% of the allocation is set apart for schemes benefiting Scheduled Castes/Tribes as in the last few years.
- (ii) The State had planned to give adequate funds for the completion of certain old irrigation projects towards the end of the Sixth

Plan. However, those projects were not completed. In 1985-86 sufficient funds for Pamba, Chitturpuzha, Kuttiyadi, Pazhassi and Periyar Valley Projects have been provided to make final payments and finish the works.

13.3 The commitment for spill-over works has been worked out by the State Plan Working Groups and a rough estimate of about Rs. 670 crores has been arrived at for the five year period. The spill-over component of the Annual Plan of 1985-86 is Rs. 125 crores. The estimated requirement for centrally sponsored schemes is Rs. 40 crores for 1985-86. The amount set apart for externally aided schemes is Rs. 91 crores. Thus the allocation for externally aided, centrally sponsored and spill-over schemes together is Rs. 316 crores or nearly 57% of the States Annual Plan of Rs. 549 crores

#### *Sectoral Programmes*

13.4 The emphasis in agricultural development in 1985-86 is to raise the productivity of both food and commercial crops through the adoption of improved agricultural practices and extension and training. Emphasis will also be laid on the effective use of inputs like fertilisers, improved varieties of seeds and pesticides, etc. It is proposed to increase the area and productivity of pulses through better management practices, use of improved seeds etc. The need for speedy completion of the on-going major and a medium irrigation projects as well as maximum exploitation of minor irrigation potential is kept in view in the Annual Plan. The Kerala Agricultural Extension Project to introduce the Training and Visit System will be completed in 1985-86. In the implementation of KAEP certain gaps and deficiencies have emerged. Another programme, a National Agricultural Extension Project (NAEP) is being conceived at the national level to support the States which have adopted the T & V system.

13.5 The Multi-State Cashew Development Project is another Project assisted by World Bank. It is expected that this Project will be extended by one more year. Major stress is laid on the programmes of the Kerala Land Development Corporation. The Corporation proposes to complete land acquisition and other works relating to the Trichur Kole Project. The Project envisages the development of about 15,500 hectares of low lying waterlogged fields.

13.6 The programmes under Animal Husbandry and Dairying in the Annual Plan are for improving the genetic quality of cattle breed, popularising goat rearing and poultry development, and promoting fodder development, all of which will be largely aimed at helping the poor. Greater emphasis will be laid on poultry development in 1985-86.

13.7 The various schemes under fisheries will lay stress on assistance to traditional fishermen by distribution of fishing gear, nylon yarn etc., development of improved beach landingcraft, development

of deep-sea fishing, increased production of fingerlings and prawn seeds, activation of fishermen welfare societies, provision of improved infrastructure facilities particularly to benefit the traditional fishermen, setting up of fishery police squad on the model of forest guards and communication of weather-warning to fishermen and provision of rescue operations. The development of social and farm forestry will be accelerated. Greater emphasis will be laid on wild life and environmental conservation. The forest development programmes are expected to provide more employment to the poor. Social forestry is expected to increase supply of fuelwood and small timber in rural areas. The entire forest development plan will be linked with an integrated programme for forest based industries and fuelwood and fodder development programme.

13.8 The Kerala Agricultural Marketing Project, a World Bank aided project, envisages comprehensive development of agricultural marketing in the State and covers both the crop and livestock sectors. It is expected that this project will be initiated in the year 1985-86.

13.9 The schemes under rural development cover special target-group oriented development programmes. The Integrated Rural Development and National Rural Employment Programmes are now carried out through the District Rural Development Agencies. The Centrally assisted Integrated Rural Development Programme aims at increasing the income and employment of small and marginal farmers and agricultural labourers. Higher outlay has been made for these programmes in the Annual Plan for 1985-86. Activities in sectors such as agriculture, animal husbandry, fishery, forestry, horticulture, village and cottage industries will be co-ordinated. Nearly 1.36 lakhs of families will benefit under IRDP in 1985-86. Under TRYSEM 6040 youths will get self employment. In 1985-86 under NREP, priority will be given to completion of the unfinished but essential rural works and works exclusively meant for SCs & STs.

