



GOVERNMENT OF KERALA

ECONOMIC REVIEW 2016

State Planning Board, Thiruvananthapuram, Kerala, India
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Volume One

FOREWORD

In 2016-17, the economy of the State of Kerala was adversely affected by a combination of natural and policy created factors. These varied from a medium-term deceleration in growth to a decline in primary commodity prices. Further, the departure from normal rainfall for the period June 1, 2016 to September 30, 2016 (that is, coinciding with the period of the South West monsoon) was -34 per cent, and the departure from normal rainfall for the period October 1, 2016 to December 27, 2016 (that is, coinciding with the period of the North East monsoon) was -61 per cent. It is now clear that this cumulative shortfall in rain has caused drought conditions in Kerala that will continue at least until the next South West monsoon. On top of these came the the ill-designed and unwarranted decision to cancel the legal-tender character of bank notes of ₹500 and ₹1000 denominations, which devastated the state's informal sectors and its cooperative credit infrastructure, with economy-wide consequences.

At the same time, 2016-17 was also a year in which a new Government led by the Left Democratic Front assumed office on the basis of an ambitious programme to revive growth and expand social welfare programmes in the State. The Government of Kerala has taken the bold and independent step of announcing that, although the Government of India has abandoned five-year plans, the State will continue with five year planning and with the formulation and implementation of the Thirteenth Five-Year Plan.

Soon after assuming office, the Government of Kerala announced the inauguration of four Missions to help build a new Kerala. The Missions emphasise sustainable development and peoples' participation in the following fields: high-quality school education, people-friendly health facilities, a green Kerala (a Mission that includes, in turn, efforts in the spheres of nature-friendly agriculture, waste management, a clean environment, and a litter-free Kerala, and clean water bodies and enhanced water resources), and secure housing and livelihoods. The Government has also inaugurated the second phase of the People's Plan Campaign in Kerala to consolidate and expand India's foremost programme of democratic decentralisation.

Every year, the State's Economic Review has a theme chapter. This year the theme chapter is on tourism in Kerala. Income from tourism constitutes about 10 per cent of the gross State Domestic Product of the State, and is an important engine of growth. Tourism creates employment, brings in incomes, and opens out cultures to the rest of the country and world. A feature of tourism is its interconnection with other spheres of development. Tourism cannot be successful without concurrent development in health, sanitation, urban and rural planning, transport, connectivity, local self-government and other spheres.

After the boom period of the 1990s and early 2000s, the rate of growth in tourism arrivals declined in Kerala. Demonetisation, too, dealt a blow to tourism in the 2016-17 season. The Committee to Study the Impact of Demonetisation on the State Economy of Kerala appointed by the Kerala State Planning Board noted in its Interim Report that as “news of the serpentine queues at money exchange counters in airports and outside and the limits on the amount of Indian currency that can be obtained in exchange for foreign currency spread, cancellations rose and tourist arrivals fell. The cash shortage affected domestic tourist arrivals as well. As per quick estimates from the Department of Tourism, Kerala, relative to the corresponding month of the previous year, domestic tourist arrivals fell by 17.7 per cent in November 2016 and foreign tourist arrivals by 8.7 per cent. The corresponding figures for October 2016 were a positive 5.2 per cent and 6 per cent respectively.”

Nevertheless, tourism in the State has continued and promising potential. There is potential in the traditional locations in Kochi, south of Kochi and in the highlands. There is the steady and unabated growth of pilgrimage arrivals, and there is the vast and relatively unexploited tourist potential of the northern parts of the State.

Tourism development requires technical expertise and all-round planning. It must cater to all sections of tourists. It must be responsible tourism, and sensitive to carrying capacity and the needs of the State's environment and people. This is a task in which we certainly can succeed.

The Economic Review includes, as it does every year, the most recent data on government policies, Plan priorities, and on-going programmes of Government departments. It provides a snapshot of economy's performance over the 12th Five-Year Plan period. The Review is in two volumes. Volume I covers the policies, programmes and achievements of Government departments over the preceding year and Volume II provides the corresponding datasets. Economic Review 2016 is published in English and Malayalam. An e-version is uploaded at the State Planning Board website: www.spb.kerala.gov.in.

Thiruvananthapuram
February 19, 2017

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KERALA – A QUICK LOOK

Sl. No.	Item	Units	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2015-16
1	Geographical Area	'000 Sq.Km.	38856.7	38864	38863	38863	38863	38863	38863
Administrative Setup									
2	Revenue Divisions	No.						21	21
3	Districts	-do	9	10	12	14	14	14	14
4	Taluks	-do	55	56	58	61	63	63	75
5	Villages	-do		1326	1331	1364	1452	1532	1664
6	Towns	-do	92	88	106	197	159	520	520
Population as per Census			1951	1961	1971	1981	1991	2001	2011
7	Total	(in 000s)	13549.1	16903.72	21347.38	25453.68	29098.51	31843.8	33406.06
8	Males	-do		8361.93	10587.85	12608.74	14288.99	15468.61	16027.41
9	Females	-do		8541.89	10759.52	12885.08	14809.52	16372.76	17378.65
10	Rural	-do		14351	17880	20682.4	21618	23574.45	17471
11	Urban	-do		2552	3467	4771.3	7018	8266.93	15935
12	Scheduled Castes	-do		1422	2002*	2549	2886.52	3123.94	3040
13	Scheduled Tribes	-do		208	193*	261	320.97	364.19	485
14	Density of Population	Per Sq.Km.		435	549	655	749	819	860
15	Literacy Rate	Percentage		55.08	60.42	70.42	89.81	90.9	94
16	Sex Ratio	Females per 1000 males		1022	1016	1032	1036	1058	1084
17	Urban Population	Percentage		15.1	16.24	18.74	24.11	26	47.7
GSDP - at constant prices			1960-61	1970-71	1980-81	1990-91	2000-01	2009-10	2015-16
18	GSDP	Rs.Crore	462	1255	3823	12195	63715	180812	467243.13
19	Primary Sector	-do	241	652.6	1682.12	4756.05	14017.3	15966	49206.31
20	Secondary Sector	-do	68	163.15	841.06	3170.7	14017.3	38249	111177.23

21	Tertiary Sector	-do	153	439.25	1299.82	4268.25	35680.4	126597	264407.59
22	Percapita Income	Rupees	276	594	1508	4207	19951	47360	136811
Agriculture			1960-61	1970-71	1980-81	1990-91	2000-01	2009-10	2015-16
23	Net Area Sown	'000 Ha.	1923.7	2171	2179.6	2246.8	2206.1	2078.7	1973
24	Gross Cropped Area	-do	2349	2933	2884.8	3020	3021.67	2668.7	2627.5
25	Gross Irrigated Area	-do-			380.9	384.5	460.3	457.78	483.6
26	Gross Irrigated Area to Gross Cropped Area	Percentage			13.2	12.7	15.2	17.66	18.4
Gross area under principal crops			1960-61	1970-71	1980-81	1990-91	2000-01	2012-13	2015-16
27	Paddy	'000 Ha.	778.9	874.9	801.7	559.45	347.45	197.28	196.8
28	All Pulses	-do	44.1	39.54	33.86	23.38		2.948	3.76
29	Sugarcane Harvested Area	-do-	9.15	7.65	8.04	7.62	3.37	1.74	
30	Rubber	-do	132.84	188	237.8	384	474.36	545	550.8
31	Tea	-do	39.79	37.27	36.13	34.71	36.85	30.21	30.2
32	Coconut	-do	500.76	719.14	651.37	870	925.78	798.16	790.22
33	Arecanut		54.26	85.82	61.24	64.82		101.78	99.1
34	Groundnut	-do	16.03	14.69	9.4	12.82		0.699	
35	Pepper	-do	99.75	11.75	108.07	168.51	202.13	84.71	85.94
36	Cardamom	-do	28.6	47.49	56.38	66.89	41.29	41.6	39.73
37	Ginger	-do-	12	12.17	12.66	14.14	11.61	4.51	4.99
Production of Principal Crops			1960-61	1970-71	1980-81	1990-91	2000-01	2012-13	2015-16
38	Rice	'000 tonnes	1067.53	1298.01	1271.96	1086.58	751.33	508.99	549.28
39	All Pulses	-do	17.56	13.05	22.45	16.54		3.25	4.26
40	Sugarcane	-do	38.09	37.63	48.18	51.98	27.55	16.52	
41	Rubber	-do	24.103	88	140.333	307.521	579.866	800.05	438.63
42	Tea	-do	39.476	43.012	47.631	63.416	69.132	62.963	57.8
43	Coconut	In million nuts	3220	3981	3008	4232	5536	5799	5873
44	Arecanut	'000 tonnes	7.74	12.74	10.8	13.07		118.23	132.45
45	Groundnut	-do	13.8	16.09	8.2	9.53	9.76	8.59	
46	Pepper	-do	27.03	25.03	28.52	46.8	60.93	46.29	42.13
47	Cardamom	-do	1.28	1.25	3.1	3.4		10.2	19.5
48	Ginger	-do-	11.27	19.68	32.04	45.68	42.7	22.06	22.04
Live Stock Census			1977	1982	1987	1996	2003	2007	2012
49	Total Livestock	in lakh	53.17	56.45	55.01	55.77	34.81	35.87	27.35
50	Total Poultry	-do		151.86	184.59	308.24	138.64	127.14	242.82
Forest			1960-61	1970-71	1980-81	1990-91	2000-01	2011-12	2015-16
51	Forest Area	'000 Ha.	1056.05	1055.73	1081.51	1081.51	1081.51	1081.51	1924

Factories			1971	1981	1991	2001	2011	2012	2016
52	Working Factories	No.	3024	9106	13255	18554	19676	20473	22834
53	Employees	-do	206839	300515	368738	436410	644606	644802	702129
54	Employees per lakh population	-do	969	1181	1267	1370	1930	1930	2029
Electricity			1970-71	1980-81	1990-91	2000-01	2009-10	2011-12	2015-16
55	Total Generation	Mu	2125.99	5242	5490.8	7655.57	6494.5	8350.74	6797.77
56	Total Consumption	-do		2869	5281.86	10319	12877.65	16181.63	19325.1
57	Industrial Consumption	-do		2025.3	2696.78	3784	4002.37	4926.43	5209.23
58	Agricultural Consumption	-do		124.6	287.57	350	225.22	286.18	279.48
59	Domestic Consumption	-do		409.2	1620.93	4688	5931.27	7705.86	9943.5
Education			1970-71	1980-81	1990-91	2000-01	2009-10	2012-13	2015-16
60	Primary Schools	No.	9437	9605	9682	9714	9828	9737	9861
61	Enrolment	'000s	4156	4284	4402	3637	3015	2545	2398
62	High Schools	No.	1199	1971	2451	2596	2814	2890	3021
63	Enrolment	'000s		1310	1498	1611	1443	1426	1365
Health			1970-71	1980-81	1990-91	2000-01	2009-10	2011-12	2015-16
64	Hospitals	No.	553	746	1199	1319	1254	1255	1463#
65	No. of Beds	-do	21777	32447	38726	38242	37021	37388	56943#
Vital statistics (Demographic Status)			1970-71	1980-81	1990-91	2001	2009	2010	2011
66	Birth Rate/1000 population		32.26	25.5	20.3	16	14.6	14.7	14.8
67	Death Rate		9.23	6.4	6.1	6.6	6.6	6.8	7
68	Infant Mortality Rate		61	37	21	11	12	14	13
Transport			1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2015-16
69	Railway Route Length	Kms.	892	921.35	988	1148	1257	1257	1538
70	Total Road Length	-do	18037	94145	128403	125835	151652	244373	205511**
71	Motor Vehicles	'000s	86234	195000	648000	2111885	6072019	8048673	10171813
Local bodies			1990-91	2000-01	2006-07	2007-08	2008-09	2010-11	2015-16
72	Zilla Parishad/ Panchayat	No.		14	14	14	14	14	14
73	Gram Panchayats	-do	983	990	999	999	999	978	941
74	Block Panchayats	-do		152	152	152	152	152	152
75	Municipalities	-do	58	53	53	53	53	60	87
76	Corporations	-do	3	5	5	5	5	5	6

#allopatbi and ayush included:

*Base year 2011-12

** excludes LSGD non pucca roads

DISTRICTS AT A GLANCE

Sl.No.	Items	TVM	KLM	PTA	ALP	KTM	IDK	EKM
1	Area	2192	2491	2637	1414	2208	4358	3068
2	Forest Cover (sq Km) *	1317	1402	1742	112	883	3770	706
3	Population (in lakhs) 2011	33.01	26.35	11.97	21.28	19.75	11.09	32.82
	Rural	15.3	14.48	10.66	9.8	14.09	10.56	10.47
	Male	7.25	6.81	5	4.65	6.93	5.27	5.18
	Female	8.05	7.67	5.66	5.15	7.16	5.29	5.29
	Per cent Decadal Growth (2001-2011)	-28.6	-31.7	-4	-34.2	-14.8	-1.4	-35.7
	Urban	17.72	11.87	1.32	11.48	5.66	0.51	22.34
	Male	8.57	5.66	0.62	5.48	2.76	0.25	11.01
	Female	9.15	6.21	0.7	6	2.9	0.26	11.33
	Per cent Decadal Growth (2001-2011)	62.3	154.8	6.3	84.8	88.6	-9.6	51.3
	Density	1508	1061	452	1504	895	255	1072
	Fishermen Population (in no.)	164883	123100	2073	167794	24420	691	133387
	SC population as % of Total Population	11.3	12.5	13.7	9.5	7.8	13.1	8.2
	ST population as % of Total Population	0.8	0.4	0.7	0.3	1.1	5.0	0.5
4	Literacy rate (2011)							
	Male	94.16	95.83	97.7	97.9	97.17	94.84	97.14
	Female	90.89	91.95	96.26	94.8	95.67	89.59	94.27

Sl.No.	Items	TVM	KLM	PTA	ALP	KTM	IDK	EKM
5	Per cent of dropouts 2015-16							
	Lower Primary	0.64	0.53	0.37	0.08	0.36	1.06	0.27
	Upper Primary	0.42	0.23	0.12	0.04	0.14	0.48	0.09
	High School	0.32	0.46	0.15	0.13	0.48	0.98	0.37
6	GSVA 2015-16 (Quick)							
	GSVA at basic prices (₹ in lakh)	4379870	3816002	1192745	3060179	2631789	1509331	5489638
	Share in per cent							
	Primary	8	11	22	6	13	33	9
	Secondary	28	27	25	31	22	19	23
	Tertiary	64	62	53	63	65	48	68
7	Production of Rice in Kerala (15-16) in tonnes	5453	3351	8396	89335	49506	2198	12652
8	Area under irrigation (2016) in Hectre	8247	6054	5253	40404	14595	41521	21865
9	Number of Commercial Banks	706	380	380	371	487	173	965
10	CD ratio	63.76	60.58	25.76	47.02	53.51	121.09	81.02
11	Registered SSI / MSME 15-16	34659	18036	11136	18489	24771	5613	34497
12	Length of roads ** (km)	2557.734	2202.869	2031.372	1472.334	3456.214	2867.366	3085.281
13	No. of Motor Vehicles	1290592	776314	424277	697203	639616	199433	1559270
14	Tourist arrivals 2015							
	Foreign (in no.)	310223	14100	1667	63838	49976	83894	383643
	Domestic (in no.)	1861470	277109	126132	270507	458101	668537	2897894

* open forest included , ** excludes LSGD non pucca roads

Sl.No.	Items	TSR	PLK	MLP	KKD	WYD	KNR	KSD	TOTAL
1	Area	3032	4480	3550	2344	2131	2966	1992	38863
2	Forest Cover (sq Km)*	1125	1761	1475	1052	1699	1338	857	19239
3	Population (in lakhs) 2011	31.21	28.1	41.13	30.86	8.17	25.23	13.07	334.04
	Rural	10.24	21.31	22.95	10.14	7.86	8.82	7.99	174.67
	Male	4.88	10.31	10.95	4.85	3.86	4.26	3.88	84.08
	Female	5.36	11.01	12	5.29	4	4.56	4.11	90.6
	Per cent Decadal Growth (2001-2011)	-52	-5.7	-29.8	-43	-4.6	-26.3	-17.7	-25.9
	Urban	20.96	6.77	18.17	20.72	0.31	16.41	5.09	159.33
	Male	9.92	3.28	8.65	9.86	0.15	7.56	2.41	76.18
	Female	11.04	3.49	9.52	10.86	0.16	8.85	2.68	83.15
	Per cent Decadal Growth (2001-2011)	149.7	89.8	410.2	88.2	6.6	35.3	117.8	92.8
	Density	1031	627	1157	1316	384	852	657	860
	Fishermen Population (in No.)	90306	2534	82044	106613	230	60208	43342	1001625
	SC population as % of Total Population	10.4	14.4	7.5	6.5	4.0	3.3	4.1	9.1
	ST population as % of Total Population	0.3	1.7	0.6	0.5	18.5	1.6	3.7	1.5
4	Literacy rate (2011)								
	Male	96.98	92.27	95.78	97.57	92.84	97.54	93.93	96.1
	Female	93.85	84.99	91.55	93.16	85.94	93.57	86.13	92.1

Sl.No.	Items	TSR	PLK	MLP	KKD	WYD	KNR	KSD	TOTAL
5	Per cent of dropouts 2015-16								
	Lower Primary	0.07	0.34	0.24	0.35	0.65	0.16	0.73	0.35
	Upper Primary	0.08	0.22	0.12	0.16	1.05	0.13	0.28	0.21
	Higher Secondary	0.49	0.55	0.17	0.26	2.88	0.33	0.85	0.44
6	GSVA 2015-16 (Quick)								
	GSVA at basic prices (₹ in lakh)	4359486	3053495	4089318	3686581	810384	2972726	1427568	42479111
	Share in per cent								
	Primary	8	18	10	8	24	10	19	12
	Secondary	24	25	26	31	22	32	28	26
	Tertiary	68	57	64	61	54	58	53	62
7	Production of Rice in Kerala (15-16)	78886	228459	23649	3608	23704	11518	8560	549275
8	Area under irrigation (2016)	71333	87253	30204	4671	12505	15215	54713	413833
9	Number of Commercial Banks	715	410	433	437	119	374	216	6166
10	CD ratio	53.6	64.5	59.89	70.17	121.83	52.79	83.05	61.84
11	Registered SSI / MSME 15-16	32849	17970	14552	19782	4113	13419	7580	257466
12	Length of roads **	2064.216	2184.693	2680.152	2454.647	1029.314	2265.242	1460.662	31812.096
13	No. of Motor Vehicles	1059370	675991	903670	927388	139151	601790	277748	10171813
14	Tourist arrivals 2015								
	Foreign (in No.s)	7874	2232	23409	12251	12377	9022	2973	977479
	Domestic (in No.s)	2659897	502244	470261	811538	607335	613199	241347	12465571

* open forest included, ** excludes LSGD non pucca roads



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01 CHAPTER

MACRO ECONOMIC PROFILE



MACRO ECONOMIC PROFILE

The year 2016-17 was a year which witnessed several economic upheavals and changes. Global uncertainties have increased with Brexit and newly formed US regime. Similarly on the national front demonitisation has shaken the economy and slowed down the short term growth trend. The growth prospects of the State have been affected by several forces. The State is moving ahead with the thirteenth plan at a time when five year plans have been done away with and focussing on revamping agriculture and traditional industries. Over the years, the fiscal space of State government has also seen lot of transformations. These transformations and changes will shape the policies in the coming years.

Section 1 POPULATION

As per the final data published by the Directorate of Census, Kerala's population as on March 2011 was 33,406,061. Out of this 16,027,412 (48 per cent) were men and 17,378,649 (52 per cent) were women.

The decadal growth rate of Kerala's population is estimated at 4.9 per cent, the lowest among Indian States, whereas the national rate of growth of population during the last ten years is 17.6 per cent (**Figure 1.1**). The population growth trend shows that Kerala is moving towards zero population growth or even negative population growth. Among all the districts, Malappuram has the highest growth rate of 13.4 per cent, and Pathanamthitta has the lowest growth rate (- 3.0

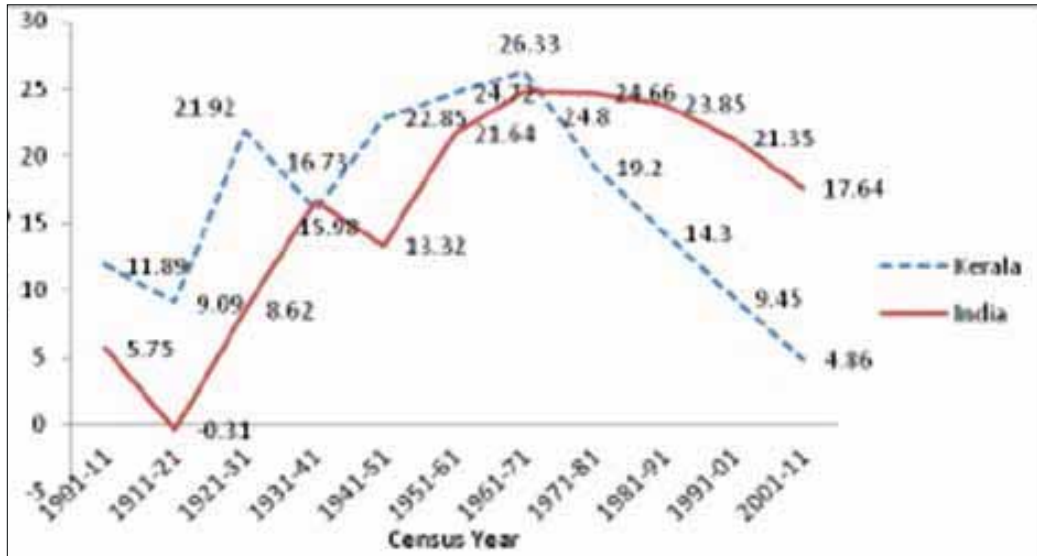
per cent). Idukki also has a negative growth rate (-1.8 per cent). The growth rate of population is lowest in the 6 southern districts (Idukki, Kottayam, Alappuzha, Kollam, Pathanamthitta and Thiruvananthapuram).

Kerala's total child population (0-6 years) in 2011 was 3,472,955 compared to 3,793,146 in 2001. That is, Census data reveal a negative growth rate of child population in the state (-8.44 per cent). The percentage of child population in total population also shows a declining trend in Kerala. The child population represented 10 per cent of the total population in 2011 while it was 12 per cent as per 2001 census. **Figure 1.2** shows district-wise percentage of child population in Kerala in

2001 and 2011. The highest proportion of child population was in Malappuram district and lowest was in Pathanamthitta. The proportion of child population in the State decreased in all the districts between 2001 and 2011. All the southern districts

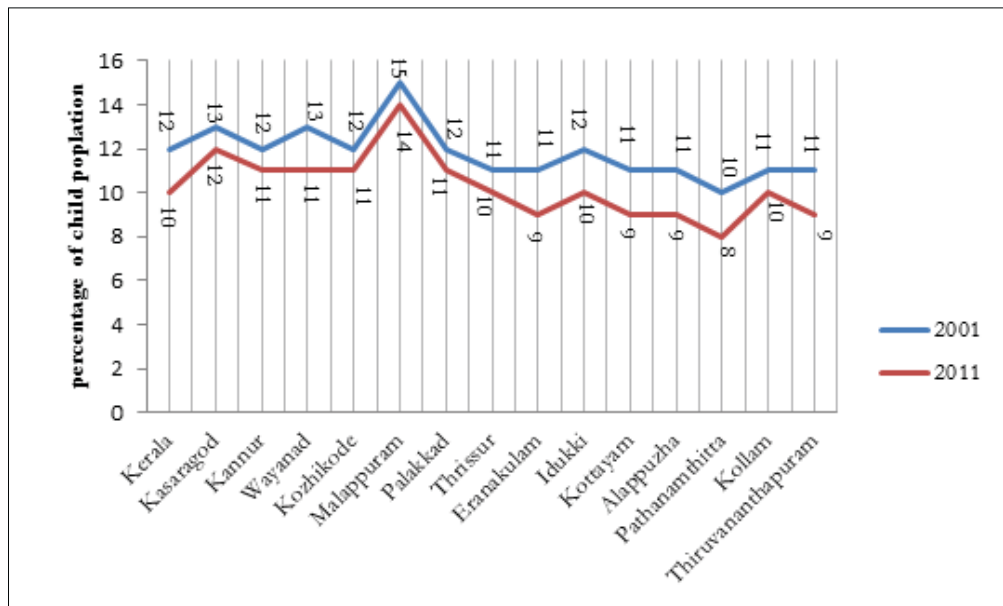
show a 2 per cent decline except Kollam, which had a decline of 1 per cent in the proportion of child population. All the northern districts show a 1 per cent decline in the proportion of child population except Wayanad, which had a decline

Figure 1.1
Decadal Growth of Population in India and Kerala 1901-2011, in per cent



Source: Census of India 2011

Figure 1.2
Percentage of child population in total population in Kerala, in per cent



Source : Census 2001, 2011

of 2 per cent. It shows that new addition to population in northern districts is faster than in the southern districts. Details are in **Appendix 1.1**.

Literacy

Kerala has the highest effective literacy rate of 94 per cent among Indian states as per 2011 census. It was 90 per cent during 2001 census. Kottayam tops in the literacy chart with 97.2 per cent and Pathanamthitta is just behind with 96.5 per cent. Wayanad has the lowest literacy rate of 89 per cent and Palakkad is just above with 89.3 per cent. Even the lowest literacy rate of Wayanad (89) is higher than national literacy rate (72 per cent). The difference between the lowest and the highest value is just 8.2. As compared to 2001, literacy rate of all the districts has improved. Details are in **Appendix 1.2**.

Sex Ratio

The sex ratio (number of females per thousand males) of Kerala according to Census 2011 is 1084 and has improved by 26 points from 2001. The sex ratio of India is 943 in 2011. Among the districts, Kannur has the highest sex ratio (1136) followed by Pathanamthitta (1132). While Idukki has the lowest sex ratio (1006), Ernakulam is just above with 1027. All districts have index above 1000. In 2001, only Wayanad had the index score below 1000 (994). The difference between the lowest (Idukki, 1006) and highest (Kannur, 1136) is 130 points. Details are in **Appendix 1.1**.

Child Sex Ratio (0-6 Years)

Child sex ratio in Kerala is 964 as per the 2011 census. It was 960 in 2001. Pathanamthitta has the highest ratio (976) followed by Kollam (973) and Kannur (971). While, Thrissur has the lowest score of 950, and Alappuzha is just above with a ratio of 951. All the districts have the ratio below 1000. When analysing the decadal change, the highest gain is for Kollam (13) followed by Kozhikode with a score of 10. All other districts have the

score below 10 points. Thrissur (-8), Idukki (-5) and Alappuzha (-5) have negative decadal change in sex ratio. Details are in **Appendix 1.1**

Density of Population

As per 2011 census, the density of population in Kerala is 860 persons/sq.km. It is much higher than the all India level of 382. Thiruvananthapuram is the most densely populated district (1508), while Idukki is the least densely populated district (255). Density of population has increased in all districts compared to 2001 census except for Pathanamthitta (-16) and Idukki (-4). Details are in **Appendix 1.2**.

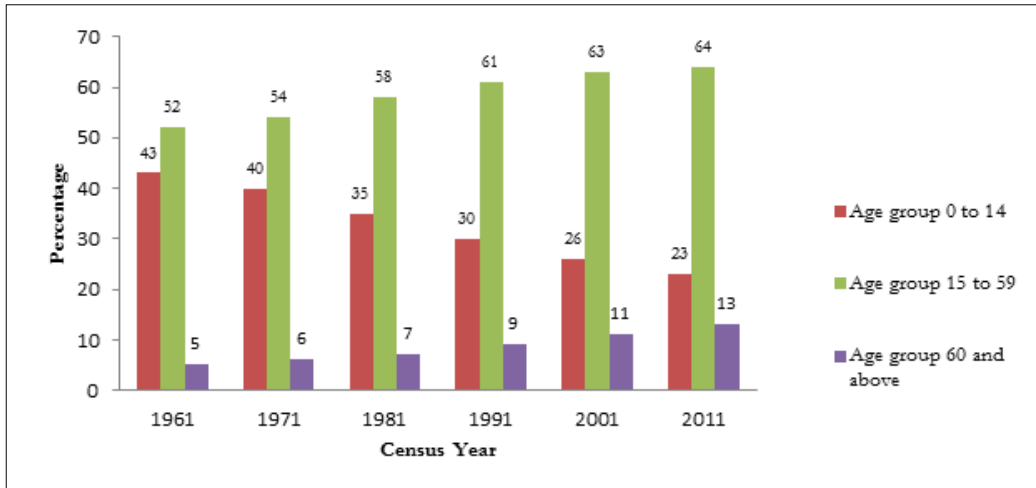
District-wise distribution of population

District wise distribution of population in Kerala during the last four census indicates that Malappuram district has the largest share of population (12.3 per cent) followed by Thiruvananthapuram (9.9 per cent) and Ernakulam (9.8 per cent). Thrissur and Kozhikkode follow with 9 per cent. Wayanad continues to be home to the smallest share of population (2.4 per cent) while Idukki, Kasargode and Pathanamthitta have a low share of 3-4 per cent. It is evident that for the last 40 years (from 1981 to 2011), there is no major change in the distribution of population across districts. Details are in **Appendix 1.2**.

Age Group Distribution

The analysis of the age group distribution of population shows that the proportion of population in the age group of (0-14 years) declined from 43 per cent in 1961 to 23 per cent in 2011. In the case of the working age group (15-59 years), the proportion is increasing at a declining rate. Due to increasing life expectancy and availability of health facilities, the proportion of population in the old age group (60 years and above) increased from 6 per cent in 1961 to 13 per cent in 2011 (**Figure 1.3**).

Figure 1.3
Age Group Distribution in Kerala, 1961-2011, in per cent



Source : Census 1961, 1971, 1981, 1991, 2001 and 2011

The increasing trend of population in the working age group (15-59) is favourable for the economy. However, the declining trend in the age group of 0-14 (the feeder category) is a matter of concern.

Similarly, increase in the number in the age group of 60 and above puts pressure on the State to provide adequate social security measures.

Section 2

URBANISATION IN KERALA

In India, out of the total population of 1210.2 million, about 377.1 million are in urban areas as on March 1, 2011. Further the number of million plus cities/urban agglomerations (UA) increased from 35 in Census 2001 to 53 in Census 2011. By 2031, it is projected that there will be 6 cities with more than 10 million population. At current rates of growth, urban population in India will reach a staggering total of 575 million by 2030. In recent years, the urban sector in India has undergone a major change following the country's transition towards a market based economy.

The urban sector of Kerala consists of 6 municipal corporations and 87 municipalities. The State has a population of 33,387,677 people according to 2011 Census as against the 31,838,619 of 2001. The urban populace of Kerala has registered a huge growth over the last decade as the number

of towns in the State increased three times. Urbanisation, as measured by the share of urban population of the State, has shown a sharp increase from 25.96 per cent in 2001 to 47.72 per cent in 2011. Corresponding levels for India were 25.52 per cent in 2001 and 31.16 per cent in 2011. Kerala, positioned 19th in terms of the level of urbanisation among the States of India as per the 2001 Census, was ranked 9th in 2011. Ernakulam (68.1 per cent) is the most urbanised district of Kerala and Wayanad (3.9 per cent) the least urbanised. A shift in the pace of urbanisation is noted between south and north of Kerala. Malappuram district shows the highest increase in urban population within a decade (2001-2011), followed by Kozhikkode district. Details of urban and rural population in Kerala are given in **Appendix 1.3.**

Urbanisation in Kerala shows marked peculiarities. Generally, increase in urban population growth rate is the result of over-concentration in the existing cities, especially in the million-plus urban agglomerations. However, in Kerala, the main reason for urban population growth is the increase in the number of urban areas as well as urbanisation of the peripheral areas of existing major urban centers. Kerala is very unique in settlement pattern also. In most of its parts, it is a continuous spread of habitation without much open lands or fields separating habitations. So the settlement pattern itself gives an image of urbanisation. Moreover,

the infrastructural facilities available to the population in general do not vary much between rural and urban, especially in the case of access to educational and health care facilities.

The spatial distribution of urban areas within the State shows that urban areas are concentrated in coastal and midland regions. The midland and high land regions are being subjected to urbanisation at an increased pace. As per present urbanisation pattern of Kerala, fertile agricultural lands in the midland region are being converted for non agricultural purposes.

Section 3 NATIONAL INCOME

The Gross National Income (GNI) of India, at 2011-12 prices, is estimated at ₹11,213,328 crore during 2015-16, as against the previous year's

estimate of ₹10,427,701 crore (Table 1.1). The gross national income is estimated to have risen by 7.5 per cent during 2015-16, in comparison to

Table 1.1
National Income, Domestic Product and Per Capita Income at 2011-12 Prices and Current prices (All India), ₹ in crore

Sl No	Item at factor cost	At 2011-12 Prices			At Current Prices		
		2013-14 (NS)	2014-15 (NS)	2015-16 (PE)	2013-14 (NS)	2014-15 (NS)	2015-16 (PE)
1	Gross National Income (GNI)	9717062	10427701 (7.3)	11213328 (7.5)	11132877	12340772 (10.8)	13418745 (8.7)
2	Net National Income (NNI)	8615309	9235026 (7.2)	9934863 (7.6)	9934405	11007592 (10.8)	11969428 (8.7)
3	Gross domestic product (GDP)	9839434	10552151 (7.2)	11350249 (7.6)	11272764	12488205 (10.8)	13576086 (8.7)
4	Net domestic product (NDP)	8737681	9359476 (7.1)	10071784 (7.6)	10074292	11155025 (10.7)	12126769 (8.7)
5	Per capita Gross domestic product (₹)	78653	83285 (5.9)	88466 (6.2)	90110	98565 (9.4)	105815 (7.4)
6	Per capita Net domestic product (₹)	69846	73871 (5.7)	78502 (6.2)	80530	88043 (9.3)	94519 (7.4)

Note: The figures in parenthesis shows the percentage change over previous year.

NS- New Series Estimate, PE- Provisional Estimate

Source: Central Statistics Office

the growth rate of 7.3 per cent in 2014-15. GNI at current prices is estimated at ₹13,418,745 crore during 2015-16, as compared to ₹12,340,772 crore during 2014-15 showing a rise of 8.7 per cent. The Net National Income (NNI) at current prices is estimated at ₹11,969,428 crore during 2015-16, as compared to ₹11,007,592 crore during 2014-15, showing a growth rate of 8.7 per cent. Details are given in **Table 1.1**.

GDP at constant (2011-12) prices in the year 2015-16 is estimated at ₹11,350,249 crore showing a growth rate of 7.6 per cent over the estimates of GDP for the year 2014-15 (₹10,552,151 crore). GDP at current prices in the year 2015-16 is estimated at ₹13,576,086 crore showing a growth rate of 8.7 per cent over the estimates of GDP for the year 2014-15 (₹12,488,205 crore). The per capita GDP in real terms (at 2011-12 prices) during 2015-16 is estimated at ₹88466 as against ₹83285 in 2014-15, registering an increase of over 6.2 per cent. The per capita GDP in real terms at current prices is estimated at ₹105,815 in 2015-16 as against ₹98,565 for the previous year depicting a growth of 7.4 per cent.

The details of GDP, NDP, GNI and NNI at current and constant (2011-12) prices from 2012-13 to 2015-16 with percentage change over previous year are given in **Appendices 1.4, 1.5, 1.6 and 1.7**. The sectoral distribution of GDP at

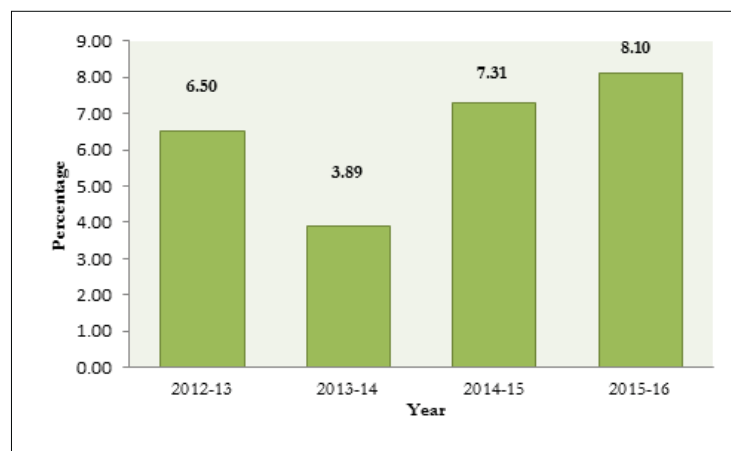
constant (2011-12) prices and current prices with percentage change over previous year is given in **Appendix 1.8** and **Appendix 1.9**.

STATE INCOME

The Ministry of Statistics and Programme Implementation has released the new series of national accounts. There are some conceptual differences between the key aggregates of national accounts published till 2014-15 at 2004-05 base year prices and 2011-12 base year prices being published now. The new series follows system of National Accounts (2008) Standards to a large extent. GDP at factor cost has been replaced by Gross Value Added (GVA) at basic prices and GDP at market prices is now termed GDP (**Box 1.1**).

The quick estimate of Gross State Domestic Product (GSDP) at constant (2011-12) prices is ₹46,724,313 lakhs during 2015-16 as against the provisional estimate of ₹43,223,674 lakhs during 2014-15. GSDP registered a growth rate of 8.10 per cent in 2015-16 compared to 7.31 per cent in 2013-14 (**Figure. 1.4**). At current prices, the GSDP is estimated at ₹58,833,659 lakhs (quick estimate) during 2015-16 as against the provisional estimate of ₹52,600,230 lakhs during 2014-15 showing a growth rate of 11.85 per cent.

Figure 1.4
Growth Rate of GSDP at Constant (2011-12) Prices, Kerala, in per cent



Source: Department of Economics and Statistics

Box 1.1

Base Year Change in the Computation of Gross State Domestic Product

Base year has been revised in the computation of national accounts statistics from 2004-05 to 2011-12. Some concepts have also undergone changes following the adoption of System of National Accounts (2008). Gross Domestic Product (GDP) at constant market prices will henceforth be known as GDP and Gross Value Added at basic prices will replace GDP at factor cost. The relation between the two is: $GVA \text{ at basic prices} = GVA \text{ at factor cost} + \text{production taxes less production subsidies}$. GDP and GVA at basic prices bear the following relationship: $GDP = GVA \text{ at basic prices} + \text{product taxes} - \text{product subsidies}$.

Production taxes or production subsidies are paid or received with relation to production and are independent of the volume of actual production. Some examples of production taxes are land revenues, stamps and registration fees and tax on profession. Some production subsidies are subsidies to Railways, input subsidies to farmers, subsidies to village and small industries, and administrative subsidies to corporations or cooperatives. Product taxes or subsidies are paid or received on per unit of product. Some examples of product taxes are excise tax, sales tax, service tax and import and export duties. Product subsidies include food, petroleum and fertilizer subsidies, interest subsidies given to farmers, and households through banks, and subsidies for providing insurance to households at lower rates.

Comprehensive coverage of the corporate sector in manufacturing, services and the financial sector by inclusion of information from the accounts of stock brokers, stock exchanges, asset management companies, mutual funds and pension funds, and the regulatory bodies has led to changes in the estimates of GVA both at aggregate and sectoral levels.

The quick estimate of Net State Domestic Product (NSDP) at factor cost at constant prices (2011-12) is ₹ 42,613,173 lakhs during 2015-16 compared to the provisional estimate of ₹ 39,370,155 lakhs during 2014-15, recording a growth rate of 8.24 per cent in 2015-16. At current prices the NSDP is estimated at ₹ 53,112,606 lakhs (quick estimate) in 2015-16 compared to the provisional estimate of ₹ 47,304,466 lakhs during 2014-15. The growth rate of NSDP at current prices is 12.28 per cent in 2015-16 compared to 13.37 per cent in 2014-15 (Table 1.2).

Per Capita State Income

As per the quick estimates, the per capita GSDP at constant (2011-12) prices in 2015-16 was ₹ 136,811 as against provisional estimate of ₹ 127,187 in 2014-15, recording a growth rate of 7.57 per cent in 2015-16. At current prices, the per capita GSDP in 2015-16 was ₹ 172,268 registering a growth rate of 11.30 per cent over the previous year's estimate of ₹ 154,778. The best indicator of per capita state

income is NSDP divided by the population. At constant (2011-12) prices, the quick estimates of per capita Net State Domestic Product in 2015-16 was ₹ 124,773 as against provisional estimate of ₹ 115,848 in 2014-15, recording a growth rate of 7.70 per cent in 2015-16. Figure 1.5 shows that during the period 2012-13 to 2015-16, the per capita state income at constant prices was higher than the per capita national income.

Sectoral Distribution of Gross State Value Added (GSVA)

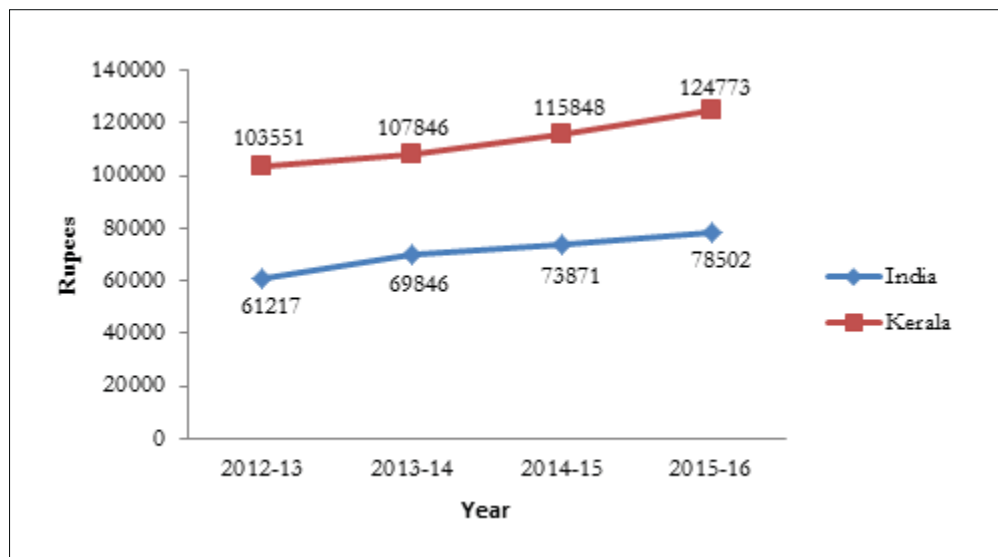
During 2015-16, the contribution from primary, secondary and tertiary sectors to the GSVA at constant prices (2011-12) was 11.58 per cent, 26.17 per cent and 62.24 per cent respectively. At current prices, the primary, secondary and tertiary sectors contributed 12.07 per cent, 24.27 per cent and 63.66 per cent respectively to the GSVA during this period (Figure 1.6).

Table 1.2
State Domestic Product and Per Capita Income of Kerala, ₹ in lakh and per cent

Sl No	Item	Income (₹ Lakhs)			Growth Rate (Per cent)	
		2013-14	2014-15 (P)	2015-16 (Q)	2014-15 (P)	2015-16 (Q)
1	Gross State Domestic Product					
	a) At Constant (2011-12) prices	40278133	43223674	46724313	7.31	8.10
	b) At Current prices	46504121	52600230	58833659	13.11	11.85
2	Net State Domestic Product					
	a) At Constant (2011-12) prices	36470677	39370155	42613173	7.95	8.24
	b) At Current prices	41726497	47304466	53112606	13.37	12.28
3	Per Capita GSDP (₹)					
	a) At Constant (2011-12) Prices	119105	127187	136811	6.79	7.57
	b) At Current Prices	137515	154778	172268	12.55	11.30
4	Per Capita NSDP (₹)					
	a) At Constant (2011-12) Prices	107846	115848	124773	7.42	7.70
	b) At Current Prices	123388	139195	155516	12.81	11.73

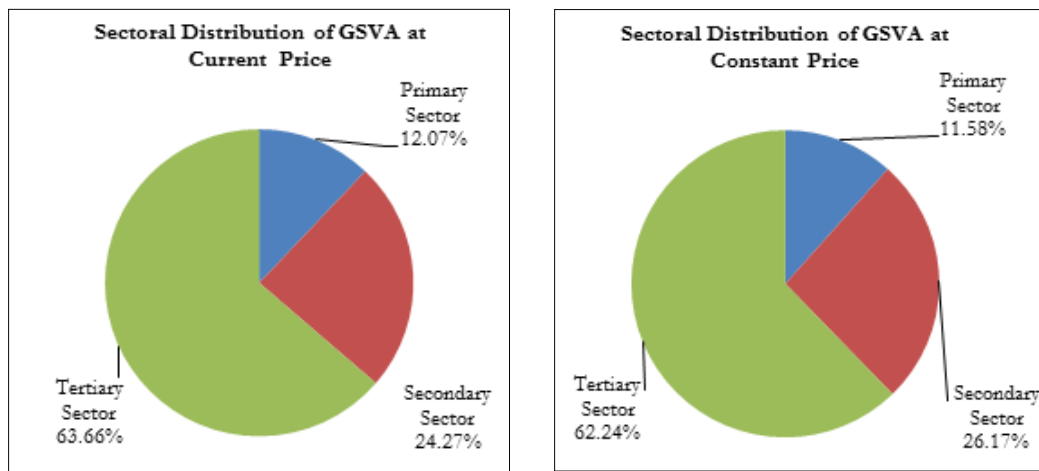
Source: Department of Economics and Statistics
P: Provisional Estimate, Q: Quick Estimate

Figure 1.5
Per Capita State Income at Constant Prices, in ₹



Source: Central Statistics Office and Department of Economics and Statistics

Figure 1.6
Sectoral Distribution of GSVA 2015-16 at Basic Prices, in per cent



Source: Department of Economics and Statistics, Government of Kerala

In 2015-16, at current prices, the contribution to GSVA of the tertiary sector increased to 63.66 per cent from 61.53 per cent in 2014-15. The contribution from primary and secondary sector declined from 13.45 per cent to 12.07 per cent in the primary sector, and from 25.02 per cent to 24.27 per cent in the secondary sector during the corresponding period. The analysis of annual sectoral growth rate of GSDP shows that the tertiary sector recorded the highest rate of growth 8.78 per cent in 2015-16 at constant (2011-12) prices compared to 8.32 per cent in 2014-15 followed by secondary sector (8.58 per cent). The primary sector recorded a negative growth rate of -2.08 per cent. Negative growth in agriculture was because of the decrease in production of some of the cash crops, and in fishing and aquaculture and forestry and logging.

The details of sectoral distribution of GSDP with percentage share during the last three years is given in **Appendices 1.10, 1.11 and 1.12** and the details of GSDP, NSDP at constant and current prices during 2011-12 to 2015-16 are given at **Appendices 1.13, 1.14, 1.15 and 1.16**.

At current prices, the tertiary sector recorded a growth rate of 14.94 per cent, secondary sector 7.73 per cent and primary sector 0.37 per cent

in 2015-16 compared to the previous year. The driving force of growth in the tertiary sector is growth in the transport, storage, communication and service-related broadcasting, real estate, ownership of dwelling and professional services.

District-wise Gross State Domestic Product

District-wise distribution of GSVA at current prices shows that Ernakulam district continues to have the highest income of ₹6,811,532 lakhs in 2015-16 as against ₹6,042,283 lakhs in 2014-15 registering a growth rate of 12.73 per cent. At constant (2011-12) prices, this amounts to ₹5,489,638 lakhs during 2015-16 compared to ₹5,061,012 lakhs during 2014-15. The district-wise GSVA details are given in **Table 1.3**.

District-wise Per Capita Income

The analysis of district wise per capita income shows that Ernakulam district continues to stand first with the per capita income of ₹ 146,518 at constant (2011-12) prices in 2015-16 as against ₹ 135,817 in 2014-15. The district wise per capita income with corresponding rank and growth rate is given in **Table 1.4**.

Table 1.3
District-wise Distribution of Gross State Value Added, ₹ in lakh

Sl. No	District Name	Gross State Value Added at Basic Price					
		At Current Prices			At Constant Prices		
		2014-15 (P)	2015-16 (Q)	Growth Rate (per cent)	2014-15 (P)	2015-16 (Q)	Growth Rate (per cent)
1	Thiruvananthapuram	4856255	5527866	13.83	3980052	4379870	10.05
2	Kollam	4447889	4833817	8.68	3635333	3816002	4.97
3	Pathanamthitta	1388104	1484563	6.95	1151854	1192745	3.55
4	Alappuzha	3578694	3860438	7.87	2902885	3060179	5.42
5	Kottayam	2929854	3231414	10.29	2484692	2631789	5.92
6	Idukki	1820222	1931443	6.11	1445373	1509331	4.43
7	Ernakulam	6042283	6811532	12.73	5061012	5489638	8.47
8	Thrissur	4887638	5499420	12.52	4019513	4359486	8.46
9	Palakkad	3502457	3916469	11.82	2837929	3053495	7.60
10	Malappuram	4600118	5188140	12.78	3783386	4089318	8.09
11	Kozhikode	4214011	4669634	10.81	3436883	3686581	7.27
12	Wayanad	981932	1073096	9.28	764660	810384	5.98
13	Kannur	3358216	3727473	11.00	2757405	2972726	7.81
14	Kasaragod	1625587	1819296	11.92	1311212	1427568	8.87
	GSVA	48233260	53574598	11.07	39572189	42479111	7.35

Source: Department of Economics and Statistics P: Provisional Estimate Q: Quick Estimate

Table 1.4
District-wise per capita income at basic price- constant (2011-12) prices, in ₹ and per cent

Sl. No.	District	2014-15 (P) ₹	Rank	2015-16 (Q) ₹	Rank	Growth Rate (per cent)
1	Thiruvananthapuram	108108	7	118740	7	9.83
2	Kollam	124329	2	130341	2	4.84
3	Pathanamthitta	88399	10	92130	12	4.22
4	Alappuzha	123368	3	130172	3	5.52
5	Kottayam	113519	6	120122	5	5.82
6	Idukki	114673	4	119908	6	4.57
7	Ernakulam	135817	1	146518	1	7.88
8	Thrissur	114168	5	123341	4	8.03
9	Palakkad	88342	11	94623	10	7.11
10	Malappuram	80277	14	85575	14	6.60
11	Kozhikode	99197	8	105873	8	6.73
12	Wayanad	81842	13	86202	13	5.33
13	Kannur	97178	9	104246	9	7.27
14	Kasaragod	86045	12	93180	11	8.29
	STATE	105104		112343		6.89

Source: Department of Economics and Statistics P: Provisional Estimate Q: Quick Estimate

Table 1.4 reveals that Thiruvananthapuram, Kasaragod, Thrissur, Ernakulam, Kannur and Palakkad districts had a higher-than-average growth rate in per capita income in 2015-16. However, Pathanamthitta, Idukki, Kollam, Kottayam and Wayanad districts showed lower-than-average growth in per capita income.

District-wise sectoral distribution of Gross State Domestic Product from 2012-13 to 2015-16 at current and constant (2011-12) prices are given in **Appendices 1.17, 1.18, 1.19, 1.20, 1.21 and 1.22**

Section 4 POVERTY

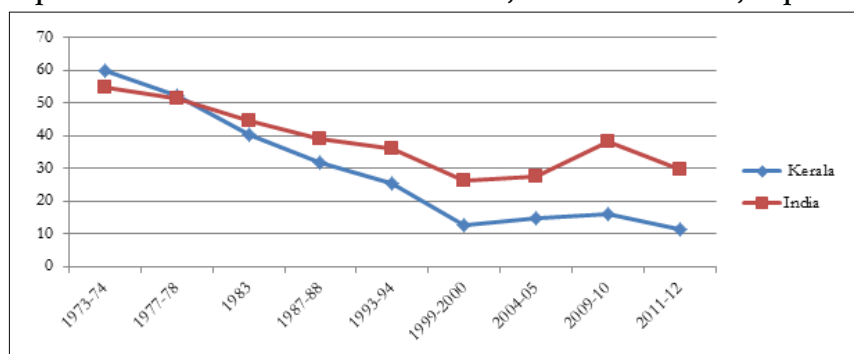
Historically, Kerala has followed a developmental path different from that followed by other Indian States. Rate of poverty in Kerala is low compared to other Indian States and the all India figures. According to the official figures, absolute poverty rate in Kerala is lower than 12 per cent in 2011-12 and has shown a sharp reduction over the last forty years. The success of Kerala in poverty reduction is reflected in the sharp reduction in the proportion of poor. The incidence of poverty in Kerala was 59.74 per cent in 1973-74 which reduced to 11.3 per cent in 2011-12. In India, the rate of poverty was 54.88 per cent in 1973-74 (which was lower compared to Kerala) and it reduced to 29.5 per cent in 2011-12.

poverty. In Kerala, from 1973-74 to 2011-12, rural and urban poverty ratio declined from 59.19 per cent to 7.3 per cent and from 62.74 per cent to 15.3 per cent respectively, whereas in India these figures declined from 56.44 per cent to 30.9 per cent for rural people and 49.01 per cent to 26.4 per cent for urban people. In Kerala, factors such as land reforms, spread of education and health care, decentralisation, pension schemes, public distribution system, Kudumbashree and Plan schemes have all played an effective role in reducing the poverty ratios. The absolute poverty rate (as per the Rangarajan report) in Kerala and India from 1973-74 to 2011-12 are given in **Figure 1.7** and **Appendix 1.23**.¹

Kerala has also made an extensive improvement in reducing the incidence of both rural and urban

Yet, there continue to be several pockets of deprivation in the State. Poverty in Kerala is

Figure 1.7
Proportion of Poor in India and in Kerala, 1973-74 to 2011-12, in per cent



Source: Planning Commission, GoI, 2014

¹(Rangarajan Committee) Report of The Expert Group to Review the Methodology for Measurement of Poverty, Government of India, Planning Commission, June, 2014

mainly concentrated in some social categories and groups, such as scheduled castes, scheduled tribes, fishing communities, potters and artisans. The Scheduled Caste Development Department, Scheduled Tribes Development Department and Fisheries Department are implementing several poverty reduction/livelihood programmes for the upliftment of the people in these communities.

SOCIO ECONOMIC AND CASTE CENSUS (SECC), 2011

India has a long history of studies for the measurement of poverty. The methodology for the estimation of poverty is based on the recommendations made by various expert groups. The previous poverty estimates provide only the details about the per centage of the poor population in each State, Union Territories (UTs) and in all India average. However, these estimates cannot be used for the identification of individual poor.

The Socio-Economic and Caste Census (SECC), 2011 was an exercise conducted by Government of India to identify households living below the poverty line in India. SECC estimates a deprivation index based on the following seven criteria.

1. Only one room with kucha walls and kucha roof
2. No adult member between age 16 to 59
3. Female headed households with no adult male member between age 16 to 59
4. Disabled member and no able bodied adult member
5. SC/ST households
6. No literate adult above 25 years
7. Landless households deriving major part of their income from manual casual labour

According to the SECC (2011) data, out of the 76.99 lakh households in Kerala, 63.19 lakh households (82.08 per cent) live in rural areas. Of these, 10.32 per cent are Scheduled Caste households and 1.63 per cent was Scheduled Tribe households. Out of the total rural households, 19.16 lakh (30.33 per cent) rural households are deprived. The highest

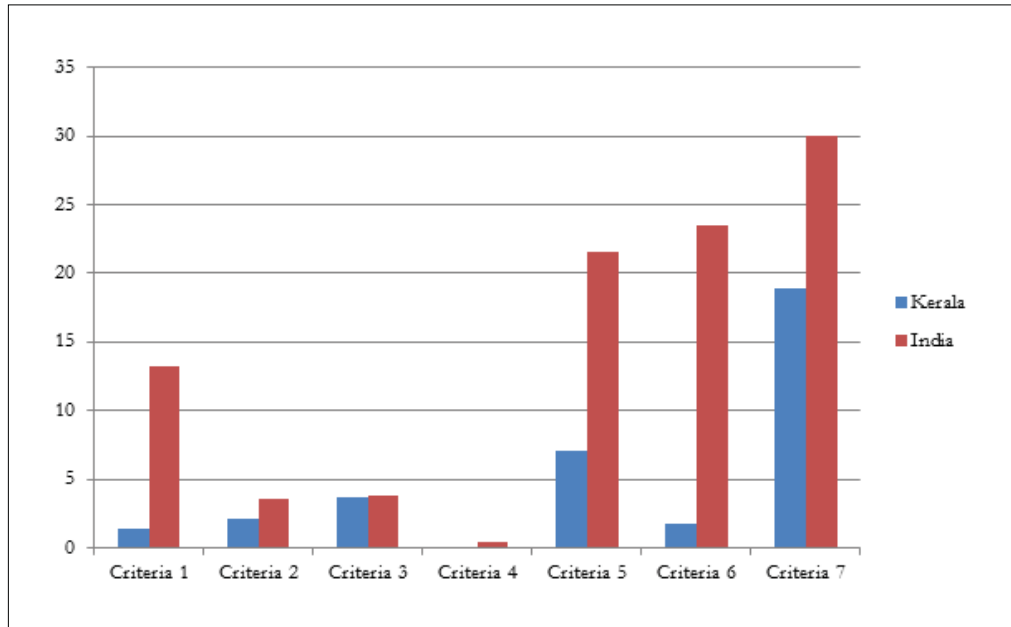
deprivation rate was recorded in Palakkad (42.33 per cent) followed by Thiruvananthapuram (38.36 per cent) and Wayanad (36.33 per cent). The lowest deprivation was recorded in Ernakulam (20.30 per cent), Kottayam (23.02 per cent) and Kannur (24.25 per cent). Out of the total rural SC and ST households, 57.66 per cent of Scheduled Caste households and 61.68 per cent of Scheduled Tribe households are included under deprived categories. District-wise details about the percentage of deprived rural households in Kerala against their total number of rural households across different categories are given in **Appendix 1.24**.

When different indicator-wise deprivation rates among the rural households are considered, the highest deprivation was recorded in the indicator, 'landless households deriving major part of their income from manual casual labour' (18.86 per cent) followed by the indicator 'SC/ST household' (7.11 per cent) and the indicator 'female headed households' (3.65 per cent). The lowest deprivation was recorded in the indicator 'disabled member and no able bodied adult member' (0.19 per cent) followed by 'no literate adult above 25 years' (1.81 per cent). District-wise details about the percentage of deprived rural households based on different deprivation indices are given in **Appendix 1.25** and the percentage of deprived rural households in Kerala and India based on different deprivation indices are given in **Figure 1.8**.

As per the land ownership indicator, 72.50 per cent of the rural households in Kerala are landless whereas in India it is only 56.41 per cent. In Kerala, the percentage of landless rural households was highest in Thrissur (87.39 per cent) followed by Alappuzha (87.19 per cent) and the lowest percentage is in Kasaragod district (49.13 per cent).

There may be a definitional reason why the SECC data shows high landlessness in Kerala, despite its history of land reforms. The SECC did not consider homestead land owned by households when assessing landownership status of a household. As a result, the SECC data may have failed to capture those landless households

Figure 1.8
Share of deprived rural households in Kerala and India as per different deprivation indices, in per cent



Source: Socio Economic and Caste Census (2011).

who received homestead land as part of the land redistribution programmes in Kerala. This would also include beneficiaries who received crop land, including garden land, on which they later built homes, thus converting their plots into homestead land.

According to the SECC, the main breadwinner of the 70.75 per cent of the rural households in Kerala earned less than ₹. 5000 per month, while in India the corresponding share was 74.50 per cent. This ratio was highest in Wayanad (79.67 per cent), followed by Malappuram (75.55 per cent) and Palakkad (74.38 per cent) districts. The ratio was lowest in Ernakulam (64.37 per cent), followed by Kottayam (64.46 per cent) and Pathanamthitta (64.66 per cent) districts.

As the most important source of household income, 50.61 per cent and 10.26 per cent of the rural households in Kerala were, respectively,

dependent on manual casual labour and cultivation. In India, the corresponding shares were 51.18 per cent and 30.10 per cent respectively. District-level data about the source of household income show that, in the case of manual casual labour, the highest rate was in Malappuram (65.05 per cent) and lowest rate was in Pathanamthitta (31.71 per cent). In the case of cultivation, the highest rate was in Idukki (32.49 per cent) and lowest rate was in Alappuzha (4.86 per cent).

Various schemes on poverty reduction have been dealt with in other chapters of this Review. Even though Kerala has made considerable progress in eradicating poverty, there are still several pockets of deprivation in the State, especially among tribal population and fishermen communities. Greater central assistance and appropriate livelihood programmes in these areas are required to ensure that the State can eliminate absolute poverty throughout the State.

Section 5

PRICES

Commodity prices are a major determining factor of economic activities in India. Price fluctuation of essential commodities influences pattern of consumption of individuals as well as society. In the global market, commodity prices continued to decline because of weak demand and ample supplies. Energy prices dropped around 45 per cent in 2015-16 due to continuing supply surpluses. The official Wholesale Price Index (WPI) of India for 'All commodities' (Base: 2004-05=100) for the month of October, 2016 rose by 0.1 per cent to 182.9 (provisional) from 182.8 (provisional) for the previous month. The annual rate of inflation, based on monthly WPI, stood at 3.39 per cent (provisional) for the month of October 2016 (over October, 2015) as compared to 3.57 per cent (provisional) for the previous month and -3.70 per cent during the corresponding month of the previous year. Inflation rate in the financial year was 4.34 per cent compared to 0.45 per cent in the corresponding period of the previous year. The average headline inflation measured in terms of Wholesale Price Index (WPI) declined from 6.0 per cent in 2013-14 to 2.0 per cent in 2014-15 and further to -3.0 per cent in 2015-16 (Apr-Dec) and reached -0.7 per cent in December 2015. Similarly, inflation measured in terms of Consumer Price Index (New Series) moderated to 4.8 per cent in 2015-16 (Apr-Dec) as compared to 5.9 per cent in 2014-15 and stood at 5.6 per cent in December 2015. WPI Food inflation which remained high at 9.4 per cent in 2013-14 moderated to 4.9 per cent in 2014-15. It stood at 1.9 per cent in 2015-16 (Apr-Dec) and recorded 6.2 per cent in December 2015.

Inflation based on Consumer Price Index, which remained sticky around 9-10 per cent during 2012-14, moderated to 5.9 per cent in 2014-15 and further to 4.6 per cent in 2015-16 (Apr-Oct). The decline in consumer inflation although broad-

based was mainly driven by consistent moderation in food and housing. Inflation based on consumer food price index (CFPI) declined to an all time low of 2.7 per cent in second quarter of 2015-16 mainly on account of huge fall in the prices of cereals, which comprise the highest share (24.8 per cent) within the consumer food basket and vegetables. CPI core inflation (non-food non-fuel) continued to move within a narrow range in the last four quarters.

As far as Primary Articles are concerned, the index declined by 0.8 per cent to 261.8 from 263.9 for the September 2016, especially for food articles like urad, fruits and vegetables, arhar, and bajra. The rate for Non-food Articles also declined by 3.1 per cent to 223.2 from 230.3 for September 2016 due to lower price of soybean, groundnut seed and flowers, raw cotton.

THE KERALA SCENARIO

Kerala is a consumer state, most of the food and non food articles come from the neighbouring states. Price structure of the essential commodities varied according to their availability and demand. Kerala being highly dependent on external sources, price trends in the State are greatly influenced by patterns emerging in rest of the country. The intervention of the State government is restricted to the market for essential goods and services.

Price Trends

In Kerala, prices of food products increased in 2016. In 2011, Wholesale Price Index of rice was 4768.35 and it increased to 6344.85 in August 2016, registering a 33 per cent increase. Wholesale Price Index of fruits and vegetables also increased to 12862.92 in August 2016 from 9831.91 in August 2015. The overall Wholesale Price Index of Food

Crops increased to 8033.23 in August 2016 from 7396.62 in August 2015.

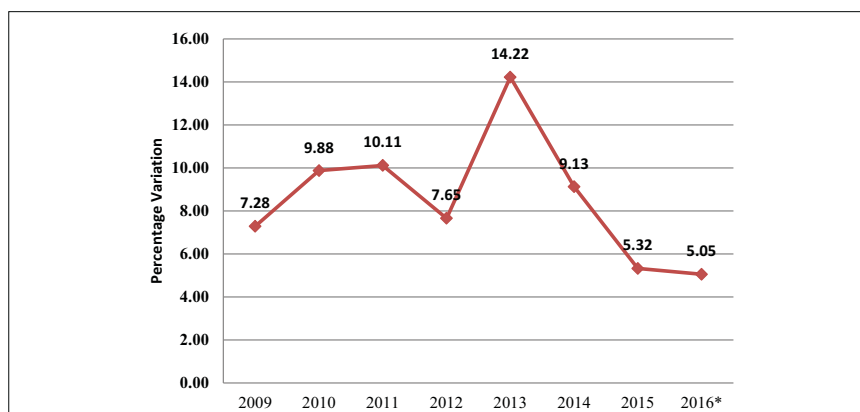
In the case of Non-food Crops, the Wholesale Price Index reduced by 19.2 per cent from 7226.53 in August 2015 to 5841.01 in August 2016. Under this category, prices of oil and oil seeds have fell by 23.8 per cent in August 2016 over the previous year. While analysing the trend in prices of all crops in Kerala, Wholesale Price Index of different crops declined to 7233.07 in August 2016 from 7394.28 in August 2015 (**Appendix 1.26**). Month-wise Wholesale Price Index reveals that prices of all food crops were rising every month in 2016 at moderate rates. A comprehensive picture of price trends is given in the **Appendix 1.27**.

Consumer Price Index (CPI) in Kerala increased considerably during 2016 over the previous years. An overview of trends in consumer price indices and the deviations in average annual inflations at different centres in Kerala reveals that price levels have been rising. In 2016, Average Consumer Price Index in Kerala was 291 against the 277 in 2015. A 5.05 per cent hike has been registered during this period. Pathanamthitta district registered a CPI of 309, the highest among the centres in 2016 and the percentage of inflation was about 4.04 compared to the previous year. Mundakayam and Kasaragod have registered second and third position of CPI

at 304 and 303 respectively. However, Kannur and Kozhikode witnessed significantly higher rate of inflation in Kerala at 6.43 per cent and 6.20 per cent respectively. On the other hand, magnitude of inflation in Ernakulam district was relatively low in 2016 compared to rest of the centres in Kerala. Rate of inflation indicated in Ernakulam is only 2.9 per cent. The centre-wise details of Consumer Price Index (CPI) and its percentage variation depicted is in **Appendix 1.28** and its State average shown in **Figure 1.9**.

The retail prices of certain commodities under groceries and vegetables have marginally increased while some others have declined in November 2016 over the previous year. The price of rice per kg has marginally increased to ₹ 35.70 in November 2016 from ₹ 33.68 over the same month of previous year. The price of red gram also increased to ₹.78.71 per kg in November 2016 over the previous year. The inflationary trend for grocery is not much compared to the previous years. The prices of items under groceries like green gram, green gram dhal, black gram, dhal (tur) have come down from November 2015 to November 2016. In the case of fruits and vegetables, price decreased substantially in 2016 over the previous year. Monthly retail price of essential commodities in 2016 is shown in **Appendix 1.29**.

Figure 1.9
Percentage variation in Average Consumer Price Index of Kerala (1998-99=100), in per cent



Source: Department of Economics and Statistics, Government of Kerala

* Upto August 2016

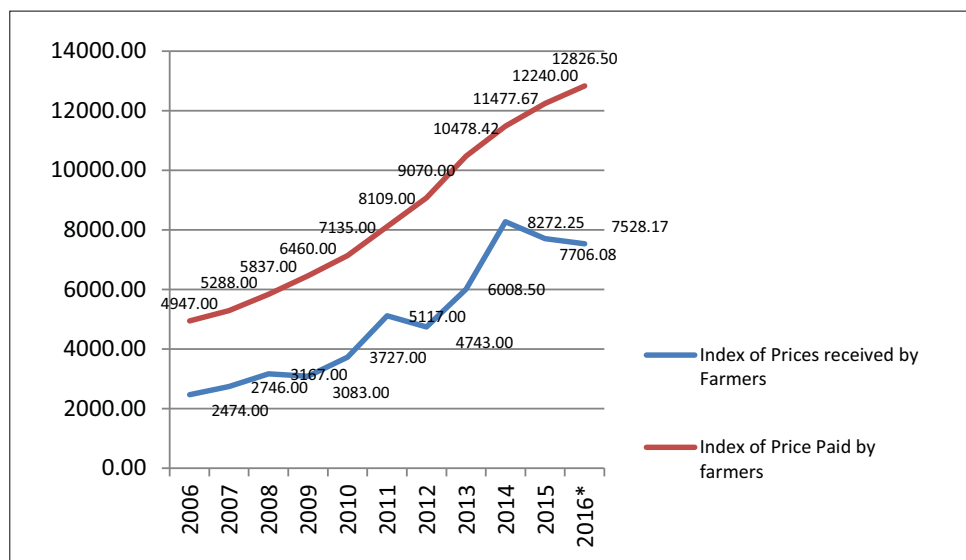
Price Parity

In the recent years, the cost of cultivation of crops has continuously increased due to exorbitant hike in fertilizer cost and transportation cost. In this situation, farmers are suffering more as their products do not get adequate price. During 2014, the index of farm expenses (index of price paid by farmers) was 11477.67 against the index of income received by farmers at 8272.25 and the parity of index was 72.08. During 2015, income of the farmers from their produces diminished considerably to reach 7706.08. Meanwhile, the expenses of farm cultivation steeply increased in the same year. During this year, price received by farmers was estimated at 7528.17 and expenses towards the cultivation were assessed at 12826.5. It reveals increasing misery of farmers suffering from declining product prices and high cost of farm input and high wages. The Yearly Average Index of Prices received and Prices Paid by Farmers is seen in the **Appendix 1.30** and **Figure 1.10**

Wages

Wage rate of skilled as well as unskilled workers has increased every year in Kerala. Average Daily Wage rates of Skilled Workers in the Agricultural Sector (**Appendix 1.31**) increased steeply in 2015-16 over the previous year. In 2013-14, the wage of a carpenter was ₹644.92 and it increased to ₹705.08 in 2014-15 and to ₹746.17 in 2015-16. In the case of Masons too, wages increased substantially since 2004-05. During 2015-16, the wage of a mason was ₹753.08 against ₹707.75 in 2014-15. The same phenomenon was seen in the case of wage rates of unskilled workers. Average Daily Wage Rates of Unskilled Workers in the agricultural sector, of both male and female workers, have increased to ₹586.06 and ₹422.19 respectively in 2015-16 as against ₹545.15 and 392.46 in 2014-15. Details of the wage structure of this category are described in **Appendix 1.32**.

Figure 1.10
Yearly Average Index of Prices Received and Paid by Farmers in Kerala



Source: Department of Economics and Statistics, Government of Kerala
*Upto June, 2016

Section 6

STATE FINANCES

The condition of State Finances in Kerala during 2011-15 was marked by fiscal mismanagement. The steady gains made in fiscal parameters during 2006-11 lost momentum in the succeeding years due to gross inefficiency in tax administration and indiscipline in expenditure. Fiscal trajectory of 2015-16 showed some improvement but was not encouraging enough for a sustainable upturn. Had the State not received higher devolution of central taxes and the post-devolution revenue deficit grant from the centre during 2015-16, the State's fiscal consolidation path would have been murkier. Also, a considerable amount of immediate and short term liabilities were passed over to the next fiscal. Otherwise the fiscal situation of 2015-16 would have been abysmal.

Against the backdrop of the general fiscal stress at both state level and national level, the State is obliged to undertake strategic steps to return to the path of fiscal consolidation. However, a recovery from the present state of fiscal stagnation seems quite remote in the near future as State's economy is faceted with a variety of internal and extraneous vulnerabilities. The unfolding of demonetization crisis has inflicted further stress on the State economy. The ongoing contraction in GDP growth will be worsened by the cash crunch.

This will result in reducing the revenue collection and widen revenue and fiscal deficit gaps. It is in this background that the State government has to shoulder the outlays towards the 10th pay revision commitment and mobilize resources for social and physical development of the State. This is a major concern for the fiscal health of the State government.

The rule-based frameworks imparted by the enactment of Fiscal Responsibility and Budget

Management Act (FRBM) by the State intend to achieve long-term macroeconomic stability. This piece of fiscal legislation entrusts greater responsibility to states to adhere to the targets-based framework for the management of Government finances. Achievement of fiscal targets stipulated by the FRBM Act seems unattainable in the present precarious fiscal scenario. Amendment to FRBM Act for the enhancement of borrowing limit becomes unavoidable to tide over the present fiscal crunch. Management of capital and current expenditure will otherwise be a tedious task.

After 2003, Kerala had made significant achievements in the fiscal consolidation. The revenue deficit, which was 4.37 per cent of GSDP in 2002-03, came down to 1.36 per cent in 2010-11. After this period growth in States tax revenue as well as other major revenue components was not buoyant enough to facilitate revenue-led fiscal consolidation. The fiscal deficit, which represents the total resource gap, had witnessed a steady rise in the last five years. In 2015-16, revenue deficit was 1.65 per cent of GSDP against 2.78 per cent of GSDP in 2014-15. Fiscal deficit to GSDP proportion during 2015-16 was 3.04 per cent, which stood at 3.75 per cent during 2014-15.