13.10 Power has been given high priority in the Plan. Nearly 19 per cent of the Annual Plan outlay is for power development. Owing to greater emphasis on power generation in the past, adequate resources were not available for developing the transmission and distribution systems. This has resulted in inadequate line capacity, frequent interruptions, low voltage and considerable backlog in giving connections. Therefore a larger allocation is made for transmission and distribution. Stress will be laid on rural electrification under the Special Component Plan. The need for setting up of thermal power plant is emphasised in the Plan.

13.11 Under major and medium irrigation adequate provision is proposed for the Kallada Scheme and for completing the old schemes, like Pamba, Periyar Valley, Chitturpuzha, Kanjirapuzha and Kuttiadi.

13.12 The proposals under medium and large industries include speedy implementation of the diversification/modernisation/expansion schemes of the existing enterprises and continuance of incentive schemes drawn up by the State Government. In order to carry out the operation of the Kerala State Industrial Development Corporation the state will provide an amount of Rs. 450 lakhs (Rs. 150 lakhs as share capital and

Rs. 300 lakhs as-market borrowings) in 1985-86. Adequate provision is being made for the creation of infrastructure facilities in the Export Processing Zone at Cochin. An amount of Rs. 550 lakhs will be provided to Kerala State Electronics Development Corporation, as state assistance to complete its spillover schemes and to take up new schemes such as computer centre for data processing and soft ware development and to assist projects such as ceramic capacitors etc., proposed in the joint sector. Outlay is also provided for completion of the Asprin Project and expansion of the bottles manufacturing unit of the Kerala State Drugs and Pharmaceuticals, expansion of the soap manufacturing capacity of the Kerala Soaps and Oils and implementation of general purpose Alternator Project of Kerala Electrical Allied Engineering Company and Sodium Hydro sulphite and liquid sulphur dioxide project of the Kerala Detergents and Chemicals Ltd.: An amount of Rs. 100 lakhs is provided in 1985-86 for meeting the expenses connected with acquisition and development of land at Mala in Trichur for the Special Refractory Project which is to be started with Soviet collaboration.

13.13 In view of the employment potential of the small scale and cottage industries sectors a higher allocation is made in 1985-86 for their development. Schemes like seed capital to private entrepreneurs for setting up new units and provision of State investment subsidy will be continued during 1985-86. The outlay for coir development has been stepped up to facilitate the assistance made available under the centrally sponsored schemes. The Khadi and Village Industries Board's scheme for providing additional employment to 2.5 lakh workers has made good progress. This programme will be further accelerated in 1985-86.

13.14 In 1985-86 it is proposed to revive the closed down private handloom factories in Cannanore District into workers co-operatives. Production of handloom cloth is expected to increase from 80 million meters to 83 million meters in 1985-86. About 300 powerlooms would be organised in 1985-86. A powerloom apex co-operative society will also, be organised.

13.15 Under medical education stress is laid on the spillover works of Medical Colleges at Kottayam, Trichur, Alleppey, Calicut and Trivandrum. Adequate provision is made for enhancement of facilities and purchase of equipment at the Ayurveda College, Trivandrum. A gradual shift is planned in favour of prevention of diseases and extension of health care facilities to the villages. More beds will be provided in taluk, district and Medical College hospitals during 1985-86.

13.16 Stress will be laid on implementing the Calicut Quilon, Trichur, Guruvayoor and Trivandrum drainage spillover schemes in 1985-86. It is also proposed to introduce low cost sanitation facilities in 10 selected municipalities in the State with World Bank assistance. Under urban water supply the implementation of schemes such as Greater Cochin Water Supply and Sewerage Scheme, Chalakudy, Varkala, Punalur, Tirur, and Vaikom will be speeded up. Adequate funds are earmarked for both LIC aided and other rural water supply schemes.

13.17 The 1985-86 programmes under transport and communications are aimed at improving the communication facilities. Improvement of State highways

of about 60 km. and major district roads of about 64 km. is envisaged during 1985-86 in view of the growing density of motor vehicles in the State. The development of district and village roads is so planned as to ensure a wide dispersal over the State. Improvement of 35 km. of other district roads to major district road standards and 30 km. of other district roads is proposed. Upgrading 105 km. of village roads to other district road standards is also contemplated. Priority is also assigned to roads in tribal areas and scheduled caste settlements. Necessary machinery items for road construction is also proposed to be acquired during 1985-86.