The implementation of the Goods and Services Tax (GST) from the next fiscal would be an important tax reform. It is widely expected that being a consumer state, Kerala will benefit the most out of the introduction of the GST. The extent of GST compensation from the centre will be a determining factor in the State finances in the immediate fiscal.

The major deficit indicators of the state for the period from 2010-11 to 2016-17 (BE) is shown in **Table 1.5**

Table 1.5
Major Deficit Indicators, ₹ in crore

Year	Revenue Deficit		Fiscal Deficit		Primary Deficit(-) / Surplus (+)		GSDP
	Amount	Per cent to GSDP	Amount	Per cent to GSDP	Amount	Per cent to GSDP	
2010-11	3673.87	1.36	7730.46	2.87	-2040.80	-0.76	269473.79
2011-12	8034.26	2.61	12814.77	4.16	-6521.17	-2.12	307906.00
2012-13	9351.45	2.46	15002.47	3.95	7797.66	2.06	379417.00
2013-14	11308.56	2.63	16944.13	3.94	8678.74	2.02	430211.00
2014-15	13795.96	2.78	18641.72	3.75	8872.13	1.79	496886.00
2015-16	9656.81	1.65	17818.46	3.04	6707.61	1.15	585467.00
2016-17 BE	13066.25	1.98	23139.89	3.51	10509.94	1.59	659308.00

Source: Finance Department, Government of Kerala

The committed expenditure on account of salaries, pensions, and debt charges showed a considerable increase in 2015-16 also. From 2016-17 onwards, the State government is committed to bear the liability towards 10th pay revision. Due to the increase in borrowings, the burden of interest payments of the State also increased steadily. To fulfill the State government's social commitment, it is obliged to spend more on devolution to local bodies, payments of welfare pensions and subsidies. Tax administration has to be strengthened to its optimum to tap resources to comply the State government's obligations.

The availability of better social and physical infrastructure is the hallmark of quality of

expenditure. During 2015-16, the State's share of expenditure on education and health in total expenditure is higher than General Category States. But in respect of development and social sector expenditure and capital expenditure, the State's performance in 2015-16 was poor compared to that of General Category States.

RECEIPTS

State government receipts can broadly be divided into Revenue and Capital receipts. The revenue receipts comprise State's own tax and non-tax revenues, share of central tax transfers and grants-in-aid from Government of India, whereas capital

Table 1.6
Financial Indicators for Government of Kerala, ₹ in crore

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Balance from current Revenue (BCR)	-2155	-910	-4973	-4866	-6694	-9037	-2738
Interest Ratio	0.20	0.18	0.17	0.16	0.17	0.17	0.16
Capital Outlay/ Capital receipts	0.26	0.43	0.31	0.29	0.25	0.23	0.46
Return of Investment ratio	0.008	0.020	0.016	0.016	0.018	0.012	0.013
Outstanding Guarantees (including interest) / Revenue Receipts	0.29	0.24	0.22	0.22	0.20	0.19	0.18
Assets/ Liabilities	0.40	0.40	0.40	0.40	NA	NA	NA

Source: Finance Department, Government of Kerala

NA : Not Available

receipts mostly consist of disinvestment receipts, recoveries of loans and advances, debt receipts from internal resources and loans and advances from Government of India and net accretions under public account.

Revenue Receipts

The revenue receipts of the State in proportion to GSDP increased marginally to 11.79 per cent in 2015-16 from 11.66 per cent in 2014-15. Growth rate of revenue receipts also showed an upward trend of 19.12 per cent in 2015-16 against 17.84 per cent in 2014-15. The trend in Revenue Receipts from 2010-11 to 2016-17 (BE) is given in **Figure 1.11**.

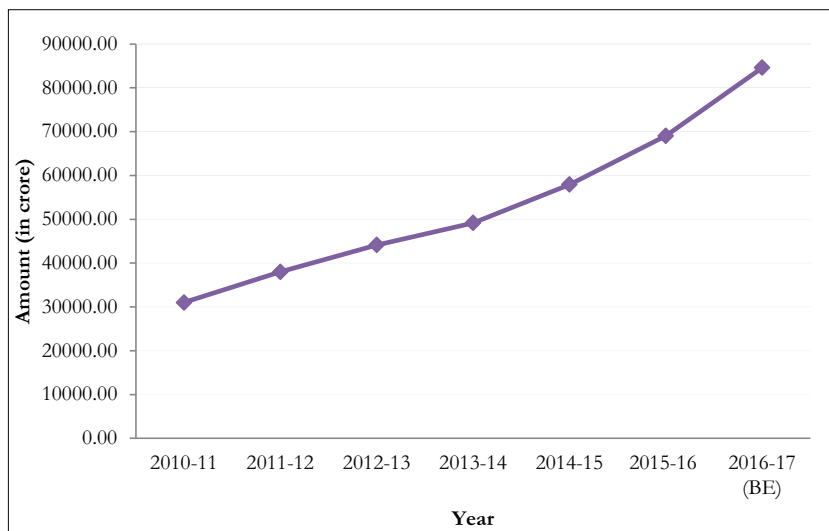
State's own taxes are the main source of revenue receipts of the State. In 2015-16, contribution from State's own taxes was ₹38,995.15 crore, which constitutes 56.49 per cent of the total revenue collection. Contributions from the share of central taxes and grants were ₹ 21,612.02 crore and State's own non-tax revenue was ₹8,425.49 crore. The details of Revenue Receipts from 2010-11 to 2016-17 BE is given in **Appendix 1.33**.

State's Own Tax Revenue (SOTR)

The main sources of State's Own Tax Revenue (SOTR) are Sales Tax including Value Added Tax (VAT), Stamps and Registration fees, State Excise Duties, Motor Vehicle Tax and Land Revenue. The State's Own Tax Revenue showed a declining trend from 2011-12 to 2013-14 and from 2014-15 onwards it showed a slight upward trend. The receipts from State's Own Tax Revenue showed a marginal increase in 2015-16 (₹38995.15 crore) against 2014-15 (₹35232.50 crore) registering a growth of 10.68 per cent. Of the SOTR, the major share was from Sales Tax including VAT. In 2015-16, receipts from Sales Tax and VAT contributed ₹ 30736.78 crore which was 78.82 per cent of the total SOTR, followed by 7.38 per cent from Stamp duties and registration fees (₹ 2877.73 crore), 7.22 per cent from Taxes on Vehicles (₹ 2814.31 crore), 5.04 per cent from State Excise Duties (₹1964.16 crore) and 0.46 per cent from Land Revenue (₹ 182.29 crore).

The receipts from Sales tax including VAT showed 10.13 per cent growth in 2015-16 over the previous year. The receipts from Motor vehicle taxes, Stamp

Figure 1.11
Trends in Revenue Receipts, Kerala, ₹ in crore



Source: Finance Department, Government of Kerala

duties and registration fees, State Excise duties and Land revenue recorded a growth of 19, 8.2, 10.51 and 31.12 per cent respectively in 2015-16. The details of State's Own Tax Revenue from 2010-11 to 2016-17 (BE) is given in **Appendix 1.34**.

State's Own Non-Tax Revenue (SONTR)

Receipts under State Lotteries have been the major source of non-tax revenue of the State for last five years. Other main sources of State's own Non-Tax Revenue (SONTR) are receipts from Interest, Dividend receipts and receipts from various social developmental services and sale proceeds of forest produces.

Receipts from SONTR registered perceptible increase during the last five years. In 2014-15, ₹7283.69 crore was realized as SONTR, recording growth of 30.65 per cent over 2013-14 (₹5575.03). In 2015-16, growth rate showed a downward trend of 15.68 per cent over 2014-15. In 2015-16, receipts from State Lotteries came to ₹. 6271.41 crore recording a growth rate of 15.18 per cent compared to 2014-15 (₹5444.88 crore). This constitutes 74.43 per cent of the total non tax revenue of the State. This was followed by ₹.772.33 crore from Social Development Services (9.17 per cent) and ₹283.04 crore from Forest revenue (3.6 per cent). In 2015-16, receipts from debt services was ₹105.03 crore. The details of State's Own Non-Tax Revenue from 2010-11 to 2016-17 (BE) is given in **Appendix 1.35**.

Central Transfers

Central Transfers comprises of share in central taxes and grants in aid from Centre. State's share in central taxes and grant in aid is determined on the basis of recommendations of the Finance Commissions. As per the recommendations of 14th Finance Commission, the share of the States in the net proceeds of Union Government during the period from 2015-16 to 2019-20 will be 42 per cent. The share pattern for the last two Finance Commissions viz. Twelfth (period 2005-10) and

Thirteenth (period 2010-15) were 30.5 per cent and 32 per cent respectively. The State specific share during the 14th Finance Commission period is 2.5 per cent, as against the 2.34 per cent in the 13th Finance Commission award period.

The 14th Finance Commission has recommended ₹9519 crore to the State for the period from 2015-16 to 2017-18 as Post-Devolution Revenue Deficit Grant .The State had received deficit grant of ₹ 4640 crore in 2015-16, ₹ 3350 crore in 2016-17 and would receive ₹ 1529 crore in 2017-18.

The annual growth rate of central transfers has increased from 2013-14 onwards. The central transfers by way of share of central taxes and grant-in aid received during 2015-16 was ₹21612.02 crore against ₹ 15434.28 crore in 2014-15. During this period, share in central taxes was ₹12690.67 crore. Even though 14th Finance Commission has not recommended grants for State Specific needs and other specific programmes, a substantial allocation of ₹. 8921.35 crore was there in overall central grants during 2015-16 compared to ₹ 7507.99 crore received in 2014-15. The increase is attributed to the receipt of revenue deficit grant of ₹4640 crore received as per the 14th Finance Commission recommendations.

The details of Central Transfers from 2010-11 to 2016-17 (BE) is given in **Table 1.7**.

EXPENDITURE

Expenditure of the State consists of two components viz., revenue expenditure and capital expenditure and expenditure on loan disbursements. The total expenditure of the State doubled from 2010-11 to 2015-16. The revenue expenditure as well as the capital expenditure also doubled during the same period.

Revenue Expenditure

The revenue expenditure of the State mainly comprises of expenditure on salaries, pension, debt charges, devolutions to the Local Self Governments (LSG) and subsidies. The operational and

Table 1.7
Central Transfers: 2010-11 to 2016-17 (BE), ₹ in crore

Year	Share in Central Taxes & Duties		Grant-in-aid and other receipts from Centre for Plan and Non-plan		Total Transfers	
	Amount	Annual Growth Rate (Per cent)	Amount	Annual Growth Rate (Per cent)	Amount	Annual Growth Rate (Per cent)
2010-11	5141.85	16.89	2196.62	-1.65	7338.47	10.65
2011-12	5990.36	16.50	3709.22	68.86	9699.58	32.17
2012-13	6840.65	14.19	3021.53	-18.54	9862.18	1.68
2013-14	7468.68	9.18	4138.21	36.96	11606.89	17.69
2014-15	7926.29	6.13	7507.99	81.43	15434.28	32.98
2015-16	12690.67	60.11	8921.35	18.82	21612.02	40.03
2016-17 (BE)	14282.00	12.54	11361.72	27.35	25643.72	18.65

Source: Finance Department, Govt. of Kerala

maintenance cost for the upkeep of the completed projects and programmes are classified under the revenue account. Grants provided by the State to meet salaries and pension liabilities of employees in the Universities and State autonomous bodies and also the pension liabilities of employees of Panchayat Raj Institutions are classified under revenue expenditure. At the same time, a major portion of funds devolved to local bodies from the revenue account of the State government is utilized for the creation of capital assets of durable nature. Also a significant share of grant-in-aid set apart for universities and autonomous institutions are meant for creation of capital assets.

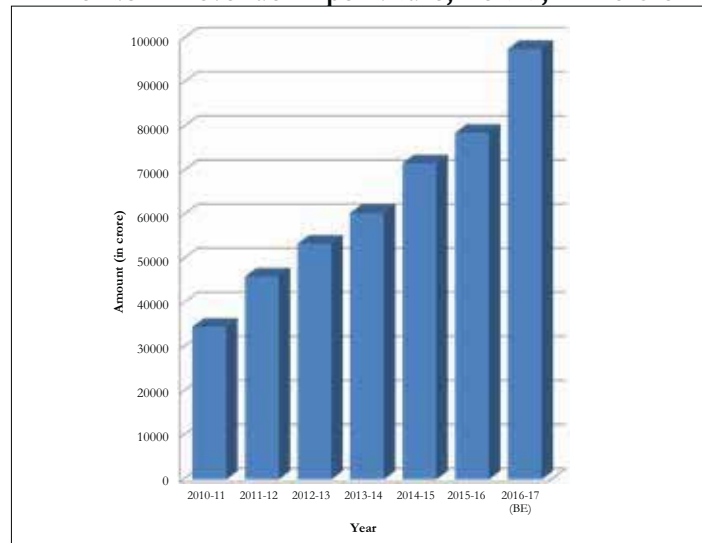
Expenditure on social and economic services together constitutes developmental expenditure. Funds devolved to Local Self Governments for expansion and development and maintenance of assets is also reckoned as developmental expenditure. The thrust on expenditure in the social and economic sectors has contributed towards maintaining the human development indicators of the State at a higher level, which ultimately has an impact on the long-term prospects of the economy. The State government's priority for social and economic services in the State is clearly evident from the increased trend of developmental expenditure in recent years. Non-

developmental expenditure of the State mainly constitutes the committed expenditure consisting of debt charges, expenditure on pension payments and administrative services.

Revenue expenditure has more than doubled during the period from 2010-11 to 2015-16. Total revenue expenditure in 2015-16 was ₹ 78,689.47 crore, of which plan expenditure was ₹ 12,078.50 crore and non-plan expenditure was ₹ 66,610.97 crore. The ratio of revenue expenditure to GSDP has shown signs of stabilization during the period from 2011-12 to 2014-15, and in 2015-16 it showed a slight declining trend (13.44 per cent). The trend in revenue expenditure of the State from 2010-11 to 2016-17 (BE) is given in **Figure 1.12** and component-wise details are given in **Appendix 1.36**.

The share of committed expenditure on revenue expenditure has slightly decreased during 2015-16, compared to the previous year. Expenditure on committed liabilities on salaries, pension, interest payments, subsidies and devolution to LSGs was 69.74 per cent of revenue expenditure during 2014-15 whereas in 2015-16 it was 68.61 per cent. During 2015-16, 76.58 per cent of the revenue receipts of the State were used for meeting the above committed expenditure. Important factors contributed for higher revenue expenditure are

Figure 1.12
Trends in Revenue Expenditure, Kerala, ₹ in crore



Source: Finance Department, Government of Kerala

government's active intervention to contain rise in prices of essential commodities, inclusive policy initiatives to bring all weaker sections of society under social security net and also due to government's priority to impart quality services in health and education. Details of developmental and non- developmental expenditure for the period from 2010-11 to 2016-17 (BE) are given in **Appendix 1.37**.

In 2015-16, salary expenditure as proportion of total revenue expenditure was 29.80 per cent whereas it was 29.75 per cent in 2014-15. Pension expenditure as percentage of total revenue expenditure was 16.60 per cent in 2015-16 compared to 15.69 per cent in 2014-15. Interest payment as percentage of total revenue expenditure increased to 14.12 per cent in 2015-16 from 13.64 per cent in 2014-15.

Table 1.8
Share of committed expenditure on Revenue Expenditure, ₹ in crore

Items	2011-12		2012-13		2013-14		2014-15		2015-16	
	Expenditure	As per cent of TRE	Expenditure	As per cent of TRE	Expenditure	As per cent of TRE	Expenditure	As per cent of TRE	Expenditure	As per cent of TRE
i. Salaries	16028.89	34.81	17257.53	32.26	19279.71	31.87	21343.58	29.75	23450.15	29.80
ii. Pension	8700.31	18.90	8867.58	16.58	9971.52	16.49	11256.46	15.69	13065.78	16.60
iii. Interest	6295.64	13.67	7212.82	13.48	8293.58	13.71	9790.15	13.64	11110.86	14.12
iv. Devolutions to LSGIs	3896.76	8.46	4739.33	8.86	4971.48	8.22	6398.00	8.92	5028.92	6.39
v. Subsidies	1001.94	2.18	1265.20	2.37	1251.77	2.07	1247.52	1.74	1336.94	1.70
Committed Expenditure total (i to v)	35923.54	78.02	39342.46	73.55	43768.06	72.36	50035.71	69.74	53992.65	68.61
Others	10121.08	21.98	14146.29	26.45	16717.44	27.64	21710.72	30.26	24696.82	31.39
Total	46044.62	100	53488.75	100	60485.50	100	71746.43	100	78689.47	100

Source: Finance Department, Government of Kerala

Capital Expenditure

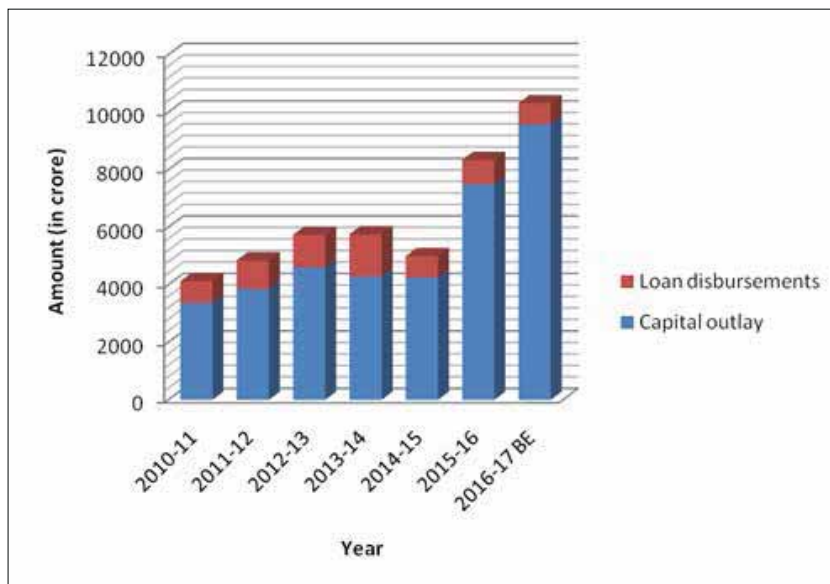
The long term development of the economy depends upon investment in infrastructure sector. Investment policy initiatives initiated by the government in recent years have helped the State to gain crucial achievements. The State Government's initiatives for attracting long term investment in infrastructural projects have started yielding results. Deficit in resources is major impediment in infrastructure financing. Government has therefore adopted the policy of looking at alternative sources for financing major infrastructural projects of the State. The share of government spending on capital projects has increased during recent years. Substantial increase was noticed in capital expenditure of the state during 2015-16; it has increased to ₹ 7500.04 crore from ₹ 4254.59 crore in 2014-15. Capital outlay to GSDP ratio has also increased to 1.28 per cent in 2015-16 from 0.81 per cent in 2014-15. The public works continued to remain the major segment of capital outlay with 35.67 per cent of the total capital outlay in 2015-16 followed by Agriculture and allied activities (7.04 per cent), Irrigation (7.02

per cent) and Industries (4.47 per cent). Details of Capital expenditure from 2010-11 to 2016-17(BE) are given in **Appendix 1.38** and **Appendix 1.39** and trend in capital outlay and loan disbursement are shown in **Figure 1.13**

A special strategy is indispensable for the revival of the State's economy by focusing on infrastructure development and social upliftment of the marginalized classes. Investment in the infrastructure sector is essential for the long term development of the economy. Implementation of major capital projects will be materialized through various financial and infrastructural institutions by creating Special Purpose Vehicles (SPVs). In this scenario, Kerala Infrastructure Investment Fund Board (KIIFB) has been restructured to act as the key SPV for mobilizing and channeling the funds to the various infrastructure SPVs. The details of KIIFB are provided in Chapter 5 of the review.

Government of Kerala has launched Nava Keralam Mission programmes for the multi dimensional development of the State. The mission mode initiatives give thrust to four key areas – Haritha

Figure 1.13
Trend in Capital outlay and Loan disbursement, ₹ in crore



Source: Finance Department, Government of Kerala

Keralam (agriculture development, sanitation and water resource management), housing, education and health – and aim to turn a new leaf in the development history of the State. The mission projects will be implemented through meaningful participation of social organizations, groups and various other institutions including LSGs for the revival and sustainability of gains that the State has achieved in the past. These initiatives will be the stepping stone for the future economic development of the State.

DEBT PROFILE

Debt of the State comprises of internal debt, loans and advances from Central Government and liabilities on account of Small Savings and Provident Fund Deposits. During the last five years, market borrowings and accretions in Small Savings and Provident Fund Deposits are the main sources of the State Government to finance the fiscal deficit. Outstanding debt liabilities of the State at the end of 2015-16 were ₹157,370.33 crore. The annual growth rate of debt has increased to the level of 16.19 per cent in 2015-16 from 13.81 per cent in 2014-15. The Debt-GSDP ratio in 2010-11 was 29.83 per cent. It came down and reached the level of 26.88 per cent in 2015-16. In 2014-15 it stood at the level of 26.05 per cent. The ratio

of debt in terms of revenue receipts decreased to 227.97 per cent in 2015-16 from 233.72 per cent in 2014-15.

The share of internal debt in the total debt liabilities of the State comes to 65.13 per cent in 2015-16. Outstanding debt under internal debt increased to ₹102,496.26 crore in 2015-16 from ₹89,067.91 crore in 2014-15. The growth rate of internal debt in 2015-16 was 15.08 per cent. The liabilities under small savings and Provident Fund come to around 29 per cent of the total liabilities. The liabilities under Small savings and Provident Fund at the end of 2015-16 were ₹47,639.36 crore. It showed an increase of ₹8,332.08 crore over 2014-15 (₹39,307.28 crore). The outstanding liabilities under Loans and Advances from the Centre at the end of 2015-16 were ₹7234.71 crore. The gross and net retention of debt in 2015-16 was ₹21930.08 crore and ₹10819.22 crore respectively. Details of debt profile of the State are given in **Table 1.9** and details of receipts and disbursements are given in **Appendix 1.40**

Contingent Liabilities

To overcome the ceiling on fiscal deficit set by the Fiscal Responsibility Act, the State Government is giving guarantees to the borrowings of public

Table 1.9
Debt of the State, ₹ in crore

Year	Internal Debt	Growth Rate (per cent)	Small Savings, Provident Fund, Others	Growth Rate (per cent)	Loans and advances from Central Govt.	Growth Rate (per cent)	Total	Growth Rate (per cent)
2010-11	48528.10	11.90	23786.06	11.69	6359.08	0.86	78673.24	10.86
2011-12	55397.39	14.16	27625.10	16.14	6395.69	0.58	89418.18	13.66
2012-13	65628.41	18.47	31310.65	13.34	6621.78	3.54	103560.84	15.82
2013-14	76804.35	17.03	35542.51	13.52	6662.21	0.61	119009.07	14.92
2014-15	89067.91	15.97	39307.28	10.59	7065.05	6.05	135440.24	13.81
2015-16	102496.26	15.08	47639.36	21.20	7234.71	2.40	157370.33	16.19
2016-17(BE)	120068.13	17.14	47905.05	0.56	8865.46	22.54	176838.64	12.37

Source: Finance Department, Government of Kerala

Table 1.10
Outstanding Guarantees, ₹ in crore

Year	Maximum Amount Guaranteed	Amount Outstanding (Principal and Interest)
2010-11	12625.07	7425.79
2011-12	11332.11	8277.44
2012-13	11482.25	9099.50
2013-14	12275.21	9763.36
2014-15	13123.30	11126.67
2015-16	13712.77	12438.52

Source: Finance Department, Government of Kerala

sector undertakings and other institutions instead of funding them directly through the budget. These contingent liabilities become the debt obligations of the State in the event of default by the borrowing public sector units for which

Government is a guarantor. The outstanding guarantees during 2015-16 is ₹ 13,712.77 crore. The outstanding guarantees of the State Government from 2010-11 to 2015-16 are shown in **Table 1.10**.

Section 7 BANKING

Bank Branches

The role of banks is not merely in aiding economic development, but also to include all segments of the population in the financial activities. The opening of bank branches in remote areas is essential for mobilising savings and channelizing them into efficient investment. In terms of number of branches, Kerala has the largest number of bank branches among the semi-urban areas in the country. Kerala has a total of 6166 bank branches as on March 2016, which accounts for 4.65 per cent of total bank branches in the country as against 5981 as on March 2015. During the period 2015-16, 185 new branches were opened in the State. The total number of bank branches increased to 6208 by the end of June 2016. Unlike the other States in the country, the bank branches are spread across the state indicating the penetration of banking activities in the rural areas (**Appendix**

1.41). The population group-wise breakup of the branch network in the State shows that 60 per cent of the branches are in semi-urban areas and 32 per cent of the branches are in urban areas. There are only 8 per cent of the total bank branches in the rural areas. There were 8966 ATMs in the State as on March 2016, which increased to 9063 in June 2016. The data of banking group wise branch network is given in **Table 1.11**.

Deposits

The credit and deposit growth of SCBs in the country shows a declining trend. Bank Deposits of SCBs witnessed a 9.30 per cent growth in 2016, lower than the growth rate of previous year (10.74 per cent). The annual deposit growth rate was above 15 per cent during the 1990s and it fell below 15 per cent after 2010-11. The cumulative deposits of all SCBs stood at ₹9,327,290 crore in 2015-16, which was ₹8,533,285 crore during

Table 1.11
Banking Group wise Branch network in Kerala

Banking Group	Number of Branches				
	Rural	Semi-urban	Urban	Total	Percentage
State Bank Group	98	919	339	1356	19
Nationalized Banks	115	1462	629	2206	31
RRB	48	511	39	598	8
Private Sector Banks	179	1404	470	2053	29
Co-Operative Banks	136	43	794	973	14
Total	576	4339	2271	7186	100

Source: State Level Bankers Committee, Kerala 2016.

2014-15. The details of credit and deposit growth are given in **Figure 1.14**.

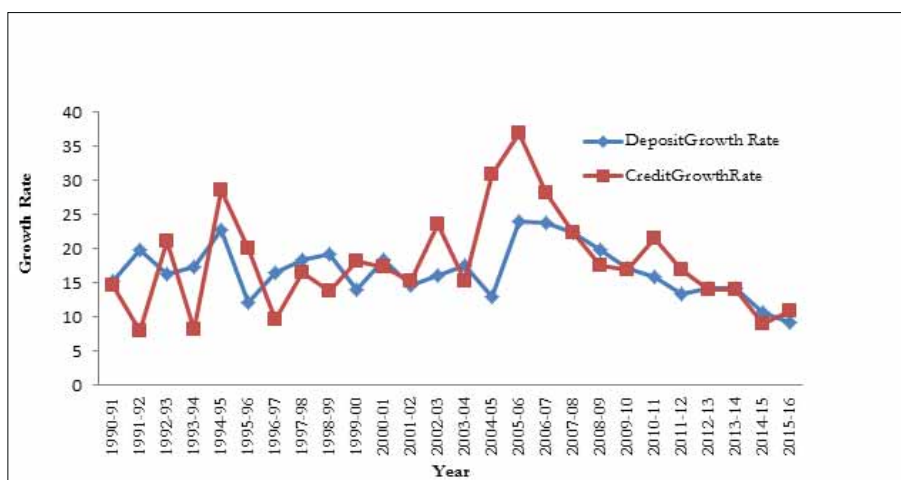
The total bank deposits in Kerala increased by 13.59 per cent and touched ₹363,511 crore during 2015-16 from ₹320,010 crore in 2014-15. The per cent increase in bank deposits during 2015 was at 15.14 per cent compared to 13.59 per cent in 2016. There is a slight drop in the growth of deposits as compared to the previous year in the State of Kerala. Maharashtra has the highest share of deposit (22.54 per cent) out of the total deposit in the country. The share of Kerala to the total deposits in the country is only 3.76 per cent

(**Appendix 1.42**). The national average growth rate shows a 2 percentage point decrease in 2015-16 as compared to previous growth of 10.75 per cent. District-wise distribution of deposits and credits of Scheduled Commercial Banks as on March 2016 is shown in **Figure 1.15**. In Kerala, the share of deposit is more in Ernakulam district.

Agricultural Finance

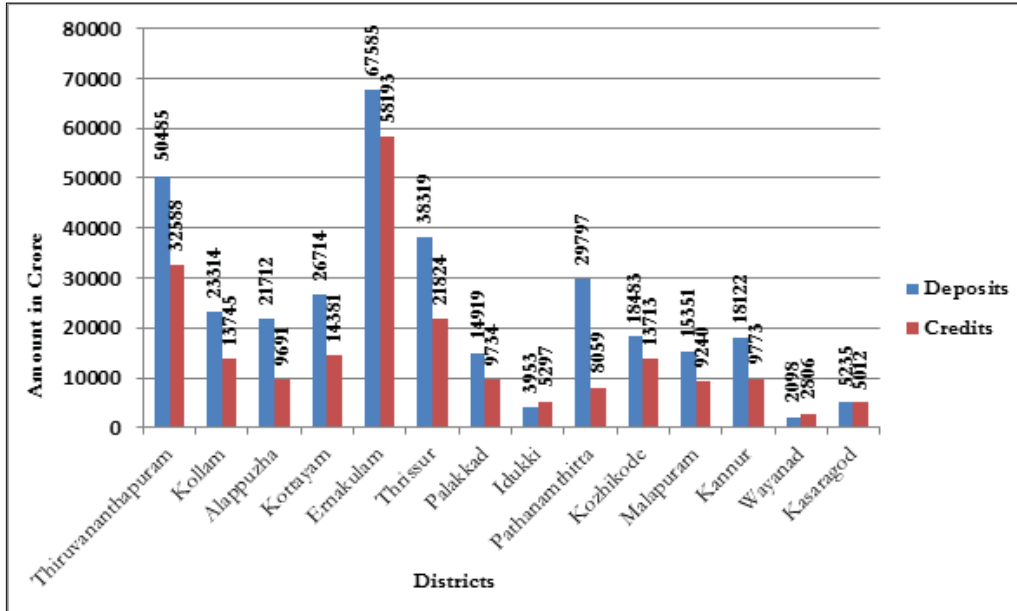
Banks in Kerala including the private sector banks disbursed an amount of ₹282,556 crore as advances as compared to ₹252,104 crore in June 2015. In the disbursement of total advance, private banks stood at

Figure 1.14
Credit and Deposit Growth Rate of SCBs in India from 1990-91 to 2015-16



Source: Reserve Bank of India

Figure 1.15
District-wise distribution of deposits and credits of Scheduled Commercial Banks
in March 2016, ₹ in crore



Source:-Reserve Bank of India

the first place disbursing ₹81,258 crore (28.76 per cent) in 2016, which was ₹70,542 crore in 2015 as at the month of June. Nationalised banks disbursed an amount of ₹78,815 crore followed by State Bank group and Co-operative Banks with ₹65,342 crore and ₹45,004 crore respectively during 2016. In terms of annual growth Co-operative Banks stood at first (34.88 per cent) followed by private sector banks (15.19) and RRB (14.39). The annual growth rate in advance among State Bank Group and Nationalized Bank is 5.05 per cent and 4.55 per cent respectively.

The Bank Group wise disbursement of agriculture advance shows that the total agricultural advance in the State reached ₹61837 crore, which was ₹60162 crore during June 2015. There is a two point decrease in the percentage of agriculture advance to total advance which fell to 22 per cent from 24 per cent. The bank group wise analyses show that Regional Rural Banks provide more agriculture advance (59 per cent) out of its total advances followed by Nationalized Banks (28 per cent) and private sector banks (13 per cent). But the growth rate in disbursement of Agriculture advance

compared to previous year shows a different picture. The disbursement of agriculture advances of Nationalized Banks and State Bank Group shows a negative growth as compared to previous year. The major state wise advance disbursed by Scheduled Commercial Banks is given in the (Appendix 1.43).

Advances to SC/ST

An amount of ₹4312 crore and ₹1128 crore was disbursed to SC and ST persons respectively in June 2016 in the State by various banks including private sector banks, commercial banks and co-operative banks. Compared to previous year, the advance given to the Scheduled Caste persons is less and there is slight increase in the advances given to Scheduled Tribe persons. The bank-wise analysis of advances to SC/ST persons shows that the commercial banks are giving more advances given to these social groups in the State. However, the credit facilities extended to marginalized sections are very less when we compare this with the total advances disbursed in the State through various banking institutions. The private banks should

given more attention for rendering assistance to scheduled caste and scheduled tribes in the State. The bank group wise advances given to Scheduled Caste and Scheduled Tribes are given **Table 1.12**.

Micro finance

Microcredit plays a crucial role in the State in reduction of poverty level through gainful employment provided by microcredit enterprises. The various commercial as well as the co-operative banks are extending loans to SHGs for starting new venture to generate income and employment. Kudumbasree has undertaken various activities for the members of Self Help Groups and work as a nodal agency in the State. The activities of the groups range from catering services, dairy services, dairy units, cafeterias, garment units and also agriculture activities.

As per the SLBC data, there are 2.40 lakh Self Help Groups (SHG) maintaining their savings bank accounts with ₹1,423 crores in various banks as on June 2016. The bank group wise data shows that Nationalized Banks attracts more accounts (50.50 per cent) followed by RRBs (23.32 per cent), private banks (16.07) and the State Bank Group (10.11 per cent). In terms of deposits, nationalized banks attract 82.57 per cent of total SHG deposits. The deposit shares of SHG in the State Bank Group were 3.94 per cent, RRBs was 5.34 per cent and private banks was 8.22 per cent for the year 2015-16.

Housing Loans

During 2015-16, banks in Kerala, including private sector banks, sanctioned an amount of ₹34,555 crore to 728,393 beneficiaries as housing loan against ₹31,414 crore to 760,968 beneficiaries during 2014-15. State Bank Group disbursed an amount of ₹ 13,721 crore to 207,919 beneficiaries, while nationalised banks released largest amount of ₹8,946 crore to 164,334 beneficiaries. Among the other bank groups, Regional Rural Banks disbursed ₹1606 crore to 40,122 beneficiaries, Private Sector Banks disbursed ₹3693 crores to 254,508 beneficiaries, and Co operative Banks disbursed ₹6589 crore to 254,508 beneficiaries. The share of beneficiaries to total is more in Co-operative Banks (34.94 per cent) followed by State Bank Group (28.54 per cent) and other Nationalised Banks (22.56 per cent). However, State Bank Group has disbursed the major share of housing loans (39.71 per cent) followed by other Nationalised Banks (25.89 per cent) and Co-operative Banks (19.07 per cent).

Educational Loans

There was substantial increase in the disbursement of educational loans in Kerala during 2015-16. At the end of June 2016, ₹9558 crore was sanctioned to 359,164 students. The Nationalised Banks disbursed an amount of ₹4475 crore to 170,062 students, which accounted for 46.82 per cent of the total educational loan disbursed by all banking groups in the State. State Bank Group disbursed

Table 1.12
Banking Group wise Details under SC/ST Advance, ₹ in crore

Bank	SC Advances		ST Advances	
	Number	Amount	Number	Amount
State Bank Group	219375	3468	76596	806
Nationalized Bank	67922	644	23945	248
RRB	23658	118	12738	64
Private Sector Bank	8530	82	1049	12
Total Commercial Banks	319485	4312	114328	1130

Source:- State Level Bankers Committee, Kerala 2016

₹3054 crore to 103,408 students. Regional Rural Banks disbursed ₹848 crore to 33,618 students, Private Sector Banks disbursed ₹1081 crore to 46,487 students and the Co-operative Banks disbursed an amount of ₹100 crore to 5589 students as educational loan during 2016. The share of educational loan NPA in total outstanding educational loan during 2016 was 12 per cent.

Co-operative banking sector in Kerala

Co-operative banking in Kerala is well developed and established and plays a pivotal role in the economy. The setting up of a single bank by merging all the co-operative banks in the State is a progressive proposal by the new government for mobilising financial resources. The Finance Minister, in his budget speech, stated that the government is looking at merging district and state level co-operative banks to form a single bank. The government has also allocated ₹10 lakh to set up the committee to prepare the detailed recommendations regarding the concept of Kerala Bank. As it is spread across the State, with large number of branches, they can play an important role in the development of Kerala economy. As per the available data, Kerala State Co-operative Bank is the apex bank of the short term credit

co-operatives in the State with 14 District Co-operatives and about 1500 Primary Agriculture Co-operative Societies (PACS). According to the SLBC data for 2016, there were a total of 973 branches working in the co-operative banking sector in Kerala, of which 136 are in rural, 43 in semi urban area and 794 in urban area. The financial activities of the District Central Co-operative Banks (DCCBs) and affiliated PACSs reveal the significance of co-operative Banks in banking activities at the grass root level.

The deposits of co-operative banks as on June, 2016 were ₹ 67,534 crores, which is 15.42 per cent of the combined deposits of commercial banks and co-operatives. There are total of 7186 bank branches in the State, including those of the public sector, commercial and co-operative banks. The total deposits in the banking sector, as on June, 2016 was ₹437,946 crore. The total advances from the banks put together in the state was 282,556 crore of which the share of co-operatives is ₹45,004 crore, which account for 15.93 per cent of the total advances in the state. The total banking business in the state, as on June, 2016 was ₹720,502 crores and the share of co-operatives was ₹112,539 crore (15.62 per cent) (**Table 1.13**).

Table 1.13
Performance of Co-operative Sector, ₹ in crore

Parameter	June 2016			Share of Co-operative to Total
	Co-operative Sector	Commercial Banks + Cooperatives	Commercial Banks	
Branches	973	7186	6213	13.54
Total Deposits	67534	437946	370412	15.42
Total Advances	45004	282556	237552	15.93
Total Business	112539	720502	607963	15.62
Priority Sector Advances	23115	159004	135889	14.54
Agriculture Advances	5893	61837	55944	9.53
SME Advances	1000	41603	40603	2.40

Source:- State Level Bankers Committee, Kerala 2016

Box 1.2 Demonetisation

On November 8, 2016, the Government of India cancelled the legal-tender character of bank notes of Rs 500 and Rs 1000 denominations and placed several restrictions on the exchange, withdrawal, and deposit of these notes. These measures, commonly referred to as “demonetisation”, had wide-ranging effects on the economy. The Kerala State Planning Board appointed a Committee to study the impact of demonetisation on the economy of the State of Kerala on November 23, 2016. The Committee was headed by Professor C. P. Chandrasekhar (Centre for Economic Studies and Planning, Jawaharlal Nehru University). Professor D. Narayana (Director, Gulati Institute of Finance and Taxation), Professor Pinaki Chakraborty (National Institute of Public Finance and Policy), Dr. K. M. Abraham (Additional Chief Secretary, Finance), and Shri V. S. Senthil (Member Secretary, Planning Board) were the other members. A summary, with excerpts from the report presented by the committee, is as follows.

Demonetisation had a severe impact on Kerala as cash transactions are predominant in the State’s economy, particularly in the unorganised sectors and in the traditional sectors of fisheries, coir, handlooms, cashew processing, crop and plantation agriculture. Cash-intensive sectors such as retail trade, hotels, and restaurants and transportation account for over 40 per cent of the Kerala economy, and the primary sector accounts for another 16 per cent of the economy. Thus, 56 per cent of the economic activity of Kerala was immediately affected by the withdrawal of the specified bank notes. It also affected earnings from tourism and in the flow of remittances, which are important drivers of growth in Kerala’s economy.

The impact of demonetisation in terms of the cash deficit and its consequences was particularly severe in Kerala also because of the distinct character of its banking sector. Around 60 per cent of all deposits are in the co-operatives in Kerala; the corresponding figure for India is less than 20 per cent. Thus the notifications by the Reserve Bank of India (RBI), which kept the cooperative banks and societies out of the note exchange process, were particularly damaging for Kerala. It resulted in the closure of banking activities at the level of the PACS and targeted the credibility of the PACS, which had served as democratically run, participatory financial institutions.

The ceiling on withdrawals of Rs 24,000 per individual per week after demonetisation was also made applicable to the cooperative societies. The ceiling affected the day-to-day functioning of various sectors. The cooperatives and the employers found it extremely difficult to make payments to the farmers or workers, whose earnings after meeting costs are so low that they could not make ends meet without receiving payments regularly. In fisheries sector, the wholesale buyers were not able to carry out business in high volumes. A large number of the two and a half million migrant workers in the State were reportedly going home as employment declined and as they did not possess bank accounts to deposit demonetised notes.

The news of the serpentine queues at money exchange counters in airports and outside and the limits on the amount of Indian currency that can be obtained in exchange for foreign currency resulted in rise of cancellations and a fall in tourist arrivals. As per quick estimates from the Department of Tourism, Kerala, relative to the corresponding month of the previous year, domestic tourist arrivals fell by 17.7 per cent in November 2016 and foreign tourist arrivals by 8.7

per cent. Similarly, because of the difficulties in withdrawing rupees from banks and the inability of instant transfer agents to provide rupees at local counters, remittances too have reportedly fallen.

In the case of Kerala, its own tax-to-GSDP ratio has declined from 7.06 per cent in 2011-12 to around 6.5 per cent by the end of 2015-16 (Revised Estimates). In its Revised Budget, the present Government, which came to power in May 2016, proposed that the tax-to-GSDP ratio be increased to 6.85 per cent. That is, own tax revenue was expected to grow at the rate of 19.39 per cent in 2016-17. However, there is a post-demonetisation slump in economic activity and the revenue loss is already seen in the real estate sector on account of stamp-duty collection and in motor vehicle tax collection. A fall in revenue coupled with a decline in central transfers would either mean a bigger deficit or a contraction in expenditure at the state level. This contraction in public expenditure can also further contribute to a process of slowdown that has already begun in the state as a result of demonetisation.

NRI Deposits

Remittances from the other countries, especially Gulf countries, are the key growth engine for the State of Kerala. According to Kerala Migration Study (KMS 2014), 2.4 million Keralites are working abroad. The inflow of NRI deposits increased by 24 per cent from ₹ 109,603 crore in March 2015 to ₹ 135,609 crore in March 2016 according to SLBC data (**Appendix 1.44**). Domestic deposits grew by 13.20 per cent to ₹225,984 crore during March 2016, as against ₹210,287 crore in March 2015. Domestic deposits constitute 67.81 per cent of the total deposits of the state. The bank-wise analysis of deposits shows that major share of deposit comes from domestic deposit except for Federal Bank. The Federal Bank attracts more NRI deposits than the other public and private sector banks. During March 2016, the share of NRI deposits to total deposit of the Federal Bank was 55.29 per cent whereas it is less than 50 per cent for all other public and private sector banks (**Appendix 1.45**). The Bank Group wise analysis shows that the Kerala's NRIs seem to prefer public sector banks over private banks when depositing their money. The total NRI deposits

in public sector banks is ₹77,177 crore, compared to ₹58,431 crore in the private sector banks. The percentage share of the NRI deposit is 56.91 per cent in public sector banks and 43.09 per cent in private sector banks. The State Bank Group attracts 36.16 per cent and Nationalised Banks get 20.39 per cent of the total remittance flowing through the banking sector.

Credit-Deposit Ratio

The credit deposit ratio of banking sector in India at the end of March 2016 was 77.86, which was 76.05 in 2015. Tamil Nadu stood at first position in CD ratio among the major States at 112.86; however, the ratio is quite lower than the previous year. Andhra Pradesh (104.52), Telangana (103.61) and Maharashtra (102.65) are the other States with CD ratio higher than 100. The CD ratio in Kerala is only 61.84, which is lower (69.48) than that of previous year (**Appendix 1.46**). In Kerala, the credit-deposit ratio is high in district of Idukki (134) and Wayanad (133.73). Among the districts, Pathanamthitta stands at the bottom with CD ratio of 27.04 per cent (**Appendix 1.47**).

Section 8

ANNUAL PLAN 2016-17

Annual Plan 2016-17 was the 5th year of the 12th Five year Plan (2012-17). Annual Plan for the year is formulated based on specific guidelines. While formulating the plan, critical review of the performance of ongoing schemes were held. Stakeholder consultations were held on different areas of critical importance to the State, with a bottom up approach, to capture information on the ground realities. In order to avoid proliferation of schemes, attempts were made to reduce the number of schemes and wherever possible schemes having similar nomenclature were grouped together under a single head.

In order to facilitate speedy implementation of the schemes, some systemic changes have been introduced in the presentation of Plan Document and plan formulation process in Annual Plan 2016-17. The Budget document (Programme Book) was presented in two separate volumes viz. Green Book and Programme Book. The schemes with high priority and ready for implementation were included in the Green Book. A Summary Document on Sector/Sub-Sector/Scheme wise Officer responsible for the implementation of each of the schemes were furnished in the Annual plan 2016-17 to be tabled in the State Legislature along with the Budget documents for 2016-17.

In the Annual Plan (2016-17), the Aggregate Outlay for 2016-17 was ₹30,534.17 crore, which includes the State Plan of ₹24,000 crore and Central Assistance of ₹ 6534.17 crore. The total State Plan outlay for 2016-17 was ₹24,000 crore, reflecting an increase of 20 per cent over the previous financial year's outlay of ₹20,000 crore. Out of the outlay of ₹24,000 crore, ₹5500 crore was for assistance to LSGIs and the remaining ₹18,500 crore was for State sector schemes. Of the outlay of ₹24,000 crore, ₹2354.40 crore is for Special Component Plan and ₹682.80 crore is for Tribal Sub Plan. An

outlay of ₹ 2536.07 crore was proposed for the Major Infrastructure Development Projects and amounts under this head is to be released through the Kerala Infrastructure Investment Fund, with effect from 2016-17.

Major sector wise comparative statements of the outlays of Annual Plan (2014-15), (2015-16) and (2016-17) are given in **Table 1.14**.

Rationalisation of CSS

Based on the recommendations of the Sub-Group of Chief Ministers and after consultation with various Ministries/Departments and other stakeholders, the Centrally Sponsored Scheme (CSS) was rationalized for the following sectors.

1. Poverty Elimination – Livelihoods, Jobs and Skill Development
2. Drinking Water and Swachh Bharat Mission
3. Rural Connectivity: Electricity: Access Roads and communication
4. Agriculture, including Animal husbandry, Fisheries, Integrated Watershed Management and Irrigation
5. Education, including Mid-Day Meal
6. Health, Nutrition, Women and Children
7. Housing for All: Rural and Urban
8. Urban Transformation
9. Law and Order, Justice Delivery Systems
10. Others, including Wildlife Conservation and Greening

The existing 66 Centrally Sponsored schemes (CSSs) have been rationalised into 28 umbrella schemes. Out of this, 6 schemes have been

Table 1.14
Annual Plan 2014-15, 2015-16(RE) and 2016-17 Sector wise Outlay Comparative Statement,
₹ in crore

Sl. No	Sector	2014-15			2015-16 (BE)			2016-17			per cent of increase over 2015-16
		Outlay	CSS	Aggregate	Outlay	CSS	Aggregate	Outlay	CSS	Aggregate	
1	2	3	4	5	6	7	8	9	10	11	13
I	Agriculture and Allied activities	1664.02	149.09	1813.11	1241.85	627.58	1869.43	1542.66	418.98	1961.64	5
II	Rural Development	617.23	833.41	1450.64	653.12	2223.08	2876.20	844.76	2733.66	3578.42	24
III	Special Area Programmes	413.76		413.76	467.23	75.20	542.43	478.98		478.98	-12
IV	Irrigation and Flood Control	749.64	160.67	910.31	348.01	223.67	571.68	491.47	86	577.47	1
V	Energy	1370.04		1370.04	1467.20	0.00	1467.20	1622.70		1622.70	11
VI	Industry and Minerals	639.40	36.68	676.08	582.20	28.71	610.91	1141.80		1141.80	87
VII	Transport	1180.87	0.63	1181.50	1300.12	0.00	1300.12	1876.55		1876.55	44
VIII	Science, Technology and Environment	621.45	42.73	664.18	688.40	67.59	755.99	188.57	1.00	189.57	-75
IX	General Economic Services	1651.49	43.25	1694.74	2508.19	137.64	2645.83	2767.60	82.31	2849.91	8
X	Social Services	6334.44	2435.33	8769.77	5873.47	4287.85	10161.32	7447.43	3192.19	10639.62	5
XI	General Services	57.66	30.00	87.66	70.21	15.00	85.21	97.48	20.03	117.51	38
	TOTAL - I toXI	15300.00	3731.79	19031.79	15200.00	7686.32	22886.32	18500.00	6534.17	25034.17	9
XII	LSGD	4700.00	0.00	4700.00	4800.00	0.00	4800.00	5500.00		5500.00	15
	GRAND TOTAL	20000.00	3731.79	23731.79	20000.00	7686.32	27686.32	24000	6534.17	30534.17	10

Box 1.3
Thrust Areas of Annual Plan 2016-17

Crop Husbandry
 Animal Husbandry
 Fisheries
 Major and Medium Irrigation
 Minor Irrigation
 Power development
 Medium and Large Industry

Roads and Bridges
 IT & E Governance
 Forestry & Wildlife
 Tourism
 Medical & Public Health
 Water supply & Sanitation
 Urban Development

categorised as Core of the Core schemes, 20 schemes as Core schemes, and remaining two as Optional schemes. Core Schemes will have compulsory participation by the States, whereas participation amongst the Optional schemes would be by choice. For Optional Schemes, a lump sum provision for each State may be intimated in advance on the basis of which states will inform the Ministry of Finance of the preferred distribution within the overall ceiling indicated.

The existing funding pattern will continue for Core of the Core schemes. For Core schemes, the funding pattern shall be Centre: 60 per cent and State: 40 per cent and for Optional schemes, the ratio will be Centre: 50 per cent and State: 50 per cent.

PLANSPLACE: District Roll Out

As part of strengthening the plan monitoring and evaluation mechanism, an online plan monitoring software PLANSPLACE was developed by the State Planning Board with the technical support of IITM-K. Planspace is a web based management information system for monitoring and evaluation of the progress of implementation all plan

schemes in the State. The Annual Plan proposals for the year 2016-17 were received online from Heads of department and Implementing agencies through Planspace.

With a view to strengthen the District Level Plan Monitoring System, Planspace has been rolled out to all the Districts in the State. This will enable implementing officers at district and sub district levels to directly input data into the system, thus further enhancing its accuracy and timeliness. As per the information available on Planspace, during the current Financial Year the total plan expenditure is 31.63 per cent percent as on December 31, 2016 which is expected to improve substantially by the end of the Financial Year.

As a further step towards the monitoring mechanism, software for monitoring of MLASDF schemes at District level has been developed. The software developed is capable of capturing information at different levels of implementation of the scheme, beginning from the origin of the proposal to handing over of the asset created to the local bodies. The submission of proposals will also be online and Administrative Sanction order can be generated from the system itself.

Economic development in the State has been characterized predominantly by development on social parameters. The demographic indicators, poverty ratio and literacy level are indicative of this. However, the State is constrained in terms of financial resources to sustain the social developments as well as tackle the emerging issues in this sector. Further, resource constraints are affecting the quality of expenditure and funds to meet the capital expenditure. The State has adopted innovative measures in this regard. The formulation of 13th Plan was a decisive step by the State and it seeks to address the imbalances in different sectors and frame appropriate policies and programme for each accordingly.

2 CHAPTER

AGRICULTURE AND ALLIED SECTORS



AGRICULTURE AND ALLIED SECTORS

Recent years have witnessed stagnation in the growth of the agricultural sector. The price variability has increased with sharp swings in both product and input prices. Markets have been affected by macroeconomic factors and adverse weather conditions. Extreme weather conditions like drought and other climate variabilities have had a major impact on the agricultural sector. The need of the hour is to devise strategies to deal with the adverse conditions affecting the sector and revive the growth momentum. It is a great challenge and formidable task to arrest the decline and reverse the slowing growth of the agricultural sector.

Section 1 AGRICULTURE

PERFORMANCE OF AGRICULTURE

In 2011-12, in India as a whole, the share of agriculture in total employment was 48.9 per cent of the workforce. In 2014-15 (as per first revised estimates), the share of agriculture in the Gross Domestic Product (GDP) of India was 17.4 per cent at constant (2011-12) prices (**Table 2.1**). The Twelfth Five Year Plan (2012-13 to 2016-17) had envisaged a growth target of 4 per cent for agriculture and allied sectors, which is necessary for the Indian economy to grow at over 8 per cent. During the last three years, the growth rates in agriculture have been fluctuating at 1.5 per cent in 2012-13, 4.2 per cent in 2013-14, and (-) 0.2 per

cent in 2014-15. According to the “Provisional Estimates of National Income 2015-16” published by the CSO (Central Statistics Office), the ‘agriculture, forestry and fishing’ sector has shown a growth rate of 1.2 per cent in 2015-16. The “First Advance Estimate of National Income 2016-17” of the CSO estimates the growth in ‘agriculture, forestry and fishing’ sector to be 4.1 per cent.

The agricultural sector in Kerala is facing a serious crisis of growth. According to data from the Directorate of Economics and Statistics (DES), using 2011-12 as base year, agriculture and allied sectors recorded a growth rate of 1.43 per cent in the first year (2012-13) of the Twelfth Plan period. However, the sector witnessed a negative growth rate during the following three years with growth

rate of (-) 6.31 per cent in 2013-14, (-) 1.09 per cent in 2014-15 and (-) 2.9 per cent in 2015-16. The share of Agriculture and Allied Sectors in the total GSDP of Kerala has also declined from 14.38 per cent in 2011-12 to 11.48 per cent in 2014-15 and to 10.38 percent in 2015-16 (**Table 2.1**).

MONSOON, 2016

India is heavily dependent on the South-West monsoon (June- September) for most of its annual rainfall. However, many parts of southern India, viz, Coastal Andhra Pradesh, Rayalseema, South Interior Karnataka, Tamil Nadu, Pondicherry and Kerala receive considerable rain from the north-east monsoon (October- December) also.

The realized rainfall during the South-West

monsoon season (June- September 2016) over the country as a whole was 97 per cent of the Long Period Average (LPA) and it was in the normal category (96-104 per cent of LPA). The seasonal rainfall over three of the four geographical regions of the country, except central India, was less than the respective LPAs. The realized rainfall during South-West monsoon 2016 over the country as a whole and in the four broad geographical regions is given in **Table 2.2**.

Out of the total of 36 meteorological sub-divisions, 4 sub-divisions (13 per cent of the total area of the country) received excess rainfall, 23 sub-divisions (72 per cent of the total area of the country) received normal rainfall and the remaining 9 sub-divisions (15 per cent of the total area of the country) received deficient rainfall. Out of the 9

Table 2.1
Share of Agriculture and Allied Sectors in GDP and GSDP, India and Kerala,
base year 2011-12, in per cent

Sl No	Year	Share of Agriculture and allied sectors in total GVA (India)	Share of Agriculture and allied sectors in GSDP (Kerala) #
1	2011-12	18.5	14.38 (9.1)
2	2012-13	18.2*	13.76 (9.51)
3	2013-14	18.3*	12.9 (8.83)
4	2014-15	17.4@	11.6 (P)
5	2015-16	NA	10.38 (Q)

fig with 2004-05 base in brackets; (P) Provisional (Q) Quick

* Second RE (new series), @First RE

Source: CSO and Directorate of Economics and Statistics, Kerala

Table 2.2
South West Monsoon (June to September) 2016 rainfall, in mm

Region	Actual Rainfall (mm)
All India	862.0
North West India	584.2
Central India	1034.1
North East India	1281.5
South Peninsula	661.5

Source: 2016 South West Monsoon End of Season Report, IMD

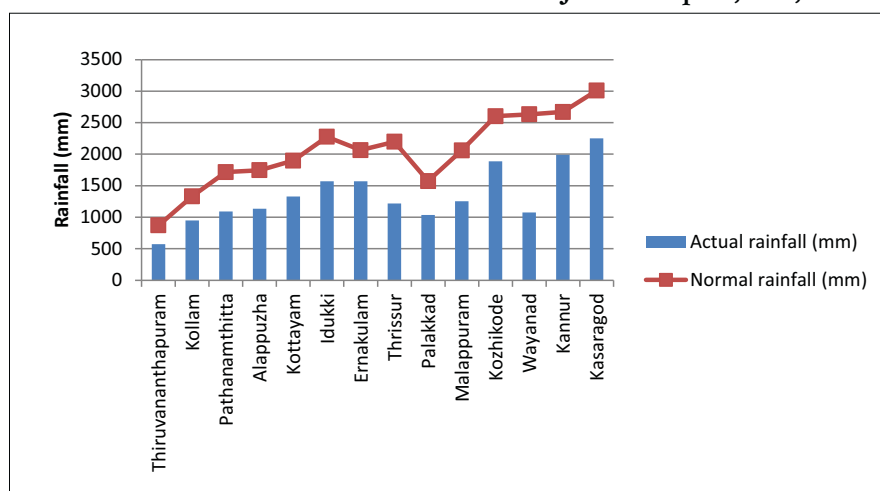
deficient sub-divisions, 4 sub-divisions were from the South Peninsula (Coastal Karnataka, South Interior Karnataka, Kerala and Lakshadweep).

The monsoon current advanced over the Andaman Sea two days earlier than its normal date of May 20, 2016 and set in over Kerala on June 8, 2016. However, the further progress was very slow. The South-West monsoon covered the entire country by July 13, 2016, which was 2 days earlier than its normal date of July 15, 2016.

The withdrawal of the South-West monsoon from the Indian sub-continent in 2016 was on October 28, 2016, which was 13 days later than the normal date of October 15, 2016 (The all-India area-weighted rainfall from June 1, 2016 to September 30, 2016 shows an actual rainfall of 862.0 mm against the normal rainfall of 887.5 mm with a deficiency of 3 per cent).

The Meteorological Sub-divisions which received deficient rainfall during the South-West monsoon in 2016 is shown in **Table 2.3**

Figure 2.1
South West Monsoon Rainfall received from June 1 -Sep 30,2016, in mm



Source: Report of Indian Meteorological Department

Table 2.3
Deficiency in rainfall during monsoon season, 2016, in per cent

Sub-division	Deficiency (per cent)
Kerala	-34
Assam and Meghalaya	-30
Haryana, Chandigarh and Delhi	-27
Punjab	-28
Himachal Pradesh	-24
Gujarat Region	-24
Coastal Karnataka	-21
South Interior Karnataka	-21
Lakshadweep	-25

Source: 2016 South West Monsoon End of Season Report, IMD

The actual rainfall received in Kerala during the South-West monsoon (June 1 to September 30, 2016) was 1352.3 mm as against the normal rainfall of 2039.7 mm in 2016 showing (-)34 percent departure from the normal, which was the highest in the country. All the districts of Kerala received deficient rainfall during the period. The percentage departure from normal rainfall was highest in Wayanad District. The Actual rainfall received in the District was 1073.8 (mm) against normal rainfall of 2632.1 (mm).

The deficiency in rains continued during the North-East monsoon season also as the actual rainfall received in Kerala was 185.0 mm against the normal rainfall of 480.7 mm, which was a (-) 62 per cent departure from normal. Highest percentage of departure from normal was in Kozhikode District (-82 per cent). All the districts except Ernakulam, Kollam, Kottayam and Pathanamthitta received scanty rainfall (-60 per cent to -99 percent) in this period. These four districts received deficient rainfall (-20 per cent to -59 per cent).

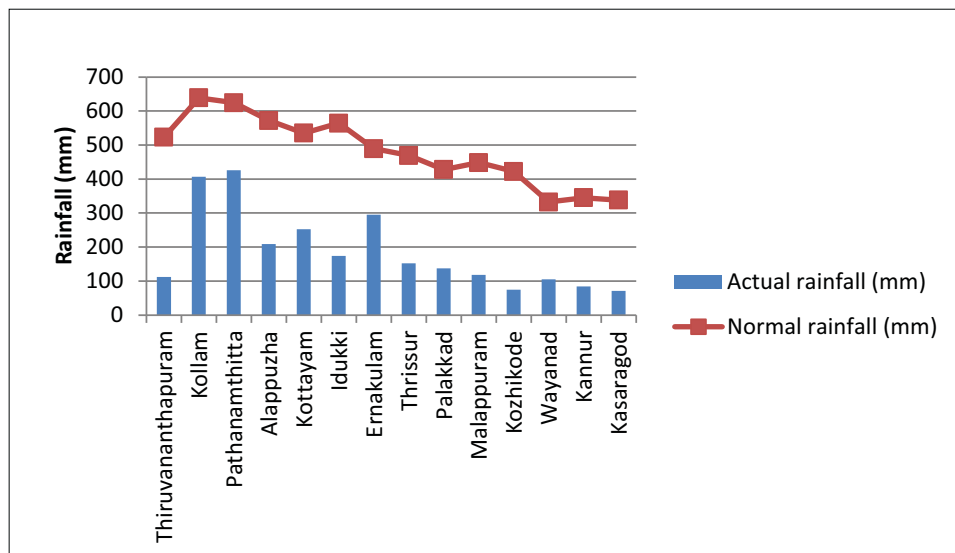
Pre-monsoon rainfall in Kerala, 2016

The pre-monsoon rainfall received in the State from March 1, 2016 to May 31, 2016 was normal with a departure of (-)18 percent from the normal. The actual rainfall received during the period was 313 mm. Excess rainfall was received in Thiruvananthapuram district, while 7 districts (Alappuzha, Kannur, Kasargod, Malappuram, Palakkad, Thrissur and Wayanad) received deficient rainfall and 6 districts (Ernakulam, Idukki, Kollam, Kottayam, Kozhikode and Pathanamthitta) received normal rainfall. The percentage departure from normal was highest in Kannur District (at -53 per cent). **Appendix 2.1**

LAND USE PATTERN

The total geographical area is classified according to thirteen different uses of land as given in **Appendix 2.2, 2.3** and **Figure 2.3**. The cultivated area of the state comes to around 67.6 per cent

Figure 2.2
North East Monsoon Rainfall received from October 1 to December 31, 2016*, in mm



*(Excess +20 per cent and above), normal (-19 per cent to +19 per cent), Deficient -20 per cent to -59 per cent, Scanty -60 per cent to -99 per cent)
Source: Report of Indian Meteorological Department

Box 2.1 **Drought Scenario - 2016**

Droughts are one of the most disastrous natural hazards; their impacts are cumulative and widespread, affecting ecological and economic systems. Areas affected by droughts are typically larger and its effects are magnified when they occur in consecutive years (see the Handbook of Drought Indicators and Indices, WMO, 2016). The Indian Meteorological Department (IMD), the responsible agency in the country for providing drought forecasting and monitoring, uses various indicators for drought monitoring. Standardized Precipitation Index (SPI) is a widely used indicator. The SPI is negative for drought, and positive for wet conditions. As the dry conditions become more severe, the index becomes more negative and as the wet conditions become more severe, the index becomes more positive.

IMD statistics for the South-West Monsoon 2016 reveals that the realized rainfall during the monsoon was deficit in Kerala. The report says that “SPI for the cumulative period June to September 2016 indicates extremely/severely/moderately dry conditions over most districts of Kerala”. The area-weighted SPI of Kerala for the South-West Monsoon (2016) season was -1.61, which indicates that the state was severely dry during the period.

The North-East Monsoon, for the period from October 1 to December 31, 2016, in Kerala also recorded 62 per cent deficiency. The all-India figures also show that the area-weighted rainfall during the period was 45 per cent deficient with 69.6 mm actual rains as against the normal of 125.6 mm rains.

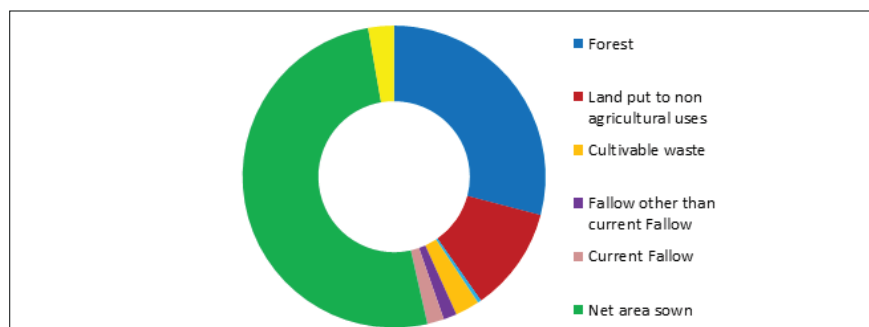
With the failure of two monsoons, drought has been declared in all the fourteen districts of the State. There has been an average reduction of 22 per cent in the water storage in the State’s dams when compared to the water storage in September of 2015. Agricultural production and electricity generation in the State are highly dependent on the two monsoons. The deficient rainfall in both the monsoon seasons will affect agricultural production and electricity generation adversely and lead to shortage in availability of drinking water.

of the total geographical area. Within this, the Net Sown Area accounts for 52 per cent and 16.83 per cent of the cultivated area is sown more than once. More than one-fourth of the area is under forest cover and 11.18 per cent of the area is put to non-agricultural use. On the other hand, there was a 4 per cent increase in the area put to non-agricultural uses and a 7 per cent increase in the land under fallow.

However, if the total area is further regrouped into two major categories: ‘land that is available for cultivation’ (including net sown area, cultivable waste, current fallow, fallow other than current

fallow and land under miscellaneous tree crops) and ‘land not available for cultivation’ (which includes land put to non-agricultural use, barren and uncultivable land and permanent pastures and other grazing land besides forest area). In that case it can be seen that land that is available for cultivation comes to 57.9 per cent of the total geographical area. The current Net Sown Area is 52 per cent of the total geographical area. Thus most of the land that is available for cultivation is already under cultivation. Hence the scope of bringing more area under cultivation is marginal and increase in agriculture production can be achieved mainly through increasing the productivity of crops.

Figure 2.3
Land Use Pattern of Kerala 2015-16



Source: Directorate of Economics and Statistics, Kerala

CROPPING PATTERN

Cropping pattern in Kerala is dominated by cash crops. Food crops comprising of rice, tapioca and pulses accounted for just 10.21 per cent of the total cultivated area in 2015-16 while cash crops (cashew, rubber, pepper, coconut, cardamom, tea and coffee) constituted 62.8 per cent of the total cultivated area. Plantation crops like rubber, coffee, tea and cardamom accounted for 26.8 per cent of the total cultivated area. Coconut has the largest area under crop cover (30 per cent) followed by rubber (20.9 per cent) and paddy (7.4 per cent). Of the cultivated area, 4.45 per cent is under banana and other plantains. Little more than 2 per cent is under tapioca and just 0.2 per cent is under ginger and turmeric together. In 2015-16, pulses, pepper, ginger, areca nut, cardamom and rubber recorded slight increases in area under cultivation compared to the previous year while all other crops recorded a decline. The area, production and productivity of principal crops is given in **Table 2.4**.

Irrigated area

The share of net irrigated area to total cropped area was 15.75 per cent in 2015-16. Thus, only 15.75 percent of the total cropped area was under irrigation cover whereas in states like Punjab, Uttar Pradesh and Tamil Nadu it was more than 50 per cent. The share of gross irrigated area to gross cropped area was 18.4 per cent. Coconut occupied

the largest share of the irrigated area (34.25 percent) followed by paddy (31.12 per cent). The share of other crops were banana (9 per cent), areca nut (7 per cent) and vegetables (8 per cent).

Crop Wise Analysis

Rice

Rice is the most important food crop grown in Kerala. It occupies 7.46 percent of the total cropped area of the state. However, the area under rice has been falling at an alarming rate ever since the 1980s. From 8.82 lakh hectare in 1974-75, the paddy area has come down to 1.96 lakh hectare in 2015-16. The production has also concomitantly declined from 13.76 lakh MT in 1972-73 (peak of production) to 5.49 lakh MT in 2015-16 (**Appendix.2.4**). Moreover, the productivity of the crop is very low in the State (2790 kg/ha), though it is higher than the national average (2424 kg/ha). There has only been a marginal increase in the productivity of rice in the past four decades. China, which is the major producer of rice in the world, reports a productivity (6744 kg/ha) more than three times the productivity of rice in Kerala. The productivity of rice in Egypt is the highest in the world (9088 kg/ha), which is nearly four-fold of our productivity. Punjab is the state with the highest yield in the country (3952 kg/ha). In the recent months, the State government has taken a number of steps for the promotion of paddy cultivation (**Box 2.2**).

Table 2.4
Area, Production and Productivity of Principal Crops

Sl. No.	Crops	Area (Ha.)		Production (T)		Productivity (Kg./Ha.)	
		2014-15	2015-16	2014-15	2015-16	2014-15	2015-16
1	Rice	198159	196870	562092	549275	2837	2790
2	Pulses, including Tur	3601	3764	3409	4263	947	1133
3	Pepper	85431	85948	40690	42132	476	490
4	Ginger	4800	4986	22989	22044	4789	4421
5	Turmeric	2470	2603	6820	7112	2761	2732
6	Cardamom*	39730	39730	16000	19500	403	491
7	Areca nut	96686	99126	125926	132453	1302	1336
8	Banana	61936	59835	545431	536155	8806	8961
9	Other Plantains	56761	57683	468320	411626	8251	7136
10	Cashew nut	45436	43090	29715	24733	654	574
11	Tapioca	75493	69405	2943919	2662610	38996	38363
12	Coconut**	793856	790223	5947	5873	7491	7432
13	Coffee***	85359	84987	67700	69230	793	815
14	Tea\$	30205	30205	65174	57898	2158	1917
15	Rubber#	549955	550840	507700	438630	923	796

Note: **Production of Coconut in Million Nuts, Productivity in numbers.

Source; Directorate of Economics and Statistics, # Rubber Board, *Spices Board.

***Coffee Board, \$Tea Board

There are three main rice growing seasons in the state: (a) Virippu season/Autumn season/First crop season, which starts in April-May and extends up to September-October; (b) Mundakan season/Winter season/Second crop season, which starts in September-October and extends up to December-January; and (c) Puncha season/Summer season/Third crop season, which starts in December-January and extends up to March-April. In Kerala,

winter crop (mundakan) has been greater than the other two crops (summer and autumn) both in terms of area as well as production. However, in 2015-16, all the three seasons showed a declining trend resulting in an overall reduction in production(**Appendix 2.5**).

Palakkad, Alappuzha, Thrissur and Kottayam account for about 81.2 percent of the total

Box 2.2
Major initiatives for the promotion of rice in 2016-17

- Promotion of upland rice cultivation in 2520 ha
- Amendment in Paddy land/Wetland Conservation Act
- Cultivation in fallow lands
- Special projects in Aranmula Punja
- Declaring Chingam 1st of 2016 to Chingam 1st of 2017 as the rice year in which 100 activities are planned
- Enhancement of procurement price of paddy from ₹ 21.50/Kg to ₹ 22.50/Kg

Source: Agriculture Department

production of rice in the state, their individual shares being 41 percent, 16 percent, 14 percent and 9 percent respectively. In 2015-16, Alappuzha and Palakkad recorded a decline in production, while Thrissur and Kottayam recorded a slight increase in production. District-wise area under rice cultivation shows that area under rice fell for all the districts of the State between 1996-97 and 2012-13. However, the decline was sharpest for Ernakulam (93 per cent) followed by Kollam (92 per cent), Thiruvananthapuram (86 per cent) and Malappuram (78 per cent). On the positive side, in Kottayam and Alappuzha, the major rice growing districts, the decline was much less pronounced (13 and 12 per cent respectively). In 2015-16, Palakkad, Alappuzha and Wayanad, showed a decline in area as well as production of rice in the State (Details as given in **Appendix 2.6** and **2.7** and **Figure 2.4**).

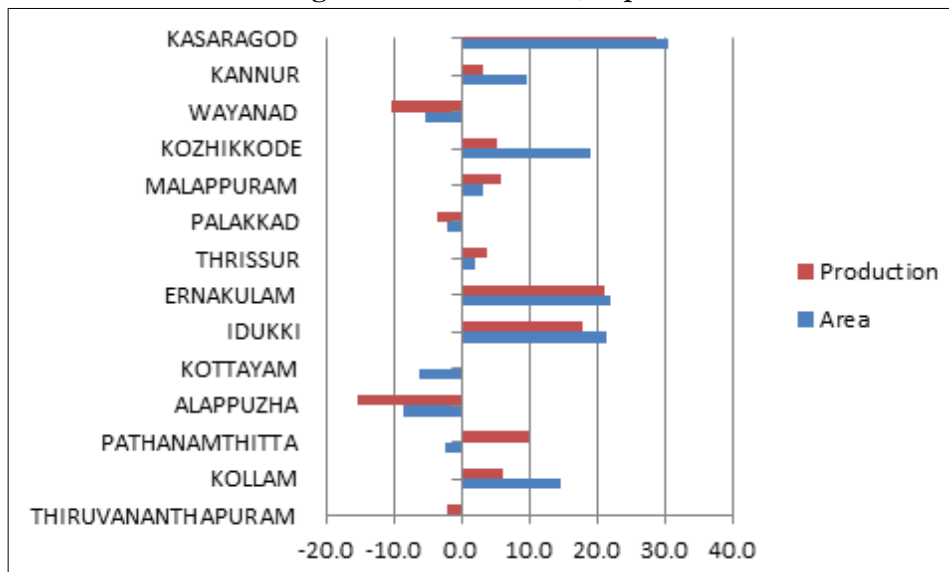
Area cultivated with paddy has increasingly been converted into cultivation with other crops as well as for non-agricultural purposes. This is mainly due to the low relative profitability in paddy cultivation, which in turn is a result of increasing costs due to rising wages and relative price changes in favour of competing crops. In spite of

focused interventions through the State plan and programmes like Rashtriya Krishi Vikas Yojana (RKVY), enhancement of per hectare assistance from ₹1500 to ₹4500 in the 12th plan period and the introduction of procurement in all districts, rice production has not responded positively. More proactive steps under the leadership of the Department of Agriculture and local bodies are required to revitalise rice production in the State.

Coconut

In terms of area under cultivation, coconut is the most important crop in the state with over 7.9 lakh hectare under cultivation. It accounts for the largest share in the Gross Cropped Area (GCA) followed by rubber and paddy. Kerala has the largest area under the crop in the country, but in terms of production it comes third. This indicates the low productivity of the crop in the state with just 7535 nuts per hectare compared to Tamil Nadu and Andhra Pradesh where the productivity is 14,873 nuts per hectare and 13,808 nuts per hectare respectively in 2014-15. Also, Kerala's share in area and production of coconut in the country has declined over time. While Kerala

Figure 2.4
Percentage change in area and production of rice in major districts of Kerala during 2015-16 over 2014-15, in per cent



Source: Directorate of Economics and Statistics, Govt. of Kerala

accounted for 69.58 per cent of the area and 69.52 per cent of the production in the country in 1960-61, the corresponding shares declined to 40.2 per cent and 42.12 per cent respectively in 2011-12. However, the area and production of coconut in the state has been increasing. From 29.88 per cent of the Net Sown Area in 1980-81, the share of area cultivated with coconut increased to 41.96 per cent in 2000-01; in 2011-12, the corresponding share stood at 40.24 per cent. The production also increased during this period. From 3220 million nuts in 1960-61, the production increased to 5536 million nuts in 2000-01. After that the production plateaued and was more or less stagnant in the next decade. Thus, the increase in output was more on account of increase in acreage as the productivity of the crop is very low in the state. Between 2014-15 and 2015-16, there was a marginal decline in the production of coconut from 5947 million nuts to 5873 million nuts. Area, production and productivity of coconut in Kerala are given in **Appendix 2.8**.

The main reason for the falling productivity of coconut is the prevalence of the root wilt disease, poor crop management and the existence of senile and unproductive palms. Hence, massive replanting of palms affected by root wilt with elite palms and elimination of senile palms, setting up of nurseries for production of quality seedlings and their subsequent distribution is essential for increasing productivity. Restructuring of the cluster development programme is also essential for more effectiveness. The attempt made by the Department of Agriculture and Cooperation to restructure two coconut development programmes through convergence approach at the panchayat level, coupled with a price advantage, is expected to revive coconut production in the state. The isolated attempts at the production of dwarf coconut seedlings and hybrids need to be scaled up substantially with the support of research institutions. Entrepreneurial ventures for the production of value-added products like desiccated coconut, beverages, shell-based products, coconut cream, and neera have to be promoted with appropriate tie-ups with credit and

marketing agencies. The coconut procurement system through Krishi Bhavans in association with Kerafed was introduced in 2012-13, which needs further streamlining. The initiative taken by the government in promoting neera and value addition are expected to revive coconut economy of the state.

Pepper

India comes third in the production of pepper in the world after Vietnam and Indonesia. However, the production of pepper in the country has been stagnant at around 50,000 tonnes in the last few years and hence is fast losing its status as a leading producer and exporter of pepper. Grown mostly in the slopes of Western Ghats in Kerala, Karnataka, and Tamil Nadu, the area under cultivation of pepper has come down drastically in the last decade, which has adversely affected production and export. In 2015-16, pepper production recorded a decline to 55,000 tonnes from 70,000 tonnes in 2014-15. However, Kerala, which accounts for 75 percent of the total production in the country, recorded a slight increase in pepper production from 40.6 thousand tonnes in 2014-15 to 42.1 thousand tonnes in 2015-16.

With regard to prices, there has been a rally in pepper prices since 2010. However, in 2015, the prices registered a decline to ₹630.31 per kg from ₹646.79 per kg in 2014. The price realization during 2016 (January-June) was ₹669.29 per kg compared to ₹619.76 per kg in June 2015, an increase of ₹49.53 per kg.

Pepper production in the State in recent years has been affected mainly by low productivity and various diseases. In order to revive spices development in the state, the Department of Agriculture had initiated comprehensive pepper development programmes in all districts in 2014-15. An integrated action plan was prepared for the revival of the crop, covering reorientation of planting material production, expansion of grafting wherever possible, area-wide disease management, liming and nutrients management and revival

of pepper samities. The increase in production achieved during 2015-16 could be because of this concerted effort by the State Government.

Cashew

In 2015-16, India continued to be the largest producer of raw cashew nuts in the world. The other main producing countries were Vietnam, Brazil, Tanzania and Ivory Coast. The production of raw cashew nuts in India declined from 725 thousand MT in 2014-15 to 670 thousand MT in 2015-16. The area under cashew cultivation, however, recorded an increase from 1027 thousand hectares to 1034 thousand hectares.

In Kerala, in the last one decade, there has been a continuous and considerable decline in both area under cultivation as well as production of cashew. It is alarming to note that the production, which stood at 60 thousand MT in 2004-05, declined to 33.3 thousand MT in 2013-14 and to 24.73 thousand MT in 2015-16. The area under cultivation dwindled from 81,000 hectares to 49,000 hectares and to 43,000 hectares during the same period. The productivity of cashew, which was around 900 kg per hectare during the late eighties, also fell to 654 kg per hectare in 2014-15. Details are given in **Appendix 2.9**.

Area under and production of cashew have risen steadily in other producing states of the country. Even though Andhra Pradesh has the highest area under cultivation (18.3 per cent), Maharashtra is the leading producer with 32.9 per cent share in production during 2013-14.

Plantation crops

Plantation crops are, in general, either export-oriented or import-substituting and therefore assume special significance from the national point of view. It is estimated that nearly 14 lakh families are dependent on the plantation sector for livelihood. Each of the four plantation crops of South India has its distinct characteristics and

economic problems. Consequent to the removal of quantitative restrictions on imports, plantation crops are facing the threat of a surge in low quality imports.

Kerala has a substantial share in the area in India cultivated with the four plantation crops of rubber, tea, coffee and cardamom. These four crops together occupy 7.04 lakh ha, accounting for 26.88 per cent of the gross cropped area in the state. During 2013-14, Kerala's share in the national production was 72.02 per cent in rubber, 22 per cent in coffee and 6.3 per cent in tea. Details are given in **Appendix 2.10**.

Rubber

Production of Natural Rubber (NR) in India declined by 12.9 per cent from 6.45 lakh tonnes in 2014-15 to 5.62 lakh tonnes in 2015-16. Even though tappable area under natural rubber was 5.59 lakh ha during 2015-16, only 3.91 lakh ha of area contributed to the NR production during the year. Consequently, the average yield, measured in terms of production per hectare of tapped area, declined to 1437 kg/ha in 2015-16 as compared to 1443 kg/ha the previous year. During 2016-17, the production is estimated to be 6.54 lakh tonnes of NR. Adverse weather, high wages, lack of skilled labourers and the grower's reluctance in harvesting or maintaining trees in response to the low NR prices have affected the production of natural rubber (NR) in India in 2016. The consumption of NR in the country also came down by 2.6 per cent to 10.2 lakh tonnes in 2014-15. This was due to a 2.5 per cent decline in auto tyre manufacturing and a 2.7 per cent fall in the general rubber goods production. The volume of exports came down to 865 tonnes in 2015-16 from 1002 tonnes in 2014-15. The Central Government continued to provide incentives for exporting quality-endorsed branded Indian Natural Rubber under a Market-linked Focus Product Scheme. The production scene was no different in Kerala also, as the total production dwindled from 5.07 lakh MT in 2014-15 to 4.38 lakh MT in 2015-16.

With regard to rubber prices, it has been volatile in both the national and international markets. NR prices after scaling to an all-time high during 2011 had fallen significantly, that too at an accelerating pace threatening the very existence of the rubber producers. Rubber prices, both in the domestic and international markets had been moving in tandem throughout the year. Domestic RSS-4 and international RSS-3 prices increased from April 2015 to June 2015 and then started decreasing from July 2015 to February 2016 and started slow recovery during the end of the year. Main reasons for the fall in rubber prices were moderate economic growth in China, slow recovery in the US and Europe, enhanced stock in Thailand, increase in world stock of NR, relatively low oil prices and consequent low synthetic rubber prices. The domestic RSS-4 price at Kottayam market came down and averaged at ₹113.06 per kg during 2015-16 compared to ₹132.57 per kg during the previous year. Domestic RSS4 price peaked at ₹133 per kg on 17.06.2015 and international price of RSS-3 peaked at ₹122 per kg on 03.06.2015. Domestic RSS-4 prices was ruling above the international RSS-3 price throughout the year during 2015-16. Details are given in **Appendix 2.11, 2.12 and 2.13**.

The declining rubber production in the year has affected India's ranking internationally as it has been pushed to the fifth position with countries like Vietnam and China occupying the third and fourth position respectively. Thailand continues to be the top producer followed by Indonesia in the second spot in the global rubber scene.

The declining price of rubber is a cause of concern. A revival of rubber prices is expected based on the revision of import duty and other measures taken by Government of India. However, more proactive measures by the central government are essential to support the rubber growers of Kerala. The strengthening and reorientation of Price Stabilisation Fund is essential. The Government of Kerala has introduced a rubber production incentive scheme with a financial support of Rs 300 crores. However, to a large extent the price depends on global supply and demand of natural rubber and the price of synthetic rubber.

Coffee

Domestic coffee production for the year 2015-16 was estimated at 348,000 tonnes, which represents an increase of 21,000 tonnes compared to previous year. Initially, the Coffee Board had projected 2015-16 crop production (Post Blossom estimate) at 355,000 tonnes, which was subsequently revised downwards by 7,000 tonnes. As per the revised figure, the Arabica production was estimated at 103.5 thousand tonnes (29.7 per cent) and Robusta at 244.5 thousand tonnes (70.3 per cent). However, as per FAO estimates, yield in India at 845.6 kg per hectare is much below that of Vietnam (2499.1 kg per hectare) and Brazil (1421.5 kg per hectare). A comparison of the productivity levels in 1971 vis-a-vis 2011 suggests that India (-1.8 per cent) and Indonesia (-0.1 per cent) are the only two countries that reported a decline in yield levels in the last 40 years. Lower productivity in India is due to limited mechanization, pest infestation, existence of old/senile plants and labour shortage. Thus, on the productivity side, much more is needed to be done and towards this concerted efforts are required both at the policy and farm level. The only way to address this issue is by providing positive research and development which can directly contribute in achieving higher yield.

With regard to Kerala, the production of coffee registered a slight increase from 67,700 MT in 2014-15 to 69,230 MT in 2015-16. The share of Kerala in total coffee production in the country is around 20 per cent during the year. Major variety grown in Kerala is Robusta with a share of 97.1 per cent in planted area. Productivity of the crop in terms of bearing area in Kerala is 808 kg/ha, which is lower than the national level of 852 kg/ha during 2011-12. Among the States, Kerala stands next to Karnataka which produces 70.4 percent of total Indian coffee production.

Tea

As one of the largest tea producing countries, India accounts for 24.8 percent of the total world production. The Tea Board had revised the production figures during 2011 by bringing

within the net all segments of tea producers, both organized and unorganized, especially North India many of whom were not reporting their crop statistics earlier, which helped India in breaching the 1 billion mark. The domestic tea production during 2015 was 1191.1mkg lower by 16.2 mkg from previous year. The decline in production in North India and South India was 1.6 mkg and 14.6 mkg respectively. The steep fall in production in south India after a one year reprieve from the low crop trap is a matter of concern.

Kerala accounts for 5.03 per cent of the area and 6.3 percent of the total domestic production of tea in the country. The production of tea in the State has been consistently falling since 2009-10. There was a slight improvement in 2012-13 as tea production recorded an increase of 5059 MT despite a decline in area of 18 per cent. This increase in production was mainly on account of increase in productivity. Tea production recorded an increase of 3.5 per cent in 2014-15 also but in 2015-16 there was a decline in production by 11.16 percent. Details given in **Appendix 2.14**

The major issues affecting the tea industry are stagnant productivity, acute labour shortage, high cost of machines, and lack of indigenous machinery.

Cardamom

India is the second largest producer of small cardamom and plays an important role in the international trade of cardamom. The output of cardamom is dependent on prevailing climatic conditions as the cardamom plant requires intermittent spells of rains and good sunshine during the growth stage. Cardamom production in the country during 2015-16 was estimated at 22 thousand tonnes compared to 18 thousand tonnes in 2014-15, an increase of 4 thousand tonnes. The turnaround in cardamom prices since 2006-07 continued up to 2010-11 reaching the highest level, but thereafter the prices have fluctuated. During 2015-16 (August-June), the prices increased by ₹ 107.33 per kg to reach ₹754.00 per kg.

Meanwhile in Kerala, cardamom production has increased by 21.8 per cent in 2015-16 despite the area under cultivation remaining stagnant.

Pulses

The year 2016 was the International Year of Pulses. Pulses are important source of protein, high in fibre content and provide ample quantity of vitamins and minerals. Keeping in view large benefits of pulses for human health, the United Nations proclaimed 2016 as the International Year of Pulses. Thus, due attention is required to enhance the production of pulses not only to meet the dietary requirement of protein but also to raise the awareness about pulses for achieving nutritional, food security and environmental sustainability. Pulses are important component to sustain the agriculture production as the crops possess wide adaptability to fit into various cropping systems and improves the soil fertility.

India's share is 25 per cent in production, about 33 per cent in acreage and about 27 per cent in consumption of the total pulses in the world. The acreage ranged from 20.35 million ha (2000-01) to 23.99 million ha (2012-13) and production varied from 11.08 million tonnes (2000-01) to 18.45 million tonnes (2012-13). The productivity has increased from 544 kg/ha (2000-01) to 750 kg/ha (2012-13). The major pulses producing states are Madhya Pradesh (25 per cent), Uttar Pradesh (13 per cent), Maharashtra (12 per cent), Rajasthan (11 per cent), Andhra Pradesh (9 per cent) and other states together (30 per cent) during 2012-13.

In Kerala, pulses are cultivated in autumn, winter and summer seasons. The area under the cultivation of pulses shows a declining trend in the state. During 1975-76, the total area under pulses including tur was 37,485 ha but by 2015-16 it has come down to 3764 ha. Apart from tur, the other main pulses grown in Kerala are cow pea, black gram horse gram and green gram. Major cultivation of pulses and tur is in Palakkad district and contributes to 30 per cent of the total production in the State. The production of pulses

in the State was highest during the year 2005-06. More proactive steps are needed to augment pulse production in the State. Details pertaining to the sector is given in **Appendix 2.15** and **2.16**

Collective farming through Kudumbasree

Collective farming is an important area of Kudumbasree, which aims at food security both at household and community level. The major crops cultivated are paddy, vegetables, banana, pineapple and tubers. In 2013-14, area brought under cultivation of paddy was 15078.60 ha, of vegetables was 12555.60 ha and of other crops (banana, pineapple and tubers) was 22476.20 ha. Details of area covered are given in **Appendix 2.17**. More hand holding including facilitation with banks and technology support are essential for improving livelihood of the women groups involved in farming.

Key initiatives of the Department of Agriculture

The annual plan schemes for 2016-17 were formulated focusing on the thrust areas and strategies for increasing the productivity in agriculture from the current levels. The key initiatives taken by the Department of Agriculture in 2016-17 for the improvement of agricultural sector included integrated food crop production programme focusing on self-sufficiency in vegetable production including comprehensive rice development, modernization of existing farms and labs and establishment of new labs, institutional mechanism for marketing, focusing initially on vegetables development of farmers markets and setting up of agriculture markets, production and distribution of quality planting materials, comprehensive fallow land cultivation with people's participation, strengthening extension activities, Agricultural Technology Management Agency (ATMA) plus model of extension, rejuvenation of spices economy, crop health management covering pests and disease

surveillance, promotion of organic farming and safe food production, crop insurance, establishment of 20 Agro Service Centres (ASCs) and strengthening the existing ASCs for improved service delivery, revival package for pepper in Wayanad. In 2016-17, the Harithakeralam Mission has been launched focusing on food crop production, waste management and water resource conservation and development.

Performance of Annual Plan, 2015-16 of Department of Agriculture

During the Annual Plan 2015-16, out of ₹474.93 crore earmarked for the Department of Agriculture under the state plan, the expenditure incurred was ₹449.14 crore (95 per cent) including Wayanad package. The key achievements of the Department of Agriculture in 2015-16 were the following.

- For rice development, assistance was given to padasekhara samithies for sustaining rice cultivation in 1.79 lakh ha through group farming and for speciality rice cultivation in 890 ha.
- For coconut development, the Department established 10 coconut nurseries and 474 organic manure production units, supported 26 Keragramams covering 12.300ha, distributed 2600 climbing devices and installed irrigation units in 656ha. A total of 4.64 lakh nos. of coconut seedlings and 4.43 lakh coconut plants, covering 2.50 lakh WCT, 1.34 lakh of Dwarf, 34,833 Number of TxD and 23,882 DxT coconut plants were produced.
- For vegetable development, the student community was mobilized and vegetable cultivation was carried out in 5592 educational institutions, project based cultivation in 334 institutions and 62 lakhs seed kits and 31,654 grow bags were distributed. The department supported 800 clusters including 50

new clusters and staggered clusters in 3904 ha and fallow land cultivation was undertaken in 402ha. Around 16 block level nurseries and 3 block level Federated Organisations was established for the marketing and input support of vegetables.

- The department carried out micro nutrient demonstration in 237 plots.
- Assistance provided for micro irrigation with fertigation in 905 units and rain shelter cultivation in 1117 units.
- For pepper development, 38 lakh numbers disease free rooted pepper cuttings were produced for distribution to farmers, new pepper garden was established in 3000 ha, good management practices adopted in 2500 ha and support given for the maintenance of 20 ha of mother pepper gardens and for strengthening 200 pepper development samithies. Further, 32 plant clinics and 3396 pest surveillance units were set up and around 1132 campaigns were conducted.
- 25 onfarm production units of trichoderma, 8 Farmer field schools and 8 Field level demonstrations were established and 1014 soil test campaigns and soil testing training to 350 farmer groups were conducted.
- Introduced soil health card monitoring system, and supplied soil ameliorants in 41,345 ha.
- The department during this year for improved service delivery established 15 Agro service centres and provided maintenance support to 49 agro service centres.
- 708 school biogas plants were installed.
- Under state crop insurance scheme, 1.46 lakh farmers were enrolled and an amount of ₹256.88 lakhs disbursed towards claim amount for 4324 farmers.

State Horticulture Mission (SHM)

The State Horticulture Mission was formed in 2005 to implement the programme of the National Horticulture Mission, a centrally sponsored scheme, with 85 per cent central share and 15 per cent state share which has been restructured as the Mission for Integrated Development of Horticulture from 2014-15 onwards. During 2015-16, Government of India (GoI) has changed the sharing pattern of the scheme as 60 per cent central share and 40 per cent state share. The main objective of the mission is a holistic development of the horticulture sector covering fruits, plantation crops, spices, flowers, aromatic and medicinal plants and mushroom. The important programmes under the mission include production and productivity improvement, post-harvest management and marketing.

During 2012-13 to 2016-17 (as on 30.09.2016), a total amount of ₹169.83 crore was released to SHM including ₹140 crore from GoI and ₹29.83 crore from state share. The total expenditure incurred is ₹176.39 crore including unspent balance of previous year. An amount of ₹30.21 crore was released to SHM during 2015-16 including ₹.25.00 crore from GoI. The total expenditure was ₹45.42 crore. The components undertaken in this mission include establishment of nurseries for production and distribution of quality seeds and planting material, establishment of new gardens, establishment of integrated pack houses, sorting and grading units, cold storage units, establishment of rural markets, strengthening wholesale markets, market intelligence, extension quality awareness and market led extension activities for fresh and processed foods.

A project monitoring system has to be evolved for realizing the envisaged outputs. A number of NGOs as well as private sector are also part of the project and their activities in achieving the intended objectives of the mission needs to be monitored. More convergence of schemes with state plan and

RKVY with deliverables are required for improved outputs.

Vegetable and Fruit Promotion Council's Programme (VFPCCK)

Vegetable and Fruit Promotion Council, Kerala (VFPCCK) formed in 2001, has been implementing various schemes in fruits and vegetable sector with the financial assistance from state and central Governments. The major activities of the council are formation of Self Help Groups (SHGs), awareness creation on Participatory Guarantee System (PGS), dissemination of Participatory Technology Development, campaigns/training/capacity building programmes, production of quality seeds and planting materials, participatory credit and insurance support, group marketing and Haritha nagari programmes for the promotion of vegetable cultivation in urban areas.

During 2015-16, the council had inducted 6264 farmers and formed 220 new SHG's for the promotion of fruits and vegetables. Now the council has a total of 1,85,437 registered farmers in 9434 Self Help Groups. The council had initiated 4 new farmer markets and 12 collection centres during 2015-16. Now there are 274 Swasraya Karshaka Samithies and 167 collection centres under the purview of the council. During 2015-16, 1,02,467 MT of fruits and vegetables worth ₹230 crore were traded through swasraya karshaka samithies of the council and a trading of 83,473 MT worth ₹180 crore has been traded upto September 2016. Ready to cook vegetables were made available in packets to public through cut vegetable scheme implemented in Thiruvananthapuram, Ernakulam, Calicut and Pathanamthitta districts. Around 65.15 lakh vegetable seedlings, 5.57 lakh tissue culture banana plants and 9 lakhs fruit plant grafts were produced and distributed throughout the state to promote homestead cultivation. An amount of ₹70.06 crore was disbursed as agriculture loan to 9187 farmers. A total of 25.11 lakh banana plants and 800 ha of vegetables were covered under crop insurance and an amount of ₹69.31 lakhs was disbursed to farmers as claim.

During 2015-16, farmers of the council had cultivated vegetables in 18,290 ha, banana in 23,400 ha and tuber crops in 3264 ha during the period. Total production during the period was 1.84 lakh MT vegetables, 2.81 lakh MT banana and 37,339 MT of tubers. It is seen that even though the area of banana increased by 712 ha during 2015-16, compared to previous year, production decreased by 13,000 MT. During 2015-16, the area and production of vegetables decreased by 1923 ha and 38,000 MT. The area as well as production of tubers increased during the period compared to 2014-15.

For popularising vegetable and fruit production and area expansion of vegetables under PGS, 175 groups have been formed with 1200 farmers. Agro meteorological data have been collected from 26 Automatic weather stations installed in different parts of the state with the participation of farmers. As part of vegetable development programme for the promotion of homestead vegetable cultivation, 25 bags each planted with saplings were distributed to 5853 beneficiaries. VFPCCK has been appointed as the regional council for Participation Guarantee System (PGS) organic certification for fruits and vegetables in Kerala. Awareness creation of PGS to promote organic farming was undertaken and 200 local groups were formed which include 1500 farmers and 1000 acres of cultivation brought under the same during the period. 20 demonstrations were conducted based on soil test results. Krishi Business Kendra has been initiated in Kasargode and Thiruvananthapuram districts. The construction of soil testing lab at Thiruvalli in Malappuram district has been initiated and the soil testing lab at Thuravoor in Alappuzha district is nearing completion.

Rashtriya Krishi Vikas Yojana (RKVY)

In order to incentivize States to draw up comprehensive plans for their agricultural sector, taking into account the agro climatic conditions, natural resource issues and technology and by

integrating livestock, poultry and fisheries, a special additional central assistance scheme was launched during 2007-08. During XI-th plan, GOI had released a total amount of ₹ 22,408.76 crore to states of which ₹21586.6 crore was utilized in implementing 5768 projects under crop development, horticulture, agriculture mechanization, natural resource management, marketing and post-harvest management, animal husbandry, dairy development, fisheries, extension etc. The scheme was implemented as 100 per cent centrally assisted scheme till 2014-15. From 2015-16 onwards the sharing pattern has been changed as 60:40 between GoI and GoK.

During 2007-08 to 2015-16, a total number of 1216 projects with an outlay of ₹1876.94 crore had been approved in the state under the scheme. Out of this 1001 projects were completed. A total amount of ₹1489.68 crore was released by GoI upto 2015-16 and an amount of ₹1424.61 crore (96 per cent) was utilized. During 2015-16 against the budgeted outlay of ₹321.40 crore, ₹150.79 crore was released by GoI of which ₹100 crore (66 per cent) was utilised upto March 2016.

A number of small schemes are included for assistance under RKVY in the state like adoption of naturally ventilated greenhouse technology, adoption of precision farming technology, establishment of mushroom cultivation units, popularization of temperate fruit crops in Idukki district, and development of cool season vegetables in Kanthalloor and Vattavada. . More focused areas with larger projects have to be identified for support under RKVY. More integration is required between RKVY and the state plan. Details are given in **Appendix 2.18**.

Major programmes during 2015-16

Vegetable Development Scheme

A new approach and strategy for the development of vegetables was introduced in the 12th five year plan. Accordingly, a major project on vegetable

development was prepared by the Department of Agriculture during 2012-13 with a mission mode approach and a multi-pronged strategy covering an integrated approach with specified physical targets at Gram Panchayath level. The project aimed at promoting sustainability in vegetable area and production and safe to eat concept by advocating an integrated nutrient management and pest management principles of cultivation. During 2015-16 against the outlay of ₹64 crore, the amount utilized was ₹54.75 crore (86 per cent). In 2016-17 for vegetable development ₹68.30 crore was provided and the expenditure incurred upto October 2016 has been ₹10.28 crore (15 per cent).

Support to State Extension Programme

The Lead Farmer Centred Extension and Advisory Delivery Services (LEADS), a new field visit oriented extension system in the State with appropriate linkage with RandD institutions, KAU and KVKs, was introduced in 4 districts of the State - Kollam, Kannur, Palakkad and Wayanad. 798 Lead farmers and Satellite farmers were formed for advisory services under the programme. During 2015-16, extension activities carried out through ATMA which includes 456 farm schools, 1520 demonstrations, 250 farmer field schools, and 25 integrated farming system models.

ATMA plus model of extension system was introduced by integrating ATMA, LEADS and new initiatives identified through Strategic Research and Extension Plan (SREP). Promotion of integrated farming systems, farmer technology development, preparation of success stories, and identification of research issues were introduced. Model Panchayat Extension Plan was prepared for 14 Grama Panchayats and farmer extension organization was established in 14 blocks. Preparation of Monthly Technology Advice was streamlined in 14 districts. District and state level awards in excellence in extension was provided for outstanding technical officers with certificate and cash award at State level and district level. In order to strengthen ATMA model of extension,

new components under ATMA plus were introduced. All extension scheme components under ATMA Plus needs to be implemented with more convergence of schemes under Animal Husbandry, Dairy and Fisheries.

Crop Insurance Schemes

During 2015-16, 1.46 lakh farmers were enrolled under the state crop insurance scheme and an amount of ₹256.88 lakhs disbursed towards claim amount for 4324 farmers insured under the scheme. Under Modified National Agricultural Insurance Scheme (MNAIS) covering paddy, banana, plantain and tapioca, around 16650 farmers were insured and a compensation of ₹ 1.19 crore were distributed to 2538 beneficiaries. The Weather Based Crop Insurance Scheme (WBCIS) was notified in 12 districts covering 12 crops (paddy, banana, ginger, turmeric, pineapple, arecanut, cardamom, pepper, nutmeg, sugarcane, mango and cashew). Under WBCIS, around 34,800 farmers were enrolled covering an area of 26799 ha and a total claim of ₹12.82 crore were settled to 33270 beneficiaries during the period.

The Coconut Palm Insurance Scheme (CPIS) is being implemented in all districts and a total claim of ₹75 lakhs was settled among 1453 insured farmers. The farmers pay 25 per cent of the premium and the rest is subsidized by Coconut Development Board (50 per cent) and the state government (25 per cent) under the scheme. The other insurance programmes implemented through Agriculture Insurance Company are Rubber Plantation Insurance (RPI) and Rainfall Insurance Scheme for Coffee (RISC). Under Rubber Plantation Insurance scheme around Rs 40 lakhs paid as compensation for 119 farmers towards insurance cover against the loss of trees due to insured perils. The Rainfall Insurance Scheme for Coffee (RISC) is jointly promoted by Agriculture Insurance Company and Coffee Board and the Coffee Board provides 50 per cent subsidy upto 10 ha. The scheme is being implemented in Idukki, Wayanad and Palakkad districts and provides insurance cover for deficit in blossom

and back up showers and excess in monsoon and post monsoon rains.

Organic Farming

Organic farming is an emerging area in the country and the export potential of organic products is increasing across the world. According to the latest statistics (FiBL-IFOAM survey) on certified organic agriculture worldwide, in 2014 around 43.7 million hectares of agriculture land, including conversion areas is being certified as organic in 172 countries, constituting 1 per cent of the total agricultural land of the countries, which is 0.6 million ha more than 2013. 11 countries have more than 10 per cent organic agriculture land. The countries with the most organic agricultural land are Australia (17.2 million ha), Argentina (3.1 million ha) and United States (2.2 million ha). The area under organic certification (including wild harvest) in India increased by 9.9 lakh ha during 2015-16 and reached 5.71 million ha from 4.72 million ha in 2013-14, which includes 26 per cent cultivable area and rest 74 per cent forest and wild area. The States occupying top position with respect to area under organic certification are Madhya Pradesh, Himachal Pradesh and Rajasthan. India produced around 1.35 million MT (2015-16) of certified organic products which includes all varieties of food products namely Sugarcane, Oil Seeds, Cereals and Millets, Cotton, Pulses, Medicinal Plants, Tea, Fruits, Spices, Dry Fruits, Vegetables, and Coffee. The production is not limited to the edible sector but also organic cotton fibre and functional food products .

Organic farming policy, strategy and detailed action plan for Kerala was declared during 2010. The Department of Agriculture has been implementing a comprehensive project on organic farming in Kasargode district and it is envisaged to cover potential areas in other districts. Under this programme, 100 vermi compost units, 625 rural compost units, 30 demonstration plots and 42 ecoshops in 13 districts were established. Also the existing 200 clusters were strengthened and 50 new clusters formed. During 2015-16, 339 vermi

compost units have been established under organic farming by the State Horticulture Mission and an area of 3000 ha has been brought under organic certification.

A comprehensive assessment of the impact of interventions in organic farming on the farmer's well-being, economy and environment in the state as envisaged in the organic farming policy (2010) is required to reorient the strategies and to evolve suitable action plan for promoting organic farming in the state. Strengthening of participatory guarantee system, good agriculture practices, quality control laboratories and other certification and incentive system are also to be worked out to promote organic and nature friendly farming in the state.

The details of consumption of fertilisers and average price of inputs are given in **Appendix 2.19** and **2.20**. The selected indicators of agricultural development is given in **Appendix 2.21**.

Crop Health Management

A new approach on Crop Health management was initiated during 2013-14 to bring together management of sustainable ecosystems and people's health through good plant protection practices (GPPP). Development of pests and disease surveillance system, implementation of area wide integrated pests management demonstration, establishment of plant health clinics and bio control labs, and development of parasite breeding stations are the major components of the scheme. Under the scheme during 2015-16, 3396 pest

surveillance units were started and reports updated online by IIITMK, 32 plant health clinics have been established, 1132 awareness campaigns and workshops including rodent control campaign have been conducted. District Diagnostic team was constituted as part of pest and disease surveillance project. A PG Diploma programme on plant health management has been initiated for the technical officers of the Department of Agriculture in collaboration with the National Institute of Plant Health Management, Hyderabad. During 2013-14 to 2015-16, out of the 93 officers enrolled in the course, 28 officers have completed the course and awarded the degree. District level as well as plant clinic level pest news bulletin were also published on monthly and fortnightly basis.

Agro Service Centers

Agro service centres (ASC) are established at block level to facilitate integration of services like mechanisation, ATMA based extension, credit support, weather advisory services, soil testing support and other technology based services. At present there are 64 agro service centres functioning in the state including 15 ASCs established during 2015-16. During 2015-16, ₹27.65 crore was budgeted of which an amount of ₹13.35 crore was utilized upto March 2016. The achievements during 2015-16 include establishment of 15 new ASCs, bio pharmacies in 14 ASCs, nurseries in 16 ASCs, soil testing labs at 4 ASCs and maintenance support to the existing 49 ASCs. It is proposed to strengthen agro service centres by constituting an apex body for co-ordination.

Section 2 **LIVESTOCK DEVELOPMENT**

Livestock is a major source of livelihood for the World's poor. It is an integral part of India's agricultural economy and plays a multifaceted role in providing livelihood support to the rural population. Livestock sector apart from

contributing to national economy in general and to agricultural economy in particular, also provides employment opportunities, asset creation, coping mechanism against crop failure and social and financial security. Livestock is the main source

of animal protein for the population. Small and marginal farmers and landless labourers own majority of the livestock resources. Also sustainable development of the livestock sector would lead to more inclusive development and empowerment of women. Livestock sector contributed 3.03 percentage of the Gross State Value Added (GSVA) and 29.18 percentage of the GSVA in Agriculture and Allied activities during 2015-16 (at constant price with base year 2011-12).

PRODUCTION OF MAJOR LIVESTOCK PRODUCTS

Milk

India ranks first among the world's milk producing nations. At the national level, milk production has increased from 1026 lakh MT in 2006-07 to 1279 lakh MT in 2011-12. Milk production during 2014-15 and 2015-16 was 1463.10 lakh MT and 1554.90 lakh MT respectively, registering an annual growth rate of 6.27 per cent. Among the major milk producing states in India highest

is in Uttar Pradesh (263.87 lakh MT) followed by Rajasthan (185 lakh MT) Gujarat (122.62 lakh MT) and Madhya Pradesh (121.48 lakh MT). Kerala ranks 14th with a production of 26.50 lakh MT in 2015-16.

Milk production in the State increased from the level of 21.19 lakh MT at the end of the tenth plan (2006-07) to 27.16 lakh MT at the end of the eleventh plan (2011-12). Milk production during 2014-15 and 2015-16 was 27.11 lakh MT and 26.50 lakh MT respectively with an annual growth rate of 2.11 per cent and (-)2.25 per cent respectively. Annual Growth rate of milk production during 2015-16 in the State is far below that at the national level. During 2015-16, Kerala contributed only 1.70 per cent of the annual milk production of the country.

The production of major livestock products at the National level and State level are shown in **Table 2.5**.

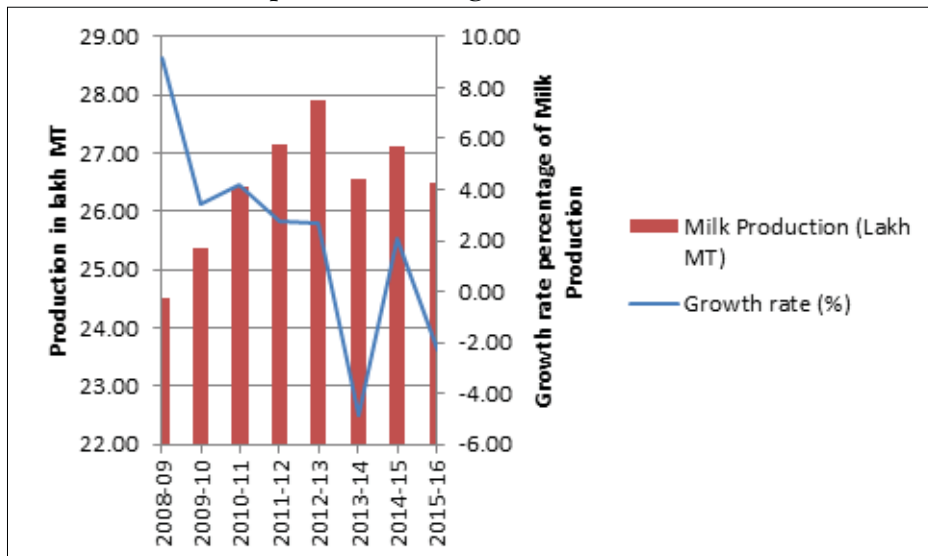
The production of milk and annual percentage change from 2008-09 to 2015-16 of the State is shown in **Figure 2.5**.

Table 2.5
Production of major livestock production

Sl No	Year	Kerala			India		
		Milk (lakh MT) (growth per cent)	Egg (crore) (growth per cent)	Meat (lakh MT) (growth per cent)	Milk (lakh MT) (growth per cent)	Egg (crore) (growth per cent)	Meat (lakh MT) (growth per cent)
1	2006-07 (X th Plan)	21.19	119.39	1.98	1026	5066	23
2	2011-12 (XI Plan)	27.16 (2.76)	170.48 (1.97)	4.26 (24.91)	1279 (5.01)	6645 (5.44)	55 (14.58)
3	2012-13	27.9 (2.72)	223.7 (33.22)	4.01 (-5.78)	1324 (3.52)	6973 (4.94)	59 (7.27)
4	2013-14	26.55 (-4.83)	247.69 (10.72)	4.16 (3.76)	1376.8 (3.99)	7475.2 (7.2)	62 (5.08)
5	2014-15	27.11 (2.11)	250.36 (1.08)	4.46 (7.16)	1463.1 (6.27)	7848.4 (4.99)	67 (8.01)
6	2015-16	26.50 (-2.25)	244.25 (-2.44)	4.66 (4.48)	1554.90 (6.27)	8292.94 (5.66)	70.20 (4.78)

Source: Animal Husbandry Department

Figure 2.5
Milk production and growth rates in Kerala



Source: Animal Husbandry Department

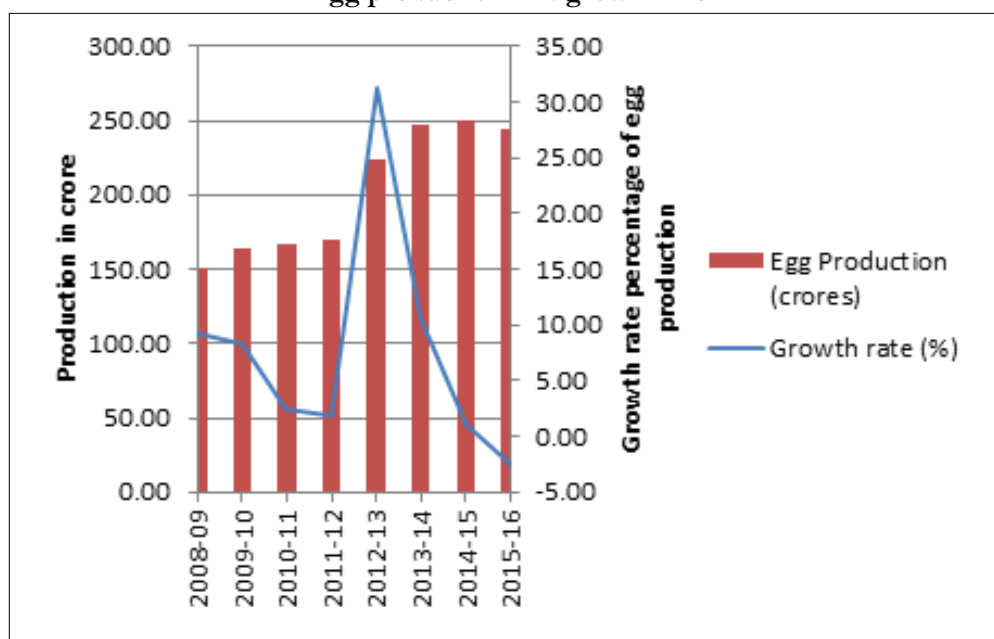
Egg/Meat

At the national level, egg production at the end of the 11th plan (2011-12) was 6645 crore as compared to 5066 crore at the end of the 10th plan (2006-07). Egg production during 2014-15 and 2015-16 was 7848.4 crore and 8292.94 crore respectively with an annual growth rate of 4.99 per cent and 5.66 per cent respectively. Tamil Nadu is the largest egg producing state in India (1612.52 crore) followed by Andhra Pradesh (1417.43 crore), Telangana (1120.58 crore) and West Bengal (601.08 crore). Kerala ranks 9th with egg production of 244.25 crore in 2015-16. At the national level, meat production increased from the level of 23 lakh MT (2006-07) to 55 lakh MT during 2011-12. Meat production during 2014-15 and 2015-16 was 67 lakh MT and 70.2 lakh MT respectively. The annual growth rate during the above period was 8.01 per cent and 4.78 per cent respectively. Among the Indian states Uttar Pradesh is the largest meat producer (14.18 lakh MT) followed by West Bengal (6.86 lakh MT), Maharashtra (6.75 lakh MT), and Andhra Pradesh (5.66 lakh MT). Kerala ranks 7th with production at 4.66 lakh MT in 2015-16.

Egg production in the State increased from 119.39 crores at the end of the Tenth Plan (2006-07) to 170.48 crores during the year 2011-12. The egg production during 2014-15 and 2015-16 was 250.36 crores and 244.25 crores respectively with an annual growth rate of 1.08 per cent and (-)2.44 per cent respectively. Meat production in the State increased from the level of 1.98 lakh MT at the end of the tenth plan (2006-07) to 4.26 lakh MT during the year 2011-12. The meat production during 2014-15 and 2015-16 was 4.46 lakh MT and 4.66 lakh MT respectively with an annual growth rate of 7.16 per cent and 4.48 per cent respectively. Growth of egg production in the state during 2015-16 is far below the national level while for meat the growth percentage during 2015-16 is almost the same as that at the national level. During 2015-16 Kerala contributed 2.95 per cent of the annual egg production and 6.64 per cent of the annual meat production of the country.

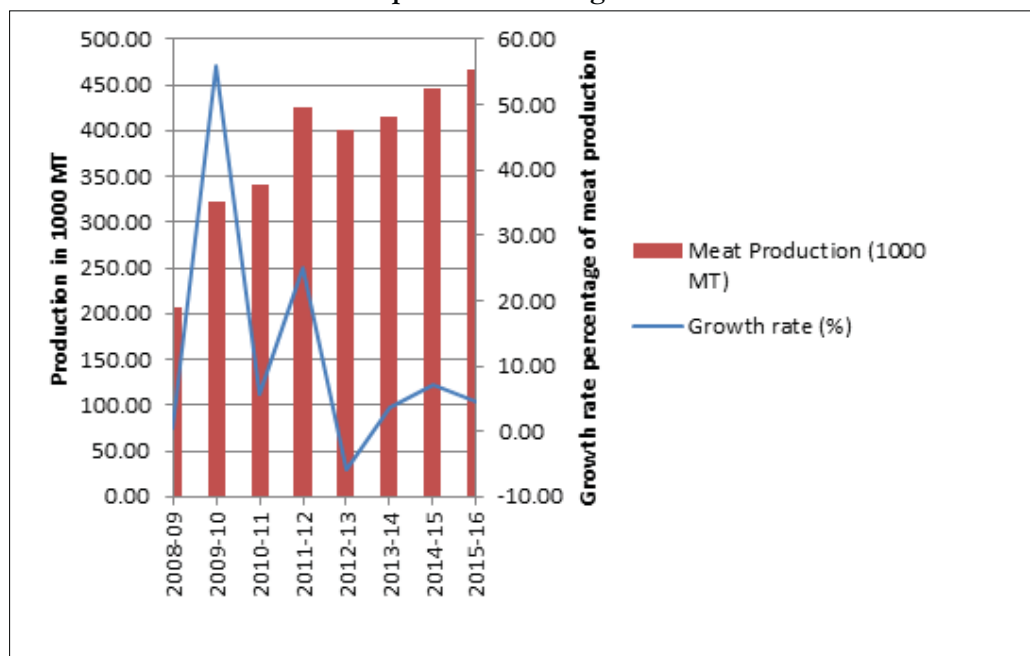
The production of Egg/Meat and corresponding growth rates from 2008-09 to 2015-16 of the State is shown in **Figure 2.6** and **2.7**. During the period 2008-09 to 2015-16, annual growth rate was maximum for egg during 2012-13 and for meat during 2009-10.

Fig 2.6
Egg production and growth rate



Source: Animal Husbandry Department

Figure 2.7
Meat production and growth rate



Source: Animal Husbandry Department

Milk Marketing

During 2015-16, a total of 5929 lakh litres of milk was procured by the dairy co-operative societies in the State of which 3795 lakh litres were sent to the dairies and 2134 lakh litres were marketed locally by the societies. The average milk procured per day by Anand Pattern Co-operative Societies (APCOS) during the year 2015-16 was 1109 MT against the previous year average of 1026 MT. The procurement/day/society during 2015-16 increased to 380 litres from 348 litres in 2014-15. The procurement of milk by Kerala Co-operative Milk Marketing Federation (KCMMF) increased to 4334.81 lakh litres against the sale of 4624.51 lakh litres during 2015-16. Except in Palakkad, Wayanad and Kattappana Dairy, the sales of milk exceeded the procurement. The shortfall between milk procurement and sales was met by arranging milk mostly from state milk federations of Karnataka, Tamil Nadu, and purchase of skimmed milk powder. Data on procurement and sale of milk by different dairies of KCMMF during 2011 to 2016 is given in **Appendix 2.22** and performance of KCMMF during 2011-12 to 2015-16 are shown in **Appendix 2.23** and average quantity of milk procured per day by APCOS are shown in **Appendix 2.24**. The price revision and price spread of milk from 2009 onwards is given in **Appendix 2.25** and **2.26** respectively

Weak Feed and Fodder Base

Special focus has been given to fodder and feed production in Kerala to support the development of the livestock sector considering the wide gap in the availability of these two critical inputs. The Dairy Development Department is the nodal agency for fodder development activities in the State. During the year 2015-16, the Department could add 2686 ha to the existing cultivated area resulting in 4.62 lakh MT more of green fodder to the existing stock. Assistance was provided to farmers for Azolla cultivation, mechanization of fodder cultivation and harvesting, and irrigation facilities. Fodder exhibitions and workshop were

also included in the fodder development activities. Innovative fodder development programs under Integrated Dairy Development Program were implemented in the districts of Kannur, Idukki and Ernakulam. To overcome shortage of raw materials for cattle feed production, maize was cultivated in 100 Ha of land producing 350 tons of maize grain. The total production of cattle feed during 2015-16 was 3.97 lakh metric tonne as against 3.61 lakh MT during 2014-15. Dry fodder marketing activities were taken up by 70 Dairy co-operative societies and Fodder cultivation and fodder marketing activities were taken up by 50 women groups. The production of feed and fodder are shown in **Appendix 2.27**, **2.28** and **2.29**.

Breeding Support

Kerala Livestock Development Board (KLDB) is involved in the production and distribution of frozen semen. Compared to 2014-15, semen production decreased from 34.45 lakh doses to 24.47 lakh doses during 2015-16. The distribution inside the State increased from 17.55 lakh doses to 17.65 lakh doses and outside the state decreased from 11.26 lakh doses to 10.71 lakh doses respectively during this period. Details are shown in **Appendix 2.30**.

The number of Artificial Insemination (AI) centres in the State during 2015-16 was 2515. The number of inseminations done during 2015-16 was 13.00 lakh and calving recorded was 3.25 lakh. The average number of inseminations needed for producing one calf is 4. The details of AI are shown in **Appendix 2.31**. The quality of AI has not shown any improvement and so measures to improve the quality of semen supplied needs to be taken up immediately. The activities of the KLD Board are given in **Appendix 2.32**.

Special Livestock Breeding Programme (SLBP)

Calf rearing in Kerala is an expensive activity. Farmers compromise with the management

practices and nutrition to save expenses. Consequently, the growth and reproductive performance of the animals are affected adversely. Providing assistance for balanced feeding and scientific management can solve the issue to a major extent. The SLBP was initiated in Kerala in 1976 with the above objective. During 2006-07 the scheme was extended to buffalo calves also as a measure to curtail the drastic reduction in the buffalo population. Enrolment of buffalo calves shows a decreasing trend and no buffalo calves were enrolled during the period 2014-15 and 2015-16. During 2015-16, 29164 calves were only enrolled under this programme against 84,712 calves during 2014-15. Year wise details from 2005-06 onwards are shown in **Appendix 2.33**.

Govardhini

Govardhini is a new scheme started in the state from 2014-15 onwards with the objectives of providing total health care to the calves like reducing the age at puberty, age at first calving and inter calving period of the female calves borne in Kerala for increasing milk production in the state. Scientific Management, feeding with adequate quantity of good quality feed and health cover including prevention against common contagious diseases and insurance cover against loss due to unforeseen reasons are the basic requirement in achieving the goal. All these aspects are comprehensively covered in this scheme. Beneficiaries are selected from the calf birth register maintained at Government veterinary dispensaries on first come first serve basis. During 2014-15 and 2015-16, 48000 calves were enrolled under this program.

Animal Health Care

Though there is an improvement in the quality of livestock through cross breeding programs, the susceptibility of animals to various diseases including exotic diseases has increased. The animal husbandry department provides veterinary care mainly through 14 district veterinary centres, 50

veterinary polyclinics, 215 veterinary hospitals, 885 veterinary dispensaries, 9 mobile veterinary hospitals, 7 mobile farm aid units and 1 motorboat veterinary hospital.

The Department through the Animal Disease Control Project has successfully taken up massive foot and mouth vaccination campaign in order to prevent foot and mouth disease (FMD) outbreak and also vaccinations for poultry and ducks against avian diseases. During 2014-15, the highly pathogenic Avian Influenza (Bird flu) outbreak occurred in the State, especially in Alappuzha, Kottayam, Pathanamthitta and Kollam districts. The disease was due to highly pathogenic H5N1 strain which is of zoonotic importance. Effective and timely action was taken by the Animal Husbandry Department by coordinating containment operations in liaison with respective district administrations and local self-governments. Compensation was provided to the farmers. During 2016-17 also Avian Influenza outbreak occurred with H5N8 strain in Alappuzha and Kottayam districts. More than 7 lakh ducks were culled as part of containment operation. Data regarding outbreaks, attacks and deaths of major contagious diseases of animals in Kerala for the period from 2009-10 to 2015-16 are given in **Appendix 2.34**. Anthrax, Hemorrhagic Septicemia, FMD and Black Quarter have been reported during 2015-16. Number of attack of Hemorrhagic Septicemia and FMD were very high during 2015-16 compared to 2014-15.

Emergency Veterinary Service during night hours

The service of a Veterinary Doctor is available only in the day time and it is difficult to get the service during odd hours of the day. Hence a project was formulated during the 12th plan to provide the expert veterinary care at block level from 6 pm to 6 am. The service of a registered veterinary practitioner is provided on contract basis. The unit is functioning under the direct

supervision of one identified veterinary institution of the block area. Medicines are made available to them. The veterinarian on contract basis has to submit monthly reports to the veterinary officer of the concerned block in which the unit is attached. Emergency night veterinary service was established in 50 selected blocks of the state upto 2015-16 and during 2016-17 this was extended to 65 blocks.

Production of Vaccine in Institute of Animal Health and Veterinary Biologicals, Palode

The Institute of Animal Health and Veterinary Biologicals, Palode is the sole agency engaged in the production and distribution of animal vaccine in the State. The production details of vaccines manufactured here are shown in **Appendix 2.35**. During 2015-16, the production of poultry vaccine was 248.29 lakh doses and livestock vaccine was 4.36 lakh doses. Compared to the previous year, production of poultry vaccine decreased by 9.61 per cent and livestock vaccine increased by 2.14 per cent. Number of vaccinations done during 2015-16 was 24.90 lakh numbers for livestock and 106.36 lakh numbers. for poultry. Compared to the previous year, vaccination to cattle increased by 15.49 per cent and vaccination to poultry decreased by 31.19 per cent. Anti Rabies Vaccinations done in dogs increased from 1.79 lakh nos. to 2.87 lakh nos. during 2015-16. Details are given in **Appendix 2.36**.

Prices

Average price of important inputs and products of livestock sector for the last six years is presented in **Appendix 2.37** and almost all the products recorded increase in prices during the period. Compared to 2014-15, there was increase in the price of all categories of meat during 2015-16. The price of chicken broiler increased by 16.06 per cent, chicken (Desi) by 27.37 per cent, mutton by 3.92 per cent, beef by 14.25 per cent and pork by 7.48 per cent. During 2015-16, the highest increase was in the case of chicken (Desi) (27.37 per cent),

followed by chicken broiler (16.06 per cent). Compared to 2014-15, the price of fowl-white egg increased by 7.69 per cent, brown egg by 10.91 per cent and duck egg by 7.51 per cent during 2015-16. Compared to 2014-15, the price of cow milk increased by 4.54 per cent and buffalo milk by 0.76 per cent during 2015-16.

On the input side, the price of straw increased by 6.72 per cent and grass by 3.14 per cent during 2015-16. Compared to the previous year, the price of groundnut cake increased by 11.48 percent, coconut cake by 7.79 per cent and gingely oil cake by 7.61 per cent during 2015-16. The increase in the price of inputs is a serious threat to dairy farming and hence the possibility of indigenous source of feeds is to be explored. The trend in average prices of livestock products from 2010-11 to 2015-16 are shown in **Figure 2.8**.

Annual Plan 2014-15

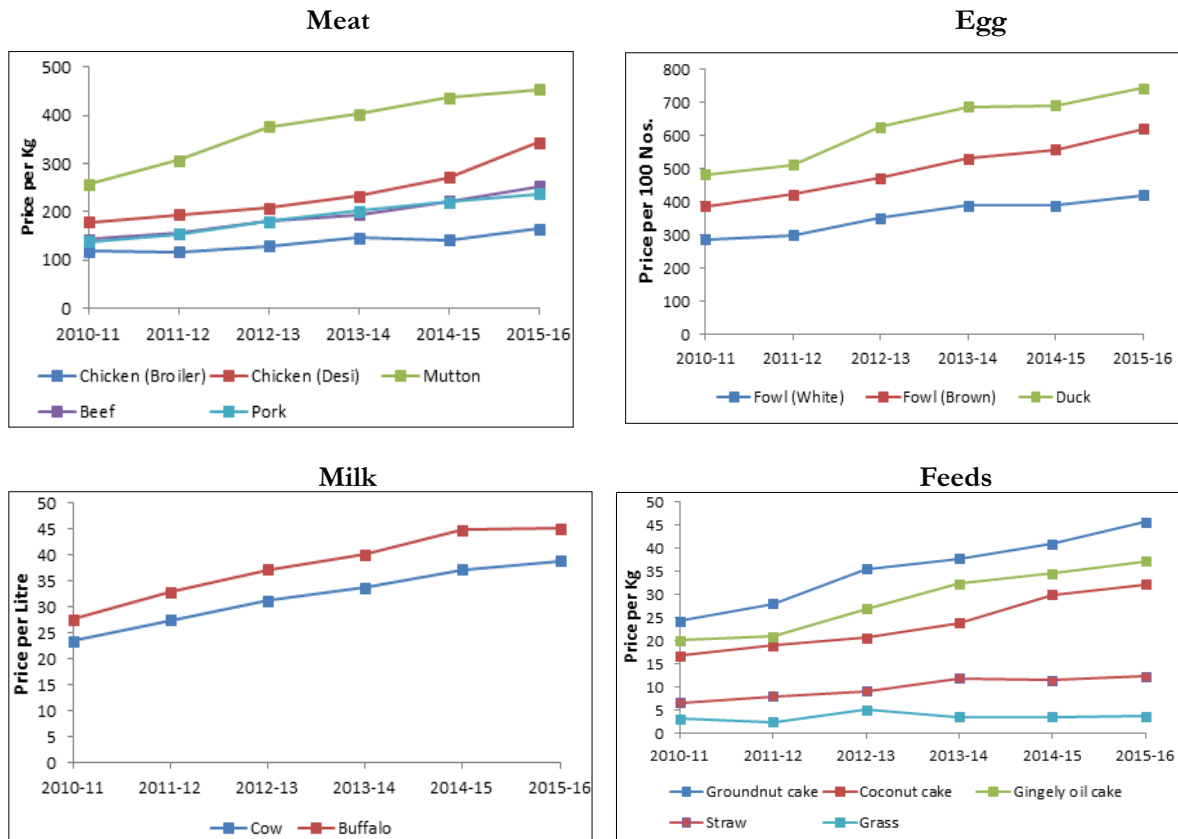
Annual Plan 2015-16 earmarked an outlay of ₹299.38 crore and ₹79.00 crore for Animal Husbandry and Dairy Development sub sectors and expended ₹187.66 crore (62.68 per cent) and ₹77.76 crore (98.43 per cent) respectively. Special Livestock Breeding Programme (SLBP) and Strengthening of Veterinary Services were two major projects implemented with an outlay of ₹46.39 crores and ₹36.37 crore respectively and ₹46.14 crore (99.46 per cent) and ₹26.80 crore (73.69 per cent) were spent. Under dairy development, milk shed development and assistance to primary dairy co-operatives are the major schemes implemented with an outlay of ₹36.25 crore and 16.50 crore respectively and ₹35.96 crore (99.20 per cent) and ₹16.47 crore (99.82 per cent) were expended.

Key initiatives in 2015-16

The key initiatives of the Dairy Development and Animal Husbandry Department are shown below:

- Emergency Veterinary service during odd hours extended to 65 selected blocks of the State.

Figure 2.8
Trends in Average Prices of Livestock Products from 2010-11 to 2015-16



Source: Animal Husbandry Department

- Strengthening of infrastructure facilities of laboratories for improved disease diagnosis and surveillance
- Antirabies vaccination campaign was implemented to control the dog population and eliminate rabies in Kerala by 2020.
- Comprehensive vaccination campaign against Foot and Mouth disease was implemented
- For Govardhini, an amount of ₹36.00 crore earmarked.
- Augmenting poultry production through villages.
- Assistance for the infrastructure development of State Dairy Lab, Thiruvananthapuram
- Integrated Dairy Development programme for Kollam and Ernakulam districts with plan outlay of 15 crore.
- Establishment of permanent Milk checking facility at Walayar and Meenakshipuram.

Section 3

FISHERIES DEVELOPMENT

India is the second largest fish producing nation in the world, with a share of 5.4 per cent of global fish production. India is also a major producer of Fish through aquaculture and ranks second in the world after China. Total fish production in India has increased since 1991. From 3.84 Million Tonnes (MT) in 1991, it increased to 10.06 MT in 2014-15 (provisional figures), of which 6.57 MT was from Inland sector and 3.49 MT was from Marine sector. Inland fish production constitutes about 65 per cent in total fish production of the country. Annual growth rate of production has also been high in the Inland sector. Though marine fish production has increased, the growth rate is very low during recent years.

Fisheries sector contributes significantly to the national economy while providing livelihood to approximately 8.74 lakh fishermen families in the country. Contribution of fisheries sector to the GDP of India is around 1 per cent. Share of fisheries in the GDP from Agriculture, Forestry and Fishing is 5.5 per cent. The sector has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries. It is also a source of cheap and nutritious food besides being a source of foreign exchange. During 2015-16, export of marine products from India was 9,45,892 tonnes valued at ₹30,420.82 crore. Compared to the previous fiscal, a decline has been recorded in the quantity and value of exports. Fisheries is recognized as a promising sub-sector of agriculture and allied activities in India.

The fishermen population of the state for 2015-16 is estimated as 10.24 lakh based on the projected population of Kerala as on October 1, 2015. Population of the state as per Census 2011 is 33.4

million. Hence the fishermen population is around 3.1 per cent of the state population. They reside in 222 marine fishing villages and 113 inland fishing villages of the state. Out of this, 7.88 lakh fishermen belong to Marine sector while 2.36 lakh fishermen belong to Inland sector. Alappuzha (1.90 lakh) is the district with largest fishermen population, followed by Thiruvananthapuram (1.70 lakh) and Ernakulam (1.36 lakh). The district wise details of fishermen population are given in **Appendix 2.38**. The number of Active fishermen in the state during 2015-16 was 2,33,126. Active fishermen are those fishermen who are engaged in fishing for their livelihood and are registered with Kerala Fishermen's Welfare Fund Board. During 2015-16, the number of allied workers in fisheries was 77,694. Allied workers are those engaged in fishery related activities for livelihood and are registered with Kerala Fishermen's Welfare Fund Board.

Fisheries and aquaculture contributes around 8.9 percentage of the Gross State Value Added (GSVA) from the primary sector which is of significance to the state economy. The Gross State Value Added of the State has been increasing over years, but the share of primary sector and that of fisheries sector has been declining. The share of fisheries sector in the State Value Added has declined from 1.12 percent in 2011-12 to 1.04 per cent in 2015-16. The share of Primary Sector in GSVA has declined from 15.20 per cent in 2011-12 to 11.58 percent in 2015-16. The contribution of fisheries sector in GSVA is given in **Appendix 2.39**.

Marine fish production of India during the year 2014-15 has provisionally been estimated as 3.49 million tonnes with an increase of about 0.05 million tonnes compared to the estimate for the

last year. As per estimates of 2013-14, among the states, Gujarat was the highest contributor of Marine fish production followed by Kerala. In total fish production in 2014-15, Andhra Pradesh was the highest contributor and Kerala stands at 5th position. Marine Fish landings in Kerala during 2015-16 were 5.17 lakh tonnes. Marine fish landing in Kerala has been declining continuously since 2011-12, with the exception of a marginal increase in 2014-15. High value species among the fish catch is less. However, significant among them are Seer fish, Prawn, Ribbon fish and Mackerel. The quality of these high value species in the total catch ultimately decides the income of the fishermen. The species wise marine fish landings in Kerala from 2012-13 to 2015-16 are shown in **Appendix 2.40**.

Trend in Production

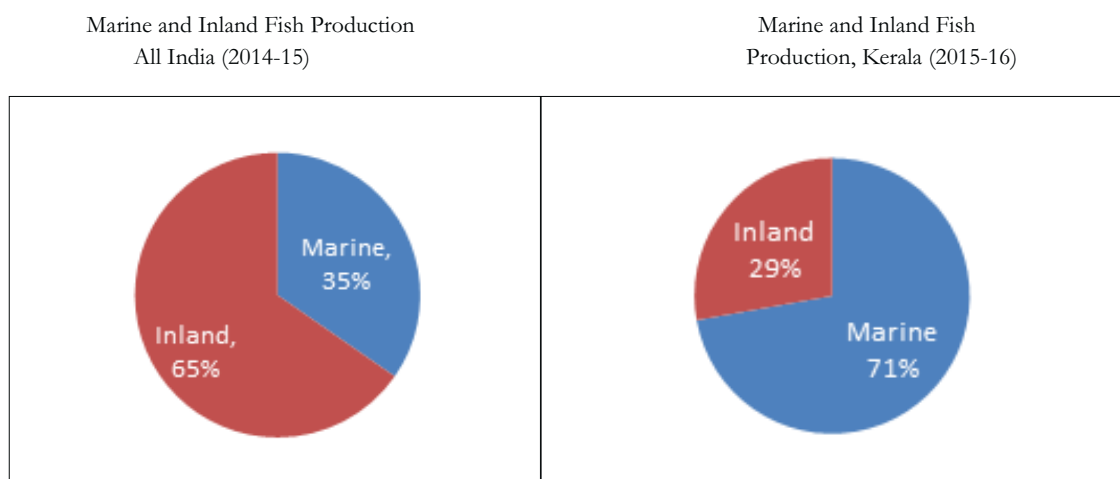
As per estimates of 2013-14, among the maritime states in India, Kerala occupies the second position in marine fish production. The total fish production in Kerala during 2015-16 was 7.27 lakh metric tonnes. The marine fishery resources of the state is said to have almost attained the optimum level of production. At National level about 65

per cent of the total fish production is contributed by the inland sector, however at the state level, the share of inland sector is relatively less than the marine sector. The current level of Inland fish production is 2.1 lakh tones, and it shows an increase of about 4 percent over the previous year. The species-wise inland fish production in Kerala from 2012-13 to 2015-16 are shown in **Appendix 2.41**.

Indian marine fisheries is also passing through a crisis due to over capacity and open access nature. During 2014-15, India's total fish production is provisionally estimated to be 10.06 million tonnes of which 3.49 million tonnes was from marine sector and 6.58 million tonnes was from Inland sector (**Figure 2.9**).

The marine fish production in Kerala has tended to fluctuate while the inland fish production has showed signs of improvement from 1999-2000. Marine fish production has decreased from 5.24 lakh tonnes in 2014-15 to 5.17 lakh tonnes in 2015-16. Inland production has been increasing during the recent years. During 2015-16, the share of inland fish production in the total fish production of the state was 29 percent. Kerala has not utilized its potential in Inland fishing. Kerala has over 7

Figure 2.9
Marine and Inland Fish Production - All India and Kerala



per cent of the water bodies in the country, but its share in Inland fishing is lower than that of many other states. Details of fish production for the last 5 years are given in **Appendix 2.42** and **Figure 2.10**.

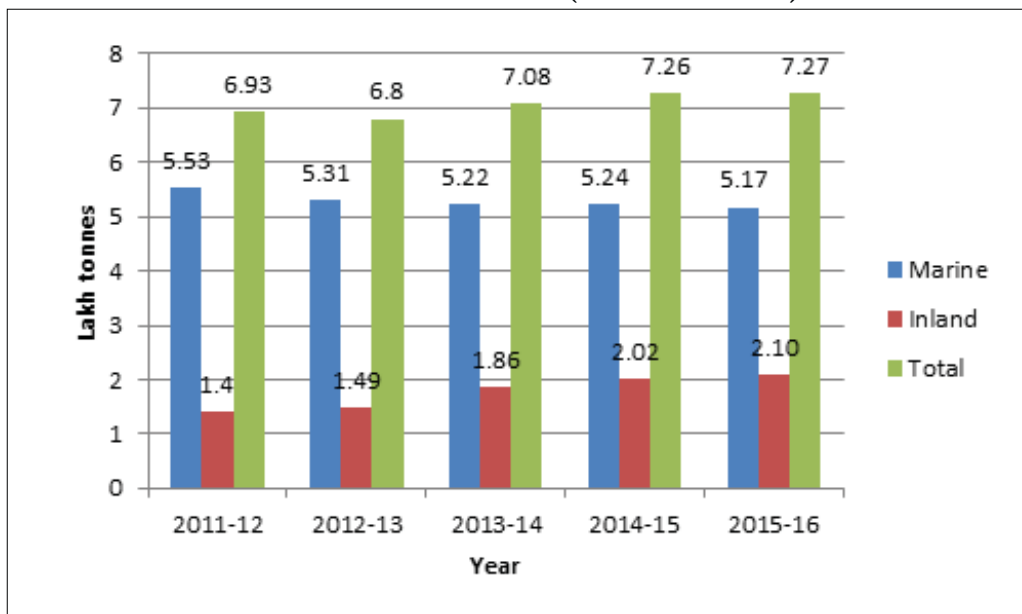
An analysis of the figures of District wise fish production in Kerala shows that the district of Kollam is the leading producer of Marine fish followed by Kozhikode and Ernakulam. These 3 districts together contribute more than 50 per cent of the total marine fish production in the state. Alappuzha, Thrissur and Palakkad are the leading districts in the case of inland fish production occupying the first, second and third positions respectively. If we look at total fish production, the leading producer is the district of Alappuzha followed by Ernakulam and Kozhikode respectively. Details are provided in **Appendix 2.43**. Kerala has made vital contributions in the export of marine products from the country. During 2015-16, export of marine products from Kerala was 1,49,138 tonnes valued at ₹4644.42 crore. Compared to the previous fiscal, a decline has been recorded in the quantity and value of Exports. Details are provided in **Appendix 2.44**.

The key elements of the 12th plan in the fisheries sector are launching of a comprehensive coastal area development project covering infrastructure, housing, sanitation, drinking water and livelihood, action plans for augmenting inland fish production to 2 lakh tones by the end of the plan from 1.17 lakh tones, enhancement of seed production, strengthening of post-harvest infrastructure like better fish landing and handling facilities, cold chains, storage facilities as well as marketing facilities for the development of the sector and improvement in the production of value added products, micro enterprises, credit support and coverage under social security. Annual Plans are formulated keeping in mind the priorities set under the Five Year Plans, and accordingly, the fourth year plan programme of the XIIth five year plan was completed in 2015-16.

Performance Review under XIIth Plan and Annual Plan 2015-16

The projected outlay during the 12th plan under the fisheries sector was ₹1471 crore (including Coastal Area Development) which accounts to 1.44 percent of the total state plan outlay and

Figure 2.10
Fish Production in Kerala (2011-12 to 2015-16)



Source: Directorate of Fisheries, Government of Kerala

16.66 percent of the outlay under Agriculture and Allied Sectors. The actual amount budgeted during the five year period of the 12th Plan from 2012-13 to 2016-17 was ₹ 1419.9 crore and the expenditure reported up to October 2016 was ₹ 972 crore (68.4 per cent). Year-wise details are given in the **Table 2.6**.

The total expenditure under state plan schemes during 2015-16 was ₹345.03 crore, which is 94 per cent of the state plan outlay. The outlay on CSS schemes was ₹59.17 crore and the expenditure during this period was ₹63.01 crore. The outlay on scheme receiving NCDC Assistance was ₹18 crore. The expenditure reported was ₹18 crore (100 per cent). The outlay and expenditure for various types of schemes implemented in the fisheries sub sector during 2014-15 and 2015-16 are given in **Appendix 2.45**. An external monitoring mechanism may be adopted for evaluating the impact of major schemes implemented by various agencies. Multiplicity of agencies and schemes pose the threat of overlapping of schemes implemented by various agencies which may be avoided.

Key Initiatives during 2016-17

Inland fish production is an area which holds promise for future in Kerala. Insufficient availability of good quality fish seeds was

identified as a major problem. To increase the production of fish seeds and to ensure quality, it is required to strengthen the existing hatcheries, nurseries, fish farms and construct new units to the existing infrastructure. During 2016-17, an amount of ₹15.99 crore was allocated for the scheme. Additionally, an amount of ₹5.5 crore was also provided for setting up demonstration units for innovative aquaculture practices.

In order to address the relative backwardness of the fisher folk population and the fishing community, the state of Kerala had initiated a new scheme 'Basic infrastructural facilities and human development of fisher folk' in 2015-16 with an outlay of ₹181.97 crore. The outlay to the scheme was ₹184.60 in 2016-17 where ₹100 crore was provided exclusively for the Housing requirements of the community.

The following are the new initiatives and priorities envisaged by the State Government

- Prime importance to protecting the traditional rights of the fishermen over fishery resources and coastal areas.
- Fishermen vulnerable to sea erosion will be rehabilitated to safe locations on priority basis
- Thrust will be given for ensuring basic

Table 2.6
Outlay and Expenditure of Fisheries and Coastal Area Development, ₹ in crore

Sector	12th FYP projected outlay	Annual Plan 2012-13		Annual Plan 2013-14		Annual Plan 2014-15		Annual Plan 2015-16		Annual Plan 2016-17		Total	
		Out-lay	Exp	Out-lay	Exp	Out-lay	Exp	Out-lay	Exp	Out-lay	Exp	Out-lay	Exp
Fisheries	1014	142	138	158	135	177	147	178	143	169.3	54.26	824.9	617.47
Special Area Devt.	457	64	49	58	49	87	47	189	202	197	8.16	595	355.16
Total	1471	206	187	216	184	264	194	367	345	366.3	62.42	1419.9	972.63

Source: Budget Programme Books, Government of Kerala and Planspace Kerala

- amenities such as pure drinking water, sanitary toilets and waste management systems in all fishing villages
- Concerted efforts will be made for empowering traditional fishermen for deep sea fishing
 - The State shall be made self-sufficient in fish seed production by augmenting existing production capacity of fish seed farms and hatcheries and establishing new seed farms.
 - Schemes will be introduced to tap the potential in inland fisheries
 - Matsyabhavans will be made more functional by providing basic infrastructure facilities and manpower.
 - It is proposed to enact a comprehensive Aquarian Reforms Act to protect the rights of active fishermen in the ownership of the fishing implements, entry to sea and access to marine resources.
 - The Kerala Marine Fishing Regulation Act, 1980 (KMFR Act, 1980) will be amended for addressing the present challenges in maritime fisheries resource conservation.
 - Fishermen Welfare and Development Societies will be strengthened and re-organised and the activities of the Kerala Fishermen Debt Relief Commission will be revamped.
 - A special package will be devised for the integrated development of the coastal area of the State.

Major Developmental Programmes

The Plan schemes of the Government under Fisheries sector can broadly be classified into the following categories –

- (1) Marine fisheries development
- (2) Inland fisheries development

- (3) Extension, Training & service delivery
- (4) Modernisation of markets and value addition
- (5) Social Security to fishermen
- (6) Development of Fishing Harbours and management
- (7) Scheme for the Fisheries University
- (8) Coastal Area Development

Ranching is undertaken for enhancing the stock of important species. 162 lakh numbers of fish/prawn seeds were released into wild environment and 1839 lakh seeds were released under controlled environment during the year 2015-16.

The 2nd phase of Matsyasaamrudhi project was started in 2015-16 for the period 2015-2018. During 2015-16, 7626.89 Ha of fresh water, 3438.05 Ha padasekharam and 2561.39 Ha of brackish water area were brought under fish/prawn/shrimp culture under this programme. 54 ha area was brought under karimeen culture. Mussel farming was also carried out by 2327 units.