13.18 The plan provision for the Kerala State Road Transport Corporation is mainly for the replacement of old buses. The requirements of additional services in the existing routes to meet growth in traffic will be met by adding few buses and re scheduling services. During 1985-86 the Corporation proposes to commission, 540 buses, 375 of which will replace overaged buses. 40 buses are proposed to be utilised for nationalising Chirayinkil Taluk as a first step of nationalising the whole Trivandrum District. The remaining 125 buses will be used to meet the increase in traffic.

13.19 The major share of the outlay for Water Transport is for completion and improvement of existing canal schemes and for acquisitions of boats for the operation of the State Water Transport Department. This Department proposes to complete the construction of 8 boats and to purchase 3 new boats during 1985-86. The second stage of the Champakkara canal project is expected to be started in 1985-86. The Neendakara Cheriazheekal Canal project is expected to be completed during the year. Adequate provision is also made for the Cochin based Kerala Inland Navigation Corporation for acquiring vessels to enlarge its cargo and passenger services. Under the sector, Ports and Harbours, the main programmes envisaged during 1985-86 are starting the construction of wharf at

Neendakara Cargo Harbour, completion of the construction of the 10 tonne pull tug completion of the two smaller tugs for Surveying and Dredging Operations, construction of a dry dock to repair barges and construction of breakwaters for the Beypore cargo Harbour. Provision is also made for basic infrastructure facilities in selected ports.

13.20 In 1985-86 it is proposed to expand tourist facilities in the state. Schemes for providing better accommodation facilities are being implemented by the Kerala Tourism Development Corporation. A major share of the allocation for tourism in 1985-86 is for strengthening the capital base of this Corporation. This Corporation will take steps to complete projects like the Cochin and the Thampanoor Projects before taking up new schemes. Provision is also made for expanding tourist transport facilities in the State.

13.21 It is proposed to integrate the science and technology programme with other activities for socio economic development. The State has sponsored a number of centres of excellence under science and technology like the Lal Bahadur Shastri Engineering Research and Consultancy Centre, Sree Chitra Thirunal Institute for Medical Science and Technology, Electronic Research and Development Centre, Kerala Forest Research Institute, Centre for Development Studies, Centre for Earth Science Studies-National Transportation Planning and Research Institute, Indian Institute for Regional Development Studies and Centre for Water Resources Development and Management. In addition, an Agency for Non Conventional Energy and Rural Technology (ANERT) will be established in the State in order to sponsor studies and implement programmes in the field of conventional energy and rural technology.

Annexure I gives the head of development wise outlays for the Seventh Plan and the Annual Plan (1985-86) and their percentage distribution.