In 2015-16, as a part of addressing issues prevailing in the housing sector of fishermen, funds were provided to 4990 fishermen for construction of new houses. To address the issue of Sanitation, during 2015-16, assistance at the rate of 17,500/- was sanctioned to 3600 fishermen for constructing toilets. In 2015-16, under the Plan scheme 'Basic Infrastructure facilities and human development of fisherfolk', Kerala State Coastal Area Development Corporation is engaged in the implementation of 3 Health infrastructure, 1 library construction, 2 sanitation works, 1 Livelihood support scheme, 5 Educational infrastructure, and 4 Anganwadis.

Fishing Harbour

The Government of Kerala has so far completed construction work of 14 fishing harbours and the works of 10 fishing harbours are progressing. The

completed fishing harbours include Thankassery, Neendakara, Kayamkulam, Munambam, Beypore, Puthiyappa, Chombal, Moplabay, Azheekal, Ponnani, and Thottappally. The On-going Fishing Harbour works include Vizhinjam, Chethi, Arthungal, Chettuvai, Thanur, Koyilandi, Vellayil, Thalai, and Manjeswaram. During 2015-16, Cheruvathur fishing harbour was commissioned in the month of August. However, some additional works are pending. During 2016-17, Plan support was extended to Fishing Harbours like Arthungal, Vellayil, Thanoor, Manjeswaram, and Koyilandi. Funds were also provided to complete and operationalize Chettuvai, Cheruvathur and Thalai Fishing Harbours. Support was also provided to Munakkkadavu Fish Landing Centre. Construction of fishing harbours was previously undertaken with the help of State fund, fund from central government (50 per cent and 75 per cent CSS), fund under central schemes like RKVY, and fund from agencies like NABARD (under RIDF). However, recent changes in the funding pattern of CSS schemes introduced by the central government would have a direct bearing on the completion of fishing harbours in Kerala. The state would find the funding of such large projects a big hurdle.

During 2016-17, ₹26.24 crore was provided for Fishing Harbours under the state Plan. Expenditure reported till October 2016 was Rs 15.28 crore. Time bound completion schedules for all ongoing fishing harbours need to be worked out. It is also reported that many of the Fishing Harbours are not in usable condition, and are not operational. Steps need to be taken to ensure that Fishing Harbours are operational throughout the year. The progress of ongoing fishing harbours is shown in **Appendix 2.46**

Total revenue collected from fishing harbours and fish landing centres has shown a sharp fall of 14 per cent from ₹ 490.96 lakh in 2014-15 to ₹ 422.23 lakh in 2015-16. Highest revenue collection has been from Neendakara harbour since 2012-13.

Puthiyappa fishing harbour is the second highest revenue earner in 2015-16. Together, Neendakara and Puthiyappa contributed about 65 per cent of the total revenue collection from fishing harbours and fish landing centres in Kerala. Compared to 2014-15, revenue collection has increased in 2015-16 in Fishing Harbours like Neendakara, Puthiyappa, Beypore, Vizhinjam, Chettuva, and Cheruvathur. The details are given in **Appendix 2.47**.

NABARD assisted schemes

Apart from the construction of Fishing Harbours, NABARD funds have been used for works like construction of Fish Landing centres, roads, bridges, locker rooms, and walkways, NABARD under RIDF XV had sanctioned 11 works including Fishing Harbour at Chellanam, Perumathura Thazhampally Bridge, Kappad-koyilandi Road, and Locker room at Thangasseri fishing harbour. Ten works have been completed. Ten projects including 7 bridges, fish landing centres and walk way amounting to ₹62.91 crore was sanctioned under RIDF XVII. Two bridges and a Fish Landing centre have been completed, and the rest are progressing. Works sanctioned under RIDF XIX include 12 fish landing centres, replenishment of Neendakara fishing harbor, 8 bridge works and 2 road works amounting to ₹76.72 crore. 8 Fish Landing centres, 2 bridges and one road work have been completed and the rest are progressing. Works for 2 roads and a bridge totaling ₹ 7.82 crore have been sanctioned under RIDF XX. An outlay of ₹ 20 crore was provided in 2016-17 for NABARD assisted RIDF projects and an expenditure of ₹11.79 crore has been reported till September 2016.

Social Security and livelihood support to Fishermen Community

Government of Kerala has placed emphasis on various schemes implemented to ensure social se-

curity and livelihood support to fishermen community. Apart from the Fisheries Department, Matsyafed and Kerala Fisherman's Welfare Fund Board also implement such schemes. Plan support is also available for many such schemes. Some of these schemes are Centrally Sponsored Schemes. Schemes include those for Housing, Insurance, and Pension besides measures which enable fishermen to earn livelihood on a continuous basis.

In order to save fisherfolk from exploitation of money lenders 21,085 fisher women were given interest free loan. 46,814 fishermen were given old age pension with an amount of ₹ 3,524.77 lakh. Widow pension was provided to 9,181 women for which an amount of ₹671.03 lakh was provided. ₹394.31 lakh was spent for providing group accident insurance scheme for fishermen and ₹137.801 lakh was spent for providing group accident insurance scheme for allied workers. Educational concessions were given to 63,099 fishermen children. During 2015-16, support was provided for livelihood activities of 257 new fisher-woman groups for social empowerment of fisherwomen. Details of such schemes implemented by the Department and KFWFB are provided in **Appendix 2.48** and **2.49** respectively. The state has been able to provide greater assistance to the fishermen community, and expand the social security net over the years.

Matsyafed

Matsyafed is an apex federation of 665 primary level Fishermen Development Welfare Co-operative Societies, of which 340 are in marine sector, 193 are in inland sector and 132 women co-operative societies. The total membership in these societies is more than 4.45 lakh. The Authorized share capital of the federation is ₹ 150 crore. Matsyafed has organized Self Help Groups within

the fishing community and has developed among them, the habit of savings. These groups have mobilized money as thrift. By providing micro finance and interest free loans, Matsyafed has made a significant impact in the area of micro credit. Matsyafed has also been successful in enabling the fishermen have access to vital fishing inputs. The achievement of various programmes implemented by Matsyafed is given in **Appendix 2.50**.

In the 11th five year plan, marine fisheries sector achieved growth especially in the area of infrastructure development. The 12th plan strategy was to ensure sustainable growth of Fish and Fisheries for nutrition, food security and economic growth by ensuring proper utilization of infrastructure created in the plan. Special emphasis is being given to conservation and management of inshore fishery resources, enhancement of offshore marine fish production, maximum utilization of harvested fish and value addition.

As the state moves into its 13th Five Year Plan, Fisheries sector is looked upon with interest due to its immense potential to contribute positively towards development. The sector needs to take upon itself objectives like (a) nutritional security through enhancing fish production and (b) poverty reduction among fisherfolk by ensuring distribution of production benefits to the community on a sustainable and equitable basis. These must be achieved keeping in mind the challenges posed by climate change and degradation of environment. The resource base of the state offers ample scope for growth of aquaculture especially in the Inland waters. However, resource conservation and elimination of harmful fishing practices need greater emphasis in the future endeavors. With adequate technological support and extension activities, the sector can be expected to do well in the coming years.

Section 4 WATER RESOURCES

Agriculture is the single largest consumer of water. Agriculture accounts for more than 70 per cent of the total water demand globally and its share is as high as 90 per cent in developing countries like India. In this context, even a marginal saving in irrigation water use can release substantial amounts of water for agricultural expansion as well as for meeting the needs of other sectors like domestic water demand. The irrigation water is one of the most ill-managed resource, which creates a severe scarcity of water, both for drinking and irrigation in some region and environmental problem such as water logging in some region. It is now widely recognised that a paradigm shift from the traditional supply orientated mind set towards the concept of water conservation and demand management is essential for the sustainability of water resources and the environment, as well as economic efficiency and social development.

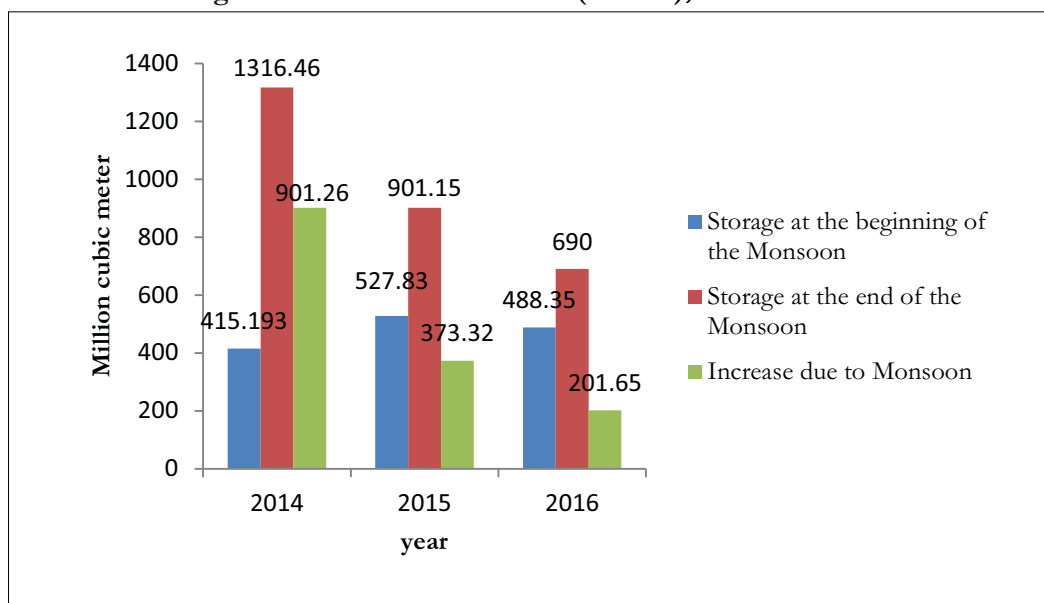
Due to unique topographic and geomorphic settings, scarcity of water is experienced in many parts of the state during the summer months. For proper planning of the future control and utilization of the available water resources, the quantity, the quality and the temporal reliability of the resource needs to be assessed.

LIVE STORAGE CAPACITIES OF IRRIGATION RESERVOIRS

There are 18 dams in the State intended for irrigation. Out of this, 14 have storages and remaining are barrages. The live storage position of the reservoirs during the beginning and end of the monsoon period during 2014 to 2016 and the average for 10 years are given in **Appendix 2.51**.

During 2016, at the beginning of monsoon, the

Figure 2.11
Live storage Position in the Reservoirs (2014-16), in million cubic meter



Source: Water Resources Department, Government of Kerala

total storage was 488.35 Mm³ and at the end of the monsoon, the level was raised to 690 Mm³, as against the previous year levels of 527.83 Mm³ and 901.15 Mm³ respectively. On analyzing the increase in storage position of reservoirs after monsoon during the past three years, it is to be noted that there is a decreasing trend, ie from 901.26 Mm³ in 2014 it has declined to 373.32 Mm³ in 2015 and to 201.65 Mm³ in 2016. 10 year average data shows that storage in the beginning of monsoon was 442.05 Mm³ which increased to 1094.95 Mm³ after the monsoon indicating an increase of 652.9 Mm³.

LONG PENDING IRRIGATION PROJECTS

There are 4 long pending irrigation projects which began in 1970s. Status of these irrigation projects are given in **Appendix 2.52**.

Karapuzha Irrigation Project

Karapuzha Irrigation Project, the first project taken up for execution during Vth Five Year Plan, envisaged construction of an earth dam across Karapuzha stream to create a reservoir of 76.50 Mm³ storage capacity and to irrigate an (net) ayacut of 5221 hectares (net) of land in three taluks of Wayanad district. The project aims to provide irrigation facility during the second crop period of paddy. Karapuzha Irrigation Project was included in the Accelerated Irrigation Benefit Programme under Prime Ministers Relief Package during 2006-07.

The project was approved by Planning Commission in 1978 with an estimated cost of ₹7.60 crore envisaging irrigation to Cultivable Command Area of 5600 ha and an ultimate irrigation potential of 8721 ha. Now, as per 2010 schedule of rates, the revised estimate is ₹441.50 crore. The project has been partially commissioned on 20.6.2010 with an ayacut (CCA) of 390 ha and an irrigation potential of 608 ha was created out of 7355 ha envisaged. As on March 2016, on completion of repairs of canal, additional CCA of 211 ha was created. Thus, as on 31.03.2016, total CCA created is 601 ha..

The cumulative expenditure incurred up to Octo-

ber 2016 is ₹322.87 crore. Head works, works of right bank canal and left bank canal are completed. 47.26 per cent of branch canal works and 5 per cent works of distributaries are also completed.

Muvattupuzha Valley Irrigation Project

The Muvattupuzha Valley Irrigation Project, one of the major projects in Kerala envisages the utilization of the tailrace discharge from the Moolamattom Power House of the Idukki Hydro-Electric Project and the dependable runoff from the catchments of Thodupuzha River. MVIP was started in 1974 with an estimated cost of ₹ 20.86 crore. The estimated cost of the project based on current CPWD rate is ₹ 945.00 crore. Project was partially commissioned in 1994.

The expenditure of the project as on October 2016 is ₹918 Cr. AIBP Central Loan Assistance of ₹154.96 cr was released during 2000-2009. Balance work is to be done for completion of the project.

Idamalayar Irrigation Project

Idamalayar Irrigation Project is a diversion scheme for diverting water of Periyar river for irrigating 14,394 ha. of cultivable lands in Periyar and Chalakudy basins. The project also envisages the improvement and augmentation of Chalakudy river diversion scheme by linking with the canal of Idamalayar irrigation project. The work commenced in 1981 at an estimated cost of ₹17.85 crore and has been revised to ₹750.00 crore as per 2012 SOR.

Main components of the project are: (1) A head regulator across the main canal at its starting point. (2) Canal system consisting of – Main canal (32.278 km), Low level canal (27.25 km), link canal (7.575 km). Main canal for a full length of 32.278 km and low level canal upto 7.3 km are completed and water through. Cumulative expenditure as on October 2016 is ₹426.54 crore. Total ayacut achieved is 2391.66 ha.

Banasurasagar Irrigation Project

The project commenced in 1979 with an estimated cost of ₹8.00 crore to irrigate an area of 2800 ha (net) agriculture land for the second and third crops in two taluks of Wayanad district. The revised estimate of the project as per 2010 SOR is ₹185.5 crores.

86 per cent of the works of 2730 m long main canal have been completed. The work of both branch canals – Padinjarathara branch canal and Venniyode branch canal are in progress. Out of the total length of 5390 m of Venniyode branch canal, works of 770 m completed. Total expenditure incurred for the project is ₹52.78 crore (including 85 lakh paid to KSEB as share cost).

FLOOD MANAGEMENT PROGRAMME

As per the constitutional provision, the subject “Flood Management” falls within the purview of the States. India has made huge investment in Flood control sector since 1951 but the fear about

severity of floods and the agony brought out by them still persist in many cases.

Kuttanad Package

Schemes related to Flood Control, salinity management and drainage are undertaken by Irrigation Department. An amount of ₹1517.90 cr was earmarked for this purpose. As on March 2016, out of the total cost outlay of ₹1840.40 cr, ₹ 707.326 crore has been utilised. Of the total expenditure, ₹353.42 cr crore is utilised for irrigation projects. Four schemes are sanctioned under Flood Management Programme(FMP) :- KEL-I – Mitigation of floods (14 padasekharams), KEL II - Mitigation of floods (9 padasekharams), KEL III - Mitigation of floods (231 padasekharams), KEL IV- Mitigation of floods in 12 watersheds. An amount of ₹200.00 core was budgeted during the first four years of 12th plan as state share and another ₹600.00 crore was provided as central share. Out of ₹800.00 crore budgeted, ₹206.68 crore was utilized as state share and ₹150.13 crore was utilized as central share (Total ₹356.81 crore). Works of KEL-I and KEL II have been completed.

Box 2.3

Sustainable Low cost Rehabilitation of Ponds – An initiative by Kerala Irrigation Infrastructure Development Corporation Ltd (KIIDC)

Ponds play a crucial role in the development of an area. But, over a period of time, the pond system has failed mainly due to poor maintenance and upkeep as well as due to filling and conversion for commercial purpose. KIIDC has initiated a project on the Restoration of Ponds in Thiruvananthapuram corporation limits. Main highlights of the project are :

- Implementation will be done in a phased manner within the corporation limits
- Renovation cost limited to an average of ₹ 15.00 lakh per pond.
- Selection of public ponds for conservation and recharge of water
- Use of low cost biological methods.
- Exploring the possibility of recreation and fish cultivation.

Survey and data collection was carried out by KIIDC across the wards of Corporation and based on ownership, ponds were categorized into public and private. A monitoring committee consisting of ward member of the area and representatives of respective residence association and KIIDC were constituted for each of the pond taken up for restoration. Till March 31, 2016, 24 ponds have been completed and works in 18 ponds of the remaining 30 ponds are complete and the works in balance 12 ponds are in different stages of implementation.

Source: KIIDC

IRRIGATION STATUS

The net irrigated area source – wise for the period 2015-16 is shown in **Appendices 2.53** and **2.54**. As per the Directorate of Economics and Statistics, the net irrigated area in the State during 2014-15 was 4.14 lakh ha and this was reduced to 4.13 lakh ha during 2015-16. Irrigated area through private canals showed a tremendous decrease from 1249 ha(2014-15) to 774 ha(2015-16). Compared to 2014-15, the gross irrigated area has shown an increase from 4.69 lakh ha to 4.83 lakh ha during 2015-16. Coconut, paddy and vegetables were most benefitted during the period. Gross Irrigated area of vegetables showed an increasing trend over the past three years, from 21066 ha in 2013-14 and 24472 ha in 2014-15 to 39306 during 2015-16. Details are given in **Appendices 2.55** and **2.56**. The percentage of gross irrigated area to gross cropped area also increased from 17.89 in 2014-15 to 18.4 in 2015-16.

Minor Irrigation

Schemes having a cultivable command area up to 2000 ha are treated as Minor Irrigation schemes. Out of these, schemes having an ayacut below 50 ha are classified as Minor Irrigation Class II and those having ayacut area of 50 ha or more are Minor Irrigation Class I schemes. The role of Minor Irrigation is quite significant to our State. Works generally taken up under Minor Irrigation are construction of check dams, construction and renovation of irrigation tanks, regulators and bunds, and lift irrigation works.

Focus on minor irrigation and development of minor irrigation structures in critical agro ecological zones for the development of agriculture was one of the thrust areas during 12th plan period. During the 12th plan period, 19.63 per cent of the total budgeted outlay was earmarked for Minor Irrigation. Physical achievement of Minor Irrigation for 2013-14, 2014-15 and 2015-16 are shown in **Appendix 2.57**.

NABARD has been providing loan assistance for irrigation works through RIDF Phase 1 to XXI since 1995-96. 1314 projects have been completed under different tranches (RIDF I to XXI). Details are given in **Appendix 2.58**. RIDF I to XV have been closed and the works under RIDF XVI to XXI are in progress. NABARD has sanctioned 26 proposals worth ₹134.12 crore and 25 proposals for ₹129.89 crore under RIDF XX and XXI respectively.

Haritha Keralam Mission

Conservation and protection of the environment and thereby natural resources such as land and water have been an inseparable part of Indian heritage and culture. Over the years, the water use scenario has changed drastically impacting the water systems adversely. This necessitates a major campaign focusing on the restoration of all types of water resource system and management of all resources in a sustainable and equitable manner.

Some of the major objectives of Haritha Keralam mission are - restore and improve the existing water resource systems including water resource structures, maximize rain water harvesting and ground water recharge within each micro watershed of the State, conservation of land and water to prevent soil erosion and enhancing the carrying capacity of river systems.

Development and preservation of water resources of the State following a water shed based approach with integration to river basins is the basic strategy for action in the water sector. By using water shed maps as scientific tools, watershed development plans can be prepared. The focus at the watershed level will be on the effective management of run off water and improved soil and moisture conservation activities.

Ground Water Development

Ground Water is a vital resource for meeting the water requirements of irrigation, domestic and in-

dustrial sectors of the country. Ground Water is an annually replenishable resource but its availability is non-uniform in space and time. The annual replenishable ground water resources of the area is the sum of recharge during monsoon and non-monsoon seasons.

Ground Water level is one of the basic elements which reflects the condition of the ground water regime in an area. Ground Water levels are being monitored by Central Ground Water Board and State Ground Water Departments. The assessment of Ground Water draft is carried out based on Minor Irrigation census data and sample surveys carried out by the State Ground Water Departments. The annual Ground Water draft of the entire country for 2010-11 has been estimated as 245 bcm. There has been marginal (2bcm) increase in the overall estimate of Ground Water draft of the country in 2011 compared to 2009. Agricultural sector remained the predominant consumer of ground water resources. About 91 per cent of total annual ground water draft ie 222 bcm is for irrigation use. Only 23 bcm is for domestic and industrial use which is about 9 per cent of the total draft. In several states including Kerala, ground water draft for domestic and industrial purposes are more than 15 per cent.

As on March 2011, total annual ground water recharge of the State is 668601.72 ha.m. and the net annual ground water availability is 607407.22 ha.m. The net annual ground water availability for future

irrigation development of our State is 306634 ha.m. The stage of ground water development of our State is 47 per cent. Among the districts, Kasargod and Wayanad ranks maximum and minimum with 71 per cent and 18 per cent respectively. Details are given in **Appendix 2.59**.

During 2015-16, ₹11.65 crore was expended against the outlay of ₹11.71 crore by the Ground Water department. Major schemes implemented by the Department are Investigation and Development of Ground Water Resources and scheme for ground water conservation and artificial recharge. For ground water development and investigation, ₹8.52 crore was expended against the outlay of ₹10.16 crore. Detailed physical achievement during the year under report is given in **Appendix 2.60**.

Performance of Irrigation sector during 2015-16

During 2015-16, the total outlay and expenditure of irrigation sector was ₹348.01 crore and ₹ 317.45 crore respectively. Details are given in **Appendix.2.61**. The poor performance of major and medium irrigation projects are the main reason for the low expenditure of the sector. Against the budgeted outlay of ₹190.23 crore for major and medium schemes, the expenditure incurred was only ₹62.94 crore. For Minor Irrigation schemes, ₹81.97 crore was expended against the outlay of ₹99.43 crore.

Section 5

FORESTRY AND WILD LIFE

The world's forest resources are monitored by FAO at an interval of 5 to 10 years since 1946. The Global Forests Resources Assessments (GFRA), by FAO, provide a consistent approach to describe the changes in the world's forest resources. The

assessments are based on country reports and remote sensing studies conducted by FAO. The latest GFRA 2015 has shown India among the few countries of the world indicating increasing trend in Forest and tree cover. Results of India State

of Forest Report (ISFR) 2015 also coincide with Global Forest Resource Assessment 2015 (GFRA 2015).

Forest Cover is classified into very dense forest, moderate dense forest and open forest. The total forest cover of the country as per ISFR 2015 is 701673 sq.km which constitute 21.34 percent of the geographical area of the country. There has been an increase of 3775 sq.km. in the country's forest cover as compared to 2013 assessment. The total growing stock of India's forests and trees outside forests is estimated as 5768 million cum which comprises of 4195 million cum inside the forests and 1573 million cum outside the forests. There is an increase of 110.34 m .cum in total growing stock of the country as compared to the assessment reported in ISFR 2013. Out of this, increase inside the forest is 21.69 m. cum and that outside the forest is 88.66 m.cum. Similarly, mangrove cover has increased by 112 sq km as compared to the previous assessment.

As per Forest Survey of India (FSI) report 2015, total forest cover in the State of Kerala is 19239 sq.km, which is 49.5 percent of the total geographic area. Forest Cover in the State consists of 1523 sq.km of very dense forest , 9301 sq.km of moderate dense forest and 8415 sq.km of open forest. The extent of very dense forests is about 8 percent of the forest cover whereas open forests accounts for 44 percent of the forest cover. A comparison with the previous assessment in 2013 indicates a significant increase in the extent of open forests and a decline in the area under dense and moderately dense forests. Similarly, there is an increase in forest cover to the extent of 1317 sq. km and this is mainly due to commercial plantations. Idukki tops the districts in forest cover (3770 sq km). Alappuzha has the least forest cover (112 sq km). In terms of percentage of forest cover to total geographical area, Wayanad ranks first (79.73 per cent), followed by Idukki (75.11 per cent) and Pathanamthitta (65.96 per cent). District wise details of forest cover in Kerala is given in **Appendix 2.62**.

MANAGEMENT OF NATURAL FOREST

Natural forests in Kerala are being managed mainly for sustaining the life support systems and biodiversity conservation. Forests in Kerala are mainly classified into 5 major categories. The major types of forests in Kerala is given in **Appendix 2.63**.

Forest Protection

Forest protection is the important aspect of managing natural forests. Major activities taken up during 2015-16 were survey of forest boundaries, forest protection and regeneration of denuded forests. Boundary demarcation was carried out by construction of cairns and kayyalas along the boundary of the forests. Degraded forest areas were rehabilitated by planting in gaps with the local species. Protection of the forests from fire was carried out mainly by undertaking fire lines and engaging fire protection watchers. About 7983 cairns and 10.72 km of stone wall were constructed in 2015-16. Gap filling was done in an area of 100 ha and fire protection for 99.79 kms in and around degraded forests during the previous year.

Productivity of Plantations

About 1549 sq km of forests are under plantations of various types. Around 1,50,000 ha (13 per cent of total forest area) of forest plantations of various species exists, of which teak covers an extent of approximately 76,800 ha (51 per cent of total plantation areas). The annual revenue of the department comes mainly from the thinning and final felling of these plantations. Modern technologies including the use of improved seeds and modern nursery practices were adopted for raising the plantations. Plantations of hardwood species of local origin and pulpwood species for supplying raw materials to industries were also raised. Under Hardwood species, 265.04 ha of new areas were raised and 910.20 ha were maintained during the

year 2015-16. Regarding industrial raw materials, 598.48 ha were newly planted and 1280.78 ha were maintained. Non-Wood Forest species were raised newly in 371.00 ha and it was maintained in 418.61 ha during 2015-16. Species wise area under forest plantation is given in **Appendix 2.64**.

Forest Development Agency

Forest Development Agencies (FDAs) are registered as Federation of Vana Samrakshana Samithies (VSS)/Eco Development Committees (EDC) under the Societies' Registration Act. All VSSs/EDCs of forest dependent communities/villages will come under the FDA on the condition that such units shall not exceed 50 under a single FDA. As on March 31, 2016, there are 400 Vana Samrakshana Samithies and 190 Eco development committees in Kerala.

Implementation of Forest Rights Act, 2006

Tribal people are integral part of forest ecosystem. Advent of scientific forest management and administration led to the settling of rights of people on forests under the provisions of Indian Forest Act, the first of which was formulated in 1865. Forests were notified by the British Government as reserved forests and protected forests after settling the rights of people on forest land and on forest resources. After independence also, the same process continued as per various State Forest Acts in the line of Indian Forest Act. It was a long felt need that the rights of tribals on forest land and on forest resources needed recognition. As a consequence, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognitions of Forest Rights) Act, 2006, popularly known as Forest Rights Act was legislated. The Forest Rights Rules, 2008 amended in 2012 deals with the detailed procedure for claim, recognition and settling of rights.

The Act defines a forest dwelling scheduled tribe as members or community who primarily reside in forest and depend on forest or forest land for their bona fide livelihood and includes scheduled tribe

pastoralist communities. Similarly traditional forest dwellers are members or community who reside in forest for a period of at least three generations prior to 13th day of December 2005 and who depend on forest or forest land for their bona fide livelihood.

The rights are classified into individual right and community right. The most important individual right is the right of individual or community for forest land for habitation and personal cultivation for livelihood . The most important community right is the right of ownership, access to collect, use and dispose of minor forest produce. Right to intellectual property rights is also recognised as a community right.

Grama sabha or *Oorukoottam* is the primary institution which collects application and take evidence in connection with the rights. Screening of rights is done at the level of Sub Divisional Level Committee and District Level Committee. The title is issued by the District Level Committee. State Level Committee chaired by the Chief Secretary monitors the whole programme.

In the State about 25,000 families have been given title for individual right so far allotting about 35,000 acres of forest land. The process of settling of Community rights on forest resources, which is more vital for livelihood is being settled now. Progress Report as on 30.11.2016 is shown in **Appendix 2.65**.

Major Forest Produce and Revenue from Forests

The production of major forest produce during the period 2014-15 and 2015-16 is shown in **Appendix 2.66**. Forests contribute substantially to the non-tax revenue of the State amounting to ₹290.20 crore against a budget estimate of ₹354.73 crore during 2015-16. During 2015-16, revenue (revenue from forest products plus interest on forest revenue dues) from forests was ₹290.20 crore against the previous year revenue of ₹ 300.40 crore . Revenue from forest products also

shows a decreasing trend, it was ₹ 257.37 crore during 2015-16 against 289.51 crore during 2014-15. Among the forest products, timber contributes the major source of forest revenue. Though major portion of the forest revenue is from timber, the share has declined during the previous year. Revenue from timber during 2015-16 was ₹240.89 crore against ₹269.43 crore during 2014-15 ie, the share of timber has declined from 89 percent of the total forest revenue (2014-15) to 83 percent (2015-16.) (Figure. 2.12). Details are given in Appendix 2.67. Further, enhanced rates for various services rendered by the Department, and e-Auction of timber has added to the forest revenue.

The share of Forestry and logging in total GSVA at basic prices during the period 2015-16 (Quick Estimates) is 0.83 percent against 0.90 percent during 2014-15. The share of primary sector in GSDP has decreased from 11.62 percent (2014-15) to 10.53 percent during 2015-16. The contribution of Forestry sector in GSVA is given in Appendix 2.68.

Wild Life and Biosphere Reserve

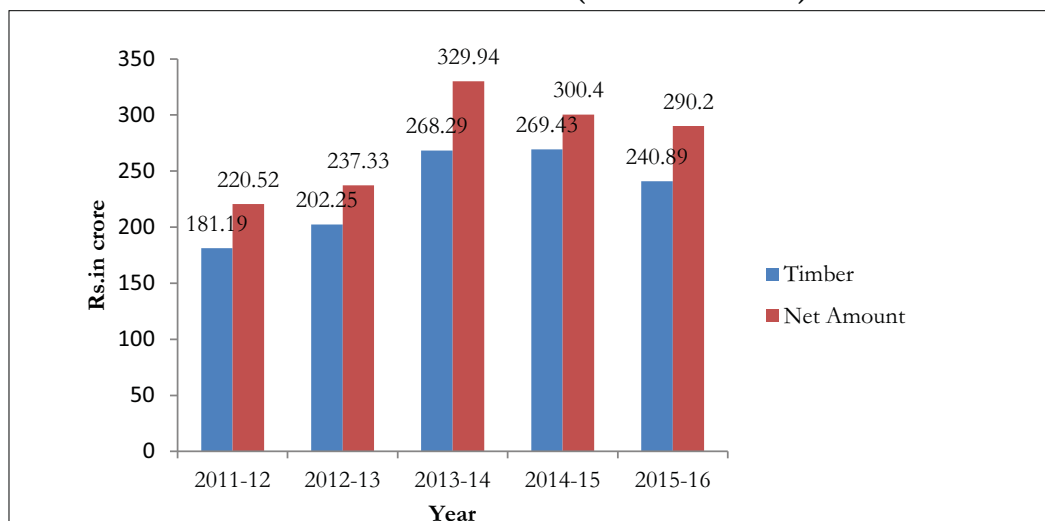
At present, there are 11 wildlife divisions under the

wildlife wing. The wing manages 3213.237 sq.km of forests under its protected area network which includes 5 National Parks, 17 Wildlife Sanctuaries (includes 2 Tiger Reserves, 2 bird sanctuaries, 1 Peafowl sanctuary) and one Community Reserve. List of Wildlife Sanctuaries, National Parks, Biosphere Reserves and Community Reserves in Kerala is shown in the Appendix 2.69. During 2015-16, Wildlife wing has undertaken activities such as management of protected areas, preparation and implementation of management plan/Tiger conservation plan, conduct of wild life census, implementation of National Conservation projects, conduct and co-ordination of nature education and awareness programmes, co-ordination of eco-tourism/eco-development activities in protected areas, mitigating man- animal conflict including payment of compensation to the victims of wild-life attack etc.

Man- animal conflict

Man animal conflict is a perpetual problem confronted by the local people who inhabit the fringes of forest. In order to mitigate the problem, the Department has constructed several preventive structures such as solar fencing, elephant proof

Figure 2.12
Forest Revenue in Kerala (2011-12 to 2015-16)



Source: Forest and Wildlife Department, Government of Kerala

trench, elephant proof wall, bio fence, kayyala, and rail fence. During the year 2015-16, 6022 incidents of man animal conflicts were reported in Kerala. This includes human death, injury to human beings, cattle death, crop damage and property loss. Among the various circles of the Department, 6022 applications were received and ₹6.81 crore was paid as compensation to the victims of wild life attack during 2015-16.

Trees Outside Forest (TOF)

Compared to majority of the states, Kerala stands fairly good in TOF in the country. The recent FSI reports (2015) suggest 11073 sq. km area under TOF which is about 28.49 per cent of the state's geographical area. Department has carried out massive afforestation programmes outside forest

areas since 2007 with novel ideas. Haritha Keralam is an umbrella programme envisaged to increase greenery and enhance biodiversity in non-forest area of the State. This includes "Ente Maram, Nammude maram" Vazhiyora thanal, and Haritha theeram. The total number of seedlings distributed/planted under the various programmes upto March 31, 2016 is ₹ 576.2 lakh. The details of seedlings distributed under these programmes are given in **Appendix 2.70**.

Financial Performance of the sector during 2015-16

During 2015-16, against the State Plan outlay of ₹152.00 crore, ₹125.36 crore was spent (82.47 per cent). Expenditure details during 2015-16 is shown in **Appendix 2.71**.

Section 6 **ENVIRONMENT**

Environment is an issue of major concern to governance at national, state and local levels. The concerns are now multi-dimensional and no longer confined only to protection or conservation. In particular, the economic significance of environmental resources is being increasingly recognized, related to both the costs incurred in preserving the environment and the role of the environment in sustaining productive activity such as agriculture, including the indirect economic benefits that it generates. Environmental governance, particularly economic policy in relation to the environment is also affected by the policy environment at all levels. For a state rich in natural resources such as Kerala, and whose economy is significantly related to its natural wealth, environmental issues are particularly a source of concern.

The Government of Kerala implements several regulatory and promotional measures for environmental protection and conservation through

various departments including the Departments of Environment, Science and Technology, Health and Family Welfare, Forests and Wildlife, Factories and Boilers, Industries Mining and Geology and Groundwater.

As per the latest environment assessment carried out by the Central Pollution Control Board, the Comprehensive Environmental Pollution Index (CEPI) score of Greater Kochi Area, one of the critically polluted areas in the country is 57.94 which was 75.08 in 2011. When compared to most of the other states, Kerala has much safer air quality with better forest cover, according to a recent national ranking. As per the Pollution Control Board's Water and Air Quality Directory (2015), the Respirable Suspended Particle Matter (RSPM) values exceeded the permissible level of 60 micro gram per cubic meter at Kannur (63) followed by Nagambadam (60) and Vadavathoor (60), while the lowest RSPM was recorded in Makkankunnu

in Pathanamthitta (24) followed by Irumpanam (25) and Thodupuzha (29).

As per Crime India 2015 Statistics (National Crime Records Bureau India, Ministry of Home Affairs) a total of 5156 cases were registered in the country under environment related offences during 2015. It was 5835 in 2014. The number of environmental related offences reported in Kerala during 2014 was 8 and in 2015 it is only 2 and these two cases are registered under the Forest Act.

However a large number of environmental issues continue to demand attention, ranging from river pollution by sewage and other waste generated by urban and rural settlements to intense noise pollution. Such a wide range of issues demand concerted attention by regulatory authorities especially the Pollution Control Board, whose functioning must be streamlined and strengthened with adequate capacity for implementation, enforcement and the pursuit of punitive legal action where necessary.

The inauguration of the Haritha Keralam mission by the Government of Kerala in 2016 is set to intensify efforts on protecting and conserving Kerala's environment in all its respects. However, as an integrated mission, its scope will include the efforts of multiple departments and not only specifically the Department of the Environment.

CLIMATE CHANGE

The year 2015 witnessed a significant achievement as a new international agreement on climate change was evolved. On December 2015, 196 parties to the UN Framework Convention on Climate Change (UNFCCC) endorsed the Paris Agreement, a universal, legal framework for climate change. The Paris Agreement establishes the obligation of all countries to develop plans on how to contribute to climate change mitigation and should communicate their 'nationally determined contributions' to the Secretariat of the Convention. Subsequently the Agreement has been ratified by a large number of countries, including all the members of the G-20, including India, China and the United States. The Paris Agreement establishes a challeng-

ing collective goal to hold the global warming well below 2 degrees Centigrade above pre-industrial levels with efforts to limit warming to 1.5 degrees Centigrade. It is expected that countries will step forward with ambitious national targets on mitigation and adaptation planning, and based on this planning countries should strengthen their national efforts as well as international cooperation.

India's contribution to cumulative global CO₂ emissions so far is approximately only 3 per cent. The per capita CO₂ emission in the country increased steadily during 1900-2014. Its per capita greenhouse gas emissions is also low, amounting to only 1.56 tons of CO₂ equivalent in 2010. India is one of the countries on course to achieve the voluntary goal of reducing the Green House Gas (GHG) emission intensity of GDP (Emission Gap Report, 2014, UNEP). India's Intended Nationally Determined Contribution (INDC) focuses on reducing the GHG emission intensity of GDP to 35 per cent by 2030, a reduction of 33 per cent from 2005 level.

The country has also initiated efforts in climate change adaptation actions. It is universally acknowledged that India will be one of the nation's that will bear the brunt of the impacts of climate change across many sectors, particularly those closely connected to the biosphere such as crop production, plantations, fisheries, and forests. Kerala needs to pay particular concern to climate adaptation while the scope for mitigation action is less than many other parts of the country.

Clean Environment Cess

A major tool proposed to deal with climate change is the introduction of carbon taxes, though globally concerns have been expressed regarding the negative distributional impact of carbon taxes in developing countries. The relatively high cost of fossil fuels in India has acted as an effective carbon tax. The Government of India in its submission of the Intended Nationally Determined Contribution (INDC) to the Paris talks has noted that oil prices amounted to an effective carbon tax of USD

140 per tonne of CO₂ for petrol and USD 64 per tonne of CO₂ from diesel. This is well above the internationally expected “reasonable” tax of USD 25-35 per tonne. Government of India introduced clean energy cess on coal in 2010. Through Finance Bill 2010-11 a corpus called National Clean Energy Fund (NCEF) was created out of cess on coal produced/imported for the purpose of financing and promoting clean energy initiatives, funding research in the area of clean energy or for any other purpose relating thereto. The cess on coal has been increased from ₹50 to ₹100 per tonne in Budget 2014-15. The coal cess has been increased to ₹400 per tonne in the Union Budget 2016-17 and the same has been renamed as Clean Environment Cess. From the figures provided in the INDC, this would approximate to a cess of USD 4 per tonne of CO₂ on coal.

Climate Finance

There are various national and international funds available to effectively manage and adapt to the impacts of climate change. Some of the important funds available are 1. Adaptation Fund 2. Green Climate Fund (GCF) 3. International Climate Initiative (IKI) 4. Special Climate Change Fund (SCCF) and National Adaptation Fund on Climate Change (NAFCC).

National Adaptation Fund on Climate Change (NAFCC)

The objective of the NAFCC established by the Government of India under the Ministry of Environment Forest and Climate Change (MoEF and CC) is to assist State and Union Territories that are vulnerable to the adverse effects of climate change in scaling up climate change adaptation interventions, in accordance with the National Action Plan on Climate Change (NAPCC) and State Action Plan on Climate Change (SAPCCs). It has a budget provision of ₹350 crores for the year 2015-16 and 2016-17. The National Bank for Agriculture and Rural Development (NABARD) has been appointed National Implementing Entity and is responsible for implementation of adaptation proj-

ects. The State Government Departments are the Executing Entities and can submit proposals for accessing NAFCC funds.

The project from Kerala under the National Adaptation Fund for Climate Change (NAFCC) titled “Promotion of Integrated Farming System of Kaipad and Pokkali in Coastal Wetlands of Kerala” with a budget of ₹ 25 crore has been approved by National Steering Committee on Climate Change (NSCCC). The period of the project is four years (2015-19). The Agency for Development of Aquaculture (ADAK), Department of Fisheries, Government of Kerala, is the Executing Entity of the project. The project envisions integrated farming methods as climate smart practices to enhance resilience of aquaculture communities to climate change especially sea-level rise that results in severe intrusion of salinity. The proposed area of the project is 600 hectares (300 hectares in Kannur District and 300 hectares in Ernakulam, Thrissur and Alappuzha districts). The proposals for coastal sea shore protection and KSEB’s renewable energy concepts are under discussion.

Biodiversity Conservation

Kerala is rich in biodiversity but the high density of human population and major transformation of the landscape since the mid-18th century emphasize the urgency for conservation of the floral and faunal diversity and sustainable use of its resources. The State contains more than 4,500 species of flowering plants of which above 1,500 are endemic in nature. Of 1,847 vertebrates of Kerala, 205 (approximately 11 per cent) species are listed as threatened in the IUCN Red List of Threatened Species of which 23 are Critically Endangered, 90 are Endangered and 92 are Vulnerable. 98 per cent of fishes and 87 per cent of amphibians of Kerala have not been included under any Schedule of the Indian Wildlife (Protection) Act (19 72) (WPA). Of the 173 reptile species endemic to Western Ghats, 17 per cent are listed in various threat categories of IUCN. Nine hundred and five species of fishes are recorded from inland and marine waters of which 30 per cent of fresh water fishes are

endemic to state. Out of 779 marine species 93 per cent is not included in any schedules of wildlife protection act. The highest level of endemism (between 77-102 species per sub basin) and highest species richness (133-160 species per sub basin) is found in the west flowing rivers Chaliyar, Bharatapuzha, Chalakkudy, Periyar, and Pamba with point endemics in certain cases.

The fragile nature of ecosystem in Kerala is a concern and many natural and man-made causes pose a great threat to its biodiversity. The following conservation initiatives are being undertaken in the State.

- People's Bio Diversity Registers (PBR) were prepared in 96 LSGs during 2015-16. Altogether 854 PBRs were prepared. 139 BMCs were reconstituted during 2015-16

consequent to change in elected people's representatives of LSGs. Preparation of PBR remain to be done in 346 LSGs.

- During 2015-16, 455 biodiversity clubs were newly registered in various educational institutions.
- Shanthisthal, a man made woodlot of Rare, Endangered and Threatened (RET) plants was established in 2.45 acres during 2015-16.

Significant efforts though are still required to implement biodiversity related initiatives based on the information and knowledge obtained through the PBRs. There is also considerable scope for enhancing revenue from the access and benefit-sharing provisions of biodiversity legislation and rules.

Section 7

CO-OPERATION AND AGRICULTURAL FINANCE

The co-operative movement in India has made remarkable progress, now numbering more than 600,000 cooperatives and 250 million members, making it one of the largest cooperative movement of the world. Co-operatives have a huge network and unparalleled reach, with 100 per cent coverage in rural areas. They play a pivotal role in the mainstream of Indian economy, particularly in the fields of rural credit, distribution of agricultural inputs, storage, fertilizer, marketing, labour, and housing. At a time when the country calls for inclusive growth as a key factor in removing socio-economic disparities, the cooperatives are the best organization to achieve this objective as they are deeply rooted in the psyche of the people, are participatory by nature, and promote equity.

In Kerala also, the co-operative movement has made deep strides and touched all spheres of life. Though initially started as a credit movement, it has diversified its activities in various socio economic

forefronts. At present there are 15285 co-operative societies functioning under the Registrar of Co-operative Societies out of which 11908 are working satisfactorily. Out of these majority are credit co-operatives (3468) and consumer co-operatives (4671) and 1152 are women co-operatives.

In addition, there are marketing, health and SC/ST co-operatives nearly half of which are either dormant or in loss. Details of the various types of co-operative societies are given in **Appendix 2.72**. The physical achievements of the sector during 2016 is given in **Appendix 2.73**.

CREDIT CO-OPERATIVES

The credit co-operative societies are most vibrant and viable in the State. The Co-operative Credit structure in the state comprises of Short Term Credit and Long Term Credit.

The Short Term Agricultural Credit structures mainly comprises the Kerala State Co-operative Bank (KSCB) at the apex level, 14 District Co-operative Banks (DCB) at the district level 1647 Primary Agricultural Co-operative Societies (PACS) at the bottom level. These co-operatives are basically self-governing institutions with total accountability to the borrower members and in whose management they have a voice. In addition to the three-tire co-operative banking, there are well developed network of Urban Co-operative Banks in the State.

In the long-term credit, Kerala State Co-operative Agriculture and Rural Development Bank (KSCARDB) is at the top and 78 Primary Co-operative Agricultural Rural Development Banks (PCARDB) at the bottom level. KSCARDB is playing an important role in promoting capital formation in agriculture and rural sectors in the State through its long term investment loans. The survival of KSCARDB and affiliated PCARDBs in the long run depends on their ability to raise funds at reasonable cost that permits financing of farmers and other rural sections at affordable interest rates and to offer a complete range of credit and financial services to them.

The efficiency of the co-operative credit movement is due to the Primary Agriculture Credit Societies functioning at the grass root levels. There are 1647 societies functioning in the state with a membership of 2.29 crores. However, during the period under review, the share capital of the societies has come down from ₹1833 crores to ₹ 1497.06

crores. The deposits during the year have increased from ₹ 73795 crores to ₹ 80190.41 crores while the loans issued has declined from ₹ 83308.04 crores to ₹ 76007.84 crores. Out of the total loans issued, the share of agriculture loans comes to around 9.70 per cent. Also, one important development is the increase in the medium term and long term loan for agriculture that will help capital formation in a big way. Selected indicators and credit operations of PACS are given in **Appendix 2.74 and 2.75. Table 2.7** shows the performance of the co-operative under vital banking statistics

CONSUMER CO-OPERATIVES

The overall aim of the consumer co-operative is to supply essential commodities at economic prices. These societies act as principal agents in the public distribution system by providing essential and consumer articles to the general public at a reasonable rate, than the rate prevailing in the open market. The organizational set up under the consumer co-operative segment consists of the Kerala State Cooperative Consumer Federation (apex) at the state level with 14 District Wholesale Stores and 643 Primary consumer stores at lower levels. The Kerala State Cooperative Consumer Federation (apex) makes bulk procurements and supplies these to District Wholesale stores, Department stores named Triveni and primary stores. The District whole sale stores and primary stores in turn cater to the needs of the consumer through their own outlets, super markets, and departmental stores.

Table 2.7
Performance of co-operative sector under vital banking statistics as on June 2016

Parameter	Unit	Number/Amount	Percentage to total
Branches	No.	973	13.5
Total Deposits	₹ in crore	67534	15.4
Total advances	₹ in crore	45004	15.9
Total business	₹ in crore	112539	15.6
Priority sector advances	₹ in crore	23115	14.5
Agriculture advances	₹ in crore	5893	9.59

Source: State Level Bankers' Committee

Triveni super markets is one important segment under consumer co-operatives intending to save the public from the exploitation of middlemen by dealing with wholesale of food and grocery, cosmetics, household and electrical, and textiles. There are 268 Triveni Super markets with 134 mobile Triveni units, 7 floating triveni super stores, 8 Triveni Coffee houses and 1 unit of Triveni noon meal scheme. Triveni notebooks-manufacture and sale of notebooks are other schemes under consumer cooperatives

The Neethi Scheme started as per directions of Government of Kerala in 1997 is being successfully implemented through 1000 odd selected Primary Agricultural credit societies in all the districts of Kerala for the distribution of consumer goods at the lowest prices, especially in rural areas., Neethi medical stores were started for –providing medicines at subsidized rates. Consumerfed procures and distributes medicines at whole sale rates as per the requirement of the Neethi medical stores. At present there are 94 Neethi Medical Stores directly run by Federation in addition to the 600 odd stores run Primary Co-operative Societies.

Nanma stores was started to distribute 10 items of essential commodities at subsidized rates through network of 2180 retail outlets mainly aiming at the extremely poor and downtrodden in the society. Currently there are 751 Nanma stores run by the Consumer fed itself. 1311 of them are run by selected Co-operative Societies and 869 by the Triveni Wing of Federation. Here the items are sold at less than 20 per cent of market rates. Another major project started is to open directly run Nanma Stores in Panchayath and Municipal Wards having no Nanma Stores run by primary societies at present.

MISCELLANEOUS TYPE OF CO-OPERATIVES

Miscellaneous type co-operative societies have been set up in the State mainly for the purpose of socio, economic development and for generation of employment opportunities to the general public as well as post graduate, engineers and technically

qualified persons and skilled and unskilled workers. Hospital Co-operative Societies are formed to provide medical aid in rural and urban areas and extend services of qualified medical and paramedical personal, especially in rural areas. It also provides facilities like health care and allied services to its members and public. Societies are permitted to conduct paramedical course. These societies are co-ordinated by their apex institution Kerala co-operative Hospital Federation. .As on March 31, 2016 there are 102 Co-operative Hospitals working under the administrative control of the Registrar of Co-operative Societies. It occupies a prominent place among the medical institutions in the State. Its aim is to provide advanced medical care and treatment to the public at much lesser and affordable costs, compared to other private hospitals. On an average each hospital has 9 departments, 9 Doctors, 31 Paramedical staff and 8 administrative personnel. It also provides facilities of health care and allied services to its members and public. Hospital Societies are permitted to conduct paramedical courses. In this sector NABH Accredited Multi- Disciplinary Super Speciality Co-operative Hospitals like EMS Memorial Co-operative Hospital and Research Centre, Perinthalmanna are functioning with multifarious Departments. Hospital Societies are co-ordinated by their apex institution, ‘Kerala Co-operative Hospital Federation’.

Issue of Kissan Credit Card loans

During the year, 2014-15 District Co-operative Banks have issued 23412 Kisan Credit Cards through PACS and the total number of cards issued by the Co-operative Societies comes to 767768 with a total loan outstanding amounting to ₹2485.32 crores.

Deposit Mobilisation Campaign by Co-operative Societies

Deposit Mobilisation campaigns by co-operative credit institutions continued during the year under report also. During the period under review, the co-operatives could mobilize ₹7311 crores as against the target of ₹ 6000 crores, while in the

previous year it was 6232 crores. Year wise target and achievement is given in **Appendix 2.76**.

Support by National Cooperative Development Corporation

National Co-operative Development Corporation or NCDC is a statutory organization established by the Government of India under an Act of Parliament, charged with the function of planning and promoting programmes for the production, processing, marketing, storage, export and imports of agricultural produce and notified commodities and for distribution of agricultural production requisites through co-operatives. National Co-operative Development Corporation has emerged as a developmental and promotional financing institution for the Co-operative sector in the country. NCDC (National Cooperative Development Corporation) has disbursed a cumulative financial assistance of ₹ 6273 crore for various cooperative development projects as on March 31, 2016, of which ₹ 1563.42 crores is through state government and ₹ 4709.93 crores is via direct funding. Also, out of the ₹ 1563.42 crores, ₹ 1459.46 crores comes under long term loan and only ₹ 53.96 crores come under subsidy, ₹ 50 crores comes under working capital. Types of NCDC Assistance are shown in **Appendix 2.77**. During the fiscal 2015-16 Kerala stood 5th in all India standing for disbursement of NCDC's financial assistance to states. Sanctions and release of NCDC funds to the state of Kerala for 2015-16 was ₹ 386.44 crore and ₹ 280.26 crores respectively which comes to the tune of 4.56 per cent of the total sanctions and 3.94 per cent of the total releases made by the NCDC country wide. Cumulatively 107 cooperatives in Kerala were benefitted by NCDC funding through State Govt/ Direct funding scheme during 2015-16 either through sanctions/disbursement of funds. Almost all sectors of Agriculture and allied activities including short term agriculture credit, marketing of agriculture produce, distribution of fertilisers and inputs, consumer cooperatives, processing activities, storage/godowns, infrastructure creation, service sector, industrial cooperatives, Labour

cooperatives and weaker section programme like Fisheries, SC/ST etc. were covered by NCDC finance in the state during 2015-16.

The Year-Wise amount released by NCDC from 2013-14 to 2015-16 is given in **Appendices 2.78, 2.79 and 2.80**. The interest rate of NCDC loans ranged from 10.40 percent to 12.5 percent in 2014-15. The interest rate of NCDC loan is referred as one of the highest rates reported. Reduction in rate seems to be essential to avail more support from NCDC.

Performance Review of the 12th Plan

The actual amount budgeted for the sector in the 12th Plan was ₹ 400.78 crores. The expenditure for the first four years has been ₹ 372.72 crores (121 percent). The year wise outlay and expenditure of the sector during the plan period is given in the **Table 2.8**. In the first two years of the plan period, the expenditure has been 86 percent. In the third year year(2014-15), expenditure has been 205 percent on account of ₹ 106.39 crores received as SDG for share capital distribution to District Co-operative banks. In 2015-16, it is 97 percent. However, for the current year, it is just ₹ 24.67 crores, that is, 25.97 percent (as on January 17, 2017)

Table 2.9 shows the major schemes implemented in the 12th Plan. As can be seen from the table, one-fourth of the outlay in the 12th Plan was allocated for credit co-operatives, the expenditure for which has been 77 percent. Miscellaneous co-operatives consisting of hospital, women, educational and SC/ST co-operatives comes next with the second largest share in outlay, however, the expenditure for it has been just above fifty percent. ₹ 36.1 crores was allocated for establishing and functioning of Farmer Service Centre (novel scheme of the plan period), the expenditure of which has also been good. Around 20 crores was earmarked for model co-operatives and SC/ST Co-operatives each, however the expenditure has been just average. The expenditure for marketing co-operatives has been poor.

Table 2.8
Outlay and Expenditure during the 12th Plan, ₹ in crore

Year	Outlay	Expenditure	(per cent)
2012-13	62	53.62	86
2013-14	75	64.85	86
2014-15	83.39	171.39	205
2015-16	85.39	82.86	97
Sub-total	305.78	372.72	121
2016-17	95	24.67	25.97*
Total	400.78	-	-

Source: Planspace and Annual Budget Statement *as on January 17, 2017.

Table 2.9
Major schemes implemented during the 12th Plan

Sl No:	Name of the scheme	Outlay	Expenditure	per cent
1	Assistance to credit Co-operatives	100.99	78.24	77.47
2	Miscellaneous co-operatives	59	32.97	55.88
3	Assistance to CAPE	38.5	28.43	73.8
4	Farmer Service Centre	36.1	31.53	87.5
5	RIDF	31.6	28.88	91.3
6	Assistance to model co-operatives	20.5	13.6	66.3
7	Assistance to SC/St co-operatives	27.8	19.37	69.6
8	Assistance to Marketing Co-operatives	17.5	4.25	24.2

Source: Planspace and Annual Budget Statement

Achievements of the sector during the 12th Plan period

- **Provision of interest free loans to paddy farmers** to encourage paddy cultivation and curtail the falling area under paddy. During the Plan Period 2012-16 an amount of ₹ 550.00 lakh was provided for sanctioning interest free loan to paddy farmers as part of the food security project and this scheme is implemented in association with Department of Agriculture and the amount to be utilized to give interest subsidy for providing interest free loans . In addition to the KSCARDB and PCARDBs, the Primary Agricultural Credit Co-operative Societies(PACS) disburse Agricultural loans to the Farmers who are the members of

the society. During the year, 2014-15 District Co-operative Banks have issued 23412 Kisan Credit Cards through PACS and the total number of cards issued by the Co-operative Societies comes to 767768 with a total loan outstanding of ₹2485.32 crore.

- **Farmer Service Centres:** Setting up of Farmer Service Centres to provide need based information and services to farmers relating to credit, planting material, seedlings and machinery is a novel scheme of the plan period. There are 60 Farmers Service Centres (FSC) functioning under the supervision of Co-operative Societies in different block area. In association with Block Panchayath and the Department of Agriculture, Farmers Service Centre acts as a Nodal Agency for providing all assistance

to farmers such as supply of seeds, fertilizers, pesticides, modern agricultural equipments like, tractors, tillers, harvesting machines, Soil Testing and Tissue culture lab facilities. They also provide credit literacy to the farmers. In certain Farmers Service Centre, there are 25 expert persons called 'Harithasena' providing agricultural service to the farmers at affordable rate. During this period 60 PACS were selected for starting Farmers Service Centres at block level and an amount of ₹ 36.1 crores was sanctioned to the said centres. Setting up of soil testing centres to diagnose plant culture problems, to improve its nutritional balance and to conserve energy and money by applying only the right amount of fertilizers. During the plan period an amount of ₹ 234.05 lakh provided to 4 societies for starting soil testing centre and tissue culture lab

- **Construction of Palakkad District Co-operative Hospital and Research Centre:** As NCDC scheme an amount of ₹ 46.80 Crores was sanctioned to the said Hospital Society for the establishment of a 500 bedded hospital. The total cost of the project was ₹52 crores. During this plan period an amount of ₹ 40.95 crores was released to the society. A balance amount of ₹ 5.85 crores is pending for release.
- **Kollam District Co-operative Hospital Society:** For the construction of Cancer Centre Geriatric Centre and Ayurvedha Hospital an amount of ₹ 115.8092 Crores was sanctioned to the said Hospital Society by NABARD. The total cost of the project was 136.2461 crores. In 2015, the Government has accorded sanction for ₹ 23.16184 crore as mobilising advance to the said society. During this plan period an amount of ₹ 12.00 crores was released to the society.
- **Computerisation of PACs, SCBs/DCBs and installation of core banking and ATM facilities** as well as upgradation and acquisition of modern technological devices for effective hassle free functioning of the banking system. A new scheme was in-

troduced in 2013 for providing assistance to PACS/Primary Credit Co-operatives/State Co-operative Bank/District co-operative Banks for Computerisation, Core Banking Solution, Installation of ATM facility and Upgradation of Technology and Acquisition of Modern Technological devices for the functioning of the Banks/Co-operatives. During this plan period an amount of ₹ 13.83 crores was sanctioned to 137 Co-operative institutions. During the XIIth Plan period, ₹284.50 Crores was provided to Consumer Federation for conducting festival markets for distributing consumer goods to common public at subsidized rates.

AGRICULTURE FINANCE

At the national level, the target for agriculture credit flow was set at ₹ 8.5lakh crore in 2015-16 as against ₹ 8 lakh crore in 2014-15. The achievement was ₹ 8.7 lakh crore for 2015-16 vis-a-vis ₹ 7.3 lakh crore in 2013-14. Commercial banks, Regional Rural Banks (RRBs) and cooperative banks disbursed ₹ 6.04 lakh crore (provisional), ₹ 1.19lakh crore and ₹ 1.53 lakh crore, respectively. Thus commercial banks continue to dominate the agriculture credit delivery followed by Co-operative banks and RRBs.

The ratio of agriculture credit to agriculture GDP has been continuously increasing in the country from 10 per cent in 1999-2000 to 38 per cent in 2012-13. However, a matter of concern is the prominent role played by informal sources/non institutional sources of credit. As per the NSSO 70th round survey, non-institutional sources of credit still account for as much as 40 per cent of the agriculture credit in India and money lenders account for 26 per cent. The access to institutional sources of credit has to be enhanced so as to free the farmers from the clutches of moneylenders. Another problem is the falling investment credit which has declined from 55 per cent in 2006-07 to 39 per cent in 2011-12. To address the falling investment credit in the country the GOI had started

the Long Term Rural Credit Fund and allocated ₹ 15000 crores in 2015-16 compared to ₹ 5000 crores in 2014-15. This can be utilised by Co-operative banks and RRBs by drawing much higher refinance from NABARD so as to support long term and medium term loans in the country.

In addition to this, credit plays a significant role in the context of Kerala agriculture on account of its specific features namely; predominance of cash crops in the cropping pattern which are highly credit intensive requiring regular doses of capital at regular intervals ,high labour intensive form of cultivation especially hired labour ,highly fragmented size of holdings in the state requiring input intensive form of cultivation warranting sustained infusion of capital, high export intensive crops as well as high rural indebtedness.

In Kerala, the agricultural advances stood at ₹60,921crore (7.16 per cent of the total agriculture advances in the country) in March 2016 as against ₹ 63,849 crore in March 2015. Thus there has been a slight decline in the overall agricultural advances in the state. The share of agricultural advances to total advances stood at 23 per cent. A disaggregated analysis show that commercial banks contributed the largest share (80 per cent) followed by Regional Rural Banks (11 per cent) and Co-operatives (9 per cent)(Table 2.10). Within these agencies, except co-operative banks, all banks have disbursed more than the mandatory 18 per cent of their advances towards agriculture. While nationalised banks have disbursed 59 per cent of their

advances, and RRB 28 per cent towards agriculture, for co-operatives it is 16 per cent. However, year on year growth shows that barring RRB and private sector banks all other agencies have shown a decline in advances.

With regard to break up of term loan and crop loan it is seen that the share of term loan is 20 per cent of the total agriculture credit. This is a very heartening fact that after continued decline in term credit for the past decade or so the share of term credit advanced in total credit has picked up .The agency wise break up shows that share of co-operative sector is 8 per cent and that of RRB is 1.37 percent and the rest 90 per cent is contributed by commercial banks .In comparison to the target and achievements of banks it can be seen that the Kerala Gramin Bank has achieved 152 per cent of the target for term loan whereas for the co-operative sector the target is just 47.49 per cent and for commercial banks it is 54.7 per cent.

With regard to the agency wise, sector wise ground level credit flow of term credit, it can be seen that out of the total term credit disbursed of ₹ 7395 crores in 2014-15, around 60 per cent was disbursed by commercial banks and 28 per cent by co-operative banks and the rest by RRB. With respect sector wise disbursal, it can be seen that 26 per cent of the term credit was disbursed for plantation and horticulture and 14 per cent was for dairy development and 13 per cent for land development and poultry each.

Table 2.10
Agency wise break up of agriculture credit disbursed in Kerala during 2015-16, ₹ in crore

	Short Term Loan	Term Loan	Total
Commercial Banks	36877	11010	47886
RRB	6835	167	7002
Co-operative banks	4994	1038	6032
	48707	12215	60920

Source: SLBC

Table 2.11
Agency wise sector wise flow of Ground level Credit in Kerala, ₹ in lakh

	2014-15				
	Commercial Banks	Cooperatives	RRBs	Others	Total
Term Loan					
Minor Irrigation	10536	24058	902		35496
Land development	49990	23266	25128		98383
Farm mechanisation	38659	21336	436	3	60435
Plantation and Horticulture	148921	40333	3276		192530
Dairy development	74317	28627	1576		104520
Poultry	29543	37768	25494		92806
Sheep/goat/piggery	3783	11433	2789		18004
Fisheries	4932	11998	5368		22298
Forest/wasteland development	20802	4633	1145		26580
Storage and market yards	2325	2448	858		5632
Others	37165	12477	3126	60	82829
Total	450973	206508	70098		739513

Source: State Focus Paper 2016-17, NABARD

Capital Formation in Agriculture

The Government expenditure as a share of GDP from agriculture in Kerala has been between 3-5 per cent over the last two decades (3.24 per cent in 1990-91 to 4.39 in 2009-10). The share of Gross Fixed Capital (GFCF) as a percentage of agriculture GDP remained much lower than the corresponding all India figures (Kerala 5.3 per cent as against all India figure of 17 per cent in 2009-10). The prospect of increased level of capital formation in agriculture and allied sector of the State is hampered by limited public investment. Further, private investment supported long term capital assets have not been up to the desired level. This phenomenon of reduced capital formation in agriculture in the State is a matter of concern. Concerted efforts to step up investments in agriculture, both private and public sector, needs to be undertaken to address the issue.

Kisan Credit Card

Kisan Credit Card is an effective credit delivery tool for providing hassle-free timely and adequate credit. As per the reports available with the Convenor SLBC, 503163 Kisan Credit Cards with an amount of ₹7564.53 crore have been issued during the year 2014-15 by the banking sector in the State. The revised KCC norms also provides for inclusion of incidental requirements of the farmers and his consumption expenses. Banks are also expected to leverage their core banking scheme (CBS) platforms to provide value added services to farmers like ATMs, anywhere banking, and debit cards .

Refinance Support by NABARD

NABARD, Kerala disbursed financial assistance of ₹5820 crore in the State during the year 2015-16. Of the above, ₹5090 crore was disbursed as refinance to banks, ₹ 600 crore to State Govern-

ment under Rural Infrastructure Development Fund (RIDF), ₹115 crore as direct assistance to Cooperative Banks and ₹15 crore as grant assistance from dedicated funds to various agencies for various developmental and promotional activities. Out of the ₹5090 crores disbursed as refinance, ₹2390 crore was for long term investment credit and ₹2700 crore was towards short term assistance to banks. The refinance for long term agriculture investment of cooperative banks was resumed in the current year after a gap of 10 years. Under RIDF new projects worth ₹710 crore was sanctioned to State Government during the year.

Under the grant component, ₹2.20 crore was released out of the Cooperative Development Fund to cooperative banks for helping them set up basic infrastructure and training and ₹1.90 crore was released out of Financial Inclusion Fund (FIF) to cooperative banks, commercial banks and Regional Rural Bank for financial literacy initiatives and technology upgradation. ₹7.85 crore was disbursed under the Tribal Development Fund for the 12 ongoing tribal projects in four districts and ₹4 Crore under UPNRM. Further an amount of ₹1.25 crore was disbursed under the Farm Sector Promotion Fund to Agriculture and Veterinary Universities, KVKs and NGOs for implementing farm projects involving transfer of technology and innovative practices.

In Kerala, the cumulative sanction and disbursement as on March 31, 2016 was ₹8174.29 crores and ₹3795.95 crores respectively. During the XXI tranche an amount of ₹709.76 crores was sanctioned and ₹116.04 crores was disbursed. The tranche wise sanction and disbursement under RIDF are shown in **Appendix 2.84**.

Under RIDF XXI tranche - 2015-16, a loan of ₹710 crore was sanctioned to Government of Kerala for 252 infrastructure projects related with agriculture and rural development. Of the above, 50 per cent projects were for the agricultural sector,

26 per cent for Social Sector and the balance 24 per cent related to rural connectivity sector. The notable projects sanctioned during the year included Groynes for anti-sea erosion works in Alappuzha district, Info-park (Second phase) infrastructure works in Ernakulum district, Fisheries hatcheries and other infrastructure works for Kerala University for Fisheries and Ocean Studies (KUFOS) in Ernakulum district, Upper Kallar Small Hydro Electric (SHE) Project of 2.0 MW in Idukki district, Salt water Exclusion Regulator cum bridge in Kasargod district, Watershed development projects in 11 districts, road and bridge projects of PWD, HADA, LSGD, in various districts, Solar Power Project(500kWp Grid Tied Floating Solar -Photovoltaic System) in Wayanad district, Projects related with construction of medical college and district hospitals in Wayanad district Hence, a total of 6060 projects with a total RIDF loan of ₹8174 crore have been extended to State Government since inception (since 1995 -96). An amount of ₹593.99 crore was disbursed during the year for ongoing projects. The total disbursements to State under RIDF since inception is ₹4299 crore.

In Kerala, the total refinance disbursement from NABARD was ₹78074 crores in 2015-16 as against ₹1731.5 crores during 2014-15. Contrary to previous years, KSCARDB accounted for the highest share of 93.15 per cent in the total refinance disbursed in the state in 2014-15, as against commercial banks which accounted for the highest share in 2013-14. This was followed by RRBs (2.89 per cent) and finally by Commercial banks (0.56 per cent) in 2015-16.. Agency wise and purpose wise disbursement of refinance assistance by NABARD in Kerala is given in **Appendix 2.81**, **Appendix 2.82** and **Appendix 2.83**

The purpose-wise analysis of the refinance by NABARD in 2014-15 reveals that, the major share of assistance was availed by non-farm sector (75.94 per cent) followed by land development(7.12 per cent) and plantation and horticulture sector (5.85).

Other major schemes availed refinance support was minor irrigation, SHGs and land development, and dairy Development. The sectors like fisheries and poultry, which are very important in the rural economy of Kerala, were neglected since 2012-13 from the disbursement of refinance by NABARD. The project from Kerala under the National Adaptation Fund for Climate Change (NAFCC) titled “Promotion of Integrated Farming System of Kaipad and Pokkali in Coastal Wetlands of Kerala” with a budget of ₹ 25 crore has been approved by

National Steering Committee on Climate Change (NSCCC). The project envisions integrated farming methods as climate smart practices to enhance resilience of aquaculture communities to climate change especially sea-level rise that results in severe intrusion of salinity. The proposed area of the project is 600 hectares (300 hectares in Kannur District and 300 hectares in Ernakulam, Thrissur and Alappuzha districts). The proposals for coastal sea shore protection and KSEB’s renewable energy concepts are under discussion.

Section 8

RURAL DEVELOPMENT PROGRAMMES

In the Indian context, rural development has a lot of significance because majority of the people in our country live in rural areas. At the time of independence, around 83 per cent of the Indian population were living in rural areas. As per the 2011 Census Report, the rural population in India is 68.86% (833.75 million) where as in Kerala it is 52.30% (17.47 million). The unique feature of Kerala is that the features in rural and urban areas in the State are almost alike.

Rural development programmes in Kerala are either Centrally Sponsored Schemes (CSS) or State Sponsored Schemes or Schemes of Local Governments and many of these schemes are implemented through Local Governments. A number of centrally sponsored schemes are being implemented in rural areas through the State Government for poverty reduction, employment generation, rural infrastructure development and provision of basic minimum services. All these programmes are directly or indirectly related to the overall development of the rural areas in the State. A brief review about the major schemes implementing in the Rural Development Sector is given below.

Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP)

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 seeks to enhance the livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment to every household whose adult members volunteer to do unskilled manual work. MGNREGA has become a powerful instrument for inclusive growth in rural India through its impact on social protection, livelihood security and democratic governance.

In addition to providing employment to the rural poor, the scheme is intended to create productive assets, which contribute towards development. The works related to natural resource management are given prime priority. Water conservation, afforestation, rural connectivity, rural infrastructure and sanitation are the major areas of work undertaken under this programme. During the review period, wage rate under this programme was ₹240/- per day.

The financial achievement under MGNREGP during 2015-16 was ₹1483.50 crore which is 93 per cent of the total release during the year. A total of 7.42 crore person days were generated of which 1.29 crore were for Scheduled castes and 0.29 crore for Scheduled Tribes. The physical and financial progress of the programme during 2015-16 and financial and employment details of MGNREGP during 2016-17 (upto October 2016) are given in **Appendix 2.85, 2.86, 2.87 and 2.88.**

*Pradhan Mantri Awaas Yojana
(PMAY) - Gramin (G)- (erstwhile
Housing for all) - Indira Awaaz
Yojana- (IAY)*

Safe and secure shelter is one of the basic needs for human being. Therefore, construction of houses was included as one of the major activities under the Rural Development Sector. Indira Awaas Yojna (IAY) is the biggest and most comprehensive rural housing programme ever taken up in the country. This scheme aims to provide dwelling units to the homeless rural poor belonging to the BPL category.

From 2015-16 onwards, the sharing pattern under IAY has been changed to 60:40 instead of 75:25. Government of India has revamped the scheme IAY into Pradhan Mantri Awaas Yojana (Gramin) (PMAY-G) and the financial assistance provided under the scheme for each house has been enhanced from ₹70,000/- to ₹1,20,000/- in plain areas and ₹75,000/- to ₹1,30,000/- in hilly/difficult areas from 2016-17 onwards.

Since the amount fixed by the Government of India is inadequate to construct a pucca house, State Government have enhanced the unit cost to ₹2.00 lakh for general beneficiaries, ₹3.00 lakh for SC beneficiaries and ₹3.50 lakh for ST beneficiaries. The additional amount over and above the unit cost fixed by the Government of India has to be

met by Grama-Block-District Panchayats in the ratio of 25:40:35. As the three tier panchayats are not in a position to meet the additional amount, State Government has provided ₹50,000/- to all categories from the year 2013-14 onwards. Three per cent of the funds have been earmarked for the benefit of differently abled persons below poverty line.

During 2015-16, an amount of ₹400.74 crore was expended and construction of 49551 new houses was completed. Financial and physical achievements of the programme during 2015-16 and 2016-17 (upto October 2016) are shown in **Appendix 2.89 and 2.90** respectively.

*Rural Infrastructure Development –
Pradhan Mantri Gram Sadak Yojana
(PMGSY)*

The spirit and the objective of Pradhan Mantri Gram Sadak Yojana (PMGSY) is to provide good all-weather road connectivity to the unconnected habitations. PMGSY-I is 100% Centrally Sponsored Scheme and PMGSY-II is 60% Centrally Sponsored Scheme. In Kerala, PMGSY-II was started during 2016-17.

Since Government of India funds can be utilized only for the actual estimated cost of construction of roads under the scheme, state support to PMGSY for meeting tender excess, shifting of utilities and maintenance provision for assets already created was included in the State Budget from the financial year 2010-11 onwards.

During 2015-16, an amount of ₹193.05 crore and ₹43.54 crore was the expenditure towards PMGSY (100% CSS) and State support to PMGSY respectively. During 2015-16 and 2016-17 (upto October 31, 2016) the total length of roads completed was 541.54 km. and 15 habitations were connected under the scheme PMGSY.

*Pradhan Mantri Krishi Sinchai Yojana
(PMKSY) - Watershed Component
(erstwhile Integrated Watershed
Management
Programme -IWMP))*

From July 1, 2015, Integrated Watershed Management Programme (IWMP) has been converted as Pradhan Mantri Krishi Sinchai Yojana (PMKSY) - (Water Shed Component). From 2015-16 onwards the funding pattern of the scheme between the Centre and State Government has been changed to the ratio 60:40 instead of the earlier pattern of 90:10.

Effective management of runoff water and improved soil and moisture conservation activities such as ridge area treatment, drainage line treatment, rain water harvesting, in-situ moisture conservation and other allied activities on watershed basis and converging with MGNREGS for creation of water source to full potential in identified backward rainfed blocks including renovation of traditional water bodies are included under the programme PMKSY (Water Shed Component). During 2015-16 an amount of ₹28.56 crore was expended and construction of 1505 number of rain water harvesting structures were completed under the scheme.

Swachh Bharath Mission (Gramin)

With effect from October 2, 2014, Nirmal Bharat Abhiyan, sanitation related scheme of Government of India has been restructured and renamed

as Swachh Bharat Mission (Gramin) with the aim to achieve an Open Defecation Free (ODF) India by October 2, 2019, the 150th birth anniversary of Mahatma Gandhi. From 2015-16 onwards, the sharing pattern of the scheme has been changed to 60:40 instead of 75:25.

During 2015-16, construction of 32167 individual household latrines, 58 community sanitary complexes and 95 school/anganwadi toilets was completed under the scheme SBM (G).

District wise details of Open Defecation Free (ODF) declared Grama Panchayats in Kerala are given in **Appendix 2.91**

Kudumbashree

Kudumbashree is a holistic, participatory, women oriented innovative overarching poverty reduction approach launched in 1998. Today 44 lakh women participate in the Kudumbashree movement in the State cutting across political ideologies and religious faiths. Kudumbashree is not only envisaged as a Mission, but also as a process, a project and a benefit delivery mechanism for the poor.

Some of the major poverty reduction programmes of Kudumbashree Mission are micro finance activities, social development initiatives, micro enterprises, marketing, agriculture and animal husbandry, livelihood collectives and producer companies, gender education and women empowerment activities, tribal development and activities of balasabha.

Box 2.4

Open Defecation Free (ODF) Kerala

The State Government declared Rural Kerala as ODF on November 1, 2016. Around 174720 numbers of latrines were constructed by that time. Unit cost of individual household latrine was ₹15400/- of which ₹12000/- was released from SBM (Gramin) in rural areas. Declaration of Urban Kerala as ODF will be done by March 31, 2017 with a target of 32197 latrines. For this, ₹6667/- is released from SBM (Urban) assistance. Balance amount will be met by the concerned local governments.

Source: Suchitva Mission

Micro Finance activities

Matching Grant, Linkage Banking, Thrift and Credit, Interest Subsidy Scheme, Financial Literacy Campaign and Yuvashree are included under Micro Finance activities. Of the total 2,58,035 Neighbourhood Groups (NHGs) over 19,230 Area Development Societies (ADS) and 1,071 Community Development Society (CDS), during 2015-16, 31,087 number of NHGs were graded and 33,261 number of NHGs were linked with various banks and an amount of ₹95,568 lakhs was disbursed to NHGs as loan. 39.87 lakh families were covered under 2.58 lakh of NHGs, an amount of ₹1,896.68 crore was disbursed as loan and an amount of ₹468.42 crore was provided as thrift. District wise details about linkage banking and thrift and credit operation are given in **Appendix 2.92** and **2.93** respectively.

Social Development Initiatives

During 2015-16, 6,431 families were benefited through Ashraya programme. So far 62 BUDS schools and 83 BUDS Rehabilitation Centers have come up in the State. During 2015-16, an amount of ₹1.74 lakh is used for providing training to the teachers in the BUDs and an amount of ₹10.45 lakh is used for the activities of BRCs.

Agriculture and Animal Husbandry

More than 60,000 Joint Liability Groups (JLGs) are engaged in cultivating about one lakh acres of land (which includes lease land farming, fallow land farming, terrace farming and cultivation in own land) through agriculture related activities of Kudumbashree. During 2015-16, the Goat Village and Ksheera Sagaram projects benefited 1926 and 814 families respectively.

Tribal Development

The objectives of the mission is planned to be achieved with the active convergence of various government and non-government agencies as well as departments. At present, about 99,478 tribal families are covered under 5,764 NHGs.

Micro finance and micro enterprise activities are given special focus among the tribals as part of the project activities. Measures have also been taken to ensure cent per cent tribal participation in the MGNREGS activities. Formation of Special Ashraya Projects, provision of supplementary food for the malnourished aged, infants and adolescent girls, and formation of ST Balasabhas are some of the highlights of the project.

Balasabha

Activities of Balasabha aim at providing education, exposure and empowerment to children. Small Learning Groups for experimental and systematic learning, opportunities for understanding democratic process, participation in conserving environment, enabling children to unfold the intricacies of collectivisation are the basic focal points of Balasabha. Upto 2015 -16, 26,896 Balasabhas were functioning with the involvement of 4.11 lakh children. The district wise details of Balasabha are given in **Appendix 2.94**.

Livelihood Collectives and Producer Companies

Samagra Projects is an initiative independently developed by Kudumbashree and being implemented in the State in collaboration with the three tier local governments and other agencies. It is an attempt to address the entire production – supply value chain holistically, by scaling up productive activity both qualitatively and quantitatively and seeking viable supply opportunities. The major samagra projects that are implemented in various districts are given in **Box 2.4**.

In addition to the above mentioned activities, Kudumbashree is the nodal agency for the implementation of Centrally Sponsored Programmes in the State. The programmes like National Rural Livelihood Mission (NRLM), and Deen Dayal Upadhayaya Grameena Kaushalya Yojana (DDU-GKY) were successfully implemented in rural areas through Kudumbashree.

Box 2.5 Major Samagra Projects

1. Kannur Goat Farmers Producer Company
2. Nedumkandam Ksheerasagaram Producer Company
3. Kasaragode Saphalam Cashew Project-Collective
4. Gramashree Ornamental Fish Producers Collective in Vaikom Block of Kottayam
5. Unnathi Society of IT Enterprises
6. Amrutham Society of Nutrimix Entrepreneurs
7. Thennala Agro Producer Company

Source:Kudumbasree

Section 9 FOOD SECURITY

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The four pillars of food security are availability, access, utilization and stability. The nutritional dimension is integral to the concept of food security. In order to achieve the concept 'zero hunger' the UNO declared to end hunger, achieve food security and improved nutrition and promote sustainable agriculture as a Sustainable Development Goal.

There are nearly 800 million people who suffer from hunger worldwide and out of this 511.7 million are in Asian countries. The incidence of the poverty in India was estimated at 264.9 million in 2011-12. Further, calorie and protein intake of large number of people in India especially in rural areas are lower than normal. As per the State of Food Insecurity in the World 2015 (FAO) India has the second highest number of undernourished people at 194.6 million which is around 15.2 percent of the world's total undernourished population. In order to reduce the incidence of poverty and to attain food security GoI enacted National Food

Security Act 2013 to provide subsidized food grains to approximately two thirds of India's 1.2 billion people.

Kerala has been deficient in the production of food grains. Of the total requirements of food grain only 15 per cent is produced in the state. In the case of vegetables too, the state relies heavily on neighbouring states. There is a strong correlation between stability in agricultural production and food security. Therefore, along with provision of food subsidy, stability in agricultural production and strengthening of supply chain management needs to be addressed to ensure food security.

Although Kerala is a highly progressive state in terms of education, healthcare facilities and awareness among beneficiaries, nutritional security especially of the most vulnerable is extremely critical to fulfill the vision of a Hunger Free Kerala. Various schemes run by the state for poverty alleviation along with the Central Government schemes such as Public Distribution System, Integrated Child Development Services and Mid Day Meal which approach food security through a life cycle approach need more strengthening,

integration, modernisation and monitoring. One of the main objectives of the 13th Five Year Plan is to make Kerala a hunger free state by supplying meals at nominal prices to the needy. As a pilot project the programme will be implemented in selected areas of the state (**Box 2.6**).

In pursuance of the Essential Commodities Act 1955 enacted by GoI, the Public Distribution System came into existence on July 1, 1965. Timely lifting of commodities allocated from the Central pool and ensuring timely and effective distribution of the same through 14,335 ration shops in the State is a major responsibility of the PDS. Kerala has made pioneering achievements in the implementation of a Universal Rationing System. The number of ration card holders in the State reached 83.14 lakh in 2015-16 from 83.13 lakh in 2014-15. Similarly, number of APL cardholders also increased slightly to 62.64 lakh in 2015-16, from 62.52 lakh in 2014-15. There are 5.82 lakh Anthyodaya Anna Yojana (AAY) card holders in 2015-16 which was 5.83 lakh in 2014-15. As on October 31, 2016, there were 83.19 lakh ration card holders in the State. Of the total, 62.54 lakh card holders are under APL, 14.80 lakh are under BPL and 5.85 lakh card holders are under AAY. Details of Public distribution system in Kerala are shown in **Appendix 2.95**

During 2015-16 rice allotment to APL card holders was 4.64 lakh MT and BPL card holders 3.78 lakh MT. At the same period rice allotment to AAY card holders was 2.71 lakh MT. Details of distribution of commodities through PDS are given in **Appendix 2.96**.

National Food Security Act 2013

In pursuance of the National Food Security Act 2013, Government of Kerala has decided to implement NFSA in the State with effect from 01.11.2016 and Kerala State Civil Supplies Corporation (Supplyco) is entrusted to implement door step delivery of PDS articles (**Box 2.7**). To implement the NFSA, government of Kerala published the draft priority list of 1.54 crore members from 33.34 lakh households in the state, who will be covered under NFSA subsidies. The remaining 2.09 crore members from 50.05 lakh households are covered under non priority list which includes 1.21 crore under APL –SS (State Subsidy). The details are given in the **Figure 2.13** and **Table 2.12**.

Kerala has a universal public distribution coverage which has been instrumental in providing food security to most of its population. In addition, state run Supplyco is mandated to control the prices of 13 essential commodities by distributing it at subsidised prices through its 1406 stores spread across the state.

Anthyodaya Anna Yojana (AAY) and Annapoorna Scheme (ANP)

The scheme is to provide 35 kg of food grains per month to the poorest of the poor families under BPL and is being implemented in the State since December 25, 2001. There were 5.82 lakhs Anthyodaya Anna Yojana (AAY) card holders in 2015-16 which was 5.83 lakh in 2014-15. In 2015-

Box 2.6 **“Hunger Free Kerala”**

The State Government has launched a new project intended to provide one time free meal a day for the needy. The scheme will be implemented with the help of Kudumbasree Units and other Voluntary Organizations/Non-governmental Organizations in two selected districts as a pilot project from 2017 -18 onwards. Price support of ₹10 per meal will be given for 1000 people per day in each district. This project will be extended to the whole of Kerala in ensuing years.

Source: Directorate of Civil Supplies Department

Box 2.7 National Food Security Act

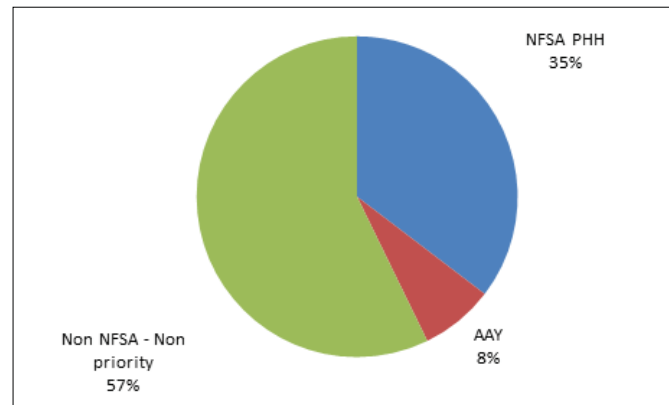
The National Food Security Act, 2013 is a legislation enacted by the Central Government which aims to provide subsidised food grains to approximately two thirds of India's 1.2 billion people. Government of Kerala decided to implement NFSA in the State with effect from November 1, 2016. Under the NFSA end to end computerization of the entire chain of the Public Distribution System has been planned with the objective of reducing leakages, better targeting and reducing the economic cost of distribution. Many states have already completed the implementation of various computerization components such as online allocation, supply chain management and FPS automation. The Civil Supplies department in collaboration with NIC, Supplyco and other partner's plans to complete the implementation of End to End computerization of PDS components by 2017-2018.

Steps Initiated for the Implementation of NFSA in the State

Item	Action Taken
Beneficiary identification	Draft List Published
Door step delivery of food grains	Supplyco was entrusted
Online allocation details in public	Web portal prepared
Appointing SFC and DGROs and grievance redressal system	Steps initiated

Source: Civil Supplies Department

Figure 2.13
Category wise Card Holders in Kerala as on October 31, 2016 (Provisional)



Source: Civil Supplies Department

Table 2.12
Details of Card Holders and Entitlement of Food grains

Category	Ration Cards	Beneficiaries	Entitlement (per month)
NFA PHH	2837236	12921411	5 Kg per member
AAY	595800	2558632	35 Kg per households
Non NFA Non Priority	4589324	18744057	2 Kg per member
TOTAL	8022360	34224100	

Source: Civil Supplies Department

16, the allotment of rice under AAY continued at the level of 2,50,260 MT. Govt. of India supplies food grains under AAY to the state at the rate of ₹3/kg and the State Govt. in turn provides it to the beneficiaries at the subsidized rate of ₹1/kg.

Annapoorna scheme provides 10 kg of rice free of cost per month to destitute of the age of 65 years and above who are not in receipt of any of the pensions from the Government. The targeted number of beneficiaries approved by the govt. of India is 44,980. But the number of beneficiaries identified in the state as on March 31, 2016 is 23322. Details of distribution of food grains under AAY and Annapoorna schemes during 2015-16 are given in **Appendix 2.97**.

Central Allotment of Sugar and Kerosene

Allotment of sugar to Kerala in 2015-16 was 53664 MT and that of Kerosene, 1,14,422 KL. Allotment of sugar is restricted to BPL/AAY card holders. Details of Central allotment are given in **Appendix 2.98**.

Kerala State Civil Supplies Corporation (Supplyco)

Kerala has one of the best Public Distribution System networks in India. Kerala State Civil Supplies Corporation being the second line of Public Distribution System is instrumental in stabilising the prices of essential commodities in the State. It was set up in 1974 to provide food security to the state. Kerala, being a consumer oriented state, controlling the undue rise in prices is not possible without a powerful public distribution system that intervenes in the open market effectively throughout the year. The system ensures the distribution of essential items to every

person in the state through Fair Price Shops and Supplyco outlets.

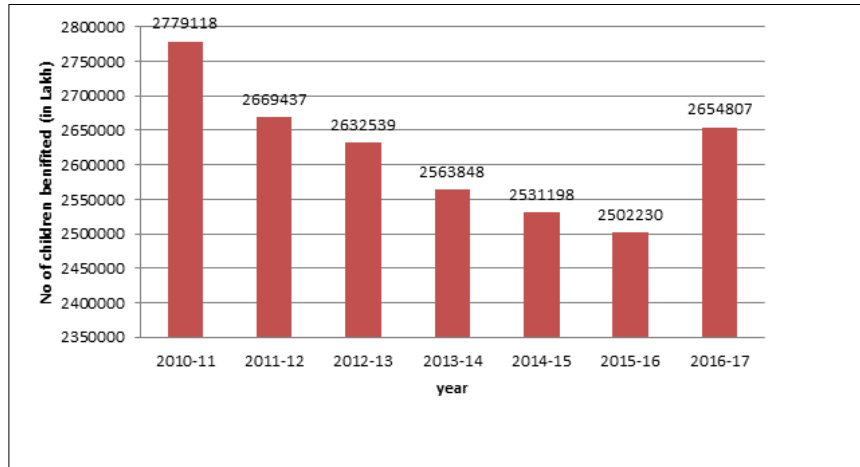
Supplyco has its headquarters in Kochi and operates through 5 regional offices, 56 depots and 1100 plus retail outlets. Details of outlets are given in **Appendix 2.99**. The main functions of Supplyco include retailing of Fast Moving Consumer Goods (FMCG) at lower prices, conducting special fairs for arresting the undue rise in prices during festival seasons, retailing of medicines by opening medical stores, procurement of paddy, processing and distribution of wheat and its products, acting as dealer of petroleum products like kerosene, petrol, diesel and LPG and acting as nodal agency to implement the programmes of Government of India in the state. The sales turnover of the corporation increased from ₹2,223 crore in 2010-11 to ₹3,857 crore in 2015-16.

Mid-day Meal Programme

Mid-day Meal Programme in schools is implemented in the state with the financial support of State govt. and Central assistance. The programme was introduced in 1995 by the Ministry of Human Resources Development, Government of India, to provide nutritional support to primary school going children and to boost universalisation of primary education by increasing enrollment, retention and attendance.

Supplyco is entrusted with the responsibility of providing commodities to mid-day meal programme in the state. The required quantity of rice is taken from Food Corporation of India. During 2015-16, the Corporation supplied 9,64,583.05 Qtls of rice and 1,23,725.2 Qtls of special rice benefiting 25.02 lakh children. The cost of the food grains is met through Education Department. Number of children benefitting from the mid-day meal programme is given in **Figure 2.14** and details of

Figure 2.14
Mid-day Meal Programme



Source: Civil Supplies Department and Supplyco

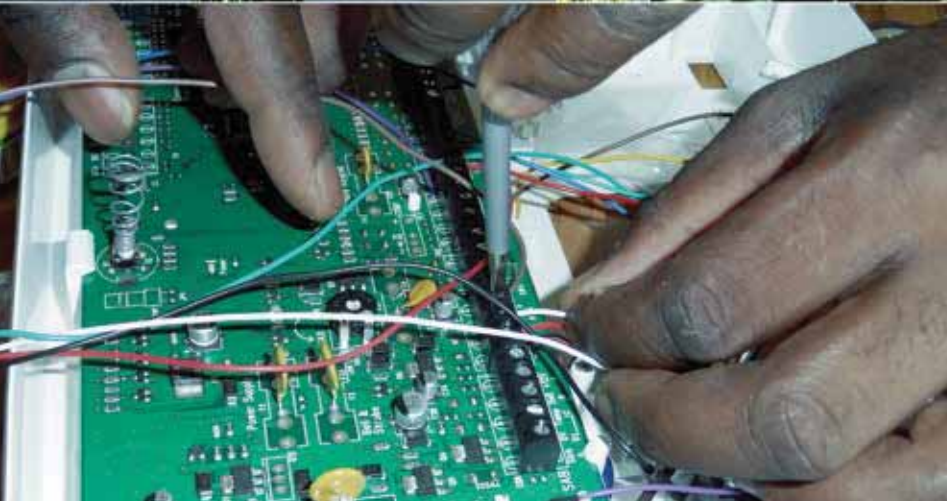
supply of food grains from 2010-11 to 2016-17 are shown in **Appendix 2.100**. One of the main reasons for decline in the number of children benefitting from this programme in the previous

years was due to the non-participation of students in certain districts. However, this scenario has changed and the number of children benefitting from the programme has increased in 2016-17.

Agricultural growth in the State has been dampened by the weak monsoons. Realizing the growth potential and the urgent need to revamp the sector, the State has taken measures for rejuvenating agriculture. Increasing public investment in agriculture, promoting self-sufficiency in production of vegetables, protection of paddy fields, improving research and extension services are some of the measures on anvil. The State needs to improve its irrigation network to equip itself for adverse weather conditions. Environmental conservation has been recognized as vital for sustainable development. Providing food security to its citizens also depends on enhancing agricultural productivity. The State aims at achieving a hunger free Kerala for which the development programmes needs to be channelized and targeted appropriately.

3 CHAPTER

INDUSTRY, LABOUR AND EMPLOYMENT



INDUSTRY, LABOUR AND EMPLOYMENT

Industrial development is crucial for the economic growth of any nation. It is also linked to the modernization of agriculture, development of science and technology, entrepreneurship, self-reliance in defence production, success in international trade, efficient utilization of natural resources, alleviation of poverty and unemployment and increase in per capita income and standard of living of the people. One of the key findings of UNIDO's Industrial Development Report 2016 is that developing domestic technological capabilities is one of the most important elements to sustain growth. The report also underlines that the share of manufacturing in value addition and employment tends to increase as developing countries starts growing. India has emerged as one of the fastest growing major economies of the world as per the CSO (Central Statistical Office) and the IMF (International Monetary Fund). Government of India has taken policy measures such as 'Make in India' for creating conducive environment for industrial growth in the country.

Section 1 MANUFACTURING

According to the Index of Industrial Production (IIP), the mining, manufacturing and electricity sectors in India registered growth of (-) 0.2 per cent, (-)1 per cent and 4.6 per cent respectively during April to October 2016 over the corresponding period of 2015.

As far as the State is concerned, industrial sector consists of medium and large industries, micro, small and medium enterprises (MSME) and traditional industries. The Departments/Agencies engaged with medium and large industries are Kerala State Industrial Development Corporation Ltd (KSIDC), Kerala Industrial Infrastructure Development Corporation (KINFRA), Public Sector Restructuring and Internal Audit Board (RIAB), Bureau of Public Enterprises (BPE) and Centre

for Management Development (CMD). The agencies that are concerned with MSME and traditional industries are Department of Industries and Commerce, Directorate of Handloom and Textiles, Directorate of Coir Development, Khadi and Village Industries Board, Cashew Workers Apex Co-operative Society (CAPEX) and Mining and Geology.

The department wise outlay and expenditure during 2014-15, 2015-16 and 2016-17 are given in **Table 3.1**. An amount of Rs. 658.93 crore has been provided for Industry Sector in 2016-17, which is 11.22 per cent higher than that of the previous year.

As per estimates by the CSO, the share of manufacturing sector in India's GVA at constant prices

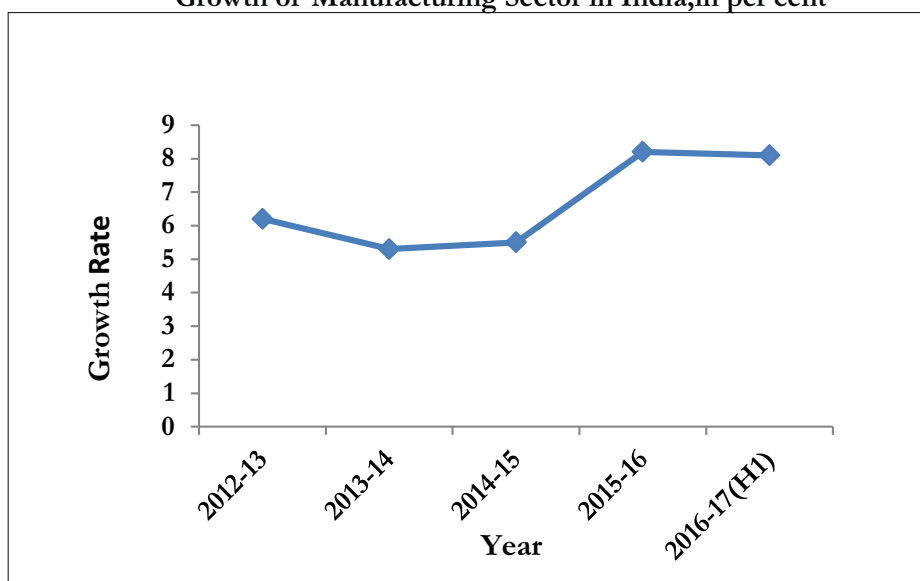
was 17.81 per cent in 2015-16. The trends in growth of manufacturing sector in India over the previous years as per provisional estimate of GVA by economic activity at constant prices for a period from 2012-13 to 2016-17 (H1) is exhibited in **Figure 3.1**

STATE SCENARIO

As per Quick Estimate of Gross State Domestic

Product for 2015-16 by Economics & Statistics Department, the manufacturing sector of Kerala grew by 9.28 per cent at current prices compared to 5.02 per cent in the previous year. At constant prices (2011-12), the sector registered a growth of 12.65 per cent in 2015-16 as against 2.46 per cent in 2014-15. The shares of manufacturing sector in GSDP at constant and current prices in 2015-16 were 9.97 per cent and 8.72 per cent respectively.

Figure 3.1
Growth of Manufacturing Sector in India, in per cent



Source: Central Statistics Office

Table 3.1
Sub Sector wise outlay and expenditure during 2014-15 to 2016-17, ₹ in lakh

Sl. No	Name of Department/ Scheme	2014-15		2015-16		2016-17	
		Outlay	Exp.	Outlay	Exp.	Outlay	Exp. *
1	Medium and Large Industries	30084.00	6184.43	23405.33	21788.79	29178.00	2851.33
2	Department of Mining & Geology	83.00	53.07	83.00	79.93	84.00	19.11
3	Village and Small Scale Industries	33773.00	20571.56	35757.00	28821.31	36631.00	10922.91
Total		63940.00	26809.06	59245.33	50690.03	65893.00	13793.35

*As on October 2016

Source: State Planning Board

The income from manufacturing sector to GSDP from 2011-12 to 2015-16 is given in **Appendix 3.1**.

The trend in growth of income from manufacturing sector in Kerala on the basis of GSDP at constant prices for the period from 2012-13 to 2015-16 is shown in **Figure 3.2**.

The income from manufacturing sector in Kerala which registered 12.47 per cent growth in 2012-13 witnessed a decline during 2013-14 (-4.65 per cent) and recorded a growth of 2.46 per cent during 2014-15 and a moderate growth of 12.65 per cent during 2015-16.

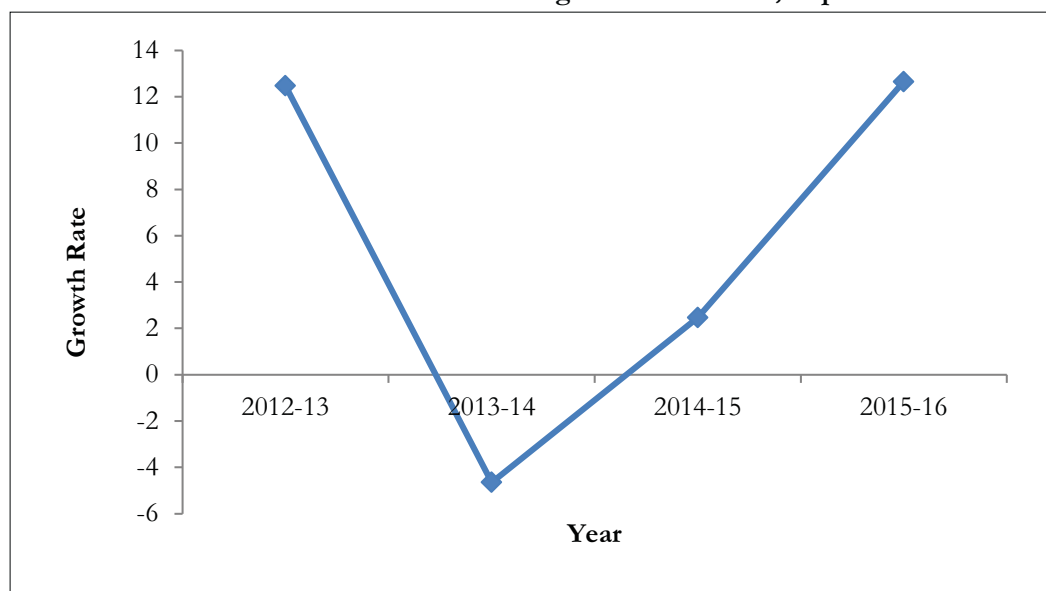
MINING

India is rich in minerals especially Iron ore, Barytes, Rare Earth and Mineral Salt. India produced 90 minerals in 2012-13, which included 11 metallic, 52 non metallic and 23 minor minerals. India is ranked 2nd in the world in the production of Barytes, third in Chromite, coal and lignite, 5th in Iron ore and Steel (crude), 6th in Bauxite ore, 7th

in Manganese Ore and 8th in Aluminium (crude) in 2012. The number of mines in India which reported mineral production (excluding minor minerals, petroleum (crude), natural gas and atomic minerals) was 1,878 in 2015-16 as against 3,524 in 2014-15.

As per Provisional Estimate (PE) of Gross Value Added (GVA) at constant prices (2011-12) for 2015-16, mining and quarrying sector at national level decelerated to 7.4 per cent as against 10.8 per cent in 2014-15. During the period April-September (H1) 2016, the mining and quarrying sector contributed ₹1.49 lakh crore to Gross Value Added (GVA) at constant prices. The sector decelerated by (-) 0.9 per cent as compared to 6.9 per cent growth in the first half of 2015-16. At current prices, the sector contributed ₹1.68 lakh crore to GVA during 2016-17 (H1) with a growth rate of 1.3 per cent as compared with the growth of 3.5 per cent of 2015-16(H1). The trend in national growth rate of Mining and Quarrying sector on the basis of GVA at constant prices is shown in **Figure 3.3**.

Figure 3.2
Rate of Growth of Manufacturing Sector in Kerala, in per cent



Source: Directorate of Economics and Statistics

GROWTH OF MINING SECTOR IN THE STATE

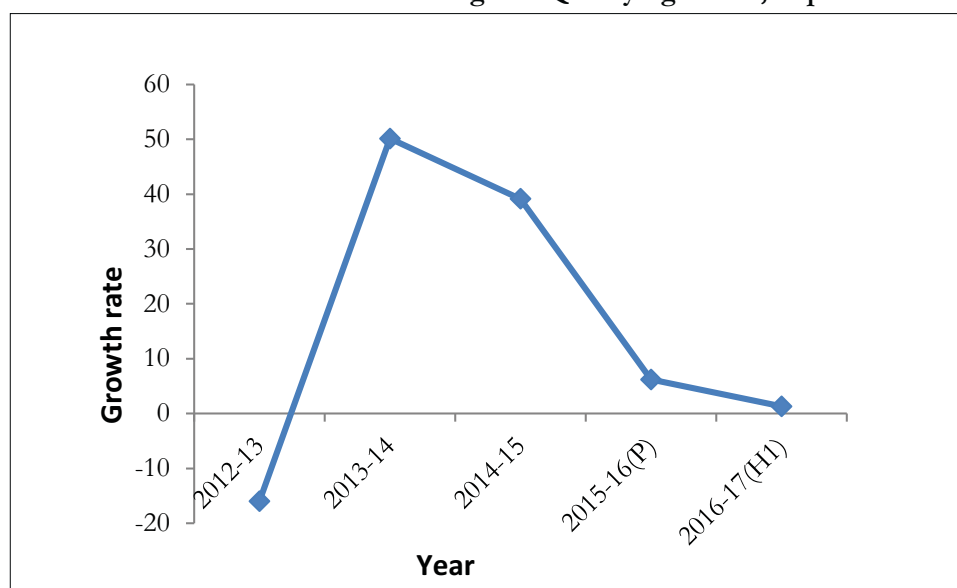
The contribution of Mining and Quarrying sector to Gross State Domestic Product at constant prices is estimated at ₹5,07,958 lakh during 2015-16, thus registering a growth of 6.21 percent compared to previous year. The share of the sector

in GSDP at constant prices stood at 1.20 percent during 2015-16.

The growth of income from the sector as per estimate of GSDP at constant prices (2011-12) from 2012-13 to 2015-16 is depicted in **Figure 3.4**.

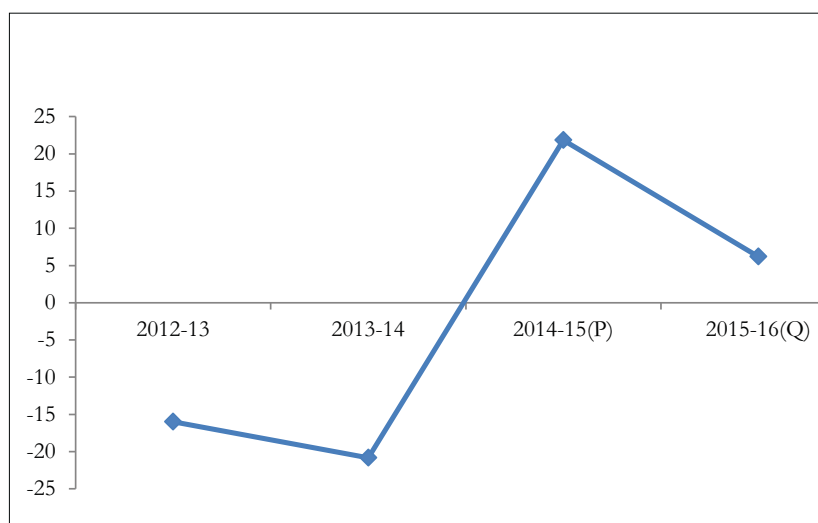
Mining and quarrying sector in the State registered negative growth during 2012-13 and witnessed

Figure 3.3
National Growth Rate of Mining and Quarrying Sector, in per cent



Source: Central Statistical Office

Figure 3.4
Growth Rate of Income from Mining and Quarrying Sector in Kerala, in per cent



Source: Directorate of Economics and Statistics

a high positive growth of 50.13 per cent during 2013-14 and declined to 39.13 per cent in 2014-15 and 6.21 per cent in 2015-16.

There are 87 major mineral mines that are operational in the State as on March 31, 2016. During 2015-16, 77 mining leases for major minerals, 501 quarrying leases for minor minerals, 2,670 quarry permits in minor minerals and 1,549 dealers' license were granted. In 2015-16 there were 188 registered metal crusher units in Kerala and two prospecting licenses granted for minor minerals.

The total area covered by mining leases as on October 2016 is 1,139.75 hectares, of which Mineral Sand accounts for 558.37 hectares, Limestone 245.69 hectares, Lime shell/seashell 99.4 hectares, Iron Ore 86.06 hectares and China Clay 72.95 hectares. Area covered by Graphite is 1.25 hectares and of Bauxite is nil. Mineral wise details of area covered by mining lease are given in **Appendix 3.2**

PRODUCTION AND ROYALTY OF MINERALS 2015-16

During 2015-16, 408.01 lakh tonnes of major and minor minerals were produced in Kerala. Among major minerals, Bauxite/laterite tops the list with 16.90 lakh tonnes followed by Limestone (6.26 lakhs ton) and China clay (5.86 lakh ton). Among minor minerals highest production is from Graph-

ite Building Stone (298.75 lakh ton) followed by Ordinary Earth (55.08 lakhs ton) and Ordinary Sand (13.31 lakhs ton).

During 2015-16 an amount of ₹119.51 crore was received as royalty from minerals, of which ₹28.00 crore was from major minerals and ₹91.51 crore was from minor minerals. During 2015-16 highest royalty among major minerals was from bauxite/laterite (₹16.22 crore) followed by lime stone (₹5.01 crore), china clay (₹2.34 crore), silica sand (₹1.59 crore) and ilmenite (₹1.15 crore). Among minor minerals granite building stone stands first by contributing ₹71.70 crore as royalty followed by ordinary earth (₹11.01 crore) and ordinary sand (₹5.32 crore) during 2015-16. The production and royalty of minerals in the State during 2015-16 are given in **Appendix 3.3**

REVENUE COLLECTED FROM MAJOR/MINOR MINERALS

District wise analysis of revenue collection shows that Ernakulum district has the highest collection of ₹22.51 crore (16.11% of total revenue) followed by ₹17.43 crore (12.48%) in Palakkad and ₹13.00 crore (9.31%) in Kannur. The least revenue collection of ₹3.01 crore (2.15%) is from Alappuzha. The district wise collection of revenue from major and minor minerals is furnished in **Appendix 3.4**

Section 2 PUBLIC SECTOR UNDERTAKINGS

Public sector enterprises have played a significant role in Indian development. They have been set up with the objective of helping the country to achieve self-sufficiency in manufacturing and technology. In 2015, there were 298 central PSUs under the administrative control of various Ministries/Departments in India. Out of these only 235 were in operation. The net profit of profit making

(157 CPSUs) stood at ₹ 1,30,363 crore in 2014-15, while net loss of loss making (77 CPSUs) stood at ₹27,360 crore.

CENTRAL SECTOR INVESTMENT

The aggregate real investment in Central Pub-

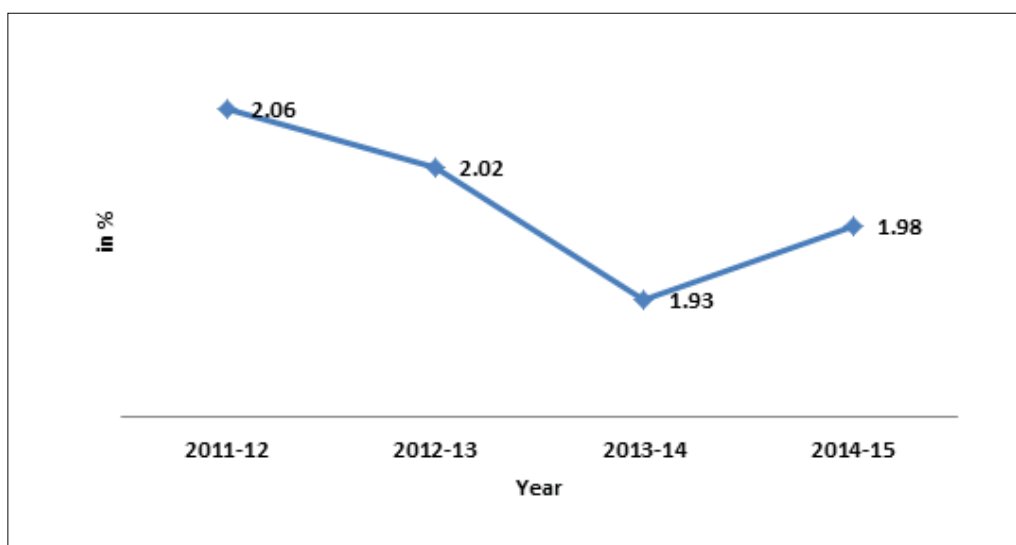
lic Sector Enterprises (CPSEs) in India, measured in terms of 'gross blocks', increased from ₹17,56,530.80 crore in 2013-14 to ₹19,06,796.31 crore in 2014-15, registering a growth of 8.55 per cent over the previous year. The investment in CPSUs in Kerala in terms of gross block grew by 11.69 per cent from ₹33,865.88 crore in 2013-14 to ₹37,825.79 crore in 2014-15. The state's share in total investment by CPSUs increased from 1.93 per cent in 2013-14 to 1.98 per cent in 2014-15 (*Public Enterprises Survey 2014-15*). Among Indian States, Maharashtra was ranked first with respect to share in investment by CPSUs (with a share of 16.97 %) followed by Tamil Nadu (share of 6.51%) and Uttar Pradesh (share of 6.22%). Details of Central Sector Investment in Kerala for 2012-13 to 2014-15 are given in **Appendix 3.5** and Central Sector Investment in selected states as on 31st March, 2015 are given in **Appendix 3.6**

Kerala's share in investment by Central PSUs from 2011-12 to 2014-15 is exhibited in **Figure 3.5**. It may be seen that the share of Kerala has declined after 2011-12.

STATE PUBLIC SECTOR UNDERTAKINGS

In Kerala, State Public Sector Undertakings (PSUs) play a crucial role in the development of the economy, especially in the manufacturing sector. PSUs consist of State Government companies and statutory corporations established to carry out activities of commercial nature. As per the report of Comptroller and Auditor General of India on Public Sector Undertakings in Kerala, there were 126 PSUs in Kerala as on March 31, 2015. Of these, there were 122 Government companies and 4 statutory corporations. Out of the 122 Government companies, 107 are currently working while 15 are non-working PSUs. Sector-wise distribution of government companies is as follows: 50 companies in the manufacturing sector, 16 in infrastructure, 18 in finance, 3 in power, 16 in agriculture and the allied, and 19 in the service sectors. It is important to note that the 15 non-working PSUs are in the manufacturing sector. As per the latest finalised accounts of working PSUs in the State as on March 2015, 50 PSUs earned profits, 53 PSUs incurred losses and 4 PSUs made

Figure 3.5
Investment in CPSEs in Kerala, in per cent



Source: *Public Enterprises Survey 2014-15*

neither profits nor losses. Under the Industries Department, Government of Kerala, there are 43 State PSUs, of which 37 are in the manufacturing sector and 7 in the non-manufacturing/service sectors. The performance of PSUs under Industries Department during the last 5 years is given in **Appendix 3.7**.

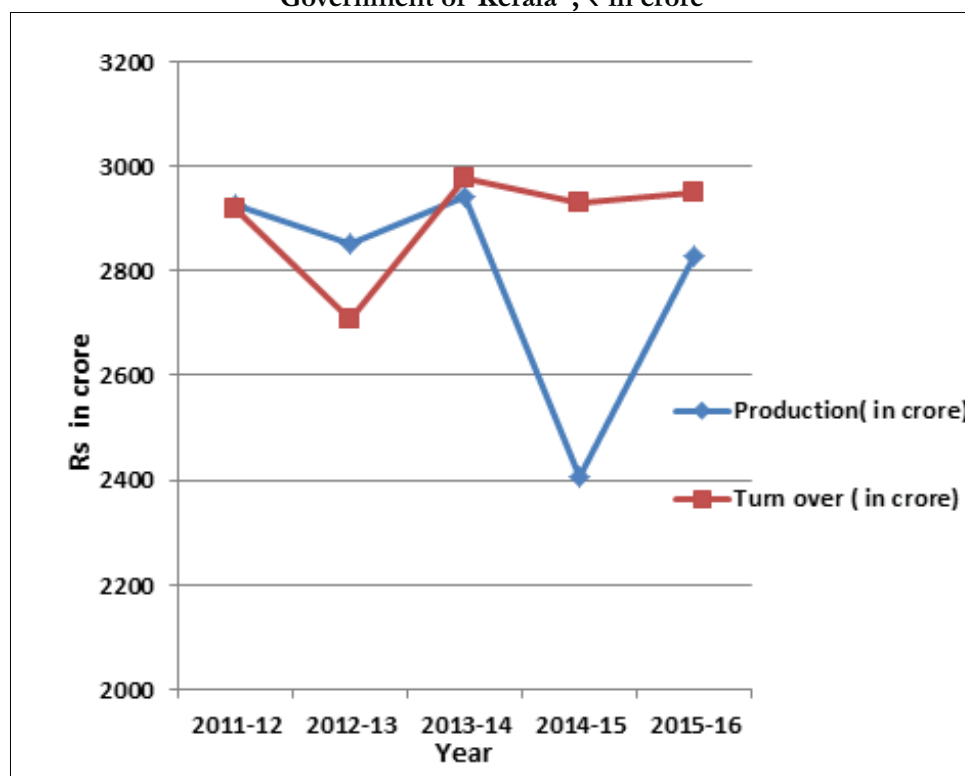
The total value of production in the 43 State PSUs under the Industries Department has increased from ₹2,405.11 crore in 2014-15 to ₹2,829.72 crore in 2015-16, registering a growth of 17.65 per cent. At the same time, turnover of these state PSUs grew by 0.63 per cent during 2015-16 compared to its previous year. Details of PSU-wise turnover and profit/loss during 2015-16 are shown in **Appendix 3.8**. The combined value of production and turnover of 43 State PSUs under the Industries Department from 2011-12 to 2015-16 are shown in **Figure 3.6**.

It may be seen that there has been no significant variation in the combined turnover of these State PSUs for the last three years. But the combined value of production decreased in 2014-15 and subsequently increased.

Ten State PSUs under the Industries Department reported profit in 2015-16 as against 13 in 2014-15. The total profit made by the profit-making PSUs increased from ₹ 61.30 crore in 2014-15 to ₹98.32 crore in 2015-16. Major profit making units in 2015-16 were Malabar Cements Ltd (₹.38.75 crore), Kerala State Industrial Development Corporation Ltd (₹34.55 crore), and Kerala Minerals and Metals Ltd (₹21.16 crore).

Even though the number of loss making State PSUs increased from 30 in 2014-15 to 33 in 2015-16, the total losses made by loss making State PSUs decreased from ₹241.23 crore to ₹208.12 crore during this period. Major loss-making State

Figure 3.6
Value of Production and Turnover of State PSUs under Industries Department, Government of Kerala*, ₹ in crore



*Excluding KINFRA

Source: Public Sector Restructuring and Internal Audit Board

Figure.3.7
Performance Trend of State PSUs under Industries Department*



Source: Public Sector Restructuring and Internal Audit Board
 *Excluding KINFRA

PSUs during 2015-16 were Kerala State Textile Corporation Ltd. (₹29.50 crore) and Kerala State Cashew Development Corporation (₹25.15 crore). Performance trend of 43 State PSUs from 2011-12 to 2015-16 is depicted in **Figure 3.7**.

The combined net profit made by all 43 State PSUs under the Industries Department was ₹212.86 crore in 2011-12, but this fell to ₹75.65 crore only in 2012-13. From 2013-14 onwards, the combined net profits of these state PSUs has been negative. In 2015-16, the combined net loss incurred by the 43 State PSUs amounted to ₹109.80 crore. Erosion of working capital, lack of timely up-gradation of technology, limited product diversification, inability to cope up with the changing market demand, increase in cost of production, tough competition from other firms, competition from cheap imports and mounting financial liabilities (includ-

ing statutory payouts) have adversely affected the performance of State PSUs. It is high time to initiate focussed and time bound action for bringing out drastic changes in the sector to improve the performance of State PSUs, which in turn will help to stimulate economic growth in the State.

PUBLIC SECTOR RESTRUCTURING AND INTERNAL AUDIT BOARD (RIAB)

RIAB, constituted in 1993, undertakes reform initiatives in state owned enterprises in Kerala. Major responsibilities of the agency include performance planning and monitoring of PSUs, enterprise reconstruction, capacity building, recruitments in

Box 3.1

Major Initiatives in PSUs during 2015-16

- Government gave clearance for the implementation of a modernisation project in Travancore Cochin Chemicals Ltd at a cost of ₹65 crore.
- The bulk cement handling project of Malabar Cements was started at Cochin Port Trust at a project cost of ₹160 crores.
- The Cherthala Unit of Malabar Cements Ltd was reopened and started production during 2015.
- Various modernisation / expansion projects were initiated by the Kerala Electrical and Allied Engineering Company Ltd and Steel Complex Ltd.
- As part of their corporate social responsibility programmes, various social and welfare activities were implemented by profit making units.
- Co-operative Spinning Mills implemented modernisation / expansion projects with assistance from National Co-operative Development Corporation (NCDC), and with a total outlay of ₹120 crores.

PSUs and governance advisory support to State PSUs. The Government has been providing funds to PSUs for modernisation and expansion and also as working capital assistance. This benefitted 26 PSUs in 2012-13, 22 PSUs in 2013-14, 30 PSUs in 2014-15 and 36 PSUs in 2015-16. During the first four years of the 12th Five Year Plan, Government has invested an amount of ₹350.20 crores for the revival and rejuvenation of PSUs. Expenditure out of this outlay (during the 12th Five-Year-Plan period) amounted to ₹296.67 crore. During 2016-17, an amount of ₹100 crore was set apart for this purpose.

JOINT STOCK COMPANIES

There were 27,505 Joint Stock Companies in Kerala as on March 2016, of which 25,899 (94.16 %) were private limited companies and 1,606 (5.84 %) were public limited companies. There were 1,396 companies, which were newly registered between April and September 2016. During 2015-16, 1,642 companies were newly registered (1,561 Private Limited and 81 Public Limited). The number of companies wound up/dissolved/struck off/amalgamated from April to September 2016 were 330. Three public companies were converted to private companies and 2 companies were converted from private to public companies. Total number of government companies as on March 2015 was 140 (96

Public Limited and 44 Private Limited companies). There were 712 joint stock companies started by women entrepreneurs in Kerala from April to September 2016. Details of joint stock companies working in Kerala are given in **Appendix 3.9**.

INDUSTRIAL FINANCING

KERALA FINANCIAL CORPORATION (KFC)

Kerala Financial Corporation has been playing a major role in the industrialisation of Kerala. The main objective of Kerala Financial Corporation (KFC) is to extend financial assistance to micro, small and medium enterprises (MSME) in the manufacturing and services sectors. Financial assistance is provided in the form of term loans, working capital loans and special schemes. KFC is a member of Credit Guarantee Fund Trust for Micro and Small Enterprises. Activities of the Corporation are the following.

- Sanction of term loans to new micro, small and medium enterprises in the manufacturing and service sectors.
- Sanction of term loans to existing industrial concerns and service sector units for expansion/modernisation/diversification.
- Sanction of working capital loans to meet working capital requirements of industrial/

- service enterprises under special schemes.
- Special schemes for financial assistance to civil contractors.
- Special scheme for financial assistance for producing feature film and TV serials.
- Special scheme for modernisation, upgrading and expansion of existing cinema theatres and establishment of new multiplexes.
- Special scheme for purchase of lab equipments/waste management.

The Corporation sanctioned loans amounting to ₹1,025.99 crores in 2015-16 and disbursed an amount of ₹838.36 crore in 2015-16. An amount of ₹.415.83 crore was disbursed to various SSI units and ₹422.53 crore to other units during 2015-16. As on March 31,2015, the Corporation sanctioned loans for an amount of ₹7,263.41 crore and disbursed ₹6,573.68 crore. The corporation reported profit (before taxation) of ₹20.35 crore during 2015-16 as against ₹30.03 crore dur-

ing 2014-15. Performance of KFC during the last seven years is given in **Appendix 3.10**. The details of loan operations and industry-wise classification of loans during 2015-16 of KFC are shown in **Appendix.3.11** and **Appendix 3.12**.

KERALA STATE INDUSTRIAL DEVELOPMENT CORPORATION (KSIDC)

Kerala State Industrial Development Corporation Ltd. (KSIDC) was established in 1961 as the premier industrial investment agency of the Government of Kerala. KSIDC initiated major industrial and infrastructure projects, which are strategically important to Kerala's industrial and economic development. KSIDC also plays a vital role in entrepreneurship development in the State. The plan outlay and expenditure by KSIDC during 2014-15, 2015-16 and 2016-17 are given in **Table No 3.2**.

Box 3.2

Major Projects Initiated by KSIDC in the 12th Five Year Plan

- Petrochemical Park in Kochi to promote petroleum and pharmaceutical investment.
- Mega Food Park ,Cherthala in marine sector.
- Electronic Hardware Park at Kochi as a world class manufacturing and R&D facility for Electronic Sector.
- Life sciences park for setting up state-of-the-art manufacturing and R&D facility for Biotechnology and Nano Technology.
- Light Engineering Industrial Park, Palakkad.

Table 3.2

Plan Outlay for and Expenditure by KSIDC, ₹ in crore

Sl. No	Year	Outlay	Expenditure
1	2014-15	50.04	0.00
2	2015-16	74.01	64.96
3	2016-17*	87.52	10.96

**As on October 2016*

Source: Accounts & Planspace, State Planning Board

During the financial year 2015-16, KSIDC financed various projects involving a capital investment of ₹2,069.62 crores with direct term loan assistance of ₹76.65 crores and Rs.10 crore under share capital assistance, which are expected to generate employment for 10,000 persons directly and indirectly. The Corporation disbursed ₹67.76 crore and a total amount of ₹118.36 crores in recovery by way of principal and interest. The operating profit of the corporation has come to ₹49.98 crores during 2015-16, which is a record in the history of the corporation. Majority of projects financed by the Corporation during 2015-16 are under metals and chemical sectors, hospitality, rubber and infrastructure sectors. The physical and financial performance of KSIDC during 2015-16 is given in **Appendix 3.13**. Details of allotment of land in KSIDC Industrial Park as on October 2016 is shown in **Appendix 3.14**.

KSIDC conducted ‘Young Entrepreneurs Summit’ (YES) with the theme of ‘collaborating and networking’ and had tied up with Indian Software Product Industry Round Table (ISPIRT) & India Private Equity & Venture Capital Association (IVCA) for YESCAN 2015. KSIDC had set up first All Women Incubation Centre at Assumption College, Changanachery.

KSIDC developed the infrastructure facilities in its Industrial Growth Centres (IGC) at Kannur, Kozhikode, Alappuzha and Thiruvananthapuram districts. KSIDC has also initiated a special finance assistance scheme known as ‘Angel Fund/Seed Fund’ to promote entrepreneurship among youth making them job providers rather than job seekers. Cumulative assistance sanctioned under the scheme is ₹366 lakhs for 18 innovative ventures. The total stage wise disbursement of funds during 2015-16 is ₹110.50 lakhs. It had set up a 120 seat incubation space spread over an area of 4500 sq.m. at Infopark, Kakkanad Kochi. KSIDC has developed a light Engineering Industrial Park at Palakkad in 34 acres of land. First and second phase of infrastructure work of this park are completed.

MAJOR INITIATIVES OF KSIDC

Ease of Doing Business

Ease of Doing Business (EoDB) is an initiative by the Department of Industrial Policy and Promotion, Government of India, for simplifying clearance procedures for starting an industrial project. Based on the direction, KSIDC appointed M/s KPMG as the Consultant to undertake a study to reform the existing rules and acts relating to clearance procedures for starting an industrial unit in Kerala. They have submitted the draft report detailing the core areas of focus, steps to improve the EoDB ranking, standard operating procedures of departments/agencies, amendments required for acts/rules, and recommendations to improve the ‘ease of doing business’ environment in the State.

Single Window Clearance System

The Government of Kerala has introduced the ‘Single Window Clearance System’ to ease the setting up of industrial projects in the state. KSIDC is the nodal agency for the scheme and has cleared 8 major projects across various sectors during the past financial year.

Make in India/ Kerala

KSIDC is the nodal agency representing State of Kerala in the scheme, ‘Make in India’ announced by Government of India

Entrepreneur support through mentoring

KSIDC initiated one to one mentoring sessions with young prospective entrepreneurs willing to start enterprises in Kerala. Initiatives were also taken up in association with agencies such as CII and TiE for providing mentoring support in many colleges. Some of the colleges that benefitted include TKM Institute of Management, Kollam, and Mar Beseleous College of Engineering & Technology, Trivandrum, National Institute of Technology,

Calicut and Rajagiri School of Social science, Ernakulam. Incubation centres have also been set up in some of these educational institutions.

KERALA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION (KINFRA)

Kerala Industrial Infrastructure Development Corporation (KINFRA) was set up in 1993 with the objective of creating infrastructure facilities in the State and thereby create an environment conducive for industrial development. KINFRA is specifically aimed at setting up industrial parks/townships/zone in industrially backward regions of the State. The outlay and expenditure by KIN-

FRA during 2014-15, 2015-16 and 2016-17 are given in **Table 3.3**.

The Industrial Parks developed by KINFRA have facilities such as developed land, built up space, dedicated power supply, continuous water supply, communication facilities, facilities for administrative block, bank, post office and security. These parks provide a good environment for starting up industrial units with minimum time and cost.

KINFRA has completed infrastructure development in 12 key industrial sectors with world-class infrastructure in 22 Industrial Parks, of which 8 are catering exclusively to the Small & Medium Enterprises Sector. Some of the notable achievements are the successful completion of International Apparel Park at Thiruvananthapuram, Export Promotion Industrial Park at Ernakulam, Info-

Table 3.3
Plan Outlay for and Expenditure by KINFRA, ₹ in crore

Sl. No	Year	Outlay	Expenditure
1	2014-15	148.79	17.12
2	2015-16	55.07	49.85
3	2016-17*	101.20	0.00

**As on October 2016 Source: Accounts & Planspace, State Planning Board*

Box 3.3 **Ongoing Projects of KINFRA**

- Industrial Park, Ottappalam
- Industrial Park, Piravanthoor (nearing completion)
- Industrial Park, Kuttippuram
- Marine Park, Beypore
- Integrated Industrial and Textile Park, Palakkad
- Knowledge Cities Thrissur and Kozhikodde
- Telecom Incubator at Hi-Tech Park Kalamassery
- Global Ayurveda Village, Thiruvananthapuram
- Trade and Convention Ground, Ernakulam
- Special Economic Zone for Electronics Industries at KINFRA Hi-Tech Industries Park, Kochi
- Special Economic Zone for Food Processing at KINFRA Food Processing Park, Kakkancherry.

tainment Park, the Film & Video Park at Thiruvananthapuram and Food Processing Industrial Park at Malappuram. KINFRA has developed small Industries Park at Thiruvananthapuram, Pathanamthitta, Ernakulam, Thrissur, Kannur, Wayanad and Kasaragod.

KINFRA has promoted investments in the State and created investment friendly climate within its Parks, contributing significantly to the State's economy. In this regard, 634 industrial units have been allotted land in the various Industrial Parks of KINFRA with total investment of ₹1581 crore and providing direct employment to 35,898 persons. KINFRA has also implemented a Single Window Clearance system in all the Parks. The Single Window Clearances system operating in the Parks are helping the investors to establish their units without hassles. The details of allotments in KINFRA Industrial Parks as on October 2016 are given in **Appendix 3.15**.

CENTRE FOR MANAGEMENT DEVELOPMENT (CMD)

The Centre for Management Development (CMD) is a leading, self-supporting autonomous institution which provides research, consultancy and training support to development agencies, corporate and governments at the national, state and local levels. Established in 1979, it is sponsored by

the Government of Kerala as an independent, professional, registered society. In 2015-16, the centre completed 43 research projects. In addition, the centre also completed 9 training programmes on Management Development /Entrepreneurship Development /workshops and 7 training programmes on Micro Enterprises Development were conducted.

Conclusion

Shortage of land has been a major constraint to the growth of manufacturing in Kerala. High density of population, nature of settlement in the State and relatively high price of land are factors that reduce the availability of land for industrial purposes. Kerala's labourers are educated and skilled, and at the same time they are also conscious about their rights. Delays in obtaining clearances for manufacturing investment, environmental problems associated with large industrial projects, and a relative paucity of entrepreneurship have adversely affected the growth of manufacturing industries in the State.

Hence, key interventions are needed in the manufacturing sector of Kerala focusing high-end technologies and products, and creating large-scale employment for skilled workers. Government can play the role of facilitator in attracting investments and creating a conducive environment for advanced manufacturing activities.

Section 3

MICRO SMALL AND MEDIUM ENTERPRISES

Micro, small and medium enterprises (MSMEs) can play a crucial role in promoting equitable development and in nurturing innovation on a small scale. The MSME sector in India is diverse in terms of size, levels of technology employed and products. There are 346.12 lakh units spread across the country employing 805.24 lakh workers.

Micro, Small and Medium Enterprises (MSME) contribute a share of 37.5 per cent to the country's GDP. The sector has huge potential in addressing structural problems such as unemployment and regional and intersectoral imbalances. Given their comparatively low capital costs and their forward-backward linkages with other sectors, MSMEs can

play a crucial role in building a diversified manufacturing sector.

Realizing the importance of the MSME sector, the government has undertaken a number of schemes/programmes such as the Prime Minister's Employment Generation Programme (PMEGP), Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE), Credit Linked Capital Subsidy Scheme (CLCSS) for Technology Upgradation, Scheme of Fund for Regeneration of Traditional Industries (SFURTI), and Micro and Small Enterprises-Cluster Development Programme (MSE-CDP) for the establishment of new enterprises and development of existing ones. Some of the new initiatives undertaken by the government for the promotion and development of MSMEs, are as follows:

Udyog Aadhar Memorandum (UAM): The UAM scheme, which was notified in September 2015 under section 8 of the MSME Development Act 2006, is a path-breaking step to promote ease of doing business for MSMEs. Under the scheme, MSME entrepreneurs need to just file an online entrepreneurs' memorandum to instantly get a unique UdyogAadhaar Number (UAN). The information sought is on self-certification basis and no supporting documents are required. This marks a significant improvement over the earlier complex and cumbersome procedures.

Employment Exchange for Industries: To facilitate match making between prospective job seekers and employers an employment exchange for industries was launched on June 15, 2015 in line with Digital India. More than 3.42 lakh job seekers have been registered on the portal as on December 30, 2015.

Framework for Revival and Rehabilitation of MSMEs: Under this framework, which was notified in May 2015, banks have to constitute a Committee for Distressed MSME enterprises at zonal or district level to prepare a Corrective Action Plan (CAP) for these units.

A scheme for Promoting Innovation and Rural Entrepreneurs (ASPIRE): ASPIRE was launched on March 16, 2015 with the objective of setting up a network of technology centres and incubation centres to accelerate entrepreneurship

The Micro, Small and Medium Enterprises Development Act, 2006

India is one amongst very few countries which has a legal framework for the MSME Sector in the form of MSME Act 2006, as per which investment limit for Micro, Small & Medium enterprises are specified for Manufacturing and Service enterprises.

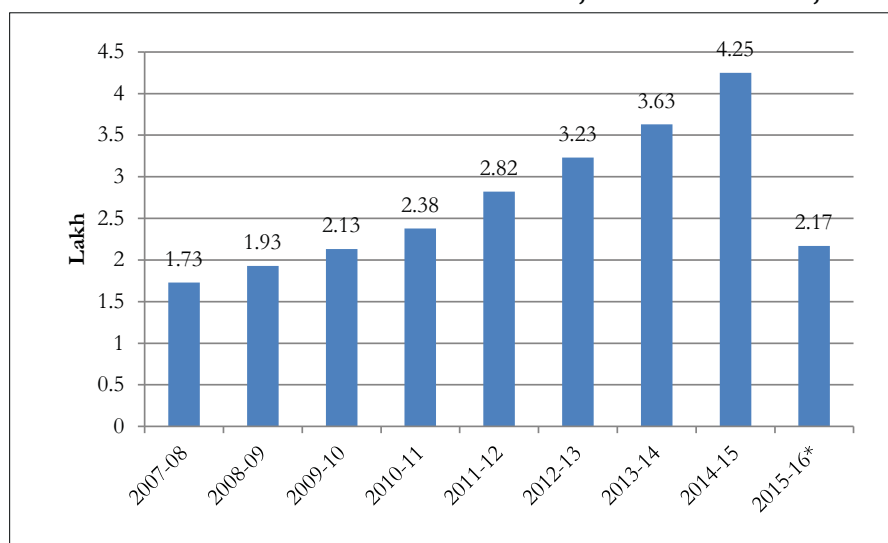
Entrepreneurs Memorandum (Part-II)

As per the provisions of Micro, Small and Medium Enterprises Development Act, 2006, MSMEs file Entrepreneurs Memorandum (Part-I) at District Industries Centres (DICs). After commencement of the project, the entrepreneur concerned files Entrepreneurs Memorandum (Part-II)/[EM-II]. Prior to the enactment of the Micro, Small & Medium Enterprises Development Act, 2006 (MSMED Act, 2006) small-scale industrial units filed only EM-I with the DICs. Now, filing of EM-II is discretionary for micro, small and medium enterprises engaged in both manufacturing and services.

Figure No. 3.8. shows the number of EM-II filed by the MSMEs at DICs under the various State/UT Commissionerates/Directorates of industries during 2007-08 to 2015-16.

Number of MSMEs filing EM-II with the District Industries Centres across the country increased from 1.73 lakh in 2007-08 to 4.25 lakh in 2014-15. Top ten States in terms of number of EM-II filed by the MSMEs during 2014-15 are Tamil Nadu, Gujarat, Uttar Pradesh, Maharashtra, Karnataka, Madhya Pradesh, Rajasthan, West Bengal, Kerala, and Telangana. These States together account for nearly 94 per cent of the total number of EM-II filed.

Figure 3.8
Total Number of EM II filed with DICs in India, 2007-08 to 2015-16, ₹ in lakh



*Data up to September 17, 2016

Source : MSME Annual Report 2015-16, Ministry of MSME, GOI.

MSME IN KERALA

Kerala, with its excellent connectivity, communication network, availability of highly skilled human resources and relatively good industrial infrastructure, is highly suited for the growth of the MSME Sector. The Micro Small and Medium Enterprises sector help in industrialisation of rural & backward areas, targeting youth and socially disadvantaged groups such as SCs, STs, women, and physically challenged persons. This sector contributes enormously to the socio-economic development of the State.

The potential of IT industry in the MSME sector is big as the State offers best connectivity with broadband reach in almost all parts of the State. Consultancy firm KPMG has suggested that there is strong potential in Kerala for growth based on SMEs and IT.

The industries coming under the MSME sector include handicrafts, handloom, Khadi, food processing industries, garment making and textile industries, industries related to coir, wood, bamboo, plastic, rubber, leather, clay, and electronic/electric components.

The Directorate of Industries and Commerce of Government of Kerala acts as a facilitator for industrial promotion and sustainability of MSME sector and traditional industrial sector in the State with the help of Directorates of Handloom & Textiles, Directorate of Coir and Khadi and Village Industries Board. A total amount of ₹2,373.74 crore has been provided for the development of Industry and Minerals, during the first four years of 12th plan.

STATE PROFILE OF THE MSME SECTOR

The number of new enterprises filed Memorandum under MSMED Part II in Kerala during the year 2015-16 up to September 17, 2015 was 7705. Out of these, 301 (3.9%) MSMEs were registered by entrepreneurs belonging to the SC community, 31 (0.4%) by entrepreneurs belonging to ST and 1805 (23.42%) by women. Investment in the sector during the period was ₹1,29,356.95 lakh while employment generated and the value of goods and services produced were 45407 Nos. and ₹3,38,001.36 lakh respectively. The details are given in **Appendix 3.16**.

As on September 17, 2015, the total number of working SSIs/MSMEs registered in Kerala are 2,57,466. Out of the total SSIs/MSMEs, 3.84 per cent were promoted by SC entrepreneurs, 0.72 per cent by STs and 24.97 per cent by women entrepreneurs. The total investment was ₹17,98,646.38 lakh while the total value of goods and services produced was ₹67,65,143.93 lakh and the total number of employment generated was 13,18,666 Nos. The details are given in **Appendix 3.17**.

EM Part II had stopped in DIC from September 18, 2015 and online registration in UdyogAadhar has started. From September 18, 2015 till March 31, 2016 the number of UdyogAadhar Memorandum filed were 11317 Nos with investment in plant & machinery of ₹1,90,735 lakh and the employment generation of 75402 nos. (www.udyogaadhar.gov.in). The details are given in **Appendix 3.18**.

Performance of the Sector in Kerala

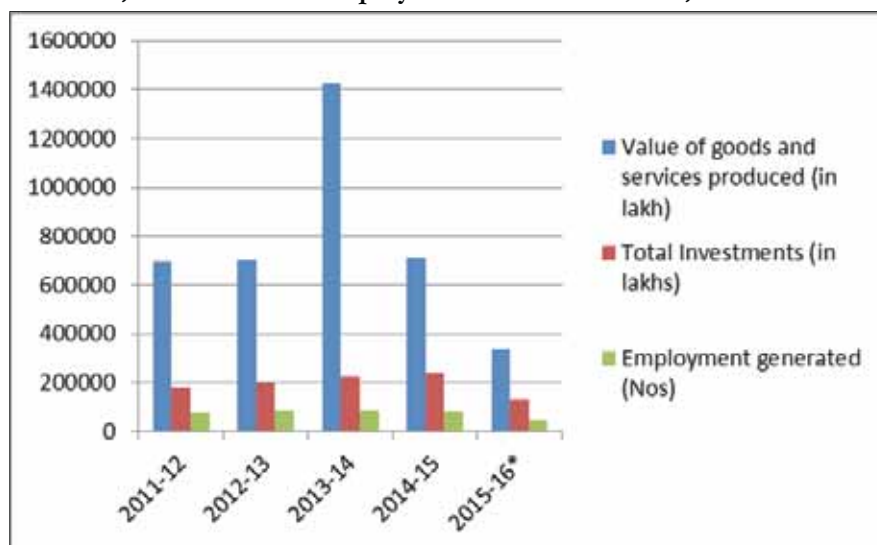
Trends in investment & employment in MSME sector over the period from 2011-12 to 2015-16 is shown in **Figure 3.9**.

The investment in the sector during the period from 2011-12 to 2014-15 has increased on an average by 9.73 per cent. The investment has shown a steady upward trend over the period. The value of production shows an enormous increase of 25 per cent during 2013-14. The employment has remained more or less constant over the period. The value of production and employment generation were at their peak during 2013-14.

The rate of growth of the number of MSME units has been increasing though at a declining rate from 2011-12 to 2014-15. However for the year 2015-16 from April- September 2015 there has been a growth rate of 10.95 % that is from 6944 as on September 2014 to 7705 as on September 2015 and is shown in **Figure 3.10**.

Figure 3.11 shows the growth rate of employment generated over last 4 years. There has been increase in employment generation for the years 2012-13 and 2013-14. But the employment generated has decreased by 4.88 per cent in 2014-15. However for the year 2015-16 from April- September 2015 there has been a growth rate of 14.51 per cent, that is, from 39651 as on September 2014 to 45407 as on September 2015.

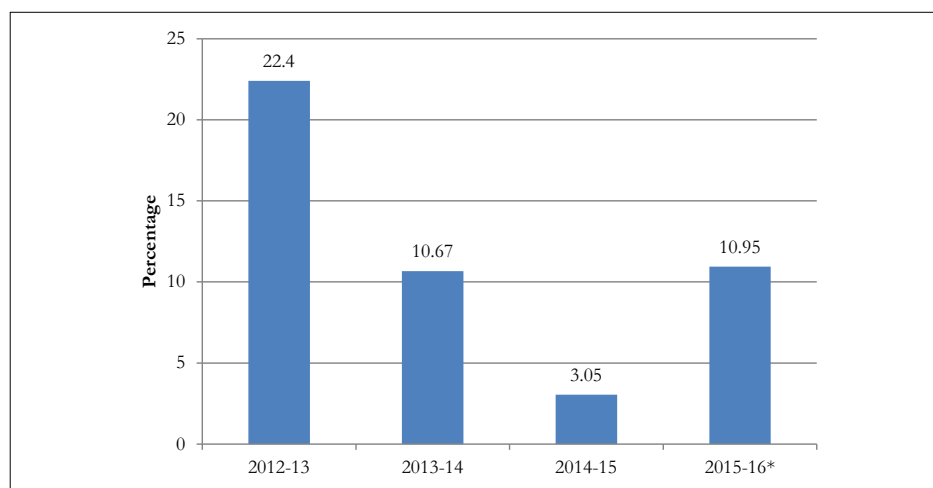
Figure 3.9
Production, Investment & Employment in MSME sector, 2011-12 to 2015-16



Source: Directorate of Industries & Commerce

*Figures only up to September 17, 2016 for the year 2015-16. Online registration in Udyog Aadhar started from September 18, 2016.

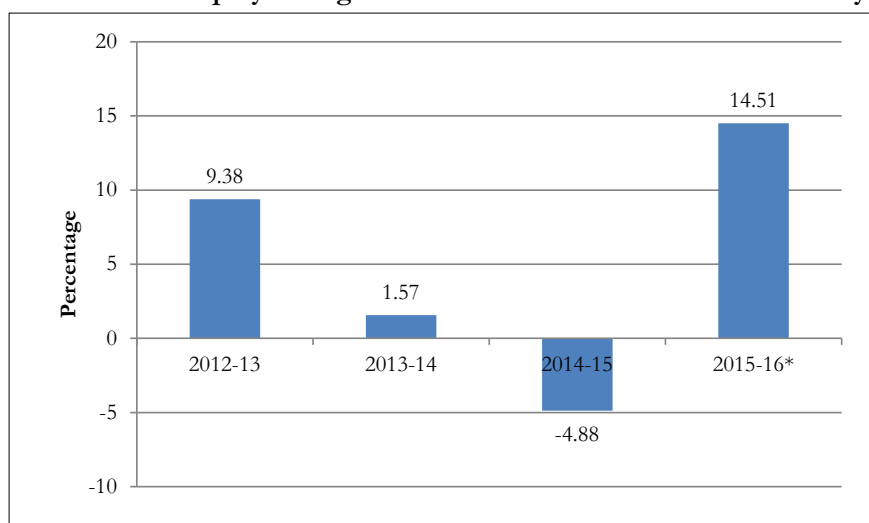
Figure 3.10
Growth rate of MSME units registered in MSME sector over the last 4 years



*2015-16 Data up to September 17, 2016

Source: Directorate of Industries & Commerce

Figure 3.11
Growth rate of Employment generated in MSME sector over the last 4 years



*2015-16 Data up to September 17 2016

Source: Directorate of Industries and Commerce

District wise achievements

District wise analysis reveals that during the year under review, Thiruvananthapuram occupies highest position with 298 new MSME units and Ernakulam tops in numbers of employment generated with 10105 and Wayanad was at the lowest

position with 184 new MSME units and 777 new jobs generated. In case of online registration from September 18, 2015 to March 2016 Ernakulam occupies the top position in all aspects with 2129 new MSME units, ₹48371lakh investment and 18857 employment generated. The details are given in **Appendix 3.19**.

Major State Plan Schemes and achievements

During 2015-16, State Government implemented various schemes successfully for improving the industrial environment of the state through development of industrial infrastructure, promoting entrepreneurship and providing skill development. Following are the major schemes and achievements.

Industrial Co-operative Societies

In Kerala, the total number of working industrial co-operative societies as on March 31, 2016 was 408 against 405 in the previous year, a increase of

0.74 per cent over the previous year. Out of 408 cooperative societies, 111 Societies were registered by women. The details are given in **Appendix 3.20**. During 2015-16, 12 societies were registered.