## APPENDIX I

## Head of Development-wise Outlays and Percentage Distribution

Sector/Head of Development	Sixth Plan (1980-85)		Seventh Plan (1985-90)		1984-85		1985-86	
	Anticipated Expenditure (Rs. crores)	Percentage to Total	Sectoral Outlay (Rs. in Crores)	Percentage to Total	Approved Outlay (Rs. in Crores)	Percentage to Total	Proposed Outlay (Rs. in Crores)	Percentage to Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>I. Agriculture and Allied Services</b>								
1. Agriculture	68.13	4.30	195.00	5.91	17.74	5.00	34.16	6.22
2. Soil and Water Conservation	9.67	0.61	15.00	0.46	2.00	0.56	2.54	0.46
3. Animal Husbandry	16.31	1.03	25.00	0.76	3.96	1.12	3.93	0.72
4. Dairy Development	8.10	0.51	9.00	0.27	2.10	0.60	1.79	0.33
5. Fisheries	20.87	1.32	65.00	1.97	5.29	1.49	10.16	1.85
6. Forests	17.55	1.11	100.00	3.03	4.69	1.32	15.00	2.84
7. Investment in Agricultural Financial Institutions	6.15	0.39	12.00	0.36	1.50	0.42	1.50	0.27
8. Marketing	0.49	0.03	72.50	2.19	0.10	0.03	0.20	0.04
9. Storage and Warehousing	0.55	0.03	2.50	0.08	0.10	0.03	0.45	0.08
Total-I	147.82	9.33	496.00	15.03	37.48	10.57	70.33	12.81
<b>II. Rural Development</b>								
1. Integrated Rural Development Project (IRDP)	23.36	1.47	53.50	1.62	6.78	1.91	7.50	1.36
2. National Rural Employment Programme (NREP)	37.34	2.36	34.10	1.03	10.90	3.07	8.00	1.46
3. Other Programmes	0.38	0.02	1.90	0.06	0.22	0.06	0.42	0.08
4. Community Development and Panchayats	30.48	1.92	30.00	0.91	4.50	1.27	4.64	0.84
5. Land Reforms	30.15	1.91	35.00	1.06	6.00	1.69	5.25	0.96
6. Special Programmes for Area Development State Programmes								
(i) Development of Backward Areas	4.05	0.26	3.50	0.11	1.00	0.28	0.50	0.09
(ii) Others—Including Special Component Plan and Tribal Sub Plan	2.48	0.16	1.50	0.05	..	..	0.25	0.05
Total—II	128.24	8.10	159.50	4.84	29.40	8.28	26.56	4.84
<b>III. Co-operation</b>								
Total—III	29.20	1.85	38.00	1.15	4.05	1.14	6.81	1.24
<b>IV. Irrigation and Flood Control</b>								
1. Irrigation								
(i) Water Development (Survey, Investigation and Research)	3.69	0.23	15.00	0.45	0.55	0.15	2.50	0.46
(ii) Multi-purpose River Valley Projects	..	..	..	..	..	..	..	..
(iii) Major and Medium Irrigation Projects	255.84	16.17	420.00	12.73	61.65	17.37	73.40	13.37
2. Minor Irrigation	30.79	1.95	70.00	2.12	7.00	1.97	9.94	1.81
3. Command Area Development	2.55	0.16	35.00	1.06	0.85	0.24	2.00	0.36
4. Flood Control Including Anti-sea Erosion	16.98 17.50*	1.07	44.00 34.00*	1.33	3.00 3.50*	0.85	6.00 5.50*	1.09
Total—IV	309.85 17.50*	19.58	584.00 34.00*	17.70	73.95 3.50*	20.58	93.84 5.50*	17.09

\*Special Central Assistance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>V. Power</b>									
1. Power Development (Survey and Investigation)		3.72	0.24	7.50	0.23	1.00	0.28	1.00	0.18
2. Multi-purpose River-Valley Projects		..	..	..	..	..	..	..	..
3. Power Projects		93.82	5.93	286.50	8.68	31.50	8.87	54.46	9.92
4. Transmission and Distribuion				350.00	10.61			43.70	7.96
5. General (Including Rural Electrification)	}	147.10	9.30			35.00	9.86		
6. New Sources of Energy including Bio-Gas and Integrated Rural Energy Programme (IREP)					6.00	0.18			0.84
Total—V		314.73**	19.87	650.00	19.70	67.50	19.01	100.00	18.21
<b>VI. Industry and Minerals</b>									
1. Village and Small Industries		44.88	2.84	120.00	3.64	11.02	3.10	18.85	3.43
2. Medium and Large Industries		114.88	7.26	200.50	6.07	24.53	6.91	30.34	5.53
3. Mining		1.71	0.11	4.50	0.14	0.43	0.12	0.69	0.13
Total—VI		161.47	10.21	325.00	9.85	35.98	10.13	49.88	9.09
<b>VII. Transport</b>									
1. Minor Ports and Light Houses		7.82	0.49	18.00	0.54	2.00	0.56	2.75	0.50
2. Shipping		0.05	..	..	..	..	..	..	..
3. Roads and Bridges		72.27	4.57	200.00	6.06	15.00	4.23	56.00	10.20
4. Road Transport		16.50	1.04	45.00	1.36	5.00	1.41	7.00	1.27
5. Inland Water Transport		4.68	0.30	15.00	0.46	1.15	0.32	2.45	0.45
6. Tourism		6.35	0.40	15.00	0.46	1.52	0.43	2.25	0.41
Total—VII		107.67	6.80	293.00	8.88	24.67	6.95	70.45	12.83
<b>VIII. Scientific Services and Research</b>									
1. Science and Technology Programmes		16.35	1.30	24.00	0.72	3.70	1.04	3.61	0.66
2. Environmental Programmes (Excluding Water Pollution Control)		0.30	0.02	1.62	0.05	0.15	0.04	0.22	0.04
3. Water Pollution Control		0.55	0.03	4.88	0.15	0.09	0.03	0.95	0.17
Total—VIII		17.20	1.08	30.50	0.92	3.94	1.11	4.78	0.87
<b>IX. Social and Community Services</b>									
<i>Education</i>									
1. General Education		64.66	4.09	65.00	1.97	10.68	3.01	11.83	2.16
2. Art and Culture		3.17	0.20	15.00	0.46	0.67	0.19	2.51	0.46
3. Technical Education		9.67	0.61	24.00	0.73	2.34	0.66	3.35	0.61
4. Sports and Youth Services		2.93	0.19	10.00	0.30	0.54	0.15	1.50	0.27
5. (a) Medical and Public Health (Excluding ESI)		42.91	2.71	74.70	2.26	10.34	2.91	13.31	2.43
(b) Employees State Insurance Scheme		0.21	0.01	0.30	0.01	0.05	0.01	0.06	0.01
6. Sewerage and Water Supply		86.15	5.44	200.00	6.06	19.16	5.40	30.00	5.46
7. Housing (Excluding Police Housing)		57.51	3.63	97.07	2.94	12.00	3.38	14.70	2.68
8. Police Housing		2.07	0.13	3.00	0.09	0.30	0.08	0.50	0.09