Industrial Development Plot/ Areas

Directorate of Industries and Commerce (DIC) develops infrastructure facilities for small-scale industries in the State. At present there are 37 Development Area / Development Plots under DIC, having a total acquired area of 2439.44 acres. A total of 2274 units are functioning in these DA/ DPs in 2015-16 compared to 1797 in the previous year. The details are given in **Appendix 3.21**.

Table 3.4
Major schemes and achievements during 2015-16

Sl No	Scheme Name	Achievements 2015-16
1	Infra-structure Development Schemes	These schemes intend to promote development of infrastructure in the industrial parks, estates, development areas/plots including roads, power, water and facilities for waste management. It is also envisaged to develop new multi-storied industrial estates, industrial parks and common facility centres for clusters. During 2015-16, the functional industrial estates at Changanasseri and Manjeri were upgraded and road construction work for the Anthur Development Plot(DP), Kannur was initiated. An outlay of ₹2430.00 lakh was provided for the year 2015-16 for implementing the scheme.
2	Entrepreneur Support Scheme (ESS)	The scheme intends to provide extensive support to MSMEs and give one time support to entrepreneurs, especially women and person belonging to SC and ST community. During 2015-16 a total amount of ₹3925 lakh was sanctioned to 1021 enterprises. An outlay of ₹4000 lakh was provided during the year 2015-16 for ESS.
3	Capacity building programme	The scheme intends to promote Entrepreneurial/ industrial promotional activities and skill development training in Micro, Small and Medium Enterprises. Under the scheme following events were conducted <ul style="list-style-type: none"> • Entrepreneurial Development Programme: 15 Days each in 14 Districts. • Technology clinic: two-day programme in 14 districts. • Investors meet: One-day workshop in 57 taluks. • Conducted 93 Investment meets, 505 entrepreneurs started new enterprises with investment of ₹67.32 Crores • An outlay of ₹750 lakh was provided during the year 2015-16.

Source: Directorate of Industries and Commerce

Mini Industrial Estates

As on March 31, 2016 there were 112 mini industrial estates and 857 SSI units in these estates providing total employment of 3590. The details are given in **Appendix 3.22**.

Industrial Estates under SIDCO

Kerala Small Industries Development Corporation (SIDCO) provides infrastructure facilities such as land, work shed, water, distribution of scarce raw materials to the units in the small scale sector. There are 17 major industrial estates, which include 882 working units, under the administrative control of SIDCO. These working units provided employment to nearly 7394 people as on October 31, 2016. Further, there are 36 mini industrial estates and 7 Industrial Parks under SIDCO in which about 1303 employees are working in 326 working units all over the State. The total turnover during 2015-16 of SIDCO was ₹277.69 crore. It is suffering losses from 2012-13 onwards. Details of industrial estates under SIDCO are given in **Appendix 3.23, 3.24 and 3.25**.

Promotional Events / Exhibitions – Achievements of the MSME sector during 2015-16

The Directorate of Industries and Commerce conducted/participated in 27 Exhibitions / Fairs /

Expos inside Kerala with 709 stalls in 2015-16 and generated an income of Rs. 1220.89 crore. Nine exhibitions were held in Thiruvananthapuram. While there were only 3 exhibitions in Kannur the maximum number of stalls (218) were put up in the district. The DIC represented Kerala in an international exhibition with 13 stalls. Details are given in **Appendix 3.26**. Following are the major promotional activities undertaken by the Department of Industries during 2015-16.

- The Kerala Business to Business Meet 2015 organised at Kochi from February 26 to 28, 2015.
- Government of Kerala participated in and won the Horeca Buzz Award for its efforts to create maximum buzz on ground and online at 'AAHAR 2016' Exhibition organised at Pragati Maidan, New Delhi from March 15 to 19, 2016
- Organised an 'Awareness programme on Workshop on Food Safety' on April 29, 2016 at Kochi
- Participated in the Food Hospitality World 2016 Exhibition from June 9 to 11, 2016 at Bangalore.
- 93 Investment meets were conducted, which were attended by 6292 entrepreneurs of which 505 entrepreneurs started new

Box 3.4 MSME Amendment Bill, 2015

The Ministry of Micro, Small and Medium Enterprises Development (Amendment) Bill, 2015 was introduced in the Lok Sabha on April 20, 2015. The objectives of the proposed amendments are to (i) enhance the existing limit for investment in plant and machinery considering changes in price index and cost of inputs consistent with the emerging role of the MSMEs in various Global Value Chains, (ii) include medium enterprises apart from small enterprises in section 7(9) to enable the aforesaid category of enterprises to avail the benefits and become competitive, and (iii) empower the Central Government to revise the existing limit for investment, by notification, considering the inflation and dynamic market situation.

enterprises with a combined investment of ₹67.32Crore.

- The following meetings were conducted; District Level Review Committee(37), District Industrial Development Councils(6), Green Channel Counter(9), District Level Committee on State Investment Subsidy(37), District Level Committee on State Tax Extension(28), Single Window Clearance Board(28), MSME Empowered Committee(16).
- 27 exhibitions were conducted in which 999 units participated and the total sales turnover of the units was ₹15.15 crore.
- 360 Industrial seminars were conducted which were attended by 21642 entrepreneurs out of whom 1416 started an enterprise.

Bank Credit to SSI / MSME Sector

As per the State Level Bankers' Committee (SLBC) report, the outstanding bank credit to various sectors by the commercial banks in Kerala at the end

of March 2016 increased by about 13.9 per cent, that is, ₹218706 crore against ₹192010 crore in the previous year. The outstanding flow of credit to MSME sector was ₹39463 crore , an increase of 10.44 per cent,as compared to ₹35730 crore in the previous year. The status of flow of credit to various sectors is given in **Appendix 3.27**.

Entrepreneurship Development

Entrepreneurial activity is a pillar of economic growth, across countries. In both developed and developing countries, fostering entrepreneurship for sustainable development could improve and create more sustainable consumption and production systems overall. Entrepreneurial education fosters innovation and helps entrepreneurs build better products, processes, and services. It is especially effective when it takes into account the social, economic and ecological complexities of development, the values of sustainability, and a long-term perspective.

In Kerala, entrepreneurship thrives in a number of sectors including trade, transport, tourism, information technology (IT),IT enabled services and engineering.

Table 3.5
Skill Development & Training Institutes in Kerala

MSME Development Institute, (MSME-DI), Thrissur, Government of India	Institute under the Ministry of MSME, Government of India provides techno-economic and managerial consultancy services to the MSME sector in Kerala and the Union Territory of Lakshadweep. It also conducts various training programmes.
Kerala Academy of Skill excellence (KASE)	Government of Kerala has setup three Kaushal Kendras under KASE at Kollam, Kozhikode and Palakkad to provide career guidance and industrial training to rural youth, improving their employability
Kerala Institute of Labour and Employment (KILE)	Constituted by Government of Kerala for training and research in labour and allied subjects. During 2015-16 various programmes were conducted by KILE including Training, Workshops, Seminars, Publications and Research studies. The beneficiaries through these programmes were 669. During 2016-17, 29 programmes were conducted (as on 30 th November, 2016).The beneficiaries of these programmes were 1641, which is 40.77 per cent higher than the previous year.

Source: 1. MSME Development Institute, (MSME-DI), Thrissur, Government of India.

2. Kerala Academy of Skill excellence (KASE)

3. Kerala Institute of Labour and Employment (KILE)

Promoting Skill Development

Staff training and the vocational and continuous on-the-job training ensure a constant upgrading of workers' skills. In India, Ministry of Micro, Small and Medium Enterprises provided entrepreneurship and skill development training to 16,87,324 persons during the 11th Plan and 11,58,562 persons during the first two years of the 12th Plan through various institutions such as MSME-Development Institutes, KVIC, Coir Board, and NSIC.

MSME-Development Institute (MSME-DI), Thrissur, Government of India has conducted 81 tailor made development training programmes in 2015-16 benefitting 2384 potential entrepreneurs. Details are given in **Appendix 3.28**.

Industrial Cluster Development

Industrial clusters have an important role in the promotion of small and medium-sized enterprises mainly due to their inclusiveness, technology absorption, efficiency improvement and availability of common resources. The Ministry of Micro, Small and Medium Enterprises (MSMEs) adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of small enterprises.

The State has already adopted the cluster development approach for industrialisation to reap the benefits of agglomerations. The State supports cluster development through MSME-DI, Thrissur and Kerala Bureau of Industrial Promotion (K-Bip). The Common Facility Centres, which are at various stages of development in the State, are in the areas of wood, plywood, furniture, Rubber, Textile, Rice Mill, Plastic, Printers, Ethnic Food, Agriculture Implements, and general engineering. The State has identified about 75 SME clusters and they are at different stages of development. Central Government agencies like Coir Board, SISI, and NGOs like Federation of Industrial Clusters are also taking initiatives in Cluster Development. The cluster development initiatives by

the State Government with the support of Ministry of MSME has gained adequate momentum and the Ministry has already sanctioned 14 projects to Kerala of which 8 have been commissioned, 5 projects are on-going and in-principle approval has been obtained for the upgrading of the cluster at Poovanthuruthu, Kottayam.

Financial Package for rural industries- Prime Minister's Employment Generation Programme (PMEGP)

'Prime Minister's Employment Generation Programme (PMEGP) is a credit-linked subsidy scheme at the national level, which aims to generate employment opportunities by setting up of micro-enterprises in the non-farm sector in rural as well as urban areas. During the period from 2008-09 to 2014-15, 2.96 lakh units have been assisted with margin money subsidy of ₹5867.68 crore to create employment for an estimated 25.87 lakh persons in the country. During 2015-16, ₹860.51 crore has been released by the Ministry as margin money under PMEGP out of which ₹ 528.32 crore has already been disbursed by the banks, assisting 24126 new projects providing employment to 1.71 lakh persons. Since its inception in 2008-09 until January 31, 2016, PMEGP assisted in the setting up of 84296 projects by women entrepreneurs. (Source: MSME Annual Report 2015-16, Ministry of MSME, GOI.)

The Khadi and Village Industries Commission (KVIC) was approved as the nodal agency for implementation of the scheme at national level. In Kerala, State KVIC Directorate, State Khadi and Village Industries Board (KVIB), District Industries Centres (DICs) and bankers are the agencies for implementation of the scheme. The banks sanctioned 758 applications and provided Margin Money of ₹917.092 lakh upto 31st March, 2016. Details are given in **Appendix 3.29 & 3.30**. During 2016-17 up to September 2016, 1430 applications were received. Applications sanctioned by banks are 26 and margin money sanctioned and released is ₹109.62 lakh.

Section 4

FOOD PROCESSING SECTOR

Food processing sector is an important industry in India in terms of output and employment. India's food processing sector covers fruit and vegetables, spices, meat and poultry, milk and milk products, alcoholic beverages, fisheries, plantation, grain processing and other products like confectionery, chocolates, cocoa products, soya-based products, mineral water and high protein foods.

India's export of processed food was valued at ₹26,067.64 crores in 2015-16. The items exported from the country included dried and preserved vegetables (₹914.21 crores), other processed fruits and vegetables (₹2,900.33 crores), Pulses (₹1,603.22 crores), Groundnuts (₹4,046.05 crores), Guar gum (₹3,233.87 crores), Jaggery and confectionary (1,289.26 crores), Cocoa Products (₹1,266.99 crores), Cereal Preparations (₹3,341.31 crores), Alcoholic and Non-Alcoholic Beverages (₹2,005.13 crores) and Miscellaneous Preparations (₹2,593.49 crores) (Source: *Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Govt. of India*).

The Indian food processing industry has great potential for export growth, especially given India's geographical position with its connectivity to Europe, Middle East, Japan, Singapore, Thailand, Malaysia and Korea. (Source: *Agricultural & Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, Govt. of India*). India is ranked 12th in the World in exports of food and food products in 2015. In India, the food sector has emerged as a high-growth and high-profit sector. The share of Food Processing Sector in GVA by India's manufacturing sector was 8.6 per cent in 2014-15.

The number of registered food processing units in India has increased from 37,175 in 2012-13 to 37,445 in 2013-14. Food processing industry is one

of the major employment intensive segments contributing 11.69 per cent of employment generated in all Registered Factory sector in 2013-14 (Source: *Make in India*).

INITIATIVES OF MINISTRY OF FOOD PROCESSING INDUSTRIES –MOFPI

The Ministry of Food Processing Industries is implementing various schemes for providing impetus to the development of food processing sector, viz. Infrastructure Development for Food Processing with the components of (i) Mega Food Park (ii) Cold Chain (iii) Setting-up/Modernization of Abattoirs, Scheme for Quality Assurance for setting up of Food Testing Laboratories and Technology Up gradation Scheme. Some of the major initiatives taken by the Government of India to improve the food-processing sector in India are as follows:

- The Ministry of Food Processing Industries announced a scheme for Human Resource Development (HRD) in the food processing sector. The HRD scheme is being implemented through State Governments under the National Mission on Food Processing. The scheme has the following four components:
 - o Creation of infrastructure facilities for degree/diploma courses in food processing sector
 - o Entrepreneurship Development Programme (EDP)
 - o Food Processing Training Centres (FPTC)
 - o Training at recognised institutions at State/National level
- The Food Safety and Standards Authority

of India (FSSAI) under the Ministry of Health and Family Welfare has issued the Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011 and the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 which prescribe the quality and safety standards, respectively for food products.

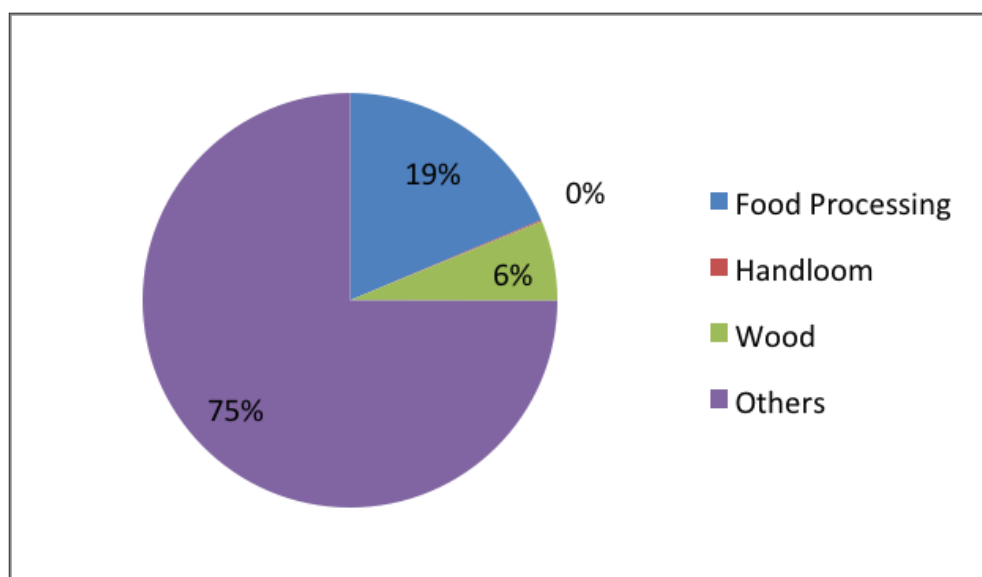
- The Ministry of Food Processing Industries has taken some new initiatives to develop the food-processing sector, which will also help to enhance the income of farmers and export of agro and processed food among others.
- The Government of India has approved the setting up of five Mega Food Parks in the states of Bihar, Maharashtra, Himachal Pradesh and Chattisgarh. The Government plans to set up 42 such mega food parks across the country in the next three to four years (Source: <http://ibef.org/industry/indian-food-industry.aspx>).

STATE FOOD PROCESSING MISSION

National Mission on Food Processing (NMFP) is a centrally sponsored scheme introduced by Ministry of Food Processing Industries (MoFPI), Government of India in the 12th Five Year Plan. The funding pattern is 75 per cent contribution from the Centre, and 25 per cent contribution from the State. The implementation of the scheme is entrusted to the States through the State Food Processing Missions. KINFRA is the Nodal Agency for State Food Processing Mission in Kerala. As on March 31, 2015 an amount of ₹ 967.18 lakhs have been received and an amount of ₹ 966.91 lakhs had been utilised for implementation of schemes under NMFP (Source: KINFRA). However, the Government has now de-linked National Mission on Food Processing (NMFP) in the States from Central Government support with effect from April 1, 2015. The scheme is being supported by the Central Government in UTs.

Food processing sector in Kerala has always made significant contribution to food exports. Kerala

Figure 3.12
Food Processing Units registered in 2015-16



Source: Directorate of Industries and Commerce

has been a major exporter of spices, marine products, cashew, coffee, tea and pickles. Two thirds of Kerala's export income comes from processed food. In Kerala, number of food processing units registered during 2015-16 is 879. Thiruvananthapuram district has registered 237 units, which is at the top position. The share of food processing units in the registered sector is only 19 per cent as evident from **Figure 3.12**.

Kerala Industrial Infrastructure Development Corporation (KINFRA) has completed infrastructure development in 12 key industrial sectors with world-class infrastructure in 22 Industrial Parks, of which 8 are catering exclusively to the Small & Medium Enterprises sector. KINFRA has promoted investments in the State and created investment friendly climate within its Parks, contributing significantly to the State's economy. In this regard, 634 industrial units have been allotted land in the various Industrial Parks of KINFRA with a total committed investment of ₹1581 crore, providing direct employment to 35898 persons. KINFRA has also successfully implemented a Single Window Clearance system in all the Parks. The Single Window Clearances system operating in the Parks are helping the investors to establish their units without any hassles. However, the scheme has been discontinued from April 1, 2015.

KINFRA has set up exclusive Food Processing Parks to suit the specific needs of the food processing sector and they offer space for food processing units in their 22 Industrial parks, as the demand for space is high. KINFRA has obtained an in-principle approval from the Ministry of Food Processing Industries (MoFPI), Government of India to set up KINFRA Mega Food Park at Palakkad. The proposed project will cover a region of 6 districts viz. Palakkad, Malappuram, Thrissur, Ernakulam, Kozhikode and Wayanad as the raw material cluster for the Mega Food Park. The Ministry has accorded final approval for the project. There are 52 units under KINFRA Food parks at Malappuram, Mazhuvannur, Adoor, Aroor and

Wayand. Out of these Mazhuvannur (Ernakulam) food processing park has 24 units with 631 workers and Kakkancherry (Malappuram) food processing park has 15 units with 510 workers. Total number of employment provided among these parks was 1525. Details of KINFRA food parks are given in **Appendix 3.31**.

Under the Mega Food Parks Scheme of Ministry of Food Processing Industries, KSIDC initiated a proposal to establish a Mega Food Park with thrust on the processing and export of seafood items at Pallippuram, Alappuzha district. The main objective is to create an integrated modern infrastructure leading to an ideal ecosystem to facilitate diverse sea food processing operations and encourage entrepreneurship in food processing in the region. When fully functional, it will create employment for about 2000 persons inside the park and benefit about 50,000 fishermen directly and indirectly.

Quality Management in Food Processing Industries

National Centre for HACCP Certification (NCHC) associated with K-BIP has initiated the process of auditing and certification of 45 Food Processing and Allied Units from our State and outside the State. The audits are carried out through the Trained Auditors selected from the various related Departments / Agencies of the Government. To create awareness on Food Safety Standards & HACCP, National Centre for HACCP Certification (NCHC) organised a Seminar on Food Safety & HACCP on May 15, 2015 along with the Hotel Tech Kerala 2015 Exhibition for the Hospitality Sector organised at CIAL Exhibition Centre, Kochi. To provide awareness on Food Safety to the MSMEs in the Food Processing & Allied Sectors of the State, the Department of Industries & Commerce, Government of Kerala in association with Kerala Commissionerate of Food Safety organised an 'Awareness Workshop on Food Safety' on April 29, 2016.

Section 5

TRADITIONAL INDUSTRIES

HANDICRAFTS

Eighty per cent of the traditional artisans engaged in production of handicrafts belong to socially and economically backward classes. Kerala has the tradition of making beautiful handicrafts with ivory, bamboo, palm leaves, seashells, wood, coconut shells, clay, cloth, coir, metals, stone, and lacquer ware. Many old handicraft classics can be seen in palaces, old heritage homes and museums in the State.

Importance of Handicraft Industry

Kerala State Handicrafts Apex Co-operative Society (SURABHI), Handicrafts Development Corporation and Artisans Development Corporation are the major promotional agencies in the handicraft industry in State. SURABHI is the apex organization of primary handicrafts co-operatives established with a view to uplift the artisans by marketing their products through the primary co-operatives and implementing welfare schemes with the assistance from State and Central Governments. The turnover of the society during the year 2015-16 was ₹280.84 lakh less than the previous year's turnover of ₹337.33. Apex society received an amount of ₹170.62 lakh during the year under the scheme, "Assistance to apex organisation in handicrafts sector". This was primarily used for conducting exhibitions and repair works of show-rooms. There are 48 societies and SURABHI made a profit of ₹2.36 lakh from 13 exhibitions and fairs in the year 2015-16. The total employment provided during the period was 30000. Details are given in **Appendix 3.32**. The Society conducted 2 exhibitions during 2016-17 as on October 12, 2016 and arrangements are being made for conducting further exhibitions in 12 places inside and outside Kerala.

Handicrafts Development Corporation of Kerala (HDCK) is engaged in procuring and marketing handicraft products by giving fair returns to artisans through Sree Moolam Shashtyabdapurthi Memorial Institute (SMSMI) and Kairali emporia spread all over India. At present it has a network of 19 such sales emporia other than SMSMI. Moreover with the support of Government of India, the Corporation has been implementing welfare schemes to artisans such as Health insurance scheme, conducting exhibitions/craft bazars at important places and tourist centres. HDCK has been running a Common Facility Service Centre (CFSC) at Thiruvananthapuram for artisans who engage in development wood crafts. Assistance to Apex Organisation in the Handicrafts Sector and establishment of Common Facility Service Centre for Handicrafts are the plan schemes implemented through HDCK during 2016-17. HDCK received an amount of ₹29.37 lakh during the year 2015-16 under the Scheme "Assistance to apex organisation in handicraft sector" which was utilised for organising exhibitions cum sales. This benefitted more than 2500 handicrafts artisans (both directly and indirectly). During the period HDCK was running a loss of ₹2.45 lakh (provisional) from 49 exhibitions and fairs conducted in the year 2015-16. Total turnover for the period was ₹1518 lakh. Details are given in **Appendix 3.33**. The Kerala Artisans Development Corporation (KADCO) is one of the State agencies providing assistance to artisans for establishing production units, promoting marketing of products, and providing employment opportunities through trade fairs and marketing centres.

BAMBOO INDUSTRY

Bamboo is a highly productive renewable and eco-friendly resource, and has several applications. It is widely used in environment protection, as a nutrient food, high-value construction material and in

about 1,500 other applications. It is estimated that about 2.5 billion people use bamboo in one form or the other at the global level. Advanced research activities are conducted to utilize bamboo for efficient fuel generating system.

In Kerala, 28 species of bamboo are found. Bamboos from the Kerala forest are being supplied mainly to the pulp and rayon units under concessional rates. It is estimated that there are about one lakh people in the State dependent on bamboo for their livelihood. It is notable that 67.3 per cent of the extracted bamboo in Kerala comes from home gardens rather than from the forests.

The Kerala State Bamboo Corporation was incorporated in 1971 as a Government of Kerala undertaking to promote the welfare of the traditional Bamboo workers in the state. The main objective

of the Corporation is to develop and promote industries based on bamboo, reed, cane and rattan and to undertake manufacturing and trading of the above products, provide financial, technical and other assistance and guidance to the traditional workers. The artisans in the rearing sector around Angamali region is supported by the Kerala State Bamboo Corporation. An Innovation Centre for Bamboo Development and Development of Premium Designs for Mementos are being set up. The major achievements during the year under review are the following: Around 10000 traditional worker families were provided assistance of ₹1030.36 lakh, Common Facility Centre established for reed collection, facilitation/amenities centre in forest including other facilities, and automatic putty applying machine was installed at Bamboo Flooring tile Factory at Nallalam. Two factories are functioning under the Corporation viz (1) Bamboo

Box 3.5

Kerala Bamboo Missions – Activities undertaken

Bamboo Innovation Centre at Angamaly, Ernakulam

Bamboo Innovation Centre was established at Angamaly, Ernakulam on August 16, 2016. It acts as the Resource Centre for the development of bamboo sector in the State. The main objective of the Centre is to develop a database about propagation, design, process development, and technology.

Bamboo Supply Chain

To ensure the availability of raw/treated bamboo to the artisans/ craftsman in various locations of the state.

Bamboo Information System

Information dissemination among beneficiaries. The software contains information regarding Bamboo products, Bamboo propagation, Treatment (Post Harvest) and Product catalogue.

Participation in Trade Fairs

Exhibition of Furniture cum Home furnishing products, Home Stays & Rural Tourism Travel Meet, UBM Index fair 2015, Mumbai, India International Trade fair 2015, New Delhi, and SwasrayaBharath 2015 exhibitions, Kozhikode .

Training Programmes

It aims at quality enhancement and process improvement training to Bamboo groups, Design transfer training workshops to Bamboo artisans of Micro enterprises & SHGs located at Wayanad, Bamboo Skill Upgradation training programmes through NGOs/Societies and Bamboo Skill Upgradation Training Programmes organised by KSBM at Bamboo Innovation Centre, Angamaly

Source Kerala Bureau of Industrial Promotion(K-BIP)

Board Factory at Angamaly for manufacture of Bamboo ply (2) Hi-Tech Bamboo Flooring Tile Factory at Nallalam Calicut for manufacture of Bamboo Flooring Tiles, Bamboo furniture and other allied products.

Kerala State Bamboo Mission

Kerala State Bamboo Mission (KSBM) constituted in the year 2003 is designated as the Bamboo Development Agency (BDA) of the State for implementation of the various schemes of the National Bamboo Mission (NBM), under the Department of Agriculture & Cooperation, Ministry of Agriculture and Farmers' Welfare, Government of India. KSBM has four Sub-Committees namely Propagation of Bamboo, Technology Intervention and R & D, Marketing & Livelihood and Design & Training. For ensuring effective implementation and monitoring of the Schemes, State Bamboo Steering Committee (SBSC) was constituted with the Additional Chief Secretary (Forest & Wildlife) as its Chairman.

The interventions initiated after the formation of KSBM include promoting cultivation of bamboo, creation of new designs for innovative products in the handicrafts sector along with appropriate skill development, promotion of bamboo based modern industries supported by technology adaptation and development. It is expected that this will bring in greater business opportunities at various levels, especially among women and hence improve the living standards of the rural people, there by contributing to the overall growth of the sector.

Problems and Issues in the sector

- Lack of Infrastructure facilities, Land Acquisition delays and Environmental Issues
- Delay in getting license and clearance.
- Limited credit flow to MSME and lack of skilled man power
- Lack of effective/efficient Entrepreneurship Development Programmes/Skill Development Programmes.

- Inadequate collaboration between technology providers and entrepreneurs
- Lack of modernization and new designs/innovations
- Inadequate marketing facilities / handholding support for forward and backward linkages

The governments role has to changed to a facilitator rather than a provider, should intensify its interventions in creating adequate infrastructure, creating appropriate climate to attract private investment, technical up gradation, diversification and modernisation for the revival and strengthening of the MSME sector.

Conclusion

Though Kerala has made considerable achievements in the sphere of industry over the last few years, there are also stiff challenges ahead. They include high cost of production, lack of competitiveness in the global market, minimal forward backward linkages, relative shortage of land and capital, and the virtual absence of important industrial raw material. An integrated approach involving entrepreneurs, Government and the society is essential for achieving faster industrial development of Kerala.

TEXTILE INDUSTRY

The Indian Textile Industry plays a significant role in the economic growth of the country through its contribution to industrial output, employment generation, and export earnings. The industry with all its ebbs and flow is a prominent economic activity in the state. Kerala's textile industry comprises traditional handloom sector, Power loom and the spinning sector.

Handloom Sector

In India, Handloom weaving is the second largest employer after agriculture, providing direct and indirect employment to more than 43 lakh weavers and allied workers. This sector contributes nearly 15 per cent of the cloth production in the

country and also contributes to the export earning of the country. In fact, 95 per cent of the world's hand woven fabric is produced in India. The handloom sector has a unique place in our economy and its strength lies in its uniqueness, flexibility of production, openness to innovations, adaptability to the supplier's requirement and the wealth of its tradition. The share of Kerala in the national handloom industry remains relatively small even as compared with other Southern states, namely Tamil Nadu, Andhra Pradesh and Karnataka.

Among traditional industries of Kerala, the handloom Sector stands second only to the coir sector in terms of providing employment. The Handloom Industry in the State is mainly concentrated in Thiruvananthapuram and Kannur District and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod Districts. The Industry is dominated by the Co-operative sector, covering 96 per cent of total looms. The remaining 4 per cent of Handloom units are owned by Industrial entrepreneurs. The Co-operative sector consists of factory type and cottage type societies. The number of registered Primary Handloom Weavers Co-operative Societies in the State as on October, 2016 is 600 as against 575 during March 2015. Of this, 167 are factory type and 433 are Cottage type societies. Of these 600 societies, 402 are in working condition as on October 2016. The number of factory type Co-operative Societies functioning at present is 84 (50%) and cottage type societies is 318 (53%). Details are given in **Appendix 3.34**.

The major varieties of products produced in the handloom sector of the State are dhothis, furnishing material, bed sheets, shirting, sarees and lungi. Considering the traditional value and heritage, the following products of the state are registered under the Geo Indication Act of India.

1. Balaramapuram Sarees and Fine cotton Fabrics
2. Kasargode Sarees
3. Kuthampully Sarees
4. Chendamangalam Dhothi
5. Cannanore Home Furnishings

Directorate of Handlooms and Textiles and Agencies in Handloom Sector

The Directorate of Handlooms and Textiles, Kerala, functioning under the Department of Industries and Commerce, aims at evolving policies for the promotion and development of handloom and textile sector in the state. The Director heads the office and also acts as the functional registrar of Apex Co-operative weavers' society and Co-operative Spinning Mills in the State.

Kerala State Handloom Weaver's Co-operative Society (Hantex)

Kerala State Handloom Weaver's Co-operative Society (Hantex) was registered under the Kerala Co-operative Society Act 1961. Hantex is the apex body of handloom co-operatives established for distribution of required inputs to primary co-operative societies viz procurement, processing, marketing of goods, process high quality yarn and raw materials for societies and explore new business opportunities by promoting Handloom products through exports. Currently Hantex comprises 520 primary co-operative societies as members. Out of this 350 are engaged in production and procurement processes with most modern infrastructure to produce hand crafted fabrics, garments, furnishings, made-ups, sarees, and traditional wears strictly in tune and harmony with eco-friendly norms for internal and export market. Currently there are 98 sales outlets in Kerala. Hantex incurred an accumulated loss of ₹1998.48 lakh during 2015-16. Details of Hantex are given in **Appendix 3.35**.

Kerala State Handloom Development Corporation (Hanveev)

Hanveev, which started functioning in 1968, is another agency for the upliftment of traditional handloom weavers in the unorganized sector in handloom industry with its registered office at Kannur and engaged in the manufacturing and marketing of wide range of handloom products depending on the market trends and sold at various outlets

throughout Kerala. At present, Corporation has 50 own showrooms, 7 exclusive agency showrooms and 32 production centres. Details of Hanveev are given in **Appendices 3.36** and **3.37**. In 2015-16, Hanveev's sales turnover was ₹ 1903.94 lakh, but it incurred an accumulated loss of ₹ 7808.58 lakh (provisional).

Indian Institute of Handloom Technology (IIHT)

IIHT, which is an autonomous institute under the Ministry of Industries, Government of Kerala, is the nodal agency in the State for providing technological inputs to the handloom sector. The Institute was established and registered under the Societies Registration Act of 1860 in the year 1987 in the name of Institute of Handloom and Textile Technology (IHTT). Now the Institute of Handloom and Textile Technology, is amalgamated to the Indian Institute of Handloom Technology (IIHT), which is working on the guidelines of the Ministry of Textiles, Government of India.

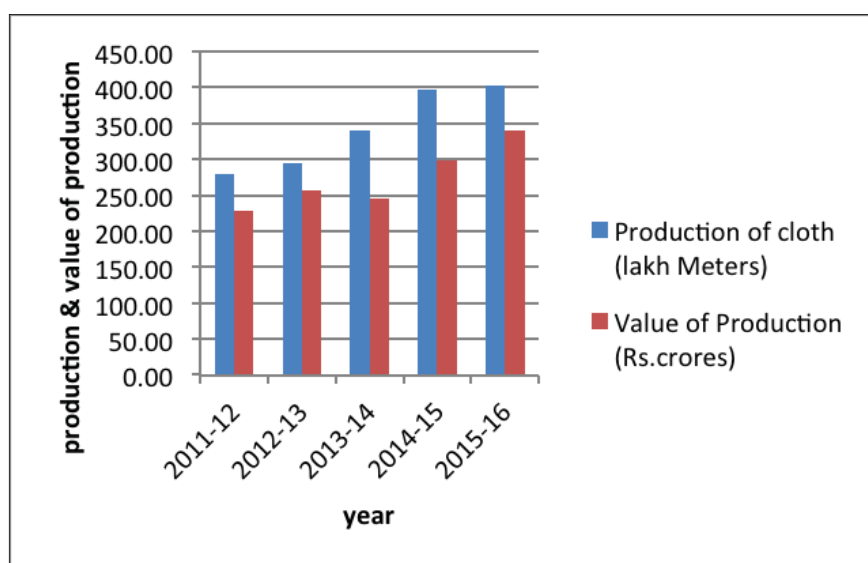
Handloom Industry in Kerala

For the development of handloom industry, Government extended assistance of ₹ 173.86 lakh by

way of loan and ₹ 955.97 lakh by way of grant in 2015-16. The details are shown in **Appendix 3.38**. The total value of production in the handloom sector showed an increase of 13.5 per cent from ₹ 298.89 crores in 2014-15 to ₹ 339.25 crores in 2015-16. The total number of weavers employed declined by 13 per cent, from 23,071 in 2014-15 to 20,135 in 2015-16. But the number of women employed increased from 13,238 in 2014-15 to 15,093 in 2015-16. Total employment in the sector increased from 66.37 lakh man days in 2014-15 to 67.37 lakh man days in 2015-16. Total turnover for the handloom industry during 2015-16 is ₹ 203.55 crore, which includes money, man, and material costs. The average wage rate prevailing in the industry ranges between ₹ 150 to ₹ 200 per day. Details regarding production in handloom industry in Kerala are given in **Appendix 3.39** and in **Figure 3.13**. **Figure 3.14** shows production and value of production and employment generated (lakh man days) in the handloom sector respectively.

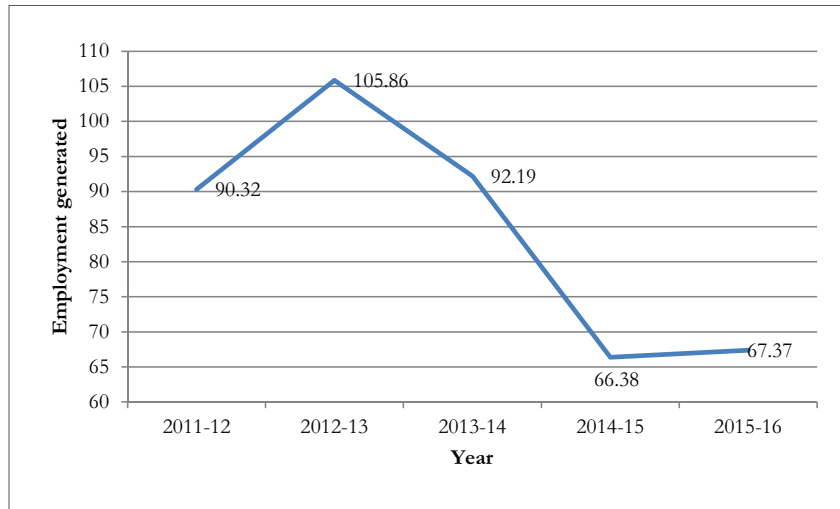
Figure 3.13 exhibits a steady increase in production and value of production. The employment generated, however, exhibits an increasing trend during the initial two years and thereafter shows a decreasing trend (Figure. 3.14). Age - wise distribu-

Figure 3.13
Production and Value of production in Handloom sector



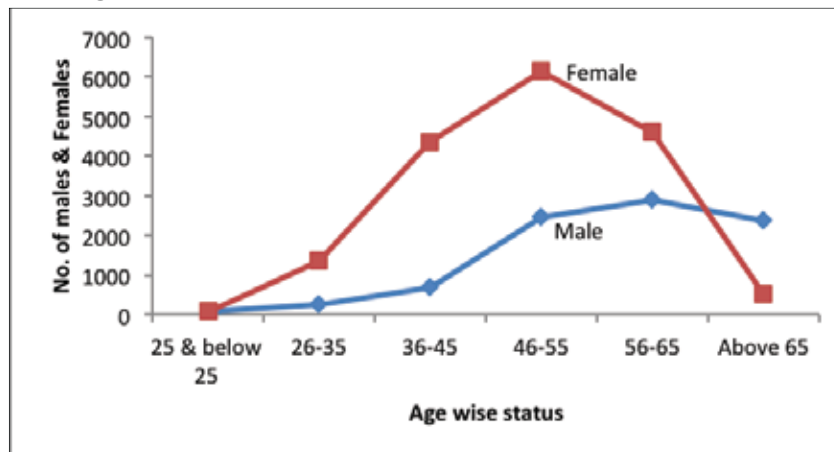
Source: Directorate of Handloom and Textiles, Govt. of Kerala

Figure 3.14
Employment generated in the Handloom sector, in lakh mandays-



Source: Directorate of Handloom and Textiles, Govt. of Kerala

Figure 3.15
Age wise distribution of workers in the Handloom sector



Source: Directorate of Handloom and Textiles, Government of Kerala

tion of workers engaged in the handloom industry is shown in the **Figure.3.15**.

Figure 3.15 shows that approximately 2/3rd of all female workers in the handloom sector are aged 46 years or more. Workers who are less than 25 years are negligible. Workers who are 35 or less are only 5 per cent or even less. Among male workers 90 per cent are above 46 years.

The plan outlay and expenditure of the handloom sector from the financial year 2012-13 to 2016-17 is given in **Table 3.6**

The expenditure recorded in the handloom sector during the reference period has been more than 100 per cent except in 2014-15 when it was 99 per cent. The trend of allocation and expenditure for the first four years of 12th five year plan period (2012-13, 2013-14, 2014-15 & 2015-16) are shown in the **Figure 3.16**

The variation in outlay and expenditure was comparatively low between 2012-13 and 2014-15. But in 2015-16, the expenditure was 39 per cent more than outlay, because of the increase in expenditure on the scheme for spinning mills.

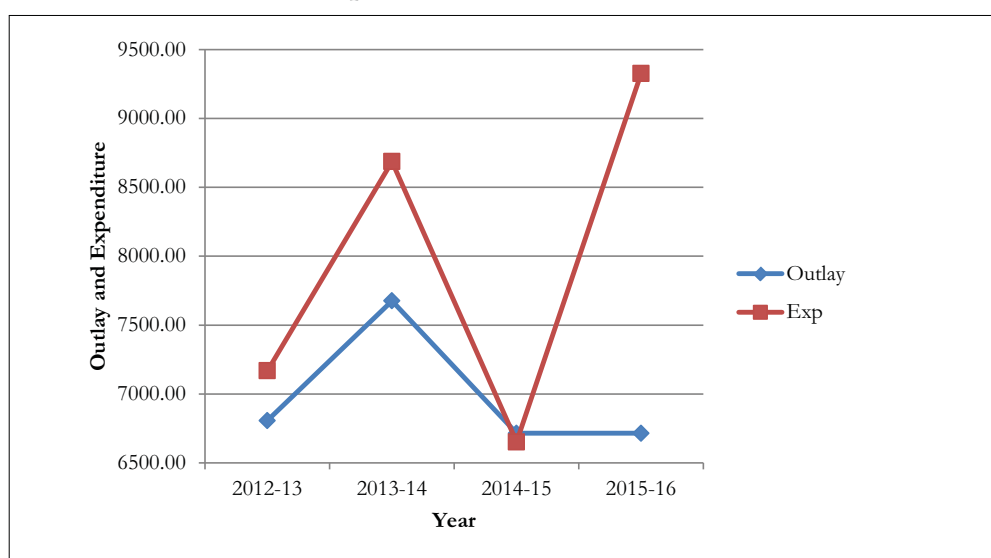
Table 3.6
Plan outlay & Expenditure of the handloom sector during the
12th Five Year Plan period, ₹ in lakh

Year	Plan outlay	Plan expenditure	Expenditure as Per cent of outlay
2012-13	6807.00	7168.13	105.3
2013-14	7676.00	8687.04	113.2
2014-15	6714.50	6652.48	99.1
2015-16	6715.00	9326.06	139.0
2016-17*	7073.00	1967.14	27.81
Grand total	34985.5	33800.85	96.6

Source : Budget 2012-13 to 2016-17, State planning Board and Planspace

*Expenditure upto October 30, 2016

Fig 3.16
Plan outlay and expenditure in the Handloom sector, ₹ in lakh



Source : Budget 2012-13 to 2016-17, State planning Board and Planspace

*Expenditure upto October 30, 2016

Major Schemes Implemented by the Directorate of Handloom and Textiles during 2015-16

1. Capital Support schemes

Various programmes for infrastructure development were directed to PHWCS and apex societies under this scheme in 2015-16. The objectives included technology upgradation, revitalisation and development of

the favourable working condition in the units. In the same year 14 production units were started under promotion of 'master weavers' and 20 new handloom units were started with 100 looms under Self Employment Scheme.

2. Skill & Capacity development Scheme

In 2015-16, 657 weavers were trained under this scheme for developing value added products.

Box 3.6
Major Physical Achievements during 2015-16

- Started Handloom Incubation Centre and Powerloom incubation centre in Thiruvananthapuram District.
- Given Skill development training to 657 weavers.
- Given training for 30 weavers in solid borders and in new designs.
- Given training for 49 weavers in Hand loom Art works
- Conducted 69 seminars cum exhibitions for the propagation of handloom products.
- Assistance given to 20 new weavers to start new hand loom production units.
- Technological Up gradation work of 14 Hand loom Societies completed.
- 10210 Hand loom weavers and 423 Power loom weavers admitted to Group Insurance Scheme.
- Given skill development training to 120 Power loom weavers

3. Incentive Schemes

Large number of weavers benefitted through different incentive schemes such as weavers/allied workers motivation programme, income support scheme, Contributory Thrift Fund Scheme and Group insurance scheme.

4. Marketing & Trade promotion scheme

As part of marketing and trade promotion, assistance was given for renovation of show rooms and conducting Handloom Expos.

5. Training Schemes

As per this scheme, training of 3 to 6 months is given to 30 talented weavers from different parts of the state to help them to develop new designs.

The strength of the handloom sector lies in production of intricate woven fabric, its versatility & wide variety, diverse design base, ability to switchover to new designs quickly, availability of high skilled labour, traditional mode of production with low technology, non- requirement of electricity, eco- friendly technology/process, informal school for skill generation and transfer of technology. However, the sector faces many challenges. They include the decline in the number of handloom

weavers due to falling wages, low productivity, lack of technological interventions, competition from power looms and competition from textile units outside state. Other issues include the lack of product diversification in accordance with new trends, shortage of working capital, fluctuations in prices of hank yarn and cotton.

Several measures are needed to modernize the handloom sector. Technology needs to be upgraded to ensure improvements in product quality and productivity. The sector should make use of the possibilities of Information technology to improve the production and marketing of value added handloom products in national and international markets. To improve the productivity of weavers, productivity linked incentives may be routed through Direct Benefit Transfer System (DBTS). With modernisation/mechanisation, value addition may improve which may increase the income flow to the sector and prevent the exit of workers from this sector. As part of the Handloom innovation programme, production of organic cloth with 'Made in Kerala' branding can be promoted. Showcasing the rich traditions of the handloom sector can aid the development of tourism in Kerala.

Textile Sector – Spinning Mills

The Textile Industry in Kerala is organized into public sector units, co-operatives and units jointly in public/co-operative sectors.

Kerala State Textile Corporation Limited (KSTC)

KSTC, a Government of Kerala undertaking, was incorporated in 1972 with the main objective of setting up and running textile mills in the state. The Corporation has four mills and one research & testing centre. Mills under KSTC are Prabhuram mills, Kottayam Textiles, Edarikkode Textiles and Malabar Spinning & Weaving Mills. Two other units, Sitaram Textiles and Trivandrum Spinning Mills Limited are now under the administrative control of KSTC. In addition, Corporation has under its fold a research and testing division (CARDT), located at Balaramapuram (Thiruvananthapuram), which is rendering service for testing of fibers, cotton and yarn for the textile units in Kerala.

Kerala State Co-operative Textile Federation Limited –TEXFED

TEXFED was established in 1992 as a body to plan, assist and supervise the setting up and management of co-operative textile units in Kerala. TEXFED is the apex body of Co-operative Spinning Mills and Integrated Power loom Co-operative Societies in the State. It integrates all the segments of the textile industry including spinning, weaving, processing and garmenting. There are seven co-operative Spinning Mills as members of TEXFED. Five of them are administered by the state government and two by elected boards.

Mills involved in spinning and weaving in Kerala have been facing problems of demand and supply. Outdated machinery, stiff competition with high cost of raw material, low productivity, decreasing profits, and lack of working capital are also issues of concern for textile mills in Kerala.

The Government has set up a centralized purchase system to procure cotton for the entire textile sector with the help of a professionally constituted committee. The committee comprises members from Public Sector Restructuring and Internal Audit Board (RIAB), Kerala State Co-operative Textile Federation Limited (TEXFED) and Kerala State Textile Corporation Ltd (KSTC) and Managing Directors of the spinning mills. The sale of yarn carried out through depot system is also monitored by the same committee. The intervention by the committee has helped to reduce raw material costs and generate sufficient savings in the textile sector. A majority of textile spinning mills in the State are over 25 years old and they use obsolete technology and equipment. Partial modernization was attempted in certain units, but it was not at par with the industry standards.

Modernisation of Co-operative Spinning Mills

The Government took diligent efforts to revive the co-operative sector by introducing a scheme which provided assistance for the expansion of Co-operative Spinning Mills. Assistance was provided to K. Karunakaran Memorial Spinning at Mala, Priyadarsini Co-operative Spinning Mill (Prico Mills), and Malabar Co-operative Spinning Mills for upgrading existing machinery and technology for producing export quality yarn.

Power loom Industry

The weaving sector is relatively less developed in Kerala. Around 75 per cent of the textile mills in Kerala are spinning mills, which produce cotton yarn. To promote the weaving sector, government provided budgetary support to set up four integrated power loom co-operative societies in the state. Currently there are 52 power loom co-operative societies in the state. The co-operative sector owns 550 looms out of a total of 575 power looms in the State. The year wise details of production and productivity under power loom industry for the period from 2011-12 to 2015-16 is given in **Appendix 3.40.**

Khadi and Village Industries

Kerala's share in production, sales and employment provided by Khadi and Village Industries sector in India has been relatively small (see **Table 3.7**). Compared to 2014-15, there was a decline in production and mandays employed by Khadi and Village Industries sector in Kerala in 2015-16. (**Figure 3.17**). The value of production has declined from Rs. 136.35 crore in 2014-15 to Rs. 135.66 crore in 2015-16.

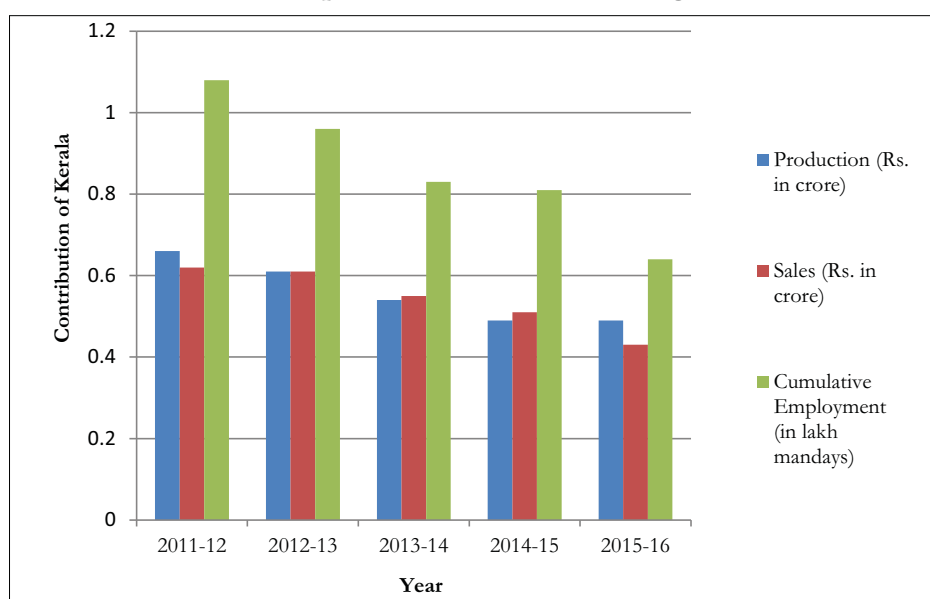
Employment in K&VI in Kerala has declined sharply from 1.29 lakh mandays in 2011-12 to 0.99 lakh mandays in 2015-16. Production and sales of the sector within the State is also showing a downward trend. A major reason for the fall in the number of workers engaged in the sector in Kerala is the migration of workers to better paying jobs in other sectors or for higher education. The sector has been plagued by issues like non-availability of sufficient raw-material for large-scale production,

Table 3.7
Production, Sales and Employment generation in Khadi and village industries sector

Year	Production (₹ crore)		State's Share	Sales (₹ crore)		State's Share	Cumulative Employment (in lakh mandays)		State's Share
	India	Kerala	Per cent	India	Kerala	Per cent	India	Kerala	Per cent
2011-12	21852.04	144.73	0.66	26797.13	167.47	0.62	119.1	1.29	1.08
2012-13	24024.24	145.79	0.61	27839.69	170.84	0.61	124.76	1.20	0.96
2013-14	26109.08	139.79	0.54	31152.4	172.55	0.55	140.38	1.17	0.83
2014-15	27569.37	136.35	0.49	33135.9	170.03	0.51	134.25	1.09	0.81
2015-16	27868.05	135.66	0.49	37642.24	161.30	0.43	154.84	0.99	0.64

Source: Annual Report 2015-16, Ministry of Micro, Small and Medium Enterprises, Govt. of India and Village Industries Board, Kerala

Figure 3.17
Production, Sales and Employment in Khadi and Village Industries in Kerala



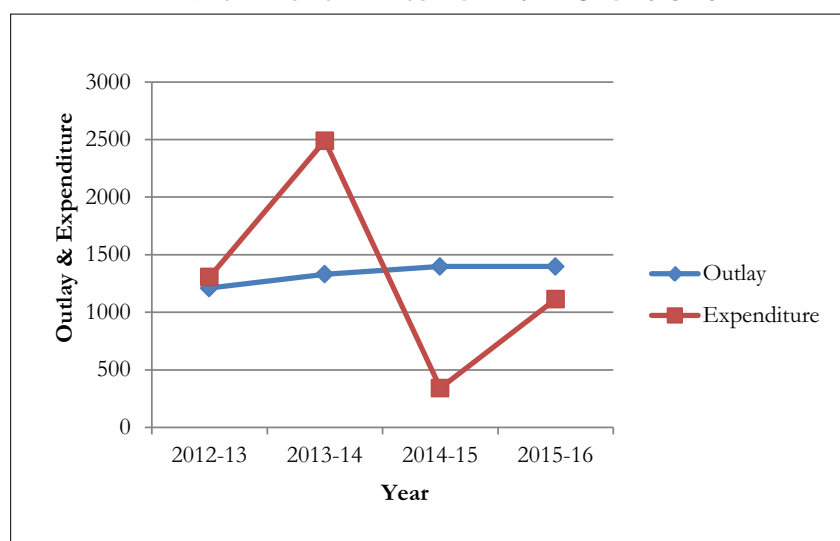
Source: Annual Report 2015-16, Ministry of Micro, Small & Medium Enterprises, Govt. of India & Village Industries Board, Kerala

Table 3.8
Fund allocated to and Expenditure incurred by K&VI Board in Kerala, ₹ in lakh

Particulars	2014-15		2015-16	
	Receipt	Expenditure	Receipt	Expenditure
State Government Grant -PLAN				
1. Administrative Expenses (Budget provision)	341.6	341.6	196.00	196.00
2. Income Support Scheme (Fund through DIC)	2200	2200	2700.00	2700.00
State Government Grant - NON-PLAN				
1.Non- Plan – Administrative Expenses	2812.24	34930.9	3037.21	3575.29
2.Non- Plan - Special Rebate	1160	1160	2213.00	2213.00
KVIC Grant				
1. PMEGP - Margin Money Grant	813.62	813.62	819.46	819.46
2. Grant for District Awareness Camps an District Level Exhibition of PMEGP	5.40	5.40	1.20	1.20
3. Grant for stationery, Publicity, TA, Expense for the Scheme PMEGP	2.15	2.15	2.15	2.15

Source: Khadi and Village Industries Board, Government of Kerala.

Figure 3.18
Financial Performance from 2012-13 to 2015-16



Source : Budget 2012-13 to 2015-16, Accounts and Planspace

boom in the growth of the power looms industry in the country, shift in the nature of demand for clothing, and the use of low productivity charkhas, looms and other accessories.

The allocation of funds from various sources to K&VI Board and the expenditure incurred by the Khadi and Village Industries Board during 2014-15 and 2015-16 are shown in **Table 3.8**.

Plan Outlay and Expenditure in The Sector During The First Four Years Of The 12th Five Year Plan

Plan expenditure was higher than plan outlay during 2012-14. However, during 2014-15 the expenditure was only 24 per cent only of the outlay of ₹1397.6 lakh. This was because of the delay in

release of funds by the Govt. The expenditure increased to 80 per cent in 2015-16. (Table 3.9)

Moreover, goods worth ₹537.96 crores has been produced through the Aided Units of the K&VI Board, including through the Rural Employment Generation Programme (REGP) and Prime Minister Employment Guarantee Programme (PMEGP), and goods worth ₹601.13 crore has been sold, providing employment to 1,39,569 persons. It is observed that the productivity per person is much higher in K&VI Aided Units than in K&VI Departmental units. The production, sales and wages paid and employment generated during 2014-15 & 2015-16 and District wise details of Departmental sales outlets and sales under K&VI Board for the period referred to are provided in **Appendix 3.41** and **Appendix 3.42** respectively.

Special Employment Generation Programme (SEGP) has been launched with a aim of giving financial support to the small-scale entrepreneurs and traditional labourers, who did not get benefits of Prime Minister's Employment Generation Programme (PMEGP). The total Project Cost for the programme during 2015-16 was ₹910.59 lakh. Total employment generated during this period was 1148. Employment generation was the highest in Alappuzha (298) followed by Kottayam(192). The amount disbursed as subsidy through the programme was ₹294.32 lakh and the total number of units started during this period is 351. District level Awareness Camp and Exhibitions were conducted by the Board. The details of district wise achievement under self-employment generation programme for the year 2015-16 is provided in **Appendix 3.43**

Technology and Value Addition

Khadi industry employs traditional technology. The Board has initiated measures, with the assistance of IIT Madras, for infusion of technological innovation to improve the production capacity of existing implements. There is ample scope for generating more employment in the Khadi sector. The Board proposes to create 10,000 new jobs in Khadi sector during the 13th five year plan period.

Marketing 2015-16

The Board has 208 sales outlets for Khadi and Village Industries goods which include Khadi Grama Soubhagya (39), Khadi Soubhagya (51), Grama Soubhagya (GS Depot115) and mobile sales van (3). The Board has conducted Onam Melas in 2015. The state level Onam Melas have been inaugurated at Kannur on July 23, 2015. Sales through OnamMela 2015 was ₹25.8 crore against the target for ₹25 crore. District-wise sales for the year 2016-17 (Up to September 30, 2016) are given in **Table 3.10**.

Constraints and Strategies of Khadi and Village Industry

A major reason for the fall in the number of workers engaged in this sector is the migration of workers to more attractive and remunerative op

portunities in other sectors. Other causes for the stagnancy prevailing in this sector are surplus stock of unsold Khadi, difficulty in availing credit from banks, lack of adoption of new marketing tech-

Table 3.9
Financial Performance from 2012-13 to 2015-16

Year	Outlay	Expenditure	Percentage
2012-13	1210.00	1306.00	108
2013-14	1331.00	2490.00	187
2014-15	1397.60	341.60	24
2015-16	1397.60	1114.60	80
Grand total	5336.20	5252.20	98

Source : Budget 2012-13 to 2015-16, Accounts and Planspace

Box 3.7**Major Physical achievements of Khadi and Village Industries Board during 2015-16**

- K&VI Board has created 2906 new employment opportunities through Prime Minister's Employment Generation Programme (PMEGP) scheme during 2015-16.
- An amount of ₹819.46 lakh was given as margin money grant to beneficiaries.
- The Government has exempted building tax for all departmental Khadi production centres working under the Board.
- The Board has increased the Khadi Production by 20 per cent than the previous year through its own production centres.
- The total cost of the cloth produced during 2015-16 is ₹2000.50 lakh.
- 25 new departmental Khadi production centres has been established, 780 new charka and 650 new looms were installed, and 20 new readymade warping units were set up.
- The Board has imparted training to 650 new artisans in khadi weaving and provided employment to them.
- The Festival incentives to Khadi workers has been enhanced to ₹1000 which was disbursed during Onam.
- The production incentives to Khadi weavers have been enhanced to 180 paise from 90 paise for the hank consumed for weaving. The production incentives to Khadi spinners have been enhanced to 60 paise from 30 paise for the hank produced.
- The Board has disbursed ₹4 crore as production/festival incentives to Khadi spinners and weavers during 2015-16.
- All the Khadi workers in the State will be under the purview of E.S.I Act from April 1, 2016 and all the benefits under the E.S.I Act will be given to Khadi workers also.
- During 2015-16, the Board has disbursed ₹27 crore to khadi workers in the State to ensure minimum wages to them through Income Support Scheme.

Table 3.10
District-wise Annual Sales For The Year from 2016-17 *

SL. NO.	Name of District	Target for 2016-17 Amount (₹ lakh)	Number of Sale Outlets	Amount
1	Thiruvananthapuram	400	18	282.20
2	Kollam	300	15	291.99
3	Pathanamthitta	175	7	247.94
4	Alappuzha	225	8	205.26
5	Kottayam	270	16	189.22
6	Idukki	140	3	141.80
7	Ernakulam	885	12	569.08
8	Thrissur	300	19	199.07
9	Palakkad	325	19	245.71
10	Malappuram	130	14	88.80
11	Kozhikode	450	29	254.07
12	Wayanad	60	1	36.87
13	PKC (Kannur, Kasargod)	1640	47	1393.49
	Total	5300	208	4145.5

Source: Khadi and Village Industries Board, Government of Kerala

*Upto September 30, 2016

niques, lack of product innovation, low quality of products, and high cost of production. Effective steps should be taken for extension of marketing facilities and development of a marketing strategy. Support institutions should be strengthened and R & D should also be developed. So a very effective, strong and pragmatic approach should be taken up both at the Department and Government level to revamp the industry.

COIR INDUSTRY

India is the largest producer of coir in the world, accounting for more than 80 per cent of the production of coir fibre globally. Coir and coir products have been exported to 115 countries including China, USA, Netherlands, South Korea, and Spain. Coir industry first emerged in Kerala in the 19th century. The State's long coast line, lakes, lagoons and backwaters provided natural condition required for retting, an important part in coir processing. With the expansion of coconut cultivation, coir industry has picked up in Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, West Bengal, Maharashtra, Assam and Tripura.

Kerala accounts for about 85 per cent of the total production of coir in the country. The coir Industry comprises four sectors. They are: (i). retting and fibre extraction sector (ii). spinning sector (iii). manufacturing sector and (iv). trading (including exports). This agro-based rural industry provides sustenance to around 2 lakh families in the coastal belt of Kerala. 80 per cent of workers are women. The co-operative sector plays a major role in the coir industry in Kerala. The private sector too has a large presence in the industry as, coir yarn producers, product manufacturers and exporters.

Directorate of Coir Development and Agencies in Coir Sector

The activities and programmes of the coir sector in Kerala are co-ordinated by Directorate of Coir Development, Govt. of Kerala. The Directorate also acts as a facilitator for the promotion of the coir industry in the state. Kerala State Co-operative

Coir Marketing Federation (COIRFED), Kerala State Coir Corporation Ltd (KSCC), Foam Mattings India Limited (FOMIL), National Coir Research & Management Institute (NCRMI), Central Coir Research Institute and Coir Board are the other important institutions for the promotion of coir industry. Coir Board with its head office at Kochi, Kerala is the arm of the Central Government for development and promotion of Coir Industry.

The Kerala State Co-operative Coir Marketing Federation (Coirfed)

COIRFED is the apex federation of primary coir co-operative societies spread all over Kerala. It is entrusted with the task of procuring products from co-operative societies and marketing them. At present COIRFED has two factories engaged in the manufacture of value added products – one producing rubberized coir products and the other rubber backed coir mats. COIRFED has four de-fibering units. The value of exports of COIRFED increased from ₹13.11 lakh in 2014-15 to ₹29.17 lakh in 2015-16.

Kerala State Coir Corporation (KSCC)

KSCC was set up in 1969 for the systematic development of coir industry in the State. It caters to the needs of the small-scale coir manufacturers by providing them facilities for manufacturing and marketing. Its diversified operations include curled coir manufacturing and allied products sectors. KSCC has been implementing the Purchase Price Stabilization (PPS) scheme in the coir sector. Under the scheme the KSCC directly procures coir products from small-scale producers and co-operatives, thereby avoiding middle men. The value of export by the corporation has increased from ₹4.16 crore in 2014-15 to ₹8.14 crore in 2015-16.

Foam Mattings India Ltd. (FOMIL)

FOMIL was established in 1979 to help the development of value-added coir products. It has emphasised the use of technology and machinery

in coir industry. It has introduced Latex Backing Plant, which produces latex backed mattings, Modern Dye House, Semi Automatic and Fully automatic Power loom, Auxiliary facilities and uninterrupted power system. The latex backing facility was introduced in 1980, with the machinery imported from Denmark. Even today, Fomil has the monopoly in latex backed production. The company has started the modern dye house in the year 2000 mainly to support the needs of exporters and powerloom. The value of exports from Fomil was ₹49.99 lakh in 2014-15 and ₹13.05 lakh in 2015-16.

The National Coir Research and Management Institute (NCRMI)

NCRMI is a State Government institution set up to strengthen the R&D activities in coir sector to enable the industry in producing more value – added products and products with new designs at reasonable cost. Also NCRMI have been conducting studies for the development of new coir technologies in collaboration with similar research organizations across the country and even at the International level.

The Central Coir Research Institute

The Central Coir Research Institute at Kalavoor, Alappuzha is one of the prime research centre of Coir Board. This institute is recognised by the Department of Science & Technology, Government of India and was established in 1959. It implements all the S & T programs for the development of Coir Industry.

Kerala State Coir Workers Welfare Fund Board

Kerala Coir Workers Welfare Fund Board is a statutory body for the welfare of poor and down trodden coir workers. There are two lakh eight thousand two hundred and fifty one (208251) coir workers registered with the Board as on July 31, 2016. Among these approximately 80 per cent are women workers. It extends pension and other welfare assistances to members. (Source: Kerala Coir Workers' Welfare Fund Board, Alappuzha)

Co-operatives in Coir

Coir co-operative societies play substantial role in collecting husk, defibring and producing varieties of coir products in Kerala. There are 1007 co-operatives registered in coir sector as on March 31, 2016. As per the report of the Coir Directorate 16 new societies were registered during 2015-16. There is also increase in the number of working societies from 536 to 544, an increase by 8 units. Details of the societies are shown in **Appendix 3.44.**

Procurement of Husk and Production of Yarn and Fibre in Co-operative sector

In 2015-16, coir co-operatives in Kerala procured 0.98 crore quantity of husk by spending an amount of ₹1.21 crore and 11847.27 tonnes of fibre at a cost of ₹33.93 crore. Around 10771.11 tonnes of coir yarn worth ₹54.59 crore was produced. There is an increment in the procurement of husk by coir co-operatives during 2015-16 compared to previous year. In 2015-16, there were 455 coir co-operative societies in Kerala in the production of coir yarn and 76 co-operative societies in the coir products sector. Total wages paid in the coir yarn sector and coir products sector, in 2015-16 were ₹3083.58 lakh and ₹657.4 lakh respectively. Details for the last Five Years are shown in **Appendix 3.45.**

Age wise distribution of workers in coir sector

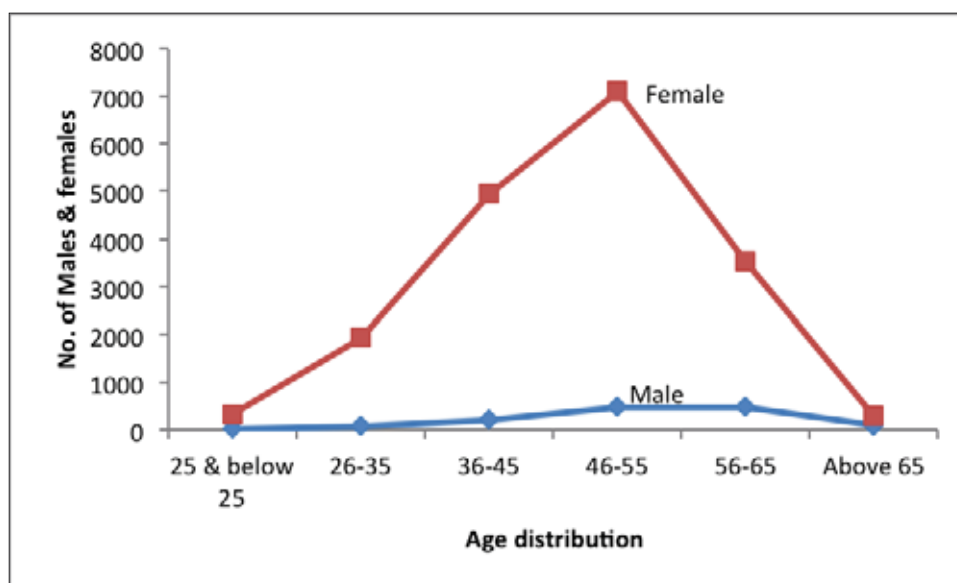
Age wise distribution of workers in coir sector during the period 2015-16 is shown in **Table 3.11 and Figure 3.19.** From the Table 3.11 and Figure 3.19, it is observed that 80 per cent of the workers are female and the number of workers in this industry who are aged 25 years or below is very low. Number of male workers engaged in this sector is highest between the age group 56-65 and that of female workers is in the age group 46-55. It can also be observed that workers who are more than 65 years of age are also few in the industry.

Table 3.11
Age wise distribution of workers in the coir industry in Kerala in 2015-16

Sl. No	Age group	Number of Workers		
		Males	Females	Persons
1	25 years or below	22	343	365
2	26-35 years	88	1952	2040
3	36-45 years	222	4958	5180
4	46-55 years	485	7122	7607
5	56-65 years	496	3525	4021
6	Above 65 years	100	300	400
7	All age groups	1413	18200	19613

Source: Directorate of Coir Development (as per income support scheme)

Fig 3.19
Age wise distribution of workers in the coir industry in Kerala in 2015-16



Source: Directorate of Coir Development

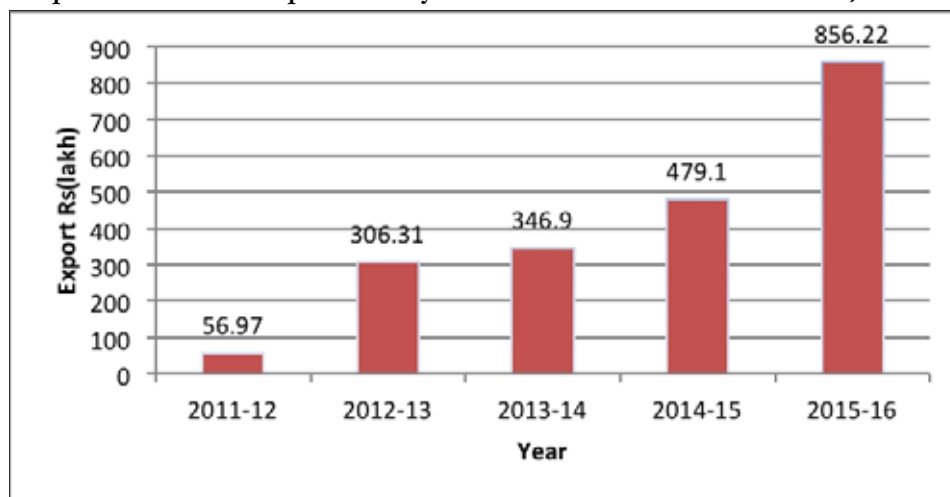
Export of Coir and Coir Products

The export of coir and coir products from India in quantity terms during the year 2015-16 was 75,2020 MT, valued at 1901.43 crore against 62,6666 MT valued at 1630.34 crore during the previous year. This recorded an overall increase of 20 per cent in quantity and 17 per cent in value over the export of previous year. Curled coir, coir fibre, coir rugs, coir pith, coir rope, coir yarn, coir geo-textile, handloom matting, power loom Mats,

rubberized coir and other sorts constitutes the major export items of the industry during 2015-16. The details of export of Coir and Coir Products during last 5 years by Public sector undertakings / COIRFED in Kerala are given in **Appendix 3.46** and **Figure 3.20**.

The export of coir and coir products of Public Sector Undertaking in Kerala shows a positive trend from 2011-12 to 2015-16. As compared to previous years, during 2015-16 export shows a hike

Figure 3.20
Export of coir & coir products by State PSUs from 2011-12 onwards, ₹ in lakh



Source: Directorate of Coir Development, Govt. of Kerala

of about 80 per cent. This is due to the increase in the export of Kerala State Coir Corporation. At national level, growth in production and export is positive, although it fluctuates over years. **Figure 3.21** provides the comparison of the growth rates of export of State PSUs to the coir exports at national level.

The plan outlay and expenditure in coir sector from the financial year 2012-13 to 2016-17 is given in **Table 3.12**

Plan expenditure was only 50-60 per cent of plan outlay between 2013-14 and 2015-16. The trend of allocation and expenditure for the first four

years of 12th five year plan period are shown in the **Figure 3.22**

The reasons for the poor utilisation of plan funds are the inclusion of non-viable and feasible proposals, technical and administrative constraints and, delays in giving sanction to projects after obtaining approvals from the working groups.

Thrust Areas for Development of Coir Industry

There have been a number of programmes to modernise the coir sector in the country includ-

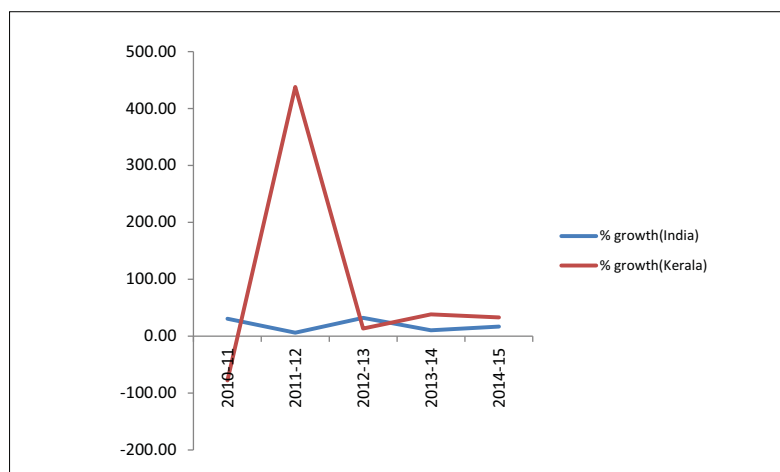
Table 3.12
State Plan outlay for and expenditure by the coir sector in Kerala, during the 12th Five Year Plan period, ₹ in lakh

Year	Plan Outlay	Plan Expenditure	Expenditure as per cent of outlay
2012-13	10070.00	9838.05	97.69
2013-14	11137.00	6640.76	59.63
2014-15	11693.90	5817.66	49.75
2015-16	11694.00	6828.52	58.39
2016-17	11700.00	2692.91*	23.02
Grand Total	56294.9	31817.9	56.52

*Data up to October 30, 2016

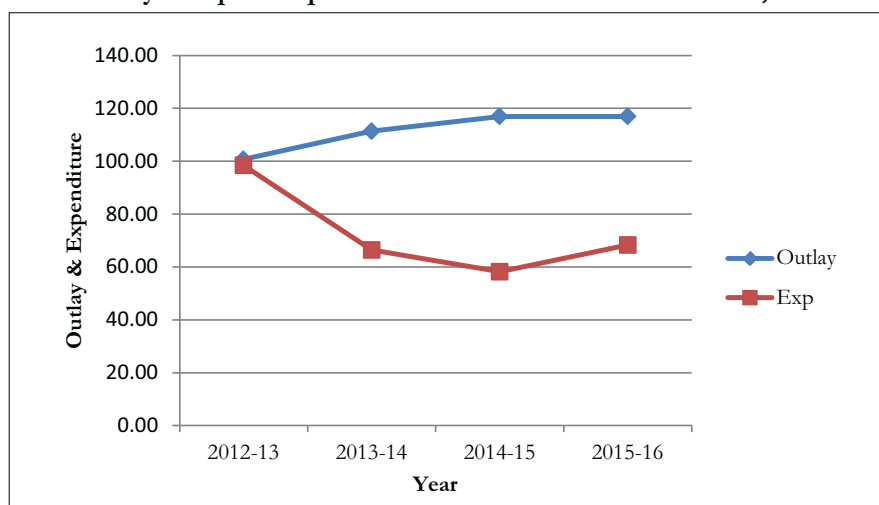
Source : Budget 2012-13 to 2016-17, State planning Board and Planspace

Figure 3.21
Rates of growth of exports of Coir Products by State PSUs in Kerala and from India as a whole



Source: Coir Board Statistics and Directorate of Coir Development, Govt. of Kerala

Figure 3.22
Plan outlay and plan expenditure in the coir sector in Kerala, ₹ in crore



Source : Budget 2012-13 to 2016-17, State Planning Board and Planspace

ing cluster development programme, mechanisms for collection and utilization of coconut husks, and programmes for product development, technological upgradation, quality improvement, value addition and diversification.

National Coir Policy

Coir Board has evolved a draft National Coir Policy and Vision 2025 with a view to develop the Coir Industry in a holistic manner. The policy broadly defines the vision of Government of India on coir

sector development and the targets to be achieved by 2025. The National Coir Policy aims at,

- Enhancing the utilization of coconut husks available in the coconut producing states for coir fibre extraction.
- Improving the quality of coir fibre, yarn and products produced in India.
- Women empowerment through value addition of coir products and coir pith.
- Zero wastage in the extraction of fibre and manufacturing process.
- Inventions in product and process for use in

- betterment of society and environment
- Modernising equipment so as to eliminate drudgery in the production processes and enhance productivity and quality.
- Addressing the problem of infrastructure bottlenecks
- Supporting modernization and technology upgradation of industry
- Providing assistance for capacity building in industry
- Providing employment to the existing coir workers and generating additional employment
- Undertaking vigorous research and development activities for finding new products based on coir
- Development of high productivity defibering units and mechanical spinning machines
- Finding new uses for Coir Wood, Coir Pith and exploring more business opportunities within India and abroad.
- Augmenting fibre availability in the country and facilitating high growth and competitiveness of the coir sector
- Developing domestic and export markets for coir products
- Promoting Consortium approach in the production and marketing of coir products

- Implementing schemes for welfare of coir workers.
- Promoting towns of export excellence in coir in areas of coir production.

Central Government Schemes in Coir Sector

Mahila Coir Yojana

The Mahila Coir Yojana is the first women oriented self-employment scheme in the Coir Industry, which provides self-employment opportunities to the rural women artisan in regions producing coir fibre. The conversion of Coir fibre into yarn on motorized ratt in rural households provides scope for large-scale employment, improvement in productivity and quality, better working conditions and higher income to the workers.

Coir Udyami Yojana

The Coir Board is implementing a scheme for the Rejuvenation, Modernisation and Technology Upgradation of Coir Industry (REMOT) to facilitate sustainable development of the Coir sector in the country. This will in turn generate more employment opportunities especially for women and the weaker sections of the rural society.

Box 3.8

Achievements of Coir industry in Kerala

- The Coir Development Department has organised 'Coir Kerala 2016' at Alappuzha. This was an International fair on natural fibre and allied products, in which buyers from various parts of India and from around 38 countries participated.
- An amount of ₹ 5 crores was disbursed among 269 societies during the year 2015-16.
- An amount of ₹ 8 crores was released to 25 coir mats and mattings Societies, Coir corporation, Foam Mattings India Ltd. and Coirfed during the year 2015-16
- ₹ 25.4 crores has been released as pension and matching grant to coir workers during the year 2015-16.
- Assistance to 196 societies under infrastructure development scheme
- Training to workers of societies on Spinning in Electronic Ratt in Chirayinkeezhu, Kollam, Kayamkulam
- Assistance for 20 societies under Government Share participation scheme
- Inaugurated Coir Machinery Manufacturing Factory at Alappuzha

Major schemes implemented by the Directorate of Coir Development during 2015-16

1. Regulated Mechanization of Coir Industry intended to modernize the industry
 Modernisation of Malabar Coir complex, installation of statutory fire fighting system and fire safety roads at Coir Park division, Kanichukulangara, fabrication of standard defibering machines for distribution in Kerala, distribution and installation of automatic spinning machines, and other infrastructural development activities were undertaken during 2015-16.
2. Marketing, Publicity, Propaganda Trade Exhibitions and Assistance for Setting up of Showrooms
 Conducted Coir Kerala, 2015, online promotion of coir sector through marketing division of National Coir Research and Management Institute. New market oriented strategy was undertaken to increase the sale of coir products during onam season during 2015-16.
3. Price Fluctuation Fund intended to stabilize the price of coir fibre, and yarn.
 Assistance given to Kerala State Coir Corporation, COIRFED, Fomil, to compensate the amount they spent as part of the price fluctuation scheme.
4. Coir Geo Textiles Development Programme
 Intended to implement pilot projects for new coir-based products, including the use of Geo textiles as a standard engineering material.
5. Production and Marketing Incentive scheme
 Production and Marketing Incentive given to 137 coir co-operatives
6. Market Development Assistance for the Sale of Coir and Coir Products.
 Market Development Assistance given to 3 societies and coir project offices through the department.

Coir industry in Kerala faces competition in both the domestic and international markets. One of its

major challenges is the relatively high cost of coir products in comparison to its synthetic substitutes. Wage costs account for around 70 per cent of the total product cost in the coir sector. To improve wages of workers in the coir industry, it is important that the industry finds ways to increase value added per worker. For a revival of the industry it is important to leverage coir's value as a natural fibre. The coir industry in Kerala should try to build itself on a slogan of 'return to nature'. At the same time, it should find ways to remedy some of the bottlenecks such as weak procurement of coconut husk, increased cost of production, pollution caused during traditional method of ratting and husk beating, and lack of professional management.

CASHEW INDUSTRY

India's cashew nut is the third widely consumed edible tree nut (source: http://www.cashewinfo.com/cashew_facts.html). India's production of cashew nut in 2014 was 7, 37,000 metric tons, which accounted for 18 per cent of the total cashew production in the world. In fact, India is the largest producer of raw cashew nut in the world, followed by Ivory Coast, Vietnam and Guinea Bissau. Other major producers include Tanzania, Nigeria, Brazil, Indonesia and Mozambique (see **Table 3.13**).

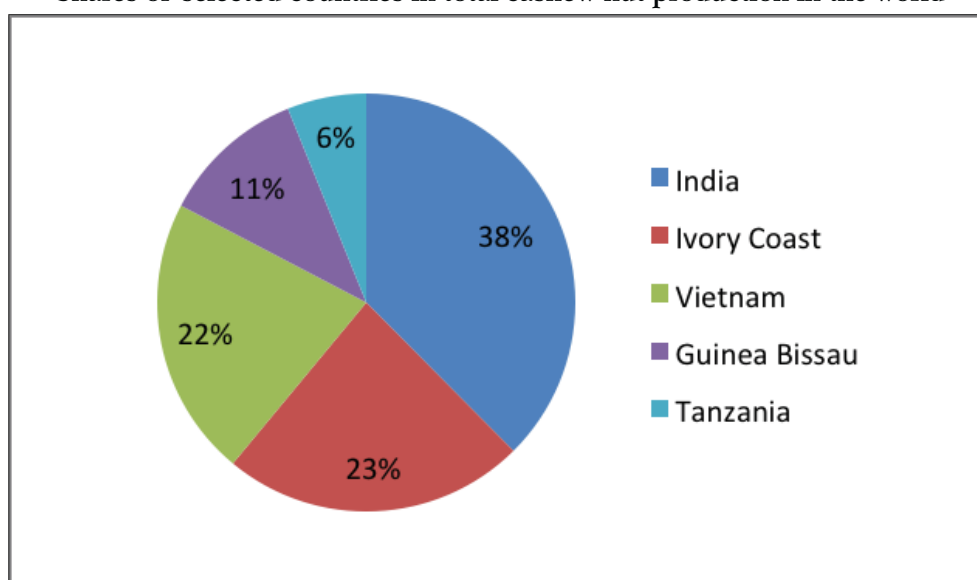
In India more than 50 per cent of the cashew processing is carried out in the unorganised sector. There are nearly 1800 medium to large and 2200 on-farm level processing units, engaging mostly women workers. The major distribution of Cashew in India is in the States of Kerala, Karnataka, Goa and Maharashtra along the West Coast and Tamil Nadu, Andhra Pradesh and Orissa along the East Coast and in West Bengal, Chhattisgarh, Gujarat, Jharkhand, and North Eastern States. At present the area under cashew is 10.08 lakh ha with a production of 7.37 lakh MT and productivity 782 kg/ha. India's requirement of raw cashew nut is about 16.23 lakh tons. Hence, the balance quantity to the tune of 8.98 lakh MT of raw cashew nuts is being met by importing raw nuts from African and South East Asian countries, still leaving a gap of

Table 3.13
Production of Cashew nut in selected Countries, 2014, in Metric Tons (MT)

Countries	2011	2012	2013	2014
India	692000	674000	728000	737000
Ivory Coast	400000	460000	525000	460000
Vietnam	300002	264810	252000	425000
Guinea Bissau	190000	176400	158000	220000
Tanzania	149999	130000	126000	120000

Source: Cashew Export Promotion Council, Kollam

Figure 3.23
Shares of selected countries in total cashew nut production in the world



Source: Cashew export Promotion council, Kollam

1.15 lakh MT of raw nuts. During 2015-16 India imported 9, 58,339 MT of raw cashew nuts.

According to DGCI&S figures (Source: CEPCI, Kollam), cashew kernels exported from India during 2014-15 and 2015-16 were 118952 MT and 96,346 MT valued at ₹5432.85 and ₹4952.12 crore respectively. The major international markets for cashew kernels processed in India were United States of America, United Arab Emirates (UAE), Japan, Saudi Arabia, Netherlands, France, Korea DP Republic Germany, Belgium, Spain,

Kuwait, the United Kingdom (UK), Iran and Singapore. Foreign exchange earnings of India from cashew industry, for the period from 2007-08 to 2016-17 (April-October -Estimate) is given in **Appendix 3.47**.

India is the third largest consumer of cashew nuts in the world. On an average 150 to 160 thousand MT of cashew kernels produced in India get absorbed in the domestic market. In fact, the domestic demand for cashew nut is steadily increasing in India.

Among the major raw cashew producing states, the production and productivity is the highest in Maharashtra, mainly on account of the use of high yielding varieties of crops, adoption of better management practices and the provision for protective irrigation. According to DCCD figures, as on 2015-16, Kerala ranks 5th in the production of raw cashew nuts. The state-wise estimates on area under cultivation, Production and productivity of cashew in India is given in **Appendix 3.48**.

Cashew Industry- Kerala scenario

The Cashew Industry in Kerala is mainly concentrated in Kollam District. The Central Government recognises Kollam as a “Centre of Cashew Industry”. The industry is highly labour intensive and employs more than 2 lakh workers, a majority of them women (above 90 per cent). Thus the industry provides a source of income for a large number of low-income families. In 2014-15, the export of cashew and cashew Kernels through Cochin port was 68150 MT. Kerala accounts for 11 per cent of cashew production and 35 per cent of all cashew nut processing units in India. The state needs around 6 lakh MT of raw cashew in a year for catering to the needs of its 800 factories.

During the 11th Five year Plan, the state government allotted an amount of ₹186.50 crore for the cashew sector and the expenditure out of this was ₹175.78 crore (94 per cent). The overall allocation

and expenditure for the cashew sector as part of the State’s Five year Plan programmes from 2012-13 to 2016-17 (up to December 14, 2016) are provided in **Table 3.14**.

Table 3.14 shows that the budgeted outlay during 12th plan was ₹236.00 crore ,20.98 per cent increase over 11th plan and the expenditure as on December 14, 2016 was ₹215.00 crore (91.10 per cent).

With respect to the production of raw cashew nuts, Kerala had the top rank among Indian states in the early 1990s, but its position has now dropped to the 4th, behind Maharashtra, Andhra Pradesh, and Orissa. The status of area as well as production of cashew for the period from 2010-11 to 2015-16 is depicted in **Figure.3.25**.

Area and yield per acre of Cashew Cultivation has decreased in Kerala mainly due to the replacement of cashew with crops such as rubber and rapid urbanisation. Increasing the area under cashew cultivation in Kerala from the current 90,000 ha to around 2 lakh ha can give a boost to cashew industry in the state.

The Kerala State Cashew Development Corporation (KSCDC) and Kerala State Cashew Workers Apex Co-operative Society (CAPEX) are the two agencies of the State engaged in cashew processing sector in Kerala.

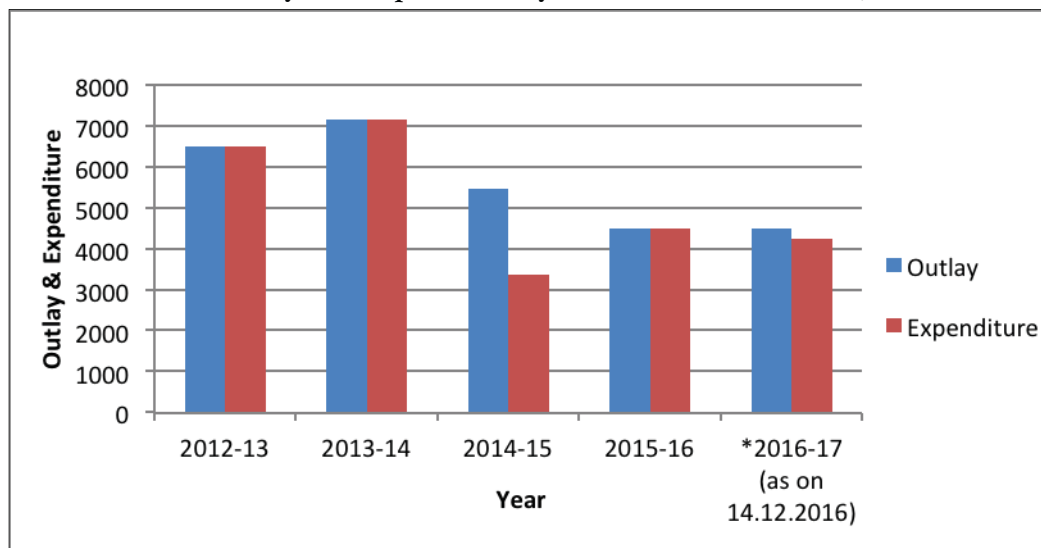
Table 3.14
State Plan Outlay and Expenditure by Cashew Sector in Kerala, ₹ in crore

Year	Outlay	Expenditure	Expenditure as per cent of Outlay
2012-13	65.00	65.00	100
2013-14	71.50	71.50	100
2014-15	54.50	33.50	61.47
2015-16	45.00	45.00	100.01
*2016-17	45.00	42.31	94.03
Grand Total	236.00	215.00	91.10

* As on December 14, 2016

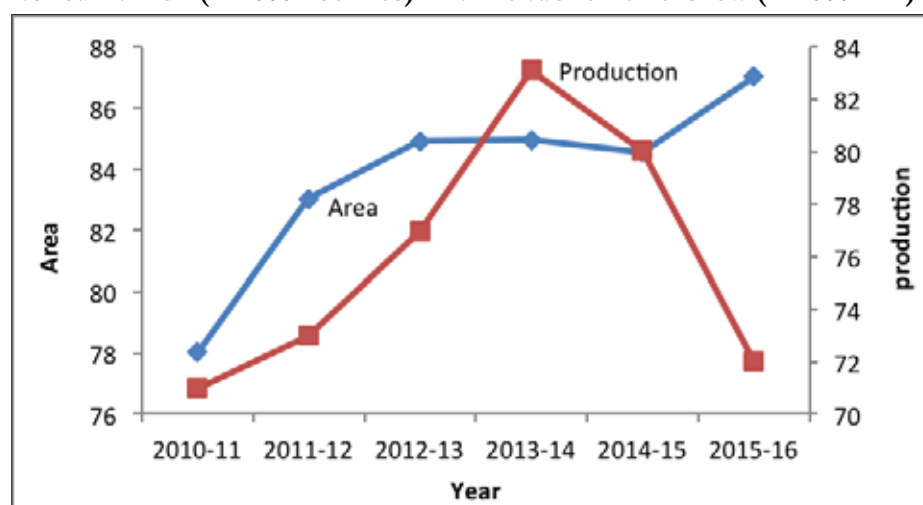
Source: Accounts and Planspace, State Planning Board

Figure 3.24
State Plan Outlay and Expenditure by Cashew Sector in Kerala, ₹ in lakh



Source: Cashew export Promotion council, Kollam

Figure 3.25
Area under cultivation (in 1000 hectares) and Production of cashew (in 1000 MT) in Kerala



Source: Cashew export Promotion council, Kollam

The Kerala State Cashew Development Corporation (KSCDC)

The Kerala State Cashew Development Corporation (KSCDC) has 30 factories with about 11000

workers. The Corporation processes raw cashew nuts and produces value added products. The Corporation provided, on an average, employment for 106 days to its workers in 2015-16. During this period, Corporation has provided employment to 10632 persons and the total turnover achieved was ₹6940 lakh, which is 52.76 per cent less than in

the previous year of ₹14690 lakh. The Corporation incurred a loss of ₹2058 lakh, which is 37.24 per cent less than the loss of Rs. 3279 lakh of the previous year. The highest rate of loss was reported during 2012-13 amounting to ₹88768 lakh. The performance of KSCDC during the last 5 years is given in **Appendix 3.49**. CAPEX and KSCDC altogether employ about 14600 workers which is less than 10 per cent of the total workers in this sector in the State. The rest of the cashew workers in Kerala are engaged in the private sector. KSCDC is committed to the modernisation of the cashew industry, brand building for the industry, and upgradation of cashew processing facilities in the State.

Lack of working capital, high raw material costs, high proportion of wages to total costs and severe competition both within India and internationally are among the major challenges faced by KSCDC.

Cashew Workers Apex Co-operative Society (CAPEX)

CAPEX with headquarters in Kollam is the apex body of cashew workers' primary societies engaged in the procurement of raw cashew nuts and marketing of the processed Kernels. The main objective of the society is to organize cashew industry in the state on commercial basis, rendering assistance to affiliated societies, in the matter of procurement and distribution of raw-nuts, making available funds for processing and marketing of kernels and

other items produced in the factories of the affiliated societies. CAPEX commenced its commercial activities in the middle of 1985. The Society owns 10 factories and one packing centre. Modern Cashew shell cutting machine, electric bormas, steam cookers, peeling machines have been installed for enhancing the efficiency of production. At present there are about 3600 workers working in the society. CAPEX could provide employment for 232 days in 2015-16. CAPEX has appointed 36 active franchisees all over Kerala and 6 franchisees outside Kerala to market CAPEX branded cashews. During 2015-16 CAPEX provided employment to 87,8120 persons and achieved a total turnover of ₹7372 lakh, which is 0.18 per cent less than ₹7385.74 lakh achieved in the previous year. During this period CAPEX was running a loss of ₹1537 lakh, which is 6.3 per cent greater than that of the previous year. The loss of ₹1445.95 lakh in 2014-15 was the highest rate of loss reported since 2008-09.

Modernization and partial mechanization of cashew factories of CAPEX, and Brand building and market awareness in India and International Market are the schemes implemented through CAPEX. A total of ₹1000 lakh has been provided during 2015-16 for implementing the above two schemes. Accordingly, an amount of ₹4 crores each was utilized for raw material purchase and for disbursement of Bonus. Around Rs. 200 lakh was utilised for advertisement and exhibitions for promoting sales. The performance of CAPEX during the last 5 years is given in **Appendix 3.50**.

Table 3.15
Achievements of CAPEX during 2012-13 to 2016-17, ₹ in lakh

Year	Domestic Sales	Export Sales	Total Turnover
2012-2013	5309.39	1573.61	6883
2013-2014	4229.58	2117.42	6347
2014-2015	5944.52	1440.48	7385
2015-2016	5906.13	1465.87	7372
2016-2017	1752.20	1481.80	3234
Total	23141.82	8079.18	31221

Source: CAPEX, Kollam

Achievements and Future Strategies

CAPEX is functioning as a model employer in cashew industry by giving all the benefits as per the Government norms to poor cashew workers by providing maximum working days and preventing workers from exploitation by private managements. By giving employment, CAPEX has directly or indirectly contributed to the welfare of the society. CAPEX has upgraded its facilities enabling mechanization of process thereby maintaining a hygienic work environment. 10 factories and packing centres have been upgraded and modernized, and electric bormas and packing machines at packing centres have been installed. For promoting sales, advertisement and exhibitions were conducted. Due to its good performance, CAPEX could achieve “One star export house” status and ISO 22000 certification. For promoting its products in divergent markets, CAPEX has appointed 36 active franchisees all over Kerala and 6 franchisees outside Kerala. During the first four years of the 12th Five Year Plan, CAPEX has created 916 working days and during 2016-17, till date, the Society created 84 working days. The sale, export and turnover of CAPEX are given in **Table 3.15**.

CAPEX is facing shortage of working Capital and bank finance. It is functioning solely with the plan funds which often is not received in time. This slows down the timely procurement of cashew nuts during the season. Being a seasonal agricultural product, the raw nuts are to be procured during the season itself. It will be beneficial if good quality cashew raw nuts are available from national and international markets.

Kerala State Agency for the Expansion of Cashew Cultivation (KSACC)

Kerala State Agency for the Expansion of Cashew Cultivation (KSACC) was constituted by Government of Kerala in 2007 and is headquartered in Kollam. This agency was established with a view to overcome the crisis of declining domestic pro-

duction of cashew nuts resulting from the large shortfall of area under cashew cultivation in the State. The vision of the agency is to increase the domestic annual raw nut production from 65000 MT to 1,50,000 MT in a phased manner through promotion of high yielding cashew grafts and a steady supply of raw cashew nuts to the industry in Kerala. Since 2008, KSACC has been organizing promotional activities in cashew cultivation and distributing cashew grafts of high yielding varieties and financial assistance to farmers and institutions in the State. The agency initiated the ‘Cultivation of Organic Cashew and Establishment of Raw Nut Bank’ project from 2007-08 onwards. The main objectives of the project are to enhance, production and productivity of cashew by adopting high technology, and high yielding grafts, achieve women empowerment through formation of SHGs for processing and value-addition, reduce the heavy dependence on import of raw cashew nuts, and create additional direct and indirect employment in cashew cultivation and processing. KSACC is the nodal agency for cashew cultivation activities in Kerala, and is approved by the National Horticulture Mission. The agency distributed 3, 02,286 grafts (1511 Ha approx.) to farmers under cultivation programme up to September 30, 2015.

Physical highlights of KSACC during 12th Five Year Plan

The major physical highlights of KSACC during the 12th Five Year Plan are; an area of 16525 ha was brought under cashew cultivation, distributed subsidy to farmers, promoted cashew cultivation in agricultural land of farmers, in land belonging to PSU’s factory and other institutions with the support of Grama Panchayths & Department of Agriculture, conducted research project activities with the help of Kerala Agricultural University (KAU), initiated a Pilot project for the production of Bio-Ethanol from cashew apple under the guidance of Cashew Export Promotion Council of India (CEPCI), and took steps to prevent exploitation of cashew farmers by middle men through “KarshakaKootayma”. Further, steps have been

taken for production of Value Added Products of cashew apple. Regional seminars, trainings for farmers in all the districts, awareness campaigns in panchayaths and publicity through press and audio visual media were conducted.

Cashew Export Promotion Council of India (CEPCI)

The Cashew Export Promotion Council of India (CEPCI, Govt. of India), a not-for-profit company, was established at Kollam, with the objective of promoting exports of cashew kernels and cashew nut shell liquid from India. The council operates plan schemes of Government of India, and offers various services to its member exporters. As per the export-import statistics, the share of agricultural products in the total export earnings of the country during 2015-16 is 6.84 per cent and cashew kernels was ranked 6th among them. The total export of Cashew Kernels from India during 2015-16 was 96,346 M.T valued at ₹4952.12 Cr. There has been a decrease of 19 per cent in quantity and 9 per cent in value in Rupee terms compared to 2014-15 when the export was 1,18,952 M.T of Cashew Kernels valued at ₹5432.85 (Source: Annual Report & Accounts, Cashew Export Promotion Council). The Export of Cashew & Foreign exchange earnings are given under External Trade in Chapter 6.

The council has set up a Laboratory and Technical Division of international standards which is recognised as an approved Research Centre for Doctoral research by Kannur University and University of Kerala. The service of CEPC Lab is available to cashew industry as well as entire food processing industry in India and abroad. The CEPC Laboratory & Technical Division, Kollam analysed 8431 samples during 2015-16.

Constraints of the Cashew Sector

The state needs around 6 lakhs MT of raw cashew in a year for its 800 factories. To overcome the problem of mismatch between demand and supply, state spends foreign exchange worth `5000 crore every year for importing the raw cashew nuts from foreign countries. If around 2 lakh Ha of land in state is brought under cultivation, foreign exchange can be saved. The sector can even earn foreign exchange worth ₹6000 crore to country's exchequer by exporting cashew kernels. As rubber plantation is facing a crisis due to declining prices and high labour cost more people are now attracted to cashew cultivation as its cost of cultivation is low and yields high income. This is a great opportunity to promote this cultivation and also encouraging women SHG groups for the production of value added products from cashew apple.

Low productivity is the major constraint in the growth of the cashew sector. Wage rates, welfare, safety and healthy working environment of the workers needs to be addressed. Also problems such as supply-demand imbalance, costs involved in mechanization in the processing sector and environmental issues have to be tackled for the sustainable economic development of Cashew sector in the State.

Developmental Goals

In the light of escalating demand for cashew, serious attention is needed to identify the gaps and reorient research and development programmes in the area of Cashew cultivation in the State to meet the challenges of attaining self-sufficiency in raw cashew nut production. Emphasis should be on Employment Generation with reasonable wages, Research and development for the development of cashew production, processing and development of new value added products of cashew including hand crafted cashew, and steps for the utilization of cashew apple.

Section 6

LABOUR AND LABOUR WELFARE

Labour and labour welfare is the cornerstone of human development policies undertaken by the Government to attain greater efficiency and productivity and ensure safety and security of its human resources. Labour market has witnessed significant transformation in the last two decades both in terms of employment conditions and industrial relations. Labour is the subject in the concurrent list where both centre and state government are empowered to enact legislations. Kerala has always recognised the value addition of the working class in the economic transition of the state which is reflected in the welfare measures enacted by the government. It is accepted fact that labour laws and labour welfare schemes implemented by the State have been commendable compared to other parts of the country. Existing unique labour structure in the state have been achieved through the active intervention of the Government on right to work of one's choice, right against discrimination, prohibition of child labour, social security, protection of wages, redressal of grievances, right to organize and form trade unions, collective bargaining and participation in management. The Government is of the view that every employee/ worker should be a member in a Labour Welfare Board and they must be protected by the State throughout their lives. Currently around 29 Labour Welfare Fund Boards exist in the State, of which 16 are under the Labour Commissionerate.

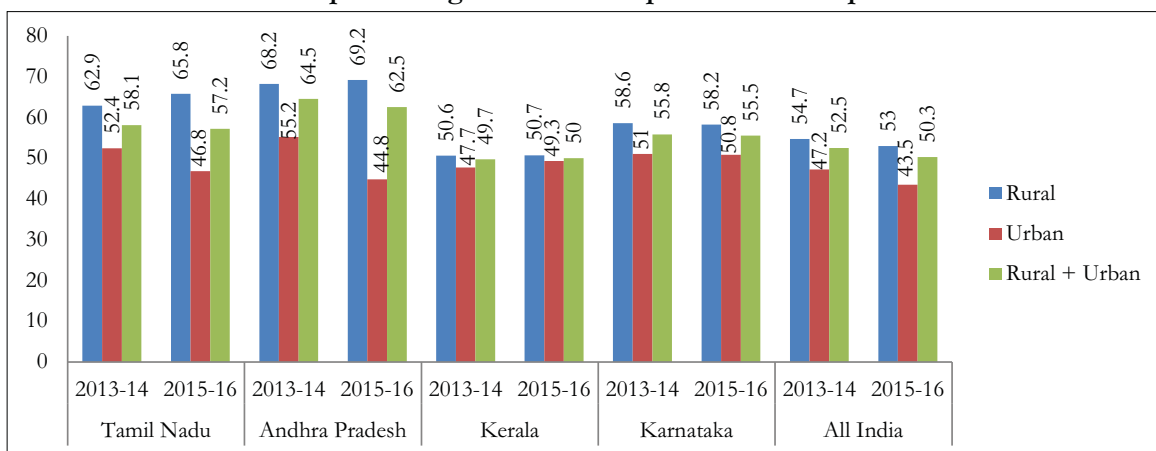
Kerala however, has been facing challenges in terms of high rate of unemployment and under employment, low rate of productive employment, inadequate levels of skill creation and training, low level of labour force participation and low worker population ratio and disparity in wages of male and female. Essentially, the state has to create employment opportunities and employment-intensive growth and for which the labour force has to be allowed from low-value added to high-value added activities.

The state aims to achieve job induced growth in the economy to create new jobs in both urban and rural Kerala, a unified and consolidated legislation for social security schemes, reprioritisation of allocation of funds to benefit vulnerable workers, long term settlements based on productivity, labour law reforms in tune with the times, amendments to Industrial Disputes Act, 1947 and revamping of curriculum and course content in Industrial Training Institutes. Monitoring & Evaluation have also been considered integral to labour reforms against the backdrop of increasing inter-state and international migration.

LABOUR FORCE PARTICIPATION RATE (LFPR)

The situation of labour force in Kerala can be gauged from the indicators such as LFPR, WPR, daily wage rate and trend in industrial relations. Low level of LFPR is the perpetual characteristic of Kerala labour market among Indian states. Apart from slight increase of LFPR in urban region, labour force participation has been constant over the last two years. As per the 5th Annual Employment & Unemployment Survey (2015-16) of Labour Bureau, Ministry of Labour, Government of India, LFPR in Kerala is 50 per cent, a marginal increase by 0.3 per cent over the year 2013-14. Even if we are at par with the national average, LFPR in our neighbouring states is better at 62.5 per cent, 57.2 and 55.5 per cent in Andhra Pradesh, Tamil Nadu and Karnataka respectively. Similarly in Rural areas, we are not only distant from national average but also from our neighbouring states of Andhra Pradesh and Tamil Nadu where the rate is 69.2 and 65.8 per cent respectively. **Figure 3.26** shows the LFPR of Kerala and other southern states.

Figure 3.26
LFPR for persons aged above 15 as per Usual Principal Status



Source: Labour Bureau, Ministry of Labour, GoI

Yet another aspect of significant concern is the low female labour force participate rate. North eastern and southern states, in general, have a higher LFPR compared to low levels in northern states. The details regarding female LFPR is covered under Gender section in Chapter 4.

WORKER POPULATION RATIO (WPR)

Worker Population Ratio (WPR) is an indicator used for analysing the employment situation and knowing the proportion of population actively contributing to the production of goods and services in the economy. The 5th Annual Employment & Unemployment Survey of Labour Bureau, Ministry of Labour, Government of India shows a declining trend in WPR. Along with national average, the WPR is declining among the southern states. The WPR in Kerala is 43.8 per cent as against the all India average of 47.8 per cent. Among the southern states, performance of Andhra Pradesh is admirable at 60.1 per cent followed by Tamil Nadu and Karnataka at 54.8 and 54.7 per cent respectively. In rural Kerala, the WPR is reported as 44.3 per cent against 66.6 and 62.9 per cent of Andhra Pradesh and Tamil Nadu. **Figure 3.27** shows the trend of WPR in Kerala and other southern states.

SELF EMPLOYED PERSONS IN LABOUR FORCE

Labour force engaged in self-employment in the state is 27 per cent which is 19.6 per cent lower than the national average. Male female gap in self-employment labour force in the state is 9.8 per cent which is 1.3 per cent higher than the national average of 8.5 per cent.

Even if self-employment among the labour force is high in Karnataka, the difference between male and female self-employed persons is high at 14.8 per cent. In Andhra Pradesh this gender gap is low at 4.9 per cent. **Figure 3.28** shows the percentage of self-employed persons in labour force and gender gap in Kerala and other states.

CASUAL WORKERS IN THE LABOUR FORCE

Casual workers are employees who do not have regular or systematic hours of work or an expectation of continuing work. A typical casual employee is employed on a daily basis when the need arises. Percentage of casual workers among the labour force in the state is 43.8 percent which is 11 per cent higher than the national average of 32.8 per

Box No 3.9
Concepts & Measurement of Labour Force

- 1. Labour Force Participation Rate:** - Labour Force Participation Rate (LFPR) is defined as the number of persons in the labour force per 1000 persons.

$$\text{LFPR} = \frac{\text{no of employed} + \text{no of unemployed persons}}{\text{total persons}} \times 1000$$

- 2. Worker Population Ratio:** - Worker Population Ratio (WPR) is defined as the number of persons employed per 1000 persons.

$$\text{WPR} = \frac{\text{no of employed persons}}{\text{total persons}} \times 1000$$

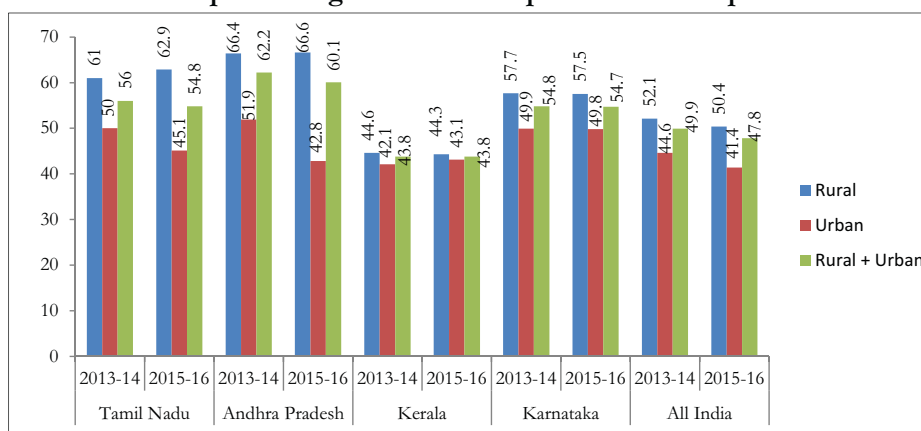
Measurement of Labour Force

In a country where majority of the workers are employed in the unorganized sector and pursuing multiple activities, estimating labour force and its derivatives by a single approach is a difficult task. In such cases no single measure is appropriate to estimate the labour force parameters precisely. As per International practice, Labour Force related parameters can be estimated for both longer reference period and current or shorter reference periods. Accordingly, based on longer reference period, Labour Force related parameters may be derived by the following two different approaches.

- i) **Usual Principal Status (UPS) Approach:** - The major time criterion based on the 365 days is used to determine the activity pursued by a person under the usual principal status approach. Accordingly, the major time spent by a person (183 days or more) is used to determine whether the person is in the labourforce or out of labour force. A person found unemployed under this approach reflects the chronic unemployment. The usual principal status approach estimates are derived for a moving reference period of last twelve months.
- ii) **Usual Principal and Subsidiary Status (UPSS) Approach:** - The other important approach to measure the labour force parameters is the usual principal & subsidiary status approach. This approach is a hybrid one which takes into consideration both the major time criterion and shorter time period (30 days or more in any economic activity). Thus a person who has worked even for 30 days or more in any economic activity during the reference period of last twelve months is considered as employed under this approach. In this approach, the reference period is same as taken in the usual principal status approach (UPS). This approach is also called the usual status approach.

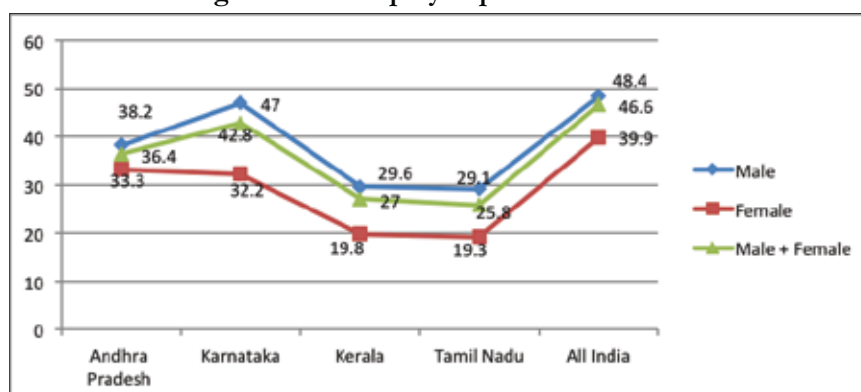
Source: 5th Annual Employment and Unemployment Survey of Labour Bureau

Figure 3.27
WPR for persons aged above 15 as per Usual Principal Status



Source: Labour Bureau, Ministry of Labour, GoI

Figure 3.28
Percentage of Self Employed persons in Labour Force



Source: Labour Bureau, Ministry of Labour and Employment, GoI

cent. Among the southern states, Andhra Pradesh and Tamil Nadu have the highest level of casual workers in labour force at 48.4 and 47.2 percent respectively. (Figure 3.29)

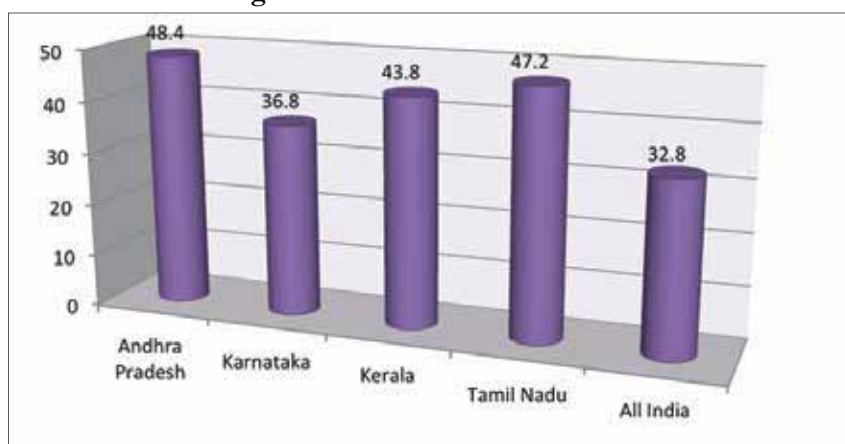
WORKERS AVAILABLE AND ACTUALLY WORKED

Out of the total workforce available for 12 months the actual percentage of workers engaged in work for 12 months is 63.4 in Kerala. In Karnataka and Tamil Nadu this status is 70.8 and 70.7 respectively. Period wise classification in Kerala shows that 24.7 percent of the workers are engaged in work for a period 6 to 11 months and 10.4 percent of

workers are engaged in work for 1 to 5 months. Figure 3.30 shows the details of workers available for 12 months but actually worked in Kerala and other southern states.

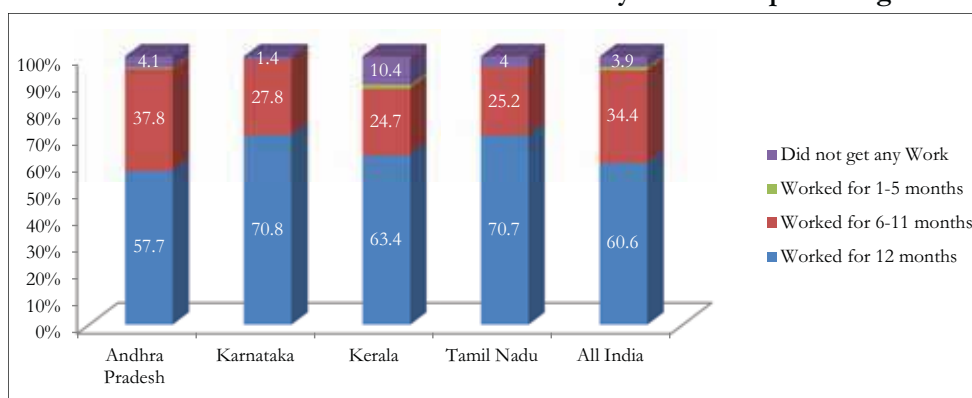
Gender wise classification shows that male workers actually engaged in works available for 12 months is 69.3 percent and female workers for the same period is 50.6 percent in Kerala. Generally, male workers have more days actually worked than the female workers. Male – Female difference for the workers available for 12 months and actually worked in Kerala is 18.7 per cent which is 8 per cent higher than Karnataka, 4.9 per cent than Tamil Nadu and 4.7 per cent than all India average of 14 per cent. Figure 3.31 shows the male fe-

Figure 3.29
Percentage of Casual Workers in Labour Force



Source: Labour Bureau, Ministry of Labour and Employment, GoI

Figure 3.30
Workers available for 12 months but actually worked in percentage



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

male workers available for 12 months but actually worked in Kerala and other southern states.

WORKERS AVAILING SOCIAL SECURITY

Workman social security plays a vital role in economic and social livelihood of every worker. A worker in Kerala is relatively protected than other parts of the country. As per the report of 5th Annual Employment and Unemployment survey, the percentage of workers except self-employed who availing social security in Kerala is 23.2 which is 1.6 percent higher than national level and 9.8 higher

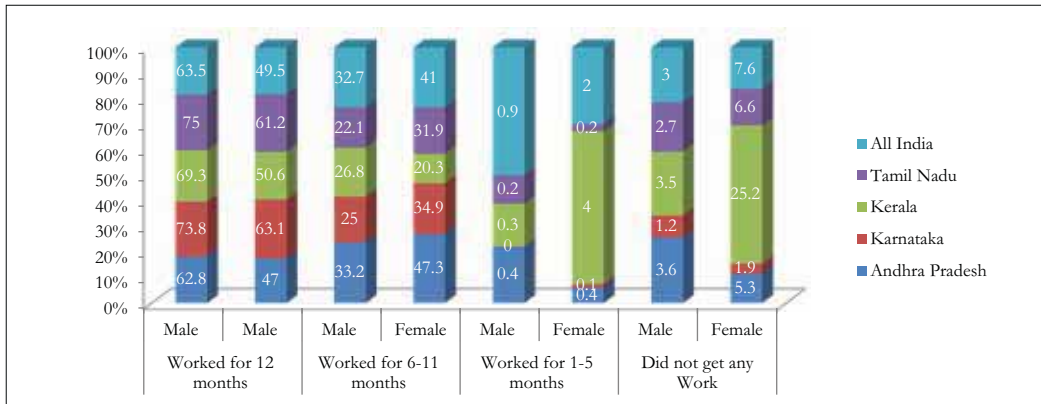
than Andhra Pradesh and 2.9 percent than Tamil Nadu. Among the southern states, Karnataka provides social security to 27.1 percent of the workers except self-employed which is 3.9 percent higher than Kerala. **Figure 3.32** shows the details of workers except self-employed availing social security in Kerala and other parts of southern India.

WORKERS RECEIVED PAID LEAVE

Paid leave will enable workers to meet the needs of their families and of the firms they work for in better and more productive ways. The percent-

Figure 3.31

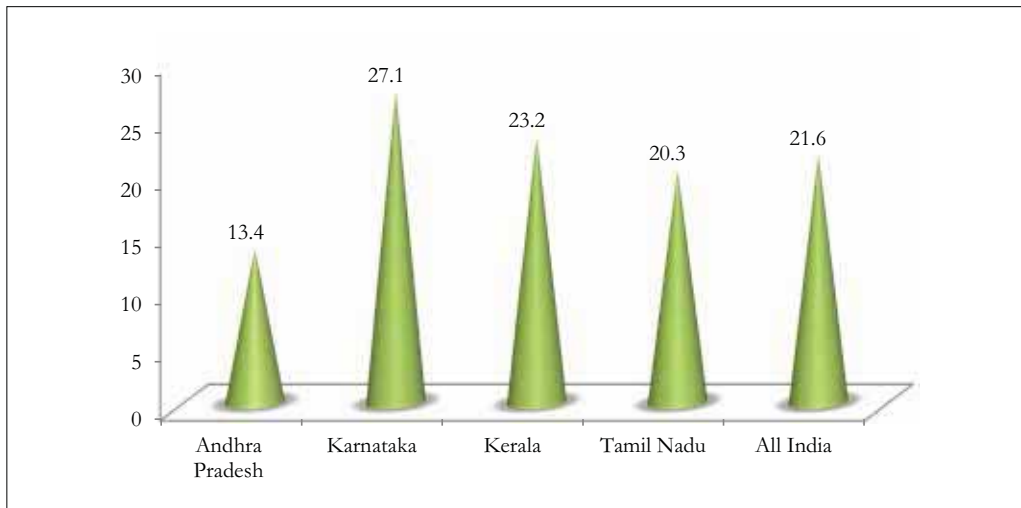
Male – Female workers available for 12 months but actually worked, in per cent



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

Figure 3.32

Workers except self-employed who availing social security



Source: Labour Bureau, Ministry of Labour and Employment, GoI

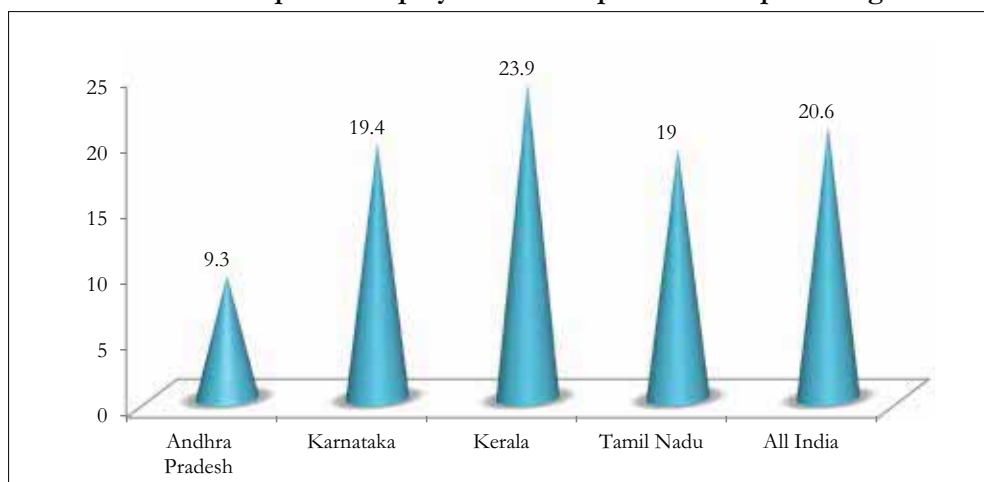
age of workers except self-employed who received paid leave in Kerala is 23.9 per cent which is 3.3 per cent higher than national average and 14.6 than Andhra Pradesh and 4.9 per cent than Tamil Nadu. **Figure 3.33** shows the details of paid leave for workers except self-employed in Kerala and other southern states.

SOCIAL SECURITY AND PAID LEAVE FOR CASUAL WORKERS

Casual workers are not part of the permanent

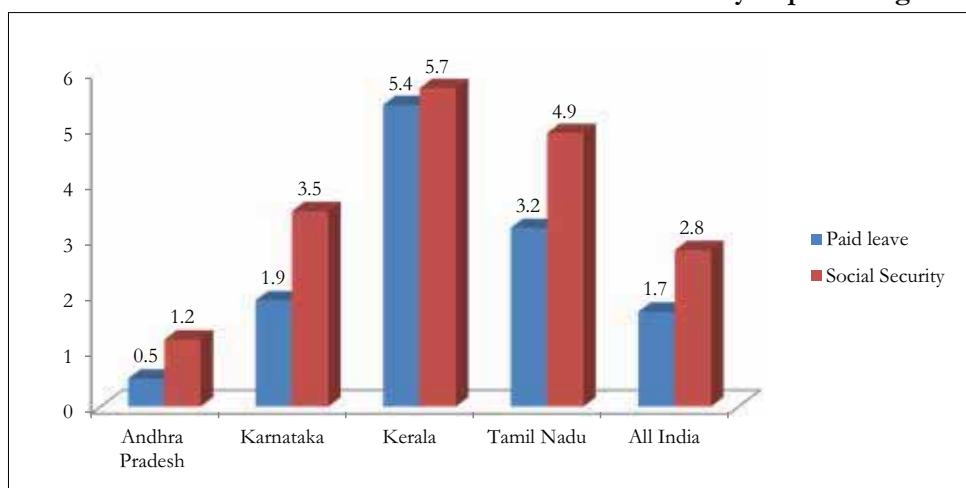
workforce, but they supply services on an irregular or flexible basis, often to meet a fluctuating demand for work. Level of benefits received by the casual workers is the symbol of labour friendly approach of the society. Relatively, benefits received by casual workers in Kerala are much better than other states of the country. The casual workers who receive social security in Kerala is 5.7 percent which is 2.9 percent higher than the national average. In case of paid leave, 5.4 percent of the casual workers in Kerala received the benefit which is 3.7 per cent higher than the national average and 4.9 per cent higher than Andhra Pradesh and 3.5 per cent than Karnataka. **Figure 3.34** shows the

Figure 3.33
Workers except self-employed received paid leave in percentage



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

Figure 3.34
Casual workers received Paid Leave and Social Security in percentage



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

percentage of casual workers received paid leave and social security in Kerala and other parts of the south India.

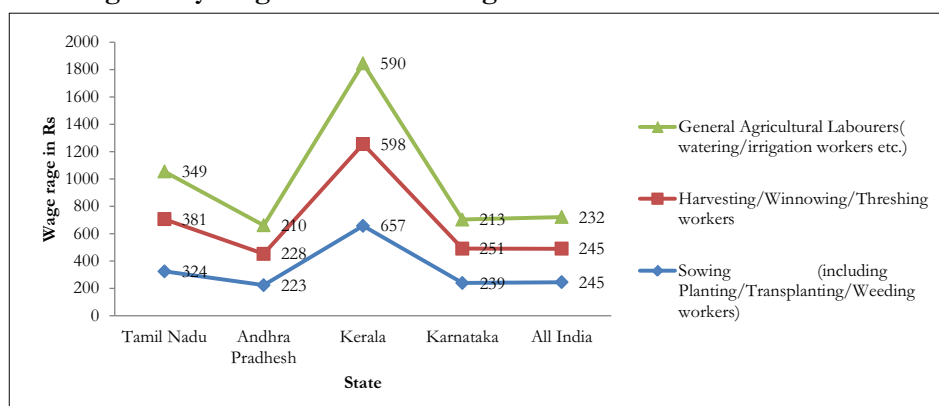
DAILY WAGE RATE

As compared to other parts of the country, reported wage rate of workers in both agricultural and non-agricultural sectors of Kerala is high. Average daily wage rate of agricultural and non-agricultural workers in India published by Labour Bureau,

Government of India shows that for male general agricultural workers in rural Kerala it is ₹590 as on June 2015. The national average of the wage rate for this category of workers is only ₹232. The wage rate in Kerala is over 150 percent higher. **Figure 3.35** shows the wage rate of male agricultural workers in rural area in Kerala vis-a-vis the national average and the southern states.

For female agricultural workers in rural Kerala, ₹410 is the average daily wage rate compared to the national average of ₹177. For sowing and

Figure 3.35
Average Daily Wage Rate of Male Agricultural Workers in Rural Kerala*



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

*As on June 2015

harvesting workers, the wage rate in Kerala are 452 and 403 compared to the national average of ₹196 and ₹206 respectively. A comparison of daily wage rates of female agricultural workers in southern states is given in the **Figure 3.36**

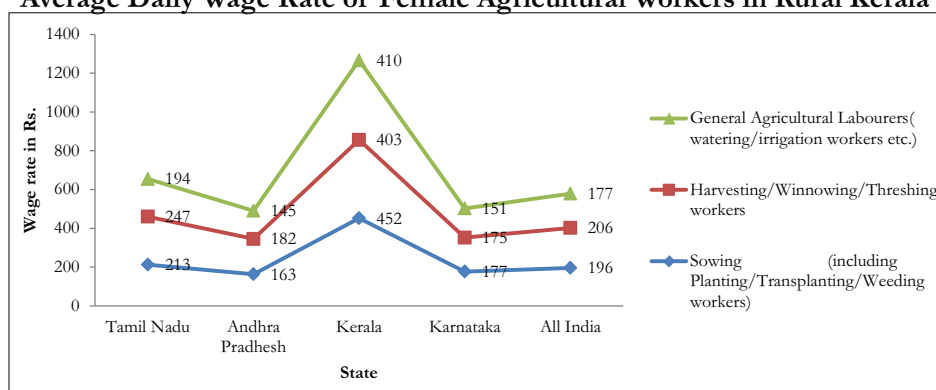
Even though the wage rates of agricultural labourers in rural Kerala are higher than the wages in other parts of the country, the wage disparity among the male and female workers is noticeable. The male-female wage gap among the rural workers engaged in harvesting/winning/threshing is 33 per cent that is female worker wage rate is equal to 67 per cent of male workers' wage rate. **Table 3.16** shows the male-female difference of

agricultural workers in Kerala and other southern states of India.

Similar to agricultural workers, the wage rate for non agricultural labourers in rural Kerala is also higher than those in other parts of the country. **Figure 3.37** shows the average daily wage rates of the non agricultural workers engaged in different occupations in Kerala. The daily wage rate of a carpenter in Kerala is ₹726, which is 102 per cent higher than the national average of ₹358. Likewise, the average daily wage rate of a mason in Kerala is ₹737 which is 86 per cent higher than the national average of ₹395.

The average daily wage rates are much higher in

Figure 3.36
Average Daily Wage Rate of Female Agricultural Workers in Rural Kerala*



Source: Labour Bureau, Ministry of Labour and Employment, GoI.

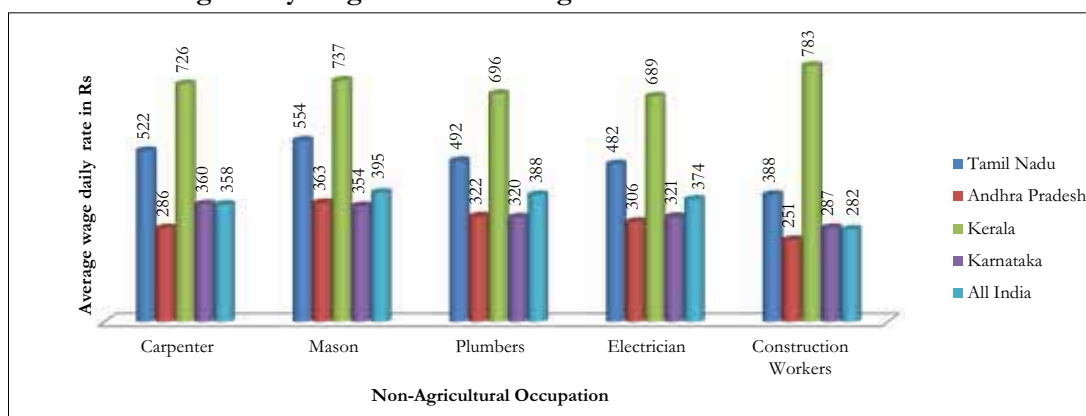
*As on June 2015

Table 3.16
Wage difference among male and female agricultural workers in Kerala

State	Sowing (including Planting/ Transplanting/ Weeding workers)		Harvesting/ Winnowing/Threshing workers		General Agricultural Labourers	
	Wage rate (Female)	per cent of women wage rate to men	Wage rate (Female)	per cent of women wage rate to men	Female wage rate	per cent of women wage rate to men
Tamil Nadu	213	66	247	65	194	56
Andhra Pradesh	163	73	182	80	145	69
Kerala	452	69	403	67	410	70
Karnataka	177	74	175	70	151	71
All India	196	80	206	84	177	76

Source : Compiled data from Labour Bureau, Ministry of Labour and Employment, GoI

Figure 3.37
Average Daily Wage Rate of non-agricultural workers in rural Kerala



Source: Labour Bureau, Ministry of Labour and Employment, GoI

Kerala that attracts in-migrants into the state, especially where wage rates are very low. Further, the wide disparity in male-female wage rates is an indication of the fact that the perception of gender equality is far away from reality.

COMPOSITION OF WORKERS

The labour community in Kerala mainly consists of those who are engaged in the informal sector (loading & unloading, casual work, construction

work, brick making self employment), traditional industries (coir, cashew, handloom, beedi, manufacturing sector (small, medium and large industries), IT industry, units in export promotion zones and those who are seasonally employed.

INDUSTRIAL RELATIONS

Healthy relation between employer and employee is the key to sustained industrial development. The responsibility of the Labour Department is to aid and maintain a harmonious balance between the

labourers and management to maintain conducive atmosphere for achieving the objective of industrial growth and prosperity in the state.

The man-days lost due to strikes in the state for the year 2016 (upto October) is 34 thousand as against 2.68 lakh in the year 2013. **Figure 3.38** shows the man days lost due to strikes in Kerala. (Appendix 3.51).

MAN DAYS LOST DUE TO LOCK OUT

However, man days lost due to lock out shows an increasing trend over the last two years. During the year 2014, total man days lost due to lock out is 2.91 lakh, which increased to 4.69 lakh in 2016

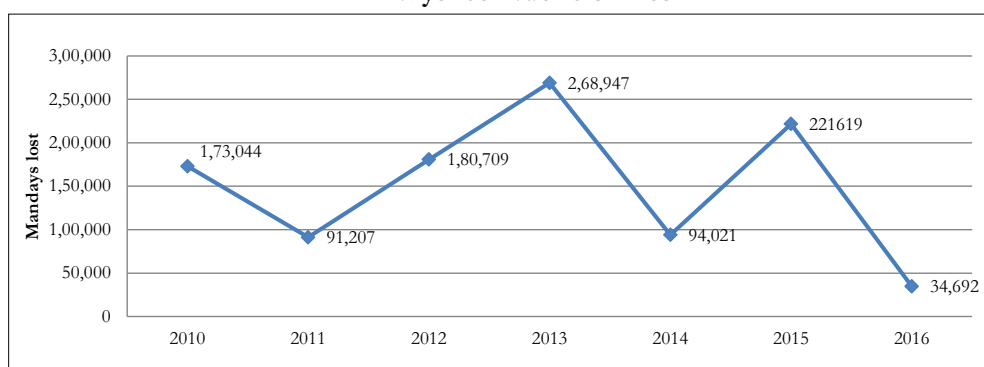
(upto October 31, 2016). **Figure 3.39** shows the trend of man days lost due to lock out in Kerala (Appendix 3.52).

MAN DAYS LOST DUE TO LAY OFF

Likewise, mandays lost due to lay off is 68.33 thousand in 2014 which increased to 3.15 lakh in 2016 (October 31, 2016). **Figure 3.40** shows the trend of mandays lost due to lay off in Kerala. (Appendix 3.53.)

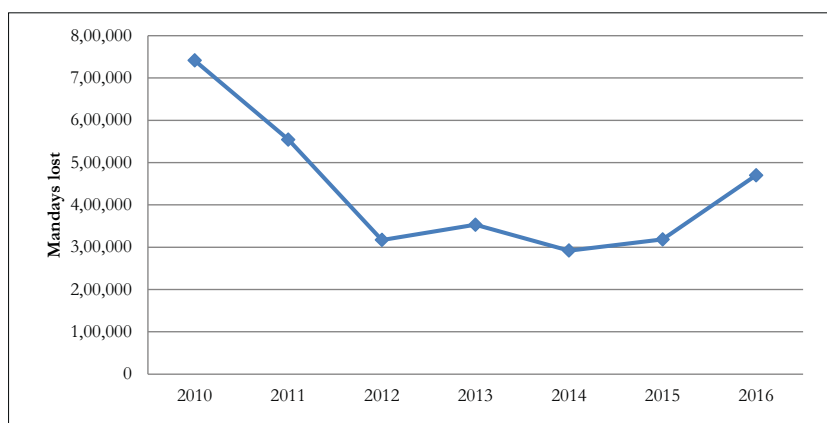
This is despite the fact that for the last ten years, the number of working factories in the state has steadily increased.

Figure 3.38
Mandays lost due to strikes



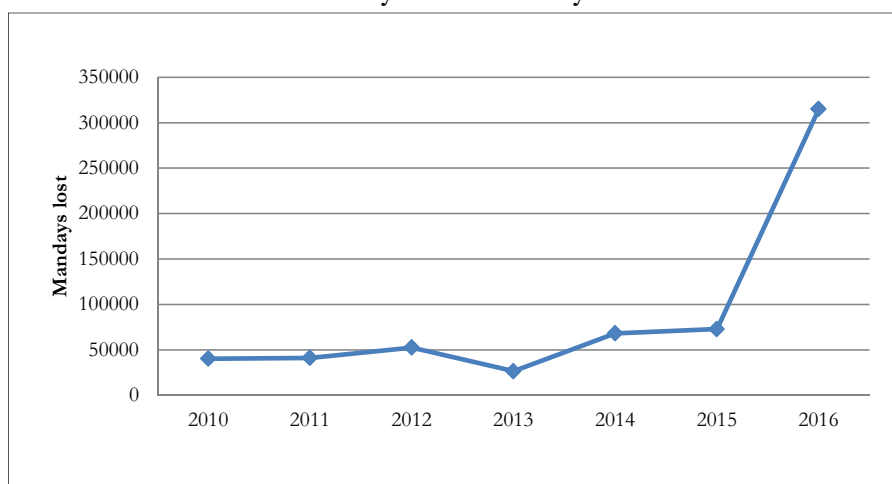
Source : Ministry of Labour and Employment, Government of India
* Upto October 31, 2016

Figure 3.39
Mandays lost due to lock out in Kerala



Source: Labour Commissionerate
* Upto October 31, 2016

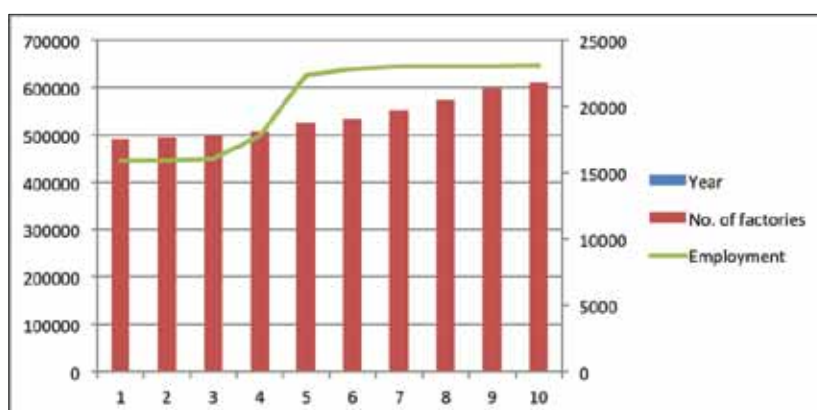
Figure 3.40
Man days lost due to lay off



Source: Labour Commissionerate, GoK.

* Upto October 31, 2016

Figure 3.41
Number of Working Factories in Kerala



Source: Factories and Boilers Department, GoK

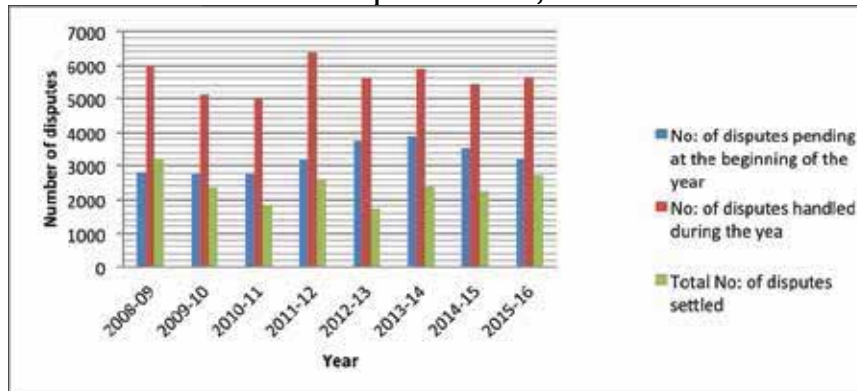
Number of factories working in the state during 2005 was 17641, which has increased to 22834 by 2016. Subsequently the average daily employment creation in these factories increased from 4.46 lakh in 2005 to 7.02 lakh in 2016. **Figure 3.41** shows number of working factories and employment details in Kerala.

INDUSTRIAL DISPUTES

Providing a platform for raising grievances and settlement of the issues between employee and employer is an essential requirement for ensuring harmonious labour relations in the state. In-

dustrial Disputes Act of 1947 provides the legal framework for the same though it applies only to the organised sector. It also regulates lay off and retrenchment. Number of disputes pending at the beginning of the year decreased from 3890 in 2012-13 to 2913 in 2015-16. There is an improvement in settlement rate of disputes as well. The total disputes handled during 2013-14 was 5909 and the disputes settled for the same period was 2384 which is 40.3 percent of the disputes handled. In 2015-16 number of disputes handled is 5642 and settled is 2729 which is 48 percent of the disputes handled. Details of number of disputes in Kerala are given in the **Figure 3.42. (Appendix 3.54)**

Figure 3.42
Industrial Disputes Details, in number



Source: Labour Commissionerate, GoK

Box 3.10

Concepts as defined in Industrial Disputes Act, 1947

Strike :-Section 2(q) of the Act defines the term ‘strike’ as cessation of work by a body of persons employed in any industry acting in combination or a concerted refusal, or a refusal under a common understanding of any number of persons who are or have been so employed to continue to work or to accept employment.

Lockout:-Lockout as defined in section 2(1) means the temporary closing of a place of employment, or the suspension of work, or the refusal by an employer to continue to employ any number of person employed by him.

Layoff :-As per section 2(KKK) of the Act, ‘Lay Offs’ means the failure, refusal or inability of an employer on account of shortage of coal, power or raw materials or the accumulation of stocks or the breakdown of machinery or natural calamity or for any other connected reason to give employment to a workman whose name is borne on muster rolls of his industrial establishment and who has not been retrenched.

Source: Statistics on Industrial Disputes, closure, retrenchments and lay-offs in India during the year 2013, Labour Bureau, Ministry of Labour, GoI

SAFETY OF THE FACTORY WORKERS

The Department of Factories and Boilers is the statutory authority to ensure safety, health and welfare of all workers in factories and the general public, living in the vicinity of factories through implementing various laws. The department carries out various programmes for the safety of the workers. During 2016-17 (upto October 31, 2016), 84 priority inspections have been done for Major Accident Hazard (MAH) factories, 125 air monitoring studies were completed in hazardous facto-

ries, 1232 medical examination of crusher factory workers and 47 inspections of hazardous factories other than MAH factories were conducted. The Department has been conducting training programmes not only for factory workers and employees but also for school children and general public near factory premises. (Appendix 3.55, 3.56, 3.57).

RASHTRIYA SWASTHYA BEEMAYOJANA (RSBY)

Rashtriya Swasthya Beema Yojana (RSBY) is a Health Insurance Scheme for BPL workers and

their families in the unorganized sector. This was introduced during 2008-2009 in all the 14 districts of Kerala. The annual insurance cover or in-patient treatment benefit is for a maximum amount of Rs. 30,000/- for a family of 5 members including the worker, spouse, children and dependent parents (if included in the BPL family list). The annual insurance premium is fixed through a tender process. The State Government provides 40 per cent of the premium and administrative cost. The Central Government provides 60 per cent of the premium (including cost of smart card) directly to the implementing agency, CHIAK (Comprehensive Health Insurance Agency, Kerala). The beneficiaries need to pay only ₹30/- as registration fee. The scheme has been implemented in the state since October, 2008. (**Appendix 3.58**)

COMPREHENSIVE HEALTH INSURANCE SCHEME (CHIS)

Comprehensive Health Insurance Scheme (CHIS) extends to all families other than the BPL families as per the guidelines of Government of India. The non-RSBY population is divided into two categories: (a) those belonging to the BPL (poor) list of the State government but not to the list as defined by the Government of India and (b) APL families that belong neither to the State Government list nor to the list prepared as per the guidelines of Government of India. In the case of the families belonging to the category (a), the beneficiaries will have to pay ₹30/- per annum per family as beneficiary contribution Smart Card. Under CHIS, a family can avail in-patient benefit and for upto ₹30,000/- as in the case of RSBY. Government and private hospital wise details of utilisation of the scheme is given under the health section in **Chapter 4**. Given the fact that only the empanelled hospitals (Public, Private and co-operative hospitals) are allowed to extend the RSBY/CHIS benefits, the quality and services is assured. Further, the coverage is likely to be increased to ₹1,00,000/-. In addition to RSBY and CHIS, the state government has also introduced another scheme called CHIS Plus. Under this scheme, the RSBY-CHIS BPL families are eligible for an additional ₹70,000/- treatment

benefit for patients of cardiology, neurology, and oncology.

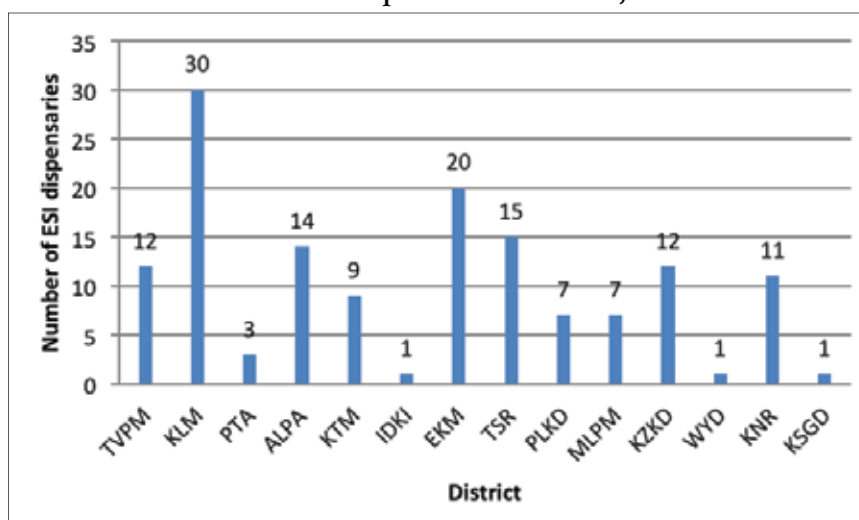
AAM ADMI BIMA YOJANA CAMPAIGN

Government of India has launched a new insurance scheme called Aam Admi Bima Yojana (AABY) covering 48 categories of households in the country. This has been implemented in the State since 2007-08. As per the scheme, the head of rural landless families or one earning member in each such family will be insured. This scheme is also implemented through CHIAK. The premium under the scheme will be ₹ 200/-. Out of which, 50 per cent shall be subsidy from the fund created for this purpose by Central Government and remaining 50 per cent will be contributed by the State Government.

EMPLOYEES STATE INSURANCE SCHEME

The Employees' State Insurance Scheme (ESI Scheme) of the Indian Government aims at protecting 'employees' against the hazards of sickness, maternity, disablement and death due to employment injury and to provide medical care to insured persons and their families. The comprehensive social security provisions are based on the ESI Act 1948. This scheme covers all the employees working in factories running on non-seasonal power that employ 10 or more persons, and factories not using power that employ 20 or more persons. It also includes those working in shops, hotels, restaurants, cinemas, road motor transport undertakings and newspaper establishments. Each insured employee and their employer are required to contribute a certain percentage of their wages to the ESIC every month. The ceiling wage rates are revised from time to time. The ESI Scheme runs like most of the social security schemes. It is a self-financing health insurance scheme and the contributions are raised from covered employees and their employers as a fixed percentage of wages. The payments are to be made on a monthly

Figure 3.43
District wise ESI Dispensaries in Kerala, in number



Source: Directorate of Insurance Medical Services, TVPM

basis. An employee covered under the scheme has to contribute 1.75 per cent of the wages whereas the employer contributes 4.75 per cent of the wages payable to an employee. The total contribution in respect of an employee thus works out to 6.5 per cent of the wages payable. However, employees earning less than ₹50 a day are exempted from making the contribution. All insured persons and dependants are entitled to free, full and comprehensive medical care under the scheme. This medical care is provided through a network of ESI dispensaries, empanelled clinics, diagnostic centres and ESI hospitals. Super speciality facilities are also offered through empanelled advanced medical institutions. Currently, six types of benefits are provided. These are medical, sickness, maternity, disablement, dependants' and funeral expenses. In Kerala there are 143 dispensaries whose distribution across the state is given in **Figure 3.43**.