\*\* Includes Rs. 70.09 crores which is the total expenditure for the year 1991-82 for which schematic break up is not available.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. Urban Development		18.02	1.14	35.00	1.06	4.90	1.38	6.05	1 1.10
10. Information and Publicity		2.14	0.14	6.00	0.18	0.61	0.17	1.10	0 0.20
11. Labour and Labour Welfare		7.95	0.50	8.00	0.24	1.16	0.33	1.43	0 0.26
12. Welfare of SC, ST and Other Backward Classes		20.14	1.27	30.00	0.91	4.50	1.27	4.88	0 0.89
13. Social Welfare		5.21	0.33	8.00	0.24	1.18	0.33	1.33	0 0.24
14. Nutrition		14.89	0.94	75.00	2.28	3.62	1.02	11.92	2 2.17
<b>Total—IX</b>		<b>337.63</b>	<b>21.33</b>	<b>651.00</b>	<b>19.73</b>	<b>72.05</b>	<b>20.29</b>	<b>104.47</b>	<b>119.19.03</b>
<b>X. Economic Services</b>									
1. Economic Services		2.53	0.16	6.00	0.18	0.79	0.22	1.27	0 0.23
2. Economic Advice and Statistics		2.95	0.19	8.00	0.24	0.79	0.22	1.40	0 0.26
3. Other General Economic Services (Weights and Measures)		0.54	0.03	1.00	0.03	0.15	0.05	0.18	0 0.03
<b>Total—X</b>		<b>6.02</b>	<b>0.38</b>	<b>15.00</b>	<b>0.45</b>	<b>1.73</b>	<b>0.49</b>	<b>2.85</b>	<b>0 0.52</b>
<b>XI. General Services</b>									
1. Stationery and Printing		2.74	0.17	7.00	0.21	1.65	0.46	2.00	0 0.36
2. Public Works		20.27	1.28	50.00	1.51	3.50	0.99	16.88	3 3.08
3. Civil Supplies		0.41	0.02	1.00	0.03	..	..	0.15	0 0.03
<b>Total—XI</b>		<b>23.42</b>	<b>1.47</b>	<b>58.00</b>	<b>1.75</b>	<b>5.15</b>	<b>1.45</b>	<b>19.03</b>	<b>3 3.47</b>
<b>Grand Total</b>		<b>1583.25</b>	<b>100.00</b>	<b>3300.00</b>	<b>100.00</b>	<b>355.00</b>	<b>100.00</b>	<b>549.00</b>	<b>10000.00</b>

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