MIGRANT LABOUR

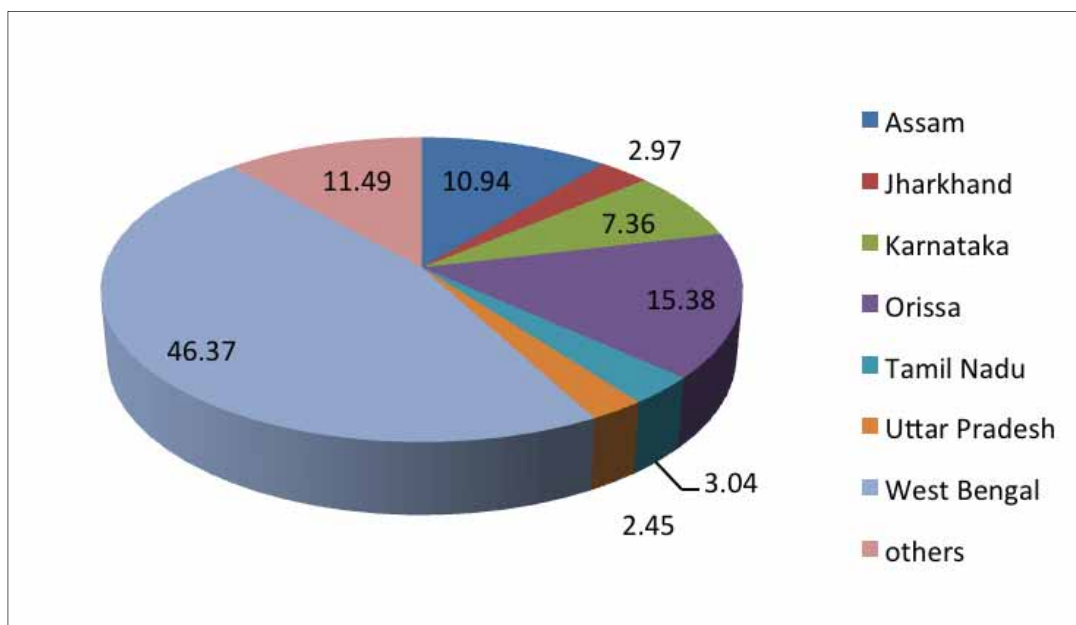
The recent trend in the employment sector in the State shows a large inflow of migrant workers from other states such as West Bengal, Bihar, Odisha, Uttar Pradesh, Chhattisgarh, and Jharkhand besides the neighbouring states. Working conditions of the inter-state migrant workmen are dealt under the Inter State Migrant Workmen Regulation of Employment and Conditions of Service

Act, 1979. As per the provisions of the Act, the contractor has to obtain a recruitment license from the state from where the workers are recruited (Original State) and an employment license from the state where they are employed (Recipient State). Accordingly the contractor and the principal employer become liable for ensuring the provisions envisaged in the enactment as an immediate employer and the principal employer respectively. But usually these workers cannot be brought under the purview of the enactment due to lack of statutory ingredients required to attract the ambit of the enactment such as an intermediary third party/contractor between the principal employer and the workmen. These workers are compelled to live in groups in unhygienic conditions near their working place without proper health facilities.

The distribution of migrant workers from different states is given below. As may be seen, out of the total ISM workers 46 per cent are from West Bengal followed by Orissa (15%) and Assam (11%). The origin-wise inter-state migrant workers are given in the **Figure 3.44**. The distribution of district wise migrated workers in the state shows that Ernakulam has the highest proportion of 17 per cent followed by Wayanad 13 per cent and Kannur 11 per cent. **Figure 3.45** presents district-wise ISM workers in Kerala.

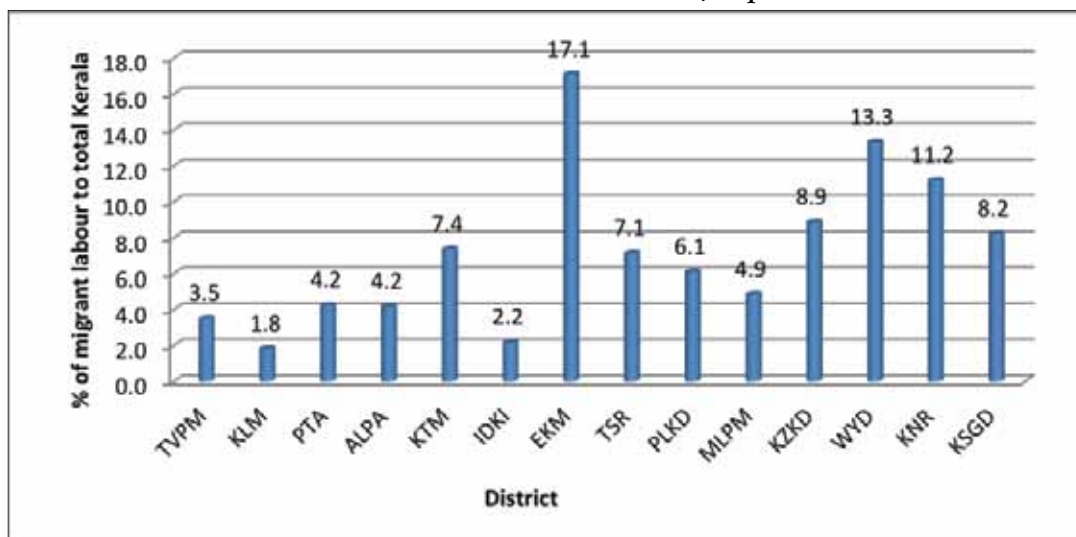
These ISM workers are engaged in different areas

Figure 3.44
Origin wise Inter State Migrant Workers in Kerala



Source: Labour Commissionerate, GoK

Figure 3.45
District Wise ISM Workers in Kerala, in per cent



Source: Labour Commissionerate

such as agriculture, construction, hotel and restaurant, manufacturing and trade. It is seen that 60 per cent of the migrant workers are engaged in the construction sectors, 8 per cent in manufacturing,

7 per cent under hotels and restaurants, 2 per cent each under trade and agriculture and the remaining 21 per cent engaged under other activities.

Due to high human development, Kerala has potential for productive labourforce. Providing opportunity for this productive labour force is the prerequisite of the state. Our social responsibility is to create a model state for labour which can be replicated in other States. Ideally every workman (including migrants) must be ensured with opportunities for work that is to be productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom to express their concerns, organize and participate in the decisions. These are the integral elements of the ILO's Decent Work agenda. The functional structure of the Labour Department needs to be restructured to ensure that the Departmental offers effective protection of labour rights for a decent life.

Section 7 EMPLOYMENT

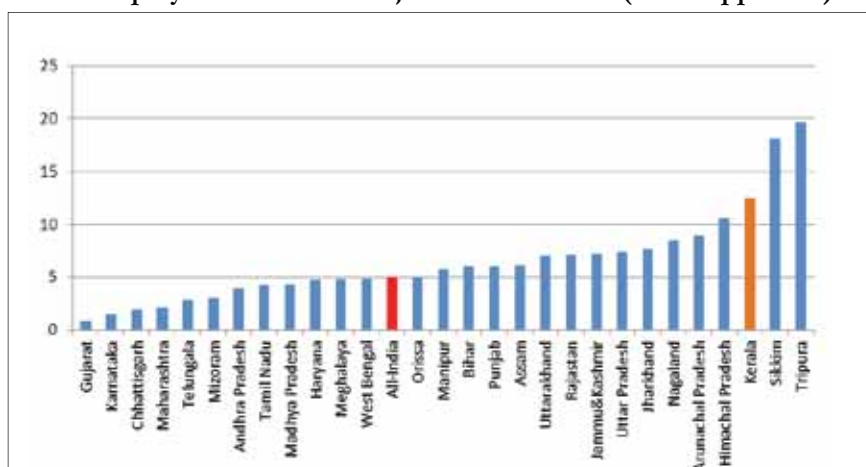
UNEMPLOYED SITUATION IN KERALA

India has witnessed an impressive GDP growth rate of over 7 per cent since 2014. However, incidence of poverty is still persistent. Employment issues have always been among the priorities because it is considered as one of the important tools to alleviate poverty. An important peculiarity of Indian job market is that majority of workers in India are in informal jobs. Recent statistics revealed that there has been a shift from agriculture & allied sectors to construction sector. According to the 5th Annual Employment-Unemployment Survey 2015-16, Labour Force Participation Rate (LFPR) at all India level is estimated at 50.3 percent under Usual Principal Status (UPS) Approach. Females LFPR is significantly lower as compared to males. It is 23.7 percent as compared to 75 percent for male and 48 percent for transgenders. Similarly, the Worker Population Ratio (WPR) at all India level is estimated at 47.8 percent comprising of 27.7 percent females, 72.1 percent males and 45.9 percent for transgenders.

Kerala has been registering a high income growth rate for quite some time now but it is not translating into creation of job opportunities. It records the highest unemployment rate as per the 5th Annual Employment-Unemployment Survey 2015-16 conducted by Ministry of Labour and Employment, Government of India. According to the survey report, among major states Kerala has the highest Unemployment Rate (UR) of 12.5 as against the all India level of 5 percent (**Appendix 3.59 and Figure 3.46**). Only two small States viz; Sikkim and Tripura have a higher unemployment rate than Kerala.

As per UPS approach, the lowest unemployment rate of 0.3 per cent is estimated in Daman & Diu (UT). Among the states the lowest unemployment rate is estimated in Gujarat (0.9 per cent). The other major states, which have lower UR than the all India average (5 per cent) are Karnataka (1.5 per cent), Chattisgarh (1.9 per cent), Maharashtra (2.1 per cent), Andhra Pradesh (3.9 per cent), Tamil Nadu (4.2 per cent), Madhya Pradesh (4.3 per cent) and West Bengal (4.9 per cent). Unemployment in Kerala is found to be high due to various reasons.

Fig 3.46
Unemployment Rate of major States in India (UPS Approach)



Source: Fifth Annual Employment-Unemployment Survey 2015-16, Government of India.

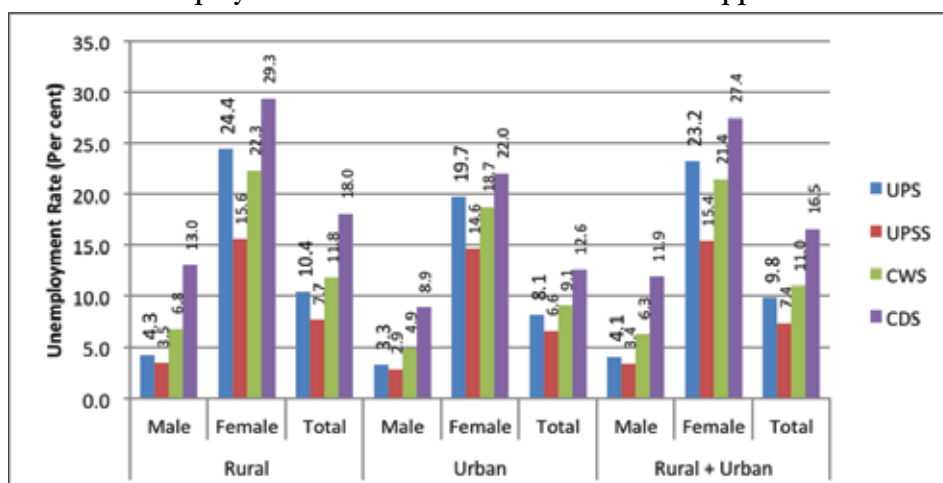
Different indicators on employment and unemployment pertaining to Kerala and India are shown in **Appendix 3.60** and **Appendix 3.61**.

As per the Survey of Employment and Unemployment Situation in India, (NSS 68th Round), area wise data shows that the unemployment rate is higher in rural areas as compared to urban areas (**Figure 3.47**).

Productive employment of youth is an essential factor for economic development. In Kerala, the

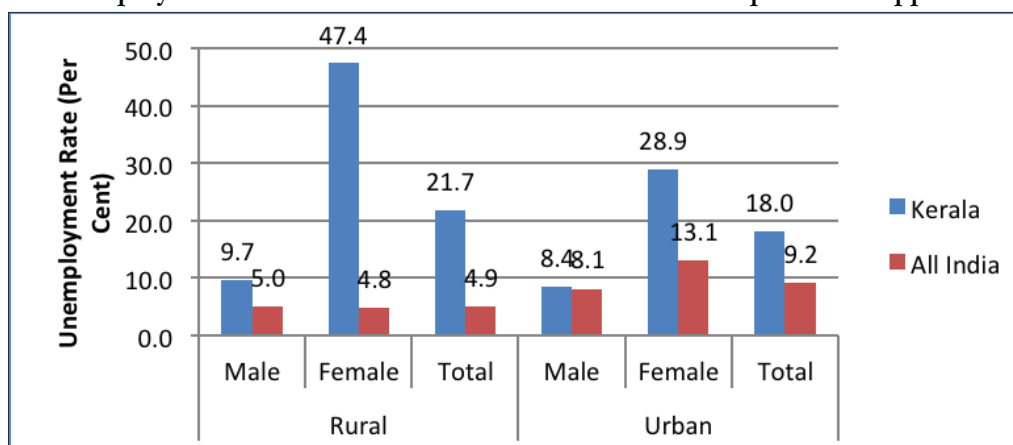
youth accounted for around 23 percent of the state's population. As per the survey report, the UR among the youth in Kerala is much higher as compared to that in the overall population and it reveals the severity of unemployment problem among the youth in Kerala. The UR of the youth is 21.7 per cent for rural areas and 18.0 per cent for urban areas. Similarly, the UR among the female youth is also much higher than that of the male youth. Area wise UR data shows that 47.4 per cent of female are in rural area as against the male of 9.7 per cent. (**Figure 3.48**). The youth

Figure 3.47
Unemployment Rate in Kerala under Different Approaches



Source: Employment and Unemployment Situation in India, NSS 68th Round, July 2011- June 2012 (Age: 15-59 years)

Figure 3.48
Unemployment Rate of the Youth in Kerala and India as per UPSS Approach



Source: *Employment and Unemployment Situation in India, NSS 68th Round, 2011-2012 (Age: 15-29 years)*

unemployment is prevalent in Kerala because young people lack adequate skills, and work experience in emerging areas. In order to face the challenges the ongoing programmes for skill development and employment generation may be restructured to equip the youth for finding better employment opportunities.

EMPLOYMENT IN THE ORGANIZED SECTOR

In Kerala, employment in the organised sector showed a downward trend. For instance, persons employed in organised sector decreased from 12.26 lakh in 2000 to 11.75 lakh in 2016, a reduction of 4 per cent over a period of 15 years. The reason behind the downfall is due to the surfacing of informal sector.

The organised sector comprises private and public sectors and it is noteworthy that private sector employment is steadily increasing since 2011 onwards. In 2016, out of 11.85 lakh persons employed in the organised sector 5.75 lakh (48 per cent) are in the public sector and 6.10 lakh (52 per cent) are in the private sector. (Appendix 3.62 and Figure 3.49).

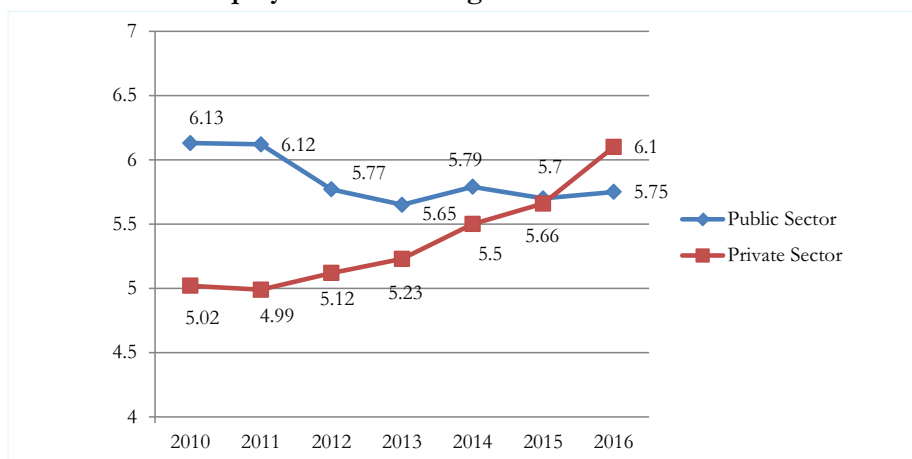
Within the public sector employment 47 per cent are employed in State Government and 10 per cent

are in Central Government, 22 per cent are in State Quasi Institutions, 5 per cent in LSGI and 16 per cent are in Central Quasi Institutions. (Figure 3.50 and Appendix 3.63).

Data on district-wise employment as on March 2016 indicate that Ernakulam and Wayanad are the two districts which respectively accounted for the highest and lowest employment. Total organized sector employment in Ernakulam District is 2.28 lakh persons, which accounted for 19 per cent of the total employment of the State. Whereas in Wayanad the employment under organized sector is 27,000 persons, which accounted for 2.3 per cent of the total employment. Men outnumber women in public sector employment as about 67.5 per cent of persons employed in public sector employment are men (See Appendix 3.64 and Appendix 3.65).

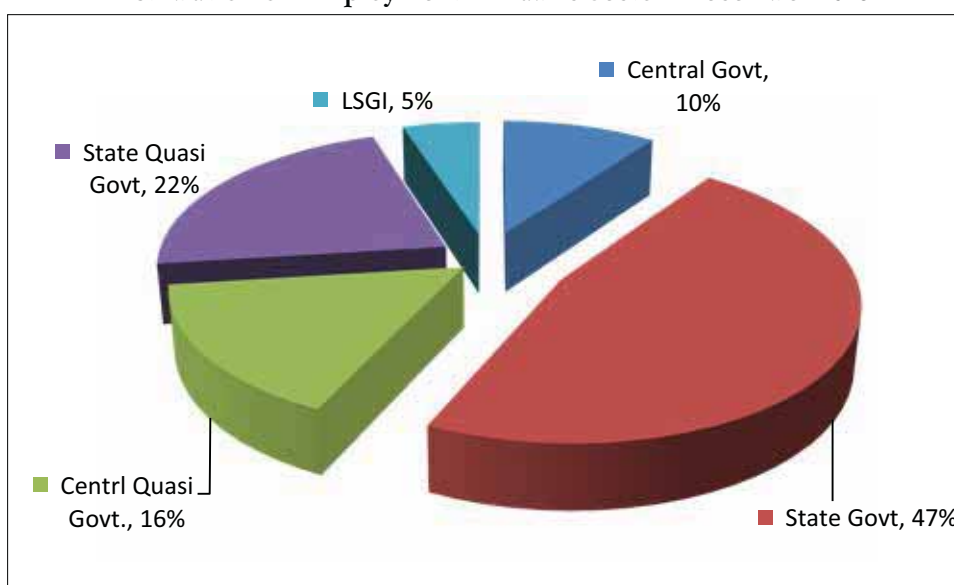
Recent statistics on sectoral distribution of workers in organized sector in Kerala indicates that the dependence on service sector continues to rise whereas the dependence on agriculture continues to decline. The employment in agriculture (relative to other sectors) gradually fell from 7.5 per cent in 2005 to 5.6 per cent in 2016. Whereas, the relative share of employment in Community, Social and Personal Services increased from 44.7 per cent in 2005 to 49.5 per cent in 2016 (See Appendix 3.66). This reveals that nearly half

Figure. 3.49
Employment in the Organized Sector- Kerala



Source: Directorate of Employment, Govt. of Kerala, 2015

Figure. 3.50
Distribution of Employment in Public Sector- December 2016



Source: Directorate of Employment and Training, Govt. of Kerala, 2016

of the employment is in the community, social and personal services. Manufacturing sector accounted for 20.7 per cent of employment.

EMPLOYMENT IN UNORGANISED SECTOR

Unorganised sector plays a crucial role in Indian

economy in terms of employment and its contribution to the Gross Domestic Product, savings and capital formation. More than 90 per cent of workforce are in unorganised sector and nearly 50 per cent of the Gross Domestic Product are accounted from the sector. A high proportion of socially and economically weaker sections of society are engaged in the unorganized economic activities in India and Kerala. As per the Employment and

Unemployment survey carried out by the NSSO (68th round) based on UPSS approach it is estimated that self employed workers in Kerala constituted 37.7 per cent of the total workers. Comparatively the percentage share of regular wage/salaried employee accounted for 22.5 per cent and that of casual labour accounted for 39.8 per cent.

Employees of enterprises belonging to the unorganised sector have lower job security, poorer chances of growth, absence of leaves and paid holidays, and lower protection against employers as compared to employees in organised sector. The unorganized workers are subject to exploitation, face poor working conditions and especially earn lower wages much below that in the formal sectors. In Kerala, Directorate of Employment and Training is the nodal department to take measures to reduce instances of unfair practices existing in the unorganized sector. In recent years, the Government has initiated several measures to provide social security to workers in the unorganised sector.

EMPLOYMENT EXCHANGES AND THEIR SERVICES

Registered Job Seekers

According to live register of employment exchanges in Kerala, the total number of work seekers as on December 31, 2012 was 44.99 lakh. But it has now declined to 36.57 lakh as on December 31, 2015, a reduction of about 8.42 lakh. Details of work seekers for various years are given in **Appendix 3.67**.

Contrary to the all India scenario women are found to be more in the live registers in Kerala. Of the total job seekers 56 per cent are women. Number of illiterate persons in the Live Register is 950. Distribution of job seekers by educational level indicates that only 10.4 per cent have qualification below SSLC. About 58 per cent of the work seekers are in the category of qualifications having SSLC. (**Appendix 3.68**).

The number of professional & technical work seekers as on October 31, 2016 is 1.70 lakh. Data reveals that ITI certificate holders and Diploma holders in Engineering together constitute 97 per cent of the total professional & technical work seekers. There are 23,984 registered Engineering Graduates (**Appendix 3.69**).

A significant and peculiar feature of Kerala is that women outnumber men who seek employment through employment exchanges. The district-wise work seekers in Kerala is shown in the **Figure 3.51**.

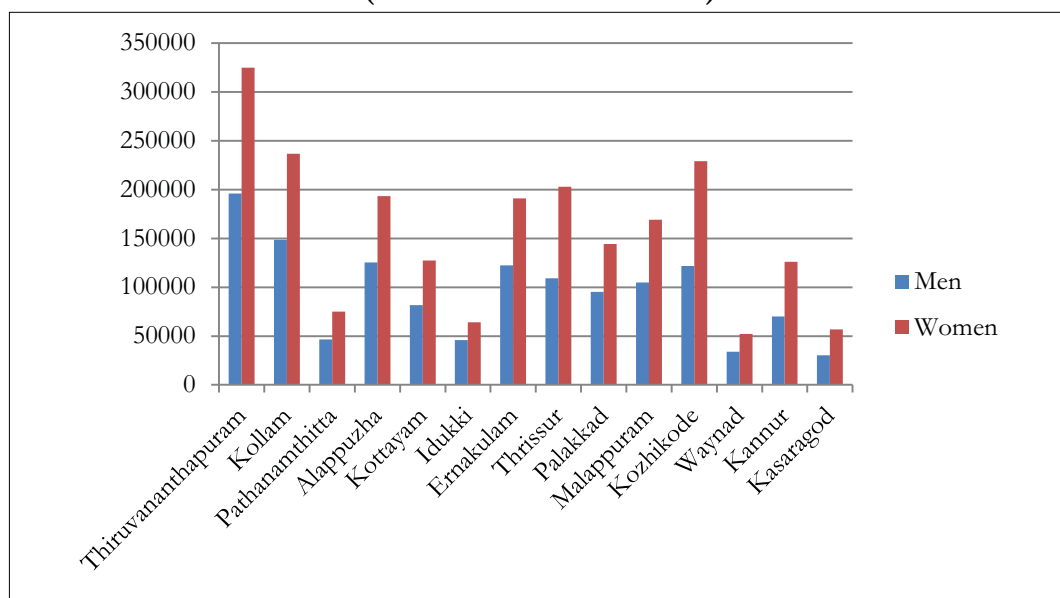
Thiruvananthapuram District ranks first in the number of work seekers in general and professional/technical categories as on September 30, 2016. The total number of work seekers in Thiruvananthapuram district is 5.2 lakh; of which 3.24 lakh are women and 1.96 lakh men. The second largest number of work seekers is in Kollam district with 3.85 lakh persons. The lowest number of work seekers registered is in Wayanad with 0.863 lakh persons, followed by Kasaragod with 0.869 lakh persons. (**Appendix 3.70**).

Self Employment Schemes implemented through Employment Exchanges

Three self employment schemes are implemented through the Employment Exchanges in Kerala.

1. Kerala Self Employment Scheme for the Registered Unemployed (KESRU) is being implemented since 1999 and is intended for unemployed persons in the live register between the age 21 - 50 years with annual family income not exceeding ₹ 1 lakh. Preference will be given to those with professional or technical qualifications, graduate women and beneficiaries of unemployment dole scheme. Bank loan up to ₹ 1 lakh with a 20 per cent subsidy is given for self employment ventures. During 2015-16 an amount of ₹ 1.33 crore was allotted to 736 beneficiaries.

Figure 3.51
Work Seekers in Kerala as on 31-12-2015
(Status of Men and Women)



Source: Directorate of Employment and Training, Govt. of Kerala, 2016

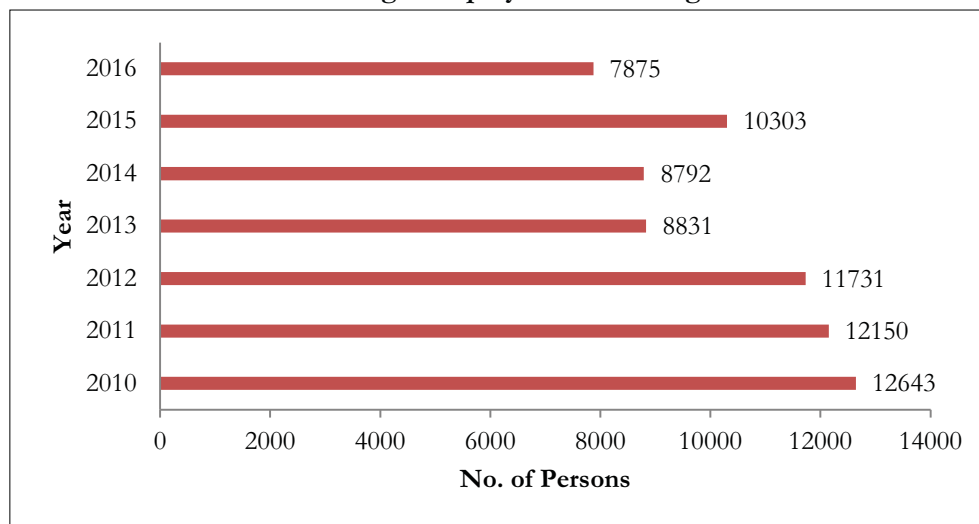
Box 3.11 Niyukthi-2016

Niyukthi-2016 was a Mega Recruitment Drive conducted by the Government of Kerala through the Employment Department. Deviating from the traditional way of conducting job fairs, modern technologies like dedicated software, 'whatsapp' technology was used and hitherto-new event-management technology by the government officials, orientation programme for job seekers and pre-employers meet were held at Thiruvananthapuram, Ernakulam and Kozhikode. In this mega event 28,265 jobseekers and 222 employers participated. Out of 17,664 vacancies reported, placement were offered for 14,399 posts.

2. Multi-Purpose Service Centres/Job Clubs (MPSC/JC) is a group oriented self-employment scheme for development of enterprises in the unorganised sector. Bank loan up to ₹ 10 lakh with a maximum of ₹ 2 lakh as subsidy is given for starting self-employment group ventures of 2 to 5 members, who are unemployed persons in the live registers in the age group of 21-40 years. The scheme is incorporated with Credit Guarantee Scheme. During 2015-16 an amount of ₹ 1 crore was allotted to 64 Job Clubs.

3. Saranya is an employment Scheme for the Destitute Women aimed at uplifting the most backward and segregated women in the State, namely widows, divorced, deserted, spinsters above the age of 30 and unwed mothers of Scheduled Tribe. Under this scheme interest free bank loan upto ₹ 50,000 with a 50 per cent subsidy (maximum ₹ 25,000) is given for starting self-employment ventures. During 2015-16 an amount of ₹ 16 crore was allotted to 3200 beneficiaries.

Fig 3.52
Placement through Employment Exchanges –Kerala



Source: Directorate of Employment and Training, Govt. of Kerala, 2015

UNEMPLOYMENT ASSISTANCE

Government of Kerala has introduced an unemployment assistance scheme in 1982. Under the scheme, unemployed youths remaining in the live registers for over three years (physically challenged two years) after attaining the age of 18 and having passed SSLC (For the SC/ST & physically Challenged, candidate need to have only appeared for SSLC examination) and having annual family income below ₹12,000 and personal income below ₹100 per month are eligible for an unemployment assistance of ₹120 per month up to the age of 35 years. With the enactment of the Kerala Panchayat Raj Act and Kerala Municipality Act the unemployment assistance scheme was transferred to Rural and Urban Local Governments since 1998. Under the scheme the eligible candidates shall submit their application for unemployment allowance in the prescribed form to the Local Government. The Welfare Standing Committee at the Local Governments may finalise the list of candidates based on the eligibility criteria. In the current year an amount of ₹15.84 crore was disbursed to 2,03,703 beneficiaries as on November 2016.

PLACEMENT THROUGH EMPLOYMENT EXCHANGES IN KERALA

The placement through Employment Exchanges in Kerala has been declining since 2010. Total placement has declined from 12,643 in 2010 to 10,303 in 2015 and further to 7,875 as on September 30, 2016. Reduction in placement may be due to temporary posts either being filled up on daily wage/contract basis or being kept vacant. The placement through employment exchanges in Kerala since 2010 is illustrated in the **Figure 3.52**.

The mismatch between the State Domestic Product (SDP) and employment elasticity has led to rising unemployment rate in Kerala leading to an unemployment rate which is over two times of the all India average. In Kerala, unemployment rate is much higher among females as compared to males despite remarkable women empowerment and poverty alleviation initiatives. An entrepreneur culture must be evolved to increase the employability of the labour.

Building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation is one of the sustainable development goals. MSMEs in the State have emerged as a crucial sector in providing employment and promoting industrialization. The State needs to create a conducive environment for the industries to thrive and encourage the growth of MSMEs as a driver of industrialization in the State. Traditional industries need to be strengthened and appropriate promotional strategies need to be devised. The potential of the labour force also needs to be adequately tapped so that its productivity is enhanced. The improving trends in industrial climate in the state will help to propel industrial growth and productivity. The State needs to frame appropriate policies which take into account the changing labour dynamics in the State and create more job opportunities to reduce the prevailing high unemployment rates.

04 CHAPTER

SOCIAL SERVICE



SOCIAL SERVICE

Kerala has been known for its achievements in the field of health and education. The State has endeavoured to create an educated, literate and healthy society. These achievements have been possible because of the pioneering policies taken in these sectors. Kerala has always taken the lead in coming up with path-breaking moves. The transgender policy announced by the State is another one in this league as Kerala is the first State to unveil such a policy. However, the challenge faced by the State is sustaining the policy initiatives. The advancements in health and education have been marred by issues like poor quality of education, lack of adequate skills and emerging life threatening life style diseases. Further, the advancements in the field of health and education in women have not led to creation of economic opportunities for them. It is recognised that concerted efforts are required to sustain the achievements as well as tackle the issues in this sector.

Section 1 EDUCATION

Kerala's unique development experience of high human development with low per capita income has received international attention. The State could attain significant achievements in the critical sectors of health and education. Kerala's unparalleled achievements in human development indicators are mainly attributed to the State's public interventions in health and education sectors, especially after Independence. Education has always had a central role in determining Kerala's performance in social development. The network of educational institutions established during the early modern period, the social reform movements and government intervention helped the State to establish a strong foundation in the field of education. In the early 1990s, Kerala became the first ever state in the Indian union to

attain universal literacy. The policies for ensuring the universal elementary education have effectively been implemented by the State since Independence.

In spite of its remarkable achievements in the education sector in the State, prominent gaps exist regarding the quality of education being imparted. In order to look into various aspects of quality of education at different levels, the Kerala State Planning Board had constituted two expert committees (the reports may be accessed at www.spb.kerala.gov.in).

Expenditure On Education

During the first year of the 12th Plan an amount of

₹590.24 crore had been earmarked for education sector of which 98.78 per cent was expended. The outlay was increased significantly during the last five years and in 2016-17 the sector was allocated an amount of ₹1330.79 crore. Among the three sub-sectors of school education, higher education and technical education, the percentage share of higher education substantially increased over these five years whereas outlay on technical education increased only marginally. Further, General

Education (school education plus higher education) got more than 80 per cent of the total allocation in these five years. Though the total outlay for all the three sub-sectors has been increasing over the five years (Table 4.1 and Figure 4.1), the percentage share of school education decreased from 56 per cent in 2012-13 to 37.8 per cent in 2016-17.

In order to address the relevant issues in the three sub sectors of education and to formulate focussed

Table 4.1
Average Plan Outlay and Expenditure during XIIth Plan, ₹ in crore

Period and Sectors		School Education	Higher Education	General Education	Technical Education	Total
Annual Plan 2012-13	Outlay	287.15	202	489.15	101.09	590.24
	Actual Expenditure	286.54	154.15	440.69	142.33	583.02
	Percentage of outlay spent	99.79	76.31	90.09	140.95	98.78
Annual Plan 2013-14	Outlay	333.15	247.99	581.14	117.86	699
	Actual Expenditure	220.2	154.15	374.35	96.95	471.3
	Percentage of outlay spent	66.1	62.16	64.41	82.33	67.42
Annual Plan 2014-15	Outlay	336.81	367.97	704.78	143.22	848
	Actual Expenditure	226.63	207.29	433.93	106.44	540.37
	Percentage of outlay spent	67.29	56.34	61.57	74.32	63.72
Annual Plan 2015-16	Outlay	349.75	510.42	860.17	184.45	1044.62
	Actual Expenditure	223.11	439.1	662.21	246	908.21
	Percentage of outlay spent	63.79	86.03	76.99	133.37	86.94
Annual Plan 2016-17	Outlay	502.51	592.87	1095.38	235.41	1330.79
	*Actual Expenditure	121.68	81.97	203.65	29.94	233.59
	Percentage of outlay spent	24.21	13.83	18.59	12.72	17.55

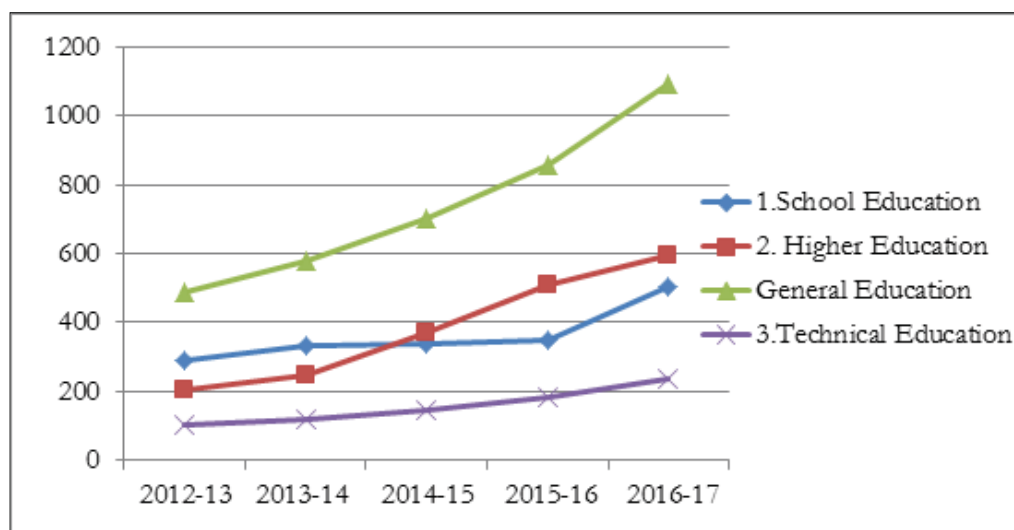
Source: Annual Plan Documents.

* upto October

Box 4.1 **Working Groups for 13th Five Year Plan on Education**

In order to formulate projects for the 13th Five Year Plan, Kerala State Planning Board constituted three Working Groups on Education for School, Higher and Technical Education. The Working Groups were co-chaired by the secretaries of the departments concerned and sector experts. Consultations with several experts were made in the respective fields and the committees submitted the draft reports, including recommendations, addressing the aspects related to the quality of education, research and development.

Figure 4.1
Trend of sector wise Outlay of Education during 12th Plan, ₹ in crore



Source: Annual Plan document, 2016

policies and programmes for implementation during 13th Five Year Plan, State Planning Board has constituted Working Groups (**Box.4.1**).

Literacy

Kerala ranks first in the country with literacy rate of 93.91 per cent closely followed by Lakshadweep (92.28 per cent) and Mizoram (91.58 per cent), as per data from the Census of India, 2011. Kerala's literacy rate, which was only 47.18 per cent in 1951, has almost doubled by 2011. The male-female literacy gap which was 22 per cent in 1951 has narrowed down to 4.41 per cent in 2011. Kerala holds the first place in the country in female literacy (92 per cent in 2011). At the other end, Rajasthan records the lowest female literacy rate of 52.66 per cent. Literacy rate of the State from 1951 to 2016 is shown in **Appendix 4.1**.

Variation in literacy rates among the districts of Kerala is low. While Pathanamthitta district (96.93 per cent) reports the highest literacy rate followed by Kottayam (96.4 per cent) and Alappuzha (96.26 per cent), Palakkad district has the lowest literacy rate (88.49 per cent). The low rate of literacy of the Palakkad district may be due to the higher percentage of Scheduled Caste (SC) and Scheduled

Tribe (ST) population in the district. About 11 per cent of the ST population in the State, reporting an average literacy of 74.44 per cent, are residing in Palakkad district. The share of SC population in the district population is also the highest in the State. Literacy rate by sex for districts in 2003 and 2015 are given in **Appendix 4.2**.

Kerala State Literacy Mission has been implementing literacy and equivalency programmes by appointing 'Preraks' (representatives of centre for propagating and continuing literacy programmes). Details of the number of people benefiting from the equivalency programme of Literacy Mission from 2005 to 2015 are given in **Appendix 4.3**. It is seen that the number of persons who attend the 7th equivalency examination is steadily decreasing from 11,631 in 2005 to 3492 in 2015. The indications are that illiteracy has almost been eradicated.

School Education

There were 12,882 schools in Kerala in 2015-16: 4619 (36 per cent) government schools, 7140 (55 per cent) aided schools and 1123 (9 per cent) unaided schools. More government schools are functioning in lower primary section than the upper primary or high school sections. Aided

schools outnumber government schools in all sections. The management wise share of schools in the state is shown in **Figure 4.2**.

Malappuram District has the largest number of schools (1548) in the State followed by Kannur (1305) and Kozhikode (1269). Malappuram also has the largest number of government (546) and unaided schools (221) in the State. But the largest number of aided schools is functioning in Kannur district (959). Details of district-wise, management-wise and stage-wise number of schools in Kerala during 2015-16 are given in **Appendix 4.4**.

There are 1408 schools in the State that are offering syllabi other than the one prescribed by the State government. These include 1210 CBSE schools, 148 ICSE schools, 36 Kendriya Vidyalayas and 14 Jawahar Navodayas. One Jawahar Navodaya Vidyalaya school each is functioning in all the districts. District-wise details of schools with syllabi other than state syllabus in the year 2015-16 are given in **Appendix 4.5**.

Physical Infrastructure and Facilities In Government Schools

All government Schools in Kerala are functioning in pucca buildings. Own buildings have to be

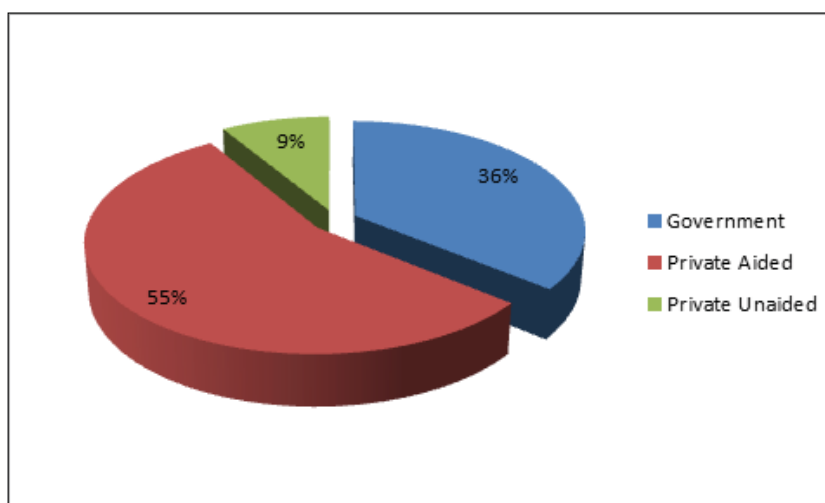
constructed for 116 government schools that are now functioning in rented buildings. District-wise details of government schools having building facilities are given in **Appendix 4.6**.

Local Self Government institutions and programmes like Sarva Shiksha Abhiyan (SSA) have contributed to the overall development and improvement of physical infrastructure and common facilities in government schools in the State. Data shows that 99.1 per cent of government schools have access to drinking water and 98.01 per cent have sanitation facilities. District-wise details of government schools having drinking water and sanitation facilities in Kerala in 2015-16 are given in **Appendix 4.7**.

Enrolment Of Students

Enrolment of students in the State has been declining in the recent years; the number has declined from 37.63 lakh in 2015-16 to 37.01 lakh in 2016-17 (provisional). However, there is a slight increase in enrolment in the Lower Primary (LP) section with an increase of 4840 students between 2015-16 and 2016-17. The decrease in enrolment in Upper Primary (UP) section and High School (HS) section has been 19,691 and 46,741 students respectively in 2016-17 over the previous year. The stage-wise enrolment of students in schools

Figure 4.2
Management wise share of schools in the State-2014-15, in per cent



Source: Directorate of Public Instruction

in Kerala from 2012-13 to 2016-17 is given in **Appendix 4.8**. Details of management-wise and standard wise enrolment of students in schools in Kerala during 2016-17 are given in **Appendix 4.9**. District-wise stage-wise and sex-wise enrolment of students in schools in the State during 2016-17 is given in **Appendix 4.10**. The section wise decrease in the enrolment of students in schools is shown in **Figure 4.3**.

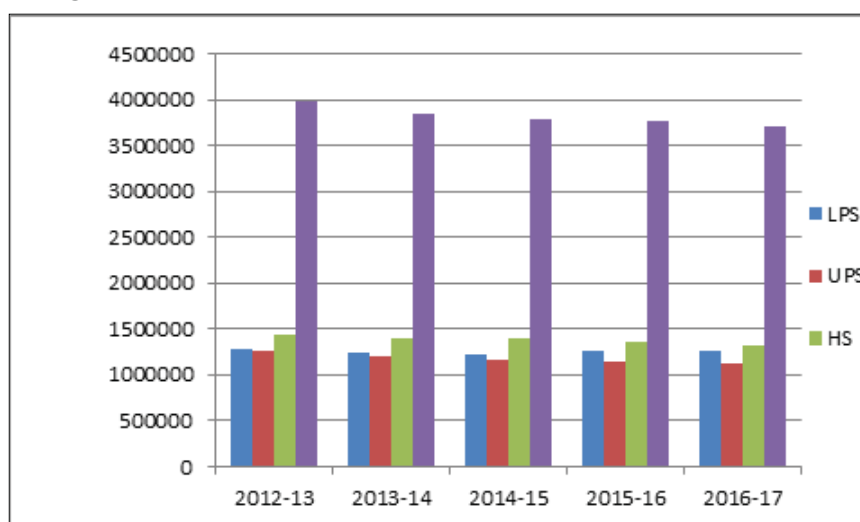
Enrolment of Girl students

Girl students constitute 49.5 per cent of the total student enrolment in schools. Boys outnumbered girls in all the districts, except Thiruvananthapuram. In terms of enrolment, the gender gap in Kerala is very narrow compared to other states.

Strength of Scheduled Caste and Scheduled Tribe Students

In 2016-17, Scheduled Caste (SC) students constituted 10.71 per cent of total students in the State. The percentage of SC students in government schools is higher than that of private aided and private unaided schools. The percentage of SC students in government schools, private aided schools and private unaided schools are 13.46 per cent, 10.56 per cent and 4.11 per cent respectively (**Table 4.2**). But the number of Scheduled Caste students in private aided schools is 33.44 percent higher than those in government schools.

Fig 4.3
Stage-wise Enrolment of Students in Schools in Kerala, in number



Source: Directorate of Public Instruction

Table 4.2
Percentage of Enrolment of SC/ST students in Schools

Management	Others	SC	ST	Total
Government	82.69	13.46	3.85	100
Private Aided	87.89	10.56	1.55	100
Private Unaided	95.43	4.11	0.46	100

Source: Directorate of Public Instruction

ST students constituted 2.12 per cent of total enrolment in schools in the year 2016-17. The percentage of ST students in government schools, private aided schools and private unaided schools are 3.85 per cent, 1.55 per cent and 0.46 per cent respectively in 2016-17. The standard-wise strength of SC/ST students in the State in 2015-16 is given in **Appendix 4.11**. Out of the total number of SC/ST students in the State, only 4.4 per cent of SC and 2.5 per cent of ST students are enrolled in private unaided schools. The rest are enrolled in government and private aided schools.

Drop-Out Rate

Kerala has achieved the distinction of having the lowest drop-out rate of school students among the Indian states. In the year 2014-15, drop-out ratio among school students in Kerala was 0.34 per cent. This was, however, 0.7 per cent more than the rate in 2013-14 (0.27 per cent). As per the statistics of Directorate of Public Instruction (DPI), this marginal increase in the drop-out rate was due to the corrections undertaken in the number of students enrolled after eliminating the duplicates. The drop-out rates in Lower Primary stage and High School stage are higher compared to that of the Upper Primary stage. Drop-out rate is highest among high school students.

Among all districts, Idukki has the highest drop-out rate in the lower primary section (1.06 per cent). In upper primary section and high school, Wayanad has the highest rates with 1.05 per cent

and 2.88 per cent respectively. The higher drop-out rate may be attributed to the higher population of Scheduled Tribe students in these districts. District-wise/stage-wise drop-out ratio in schools in 2014-15 is given in **Appendix.4.12**. Drop-out rate among SC students in Kerala during 2014-15 was 0.38 per cent and that of ST students was 2.79 per cent. District-wise and stage-wise details of drop out among SC and ST students in Kerala for the year 2014-15 are given in **Appendices 4.13** and 4.14.

Number of teachers

The number of school teachers in Kerala, including Teachers Training Institute (TTI) teachers, during 2014-15 was 164,884. Out of this 97,914 (59.38 per cent) teachers are working in aided schools and 14,982 (9.09 per cent) teachers are working in private unaided schools. The remaining 31.53 per cent of teachers are working in government schools. 51.82 per cent of total teachers in the State are teaching in high schools, 24.56 per cent in upper primary schools, 23.21 per cent in lower primary schools and the remaining (0.41 per cent) in TTI's. 72.34 per cent of total teachers in the State are women. Stage-wise and management-wise number of teachers in Kerala during 2015-16 is given in **Appendix 4.15**.

Uneconomic Schools

Schools with insufficient strength of pupils are termed as "uneconomic" schools. In 2015-

Box 4.2

Takeover of "Uneconomic" Aided Schools by the Government of Kerala

In a major relief to students of uneconomic aided-schools that are facing threat of closure, the Kerala government took over four such schools, including a 140-year-old one in Kozhikode district, which had been ordered to be shut down by the High Court. Though the government approached the Supreme Court against the Malaparamba Aided Upper Primary School management's decision to close it down, the apex court had dismissed its appeal against the High Court order to close down the school by June 8. A Cabinet meeting took the decision of taking over of the 4 uneconomic aided schools considering the future of students and widespread protests against the closure.

16, there were 5715 uneconomic schools in the State, which was an increase of 142 schools over the previous year. Out of these, 2,606 were government schools and 3,109 were in the aided sector. District-wise analysis shows that highest number of uneconomic schools is in Kannur (723) followed by Kozhikode (593), Kottayam (560) and Pathanamthitta (501). The highest number of uneconomic schools in aided sector is in Kannur (583) followed by Kozhikode (426). In the government sector, Ernakulam has the largest (279) number of uneconomic schools followed by Thiruvananthapuram (276). Among the government uneconomic schools, 73.1 per cent are lower primary schools. In the aided sector also, 78.7 per cent of uneconomic schools are from the lower primary section. District wise details of uneconomic schools in the State in 2015-16 are given in **Appendix 4.16**.

Sarva Shiksha Abhiyan (SSA)

Sarva Shiksha Abhiyaan was introduced in 2000-2001 as a flagship programme of Government of India to provide useful and relevant elementary education for all children in the age group of 6 to 14 by 2010. The programme seeks active participation of the community in the management of schools without social, regional, economic and gender barriers. It comprises all activities of school education: providing physical infrastructure, free text book for children, encouraging enrolment of girls and teacher training. The sharing of funds between the central and the state governments was 75:25. The funding pattern has now been modified to 60:40.

Higher Secondary Education

Higher Secondary courses were introduced in the State during 1990-91 to reorganize the secondary level of education in accordance with National Education Policy. There were 2073 Higher Secondary Schools in 2016 in the State. Out of these 833 (40.18 per cent) are Government schools, 854 (41.2 per cent) are Aided schools and the remaining 386 (18.62 per cent) are Unaided

and technical schools. Among the districts, Malappuram has the largest number of Higher Secondary Schools (248) in the State followed by Ernakulam (209) and Thrissur (204) respectively.

There are 7248 batches of higher secondary classes in 2016. The enrolment in Higher Secondary Schools was 383,582. Kozhikode has the largest number of batches (1051) with an enrolment capacity of 55914 students. District wise/ Management-wise number of Higher Secondary Schools and number of batches are given in **Appendix 4.17** and district wise enrolment of students in Higher Secondary Schools are given in **Appendix 4.18**.

The pass percentage of students in higher secondary courses decreased to 73.18 per cent in 2015-16 from 74.19 per cent in 2014-15. During 2016, 10,391 students secured A+ for all subjects and 317,887 students were eligible for higher studies. The details are given in **Appendices 4.19** and **4.20**. The pass percentage of SC and ST students in Higher Secondary schools also decreased in 2015-16 compared to 2014-15. The pass percentage of SC students decreased from 60.84 per cent to 57.77 per cent and ST students from 61.39 per cent to 58.12 per cent during 2015-16. Details are given in **Appendices 4.21** and **4.22**.

Vocational Higher Secondary Education

Vocational higher secondary education was introduced in the State in 1983-84. Vocational higher secondary education in the State imparts education at plus two level with the objective of achieving self/wage/direct employment as well as vertical mobility. There are 389 Vocational Higher Secondary Schools in the State with a total of 1100 batches. Out of these 261 are in the Government sector and 128 in the aided sector. Kollam (52) followed by Thiruvananthapuram (41) has the largest number of Vocational Higher Secondary Schools in the State. District wise details of Vocational Higher Secondary Schools and courses during 2016-17 are given in **Appendix 4.23**.

The percentage of students eligible for higher education in Vocational Higher Secondary examination in March 2016 is 74.92 per cent registering a fall from 80.54 per cent in March 2015. The number of students who appeared and those who passed Vocational Higher Secondary examination from 2012 to 2016 and the results of school going students are given in **Appendices 4.24** and **4.25**.

University and Higher Education

The significance of higher education in a society has been increasingly recognised and in the absence of a well-educated workforce, an economy cannot harness its optimum capabilities. The significance of higher education is not restricted to the sphere of economy and workforce alone; rather it should be seen as an opportunity for conditioning future citizens who are not only competent as a workforce

but are also responsible citizens who can address the social needs in a more matured and responsible manner.

There are 14 universities functioning in the State. Out of these, four universities viz. Kerala, Mahatma Gandhi, Calicut and Kannur are general in nature and are offering various courses. Sree Sankaracharya University of Sanskrit, Thunchath Ezhuthachan Malayalam University, Cochin University of Science and Technology, Kerala Agricultural University, Kerala Veterinary and Animal Science University, Kerala University of Health Sciences, Kerala University of Fisheries and Ocean Studies and Kerala Technological University offer specialized courses in specified subject areas. Besides these, the National University of Advanced Legal Studies (NUALS) established in 2005 and a Central University started in Kasargod district are also functioning in the State.

Box 4.3

Rashtriya Ucchatar Shiksha Abhiyan

In order to ensure access to and improve the quality of higher education, a new overarching Centrally Sponsored Scheme, Rashtriya Ucchatar Shiksha Abhiyan (RUSA) was commenced during the 12th Five Year Plan period for funding the State level higher education institutions. It is an umbrella scheme to be operated in mission mode, which seeks to improve the overall quality of existing State higher educational institutions. The scheme is implemented through a set of bodies with clearly defined roles and functions at the National, State and Institutional level. The allocation of funds under RUSA is based on well-defined norms and parameters. The Scheme would cover only the Government and Government aided institutions.

As a first instalment, an amount of Rs. 2.5 crore each has been released to 4 universities in the State: University of Calicut, University of Kerala, M G University and Sree Sankaracharya Sanskrit University for improving the infrastructural facilities. Out of this amount, apart from the renovation and repair works, innovative projects like installation of Solar Energy system, Biometric punching system and E-campus, purchase of Nuclear Magnetic Resonance Spectrometer and diesel generator set have been set up by the Universities. 15 Government colleges also received Rs 12.5 lakh each as infrastructural grant. From the preparatory grant of RUSA, seminars, workshops and trainings are being conducted. Implementation of Video Conferencing System in Institutions, Laptops and Special Software for differently-abled students, E-journal Portal for RUSA and RUSA State Project Directorate Library are the schemes implemented as best practices under RUSA State Project Directorate.

Autonomous Colleges in Kerala

The affiliating system of colleges was originally designed when their number in a university was small. The university could then effectively oversee the working of the colleges, act as a body conducting examination and award degrees on their behalf. The system has now become unwieldy and it is becoming increasingly difficult for a university to attend to the varied needs of individual colleges. The colleges do not have the freedom to modernize their curricula or make them locally relevant. The regulations of the university and its common system, governing all colleges alike, irrespective of their characteristic strengths, weaknesses and locations, have affected the academic development of individual colleges. Colleges that have the potential for offering programmes of a higher standard do not have the freedom to offer them.

Hence, the Committee on autonomy for institutions of higher education in Kerala stated in its report that there are colleges in Kerala in the Government and private sectors which deserve autonomy and which can prove their full academic potential if only greater freedom is given to take risks with responsibility. The University Grants Commission (UGC) has granted autonomous status to nine colleges in the State during 2014-15. The colleges are Maharaja's College, Ernakulam; Mar Ivanios College, Thiruvananthapuram; Fatima Mata National College, Kollam; SB College, Changanassery; St. Teresa's College, Ernakulam; Sacred Heart College, Thevara; Rajagiri College of Social Sciences, Kochi; St. Thomas College, Thrissur and St. Thomas College, Devagiri.

Arts And Science Colleges

There are 213 Arts and Science Colleges in the State comprising of 153 Private Aided Colleges and 60 Government Colleges. In 2015-16, Ernakulam (25) had the largest number of Arts and Science colleges in the State followed by Thiruvananthapuram, Kottayam and Thrissur (22). Thiruvananthapuram and Kozhikode have the largest number of Government colleges (10) in the State. District-wise number of Arts and Science colleges in the State in 2015-16 is given in **Appendix 4.26**.

Enrolment of Students

Total number of students enrolled in various Arts and Science colleges (excluding unaided colleges) under the four general universities in Kerala during 2015-16 is 2.7 lakh. Of this 1.89 lakh (71.21 per cent) are girls.

Out of the total students enrolled for degree courses, 41.7 per cent are enrolled for B.A degree courses, 41.1 per cent enrolled for B.Sc. and 17.2 per cent enrolled for B.Com degree courses. Girls constitute 71.02 per cent of total enrolment for degree courses (**Table 4.3**).

27 subjects are offered for BA degree courses. Among the subjects, Economics has the largest number of enrolment of students. 31 subjects are offered for B.Sc. course and Mathematics has the largest number of student enrolment. Details of enrolment of students in Arts and Science colleges for BA, B.Sc. and B.Com are given in **Appendices 4.27 to 4.29**. 33,070 students were admitted to post graduate course in the State in

Table 4.3
Enrolment of Students in Arts and Science Colleges

Course	Total Students	Girls	Boys	Per cent of Girls
B.A	96748	70035	26713	72.39
B.Sc	95369	69833	25536	73.22
Bcom	39923	24915	15008	62.41
Total	232040	164783	67257	71.02

Source: Directorate of Collegiate Education

2015-16. 72.6 per cent of those enrolled in PG courses are girls. Details of enrolment of students in Arts and Science colleges for MA, MSc and M.Com courses are given in **Appendices 4.30 to 4.32.**

Scheduled Caste / Scheduled Tribe Students

The enrolment of Scheduled Caste (SC) students in degree and post graduate courses in the State is 32,002 and 4,414 respectively. SC students constitute 13.74 per cent of total students in 2015-16. Girls constitute 71.1 per cent of

total SC students in Arts and Science colleges (**Table 4.4** and **Figure 4.4**).

The number of Scheduled Tribe students enrolled for courses in arts and science colleges in 2015-16 is 5321. The enrolment of ST students in degree and post graduate courses are 4,184 and 1,137 respectively. Girls constitute 65.9 per cent of the total ST enrolment in Arts and Science colleges. Enrolment of SC and ST students in Arts and Science Colleges in Kerala during 2015-16 is given in **Appendix. 4.33.**

Scholarships

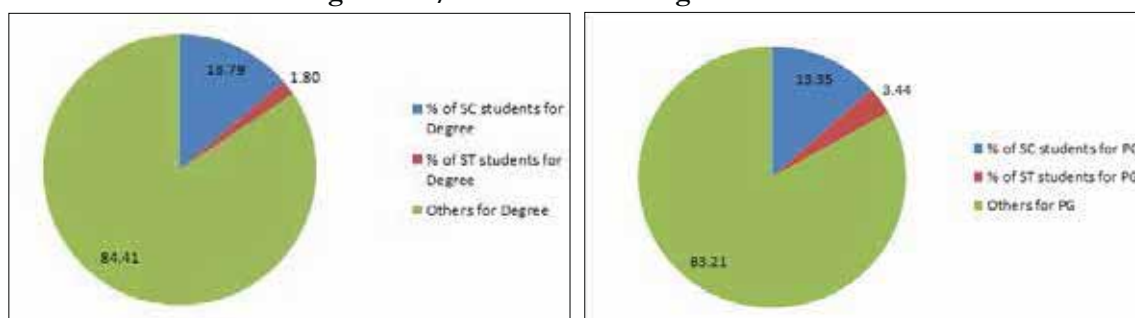
Central and state sector scholarships of 14 types are

Table 4.4
Percentage of SC/ST students in higher education

Course	Total Number of Students	Number of SC Students	Per cent of SC students	Number of ST students	Per cent of ST students	Total number of SC-ST students	Per cent of SC/ST students
B.A	96748	13295	13.74	2584	2.67	15879	16.41
B.Sc	95369	13103	13.74	890	0.93	13993	14.67
Bcom	39923	5604	14.04	710	1.78	6314	15.82
Total Degree students	232040	32002	13.79	4184	1.80	36186	15.59
M A	12602	1889	14.99	594	4.71	2483	19.70
M Sc	15360	1853	12.06	422	2.75	2275	14.81
M Com	5108	672	13.16	121	2.37	793	15.52
Total P G Students	33070	4414	13.35	1137	3.44	5551	16.79
Total degree & PG	265110	36416	13.74	5321	2.01	41737	15.74

Source: Directorate of Collegiate Education

Figure 4.4
Percentage of SC/ST students in Degree and PG Courses



Source: Directorate of Collegiate Education

given to students. Various scholarships including Kerala State Suvarna Jubilee Scholarship (4000) and post metric scholarships (47199) were given during 2015-16. The Directorate of Collegiate Education has set up LED display board giving the details of scholarships offered by the Government of Kerala and India. The details of number of scholarships offered from 2013-14 to 2015-16 is given in **Appendix 4.34**.

Teachers

The number of teachers in Arts and Science colleges in the State in 2015-16 was 9727, out of whom 55.2 per cent are women. University-wise number of teachers in Arts and Science colleges in the year 2013-14 to 2015-16 is given in **Appendix 4.35**. 3312 (34.01 per cent) teachers in Arts and Science colleges in the State have a Ph.D. degree. Details are given in **Appendix 4.36**. A total of 2072 Guest Lecturers were working in Arts and Science colleges of the State in 2016. Details are given in **Appendix 4.37**.

Kerala Council for Historical Research (KCHR)

Kerala Council for Historical Research is an autonomous academic institution, established in 2001, committed to scientific research in archaeology, history and social sciences. It is a recognized research centre of the University of Kerala and has academic affiliations and bilateral academic and exchange agreements with leading universities and research institutes in India and abroad. KCHR is envisaging publishing a comprehensive volume on the scientific history of Kerala from pre-historic to the present times.

A sustainable/historical tourism project is conceived in the Kodungallur-Paravur zone and KCHR is identified as the nodal agency to provide technical assistance. From 2006-07 onwards, KCHR has successfully undertaken the multi-disciplinary excavation at Pattanam. The excavation has yielded significant evidences for re-conceptualizing the early history of Kerala.

Technical Education

The Twelfth Five Year Plan aimed at encouraging the private sector to establish larger and higher quality institutions and Public-Private Partnerships (PPP) in higher education particularly in the establishment of research and innovation institutions. The State of Kerala has entered into MOUs with some of the leading global industrial enterprises and is going to implement some schemes in the technical education realm where skill development is a matter of concern. The State has entered into an MOU with Bosch Group which is a global company with wide network of operations in Automotive, Industrial and Consumer goods and building service sectors. Bosch Rexroth will set up one Centre of Excellence in Automation Technologies at College of Engineering, Trivandrum and one Centre of Competence in Automation Technologies at Government Polytechnic at Kalamassery. These centres will work on dual education system centres that will provide in depth knowledge on automation technologies.

The following courses are implemented under the technical education department in Public-Private Partnerships (PPP) mode.

- a. Advanced Diploma in Automotive Mechatronics (ADAM) and Establishment of Centre of Excellence in Mechatronics at Government Engineering College, Barton Hill.
- b. Centre of Excellence in Automation Technologies in College of Engineering Trivandrum.
- c. Centre of Competence in Automation Technologies in Govt. Polytechnic College, Kalamassery.
- d. Two year MS Course in Translational Engineering in Government Engineering College, Barton Hill, Thiruvananthapuram.

Directorate of Technical Education is the nodal department for technical education in the State. The basic objective is to achieve faster, sustainable and more inclusive growth. The details of technical institutions under the administrative and financial

control of Directorate of Technical Education is given in **Appendix 4.38**.

Various projects are being undertaken through funding from different agencies like Ministry of Human Resource Development, All India Council for Technical Education, Technical Education Quality Improvement Programme (TEQIP) (**Box 4.4**), Trivandrum Engineering Science and Technology (TREST) Research Park, Technology Business Incubators (TBI), Department of Science and Technology (DST), and University Grants Commission.

Engineering Colleges

There are 183 engineering colleges in the State with a sanctioned intake of 60,376 in 2016. Out of these engineering colleges, 171 (93.44 per cent) are self-financing colleges (unaided), 9 (4.92 per cent) are government colleges and 3 (1.64 per cent) are private aided colleges. Largest number of the unaided engineering colleges are functioning in Ernakulam (31) followed by Thiruvananthapuram (26). There is no government engineering college in Kollam, Pathanamthitta, Alappuzha, Ernakulam, Malappuram and Kasargode. The district-wise and management-wise details of engineering colleges and sanctioned intake are given in **Appendix 4.39**. The sanctioned intake of government colleges during 2016 was 3283 (5.44 per cent), in aided colleges was 1850 (3.06 per cent) and in unaided colleges was 55,243 (91.5 per cent).

Of the engineering colleges in Kerala, the largest number of branch wise seats was in Electronics and Communication (12,063) followed by Mechanical Engineering (11,165), Civil Engineering (10,412) and Computer Science and Engineering (10,269). Branch-wise distribution of seats in engineering colleges in 2015-16 is given in **Appendix 4.40**. The number of students enrolled in government and aided engineering colleges for graduate courses decreased to 5,134 in 2016-17 from 6370 in 2015-16. The proportion of girls' enrolment has also decreased to 36.42 per cent from 36.86 per cent in 2015-16. 1,515 students have been admitted in government and aided engineering colleges for post graduate courses in 2016-17. Girl students constitute 61.19 per cent of total students studying for post graduate courses in government and aided engineering colleges. Details are given in **Appendices 4.41** and **4.42**.

Academic Excellence in Engineering Colleges

The academic excellence in Government Engineering Colleges is high and appreciable and this was due to the high pass percentage and increasing placement of students in reputed firms. The placement record of the students in various government institutions is also relatively high. A large number of students are also qualifying for higher studies through competitive examinations

Box 4.4

Technical Education Quality Improvement Programme (TEQIP)

In 2002-03, the Government of India with the financial assistance from the World Bank launched Technical Education Quality Improvement Programme (TEQIP) as a long term Programme for 10-12 years to be implemented in three phases for systematic transformation of the Technical Education System. The first phase of TEQIP commenced in March 2003 and ended in March 2009, covering 127 institutions in 13 States. Five Engineering Colleges of Kerala were included in Phase I. TEQIP II, the second phase of the project commenced in 2010-11 and is likely to be over by March 31, 2017 covering 190 institutions in the State. Rs.10 crores for 19 institutions plus Rs.5.7 crore for State Project Facilitation Unit (SPFU) was sanctioned for the State and out of this, Rs.156.16 crore has already been released. Under TEQIP III, 250 institutions will be competitively selected from the States based on the pre-notified criteria and quality of the proposals submitted by the institutions. The third phase is likely to start in the next academic year.

Source: Directorate of Technical Education

like GATE, and CAT. Most of the students get placement in multinational firms like WIPRO, MAHENDRA, TCS, and BOSCH. Placement details of students of various Govt. Engineering colleges during 2015-16 are given in **Table 4.5**. The number of visiting faculty programmes in various engineering colleges may be seen in **Appendix 4.43**.

Polytechnics and Technical High Schools

Forty five Government polytechnics and 6 private aided polytechnics are functioning in Kerala. The annual intake of students in government polytechnics and private aided polytechnics during 2016-17 were 9,708 and 1,475 respectively. The total number of students in government polytechnics during the year 2016-17 is 27,861 and that of private aided polytechnics is 4,448. Details of annual

intake and student strength in polytechnics for the year 2014-15 to 2016-17 are given in **Appendices 4.44** and **4.45**. Details of trade-wise annual intake of students in polytechnics of the State in 2016-17 are given in **Appendix 4.46**. Student intake is highest in the trade of Mechanical Engineering (2620) followed by Computer Engineering (2190), Civil Engineering (2170) and Electronics Engineering (2120).

Total number of teachers working in polytechnics of the State is 1,801. Women teachers constitute 30 per cent of the total number of teachers in polytechnics. Student- teacher ratio is high in Government Polytechnics.

Total number of teachers working in polytechnics of the State is 1756. Women teachers constitute 28.87% of the total number of teachers in polytechnics. Student-Teacher Ratio in polytechnics is given in **Table 4.6**.

Table.4.5
Placement Details of Students of Various Engineering College during 2015-16

Sl No.	Name of College	Number of offers
1	College of Engineering, Thiruvananthapuram	870
2	Govt. Engineering College, Barton Hill	95
3	RIT, Kottayam	113
4	Govt. Engineering College, Idukki	67
5	Govt. Engineering College, Thrissur	553
6	Govt. Engineering College, Palakkad	97
7	Govt. Engineering College, Kozhikkode	59
8	Govt. Engineering College, Wayanad	1
9	Govt. Engineering College, Kannur	146
	Total	2001

Source: Directorate of Technical Education

Table 4.6
Student- Teacher Ratio in Polytechnics

Type of Institutions	2014	2015	2016
Government	21	20	20
Private (Aided)	11	10	11
Total	19	17	18

Source: Directorate of Technical Education

Details of number of students and teachers in polytechnics are given in **Appendix 4.47**. Number of SC/ST students and SC/ST teachers in polytechnics in the reporting year are given in **Appendix 4.48**. It is seen that the percentage of SC/ST students is low and it is decreasing over the last three years (**Table 4.7**).

39 Government technical high schools are functioning in the State. Total number of students in technical high schools in the year 2015-16 is 8872, and 794 teachers are working in technical high schools of the State in the corresponding period. Women teachers constitute 23.93 per cent of teachers in technical high schools. Number of students and teachers in technical high schools from 2013-14 to 2015-16 are given in **Appendix 4.49**.

Compared to the previous year, the percentage of SC and ST students in technical high schools has declined from 12.76 per cent to 9.36 per cent and from 0.96 per cent to 0.63 per cent respectively. Details are given in **Appendices 4.50** and **4.51**.

Some specific measures need to be taken on priority basis, as there is a consistent fall in the quality of higher education being imparted in the State. In this context, it would be useful to revisit some of the measures adopted in the past when concerns on quality of education were voiced. Although courses were started with a focus on skill orientation towards specific occupations with the intention of achieving self/wages/direct employment as well as vertical mobility, it remained unsuccessful for various reasons.

Table.4.7
Percentage SC/ST students in Polytechnics

Type of Institution	2014-15				2015-16				2016-17			
	SC	ST	Oth-ers	Total	SC	ST	Oth-ers	Total	SC	ST	Others	Total
1. Government	8.19	1.01	90.80	100	7.08	0.86	92.06	100	6.86	0.71	92.43	100
2. Private (Aided)	9.84	0.47	89.69	100	5.46	0.38	94.16	100	5.13	0.47	94.40	100
Total	8.40	0.94	90.66	100	6.86	0.79	92.36	100	6.62	0.68	92.70	100

Source: Directorate of Technical Education

Box 4.5 **Punarjjani**

Punarjjani, as the term denotes, is a unique programme designed by National Service Scheme, Technical Cell, Kerala to restore and reinstate the assets of institutions such as government hospitals, educational institutions and other government institutions, as a consolidated effort to achieve greater results. As a pilot programme, the cell has undertaken the rejuvenation works of discarded and unusable instruments, tools and other materials including operation tables and polluted water tanks on the premises of selected government hospitals across the State. The volunteers have repaired, painted and put them back into service. The volunteers have also attended electrical wiring, plumbing works and repaired the dilapidated buildings and toilets, and removed waste and cleaned the premises. The hospitals chosen for the Punarjjani operation include medical colleges, general hospitals, district hospitals, taluk hospitals, community health centre, primary health centres, mental hospitals and ayurveda hospitals. The efforts of the volunteers were widely appreciated. This has boosted the morale of team of NSS Technical Cell to undertake more result oriented community development projects. The team conducted 100 programmes with 6460 volunteers and created assets with value of around 10 crores during 2015-16.

Source: Directorate of Technical Education, Kerala.

Kerala has a paradoxical situation prevailing where the number of job seekers is rising alongside a scarcity of labour for manual jobs. Another major issue confronting the educational system of Kerala is the mismatch between the courses available and the courses required. This mismatch between demand and supply is more pronounced in the area of higher and technical education. There exists lack of interaction between educational institutions and industry. Collaboration of our

leading technical institutions with leading industrial concerns may change the situation. To enable the higher and technical education system in Kerala to utilise the increasing opportunities generated by globalization, the State needs to introduce various industry based courses, which will increase the quality of education. Expanding higher education to new spheres is also expected to generate more placement opportunities.

Section 2

MEDICAL AND PUBLIC HEALTH

Improvement in the health status of the people is one of the crucial areas in social development of a community. This can be achieved by improving the access to health services, especially for the underprivileged people. The foundation for a medical care system accessible to all citizens was laid in the State much before independence. Some of the hospitals in Kerala are more than 50 years old. Democratic decentralization since 1994 in Kerala improved the infrastructure facilities and equipment in primary and secondary healthcare institutions and widened healthcare delivery. Easy accessibility and coverage of medical care facilities has played a leading role in influencing the health status of Kerala. In Kerala, both Allopathy and AYUSH systems play a crucial role in providing, universal accessibility and availability even to the poorer sections of society.

Kerala has made significant gains in health indices like Infant Mortality Rate, Birth Rate, Death

Rate, and expectancy of life at birth. The challenges before the State is to sustain the achievements in the health sector and to tackle the problems of life style diseases like diabetes, coronary heart disease, renal disease, cancer and geriatric problems. Communicable diseases like chikungunya, dengue, leptospirosis, and swine flu are also major concerns. Other than these, there are new threats to the health scenario of the State, like mental health problems, suicide, substance abuse and alcoholism, adolescent health issues and rising number of road traffic accidents. To tackle these, concerted and committed efforts with proper inter-sectoral co-ordination is essential.

Health Indicators of Kerala

The health indicators of the State are considerably superior to the national figures. The comparative figures of major health and demographic indicators at State and National level are given in **Table 4.8**.

Table 4.8
Demographic, Socio-economic and Health profile of Kerala and India

Sl. No.	Indicator	Kerala	India
1	Total population (in crore) (Census 2011)	3.34	121.06
2	Decadal Growth (per cent) (Census 2011)	4.90	17.7
3	Sex Ratio (Census 2011)	1084	943
4	Child Sex Ratio (Census 2011)	964	919

Sl. No.	Indicator	Kerala	India
1	Birth Rate #	14.8	21.0
2	Death Rate #	6.6	6.7
	Male	7.6	7.1
	Female	5.8	6.2
3	Natural Growth Rate #	8.2	14.3
4	Infant Mortality Rate #	12	39
	Male	10	37
	Female	13	40
5	Neo Natal Mortality Rate*	7.00	35.00
6	Perinatal Mortality Rate*	13.00	35.00
7	Child Mortality Rate*	2.00	15.00
8	Under 5 mortality Rate*	14.00	69.00
9	Early Neo-natal Mortality Rate*	5.00	27.00
10	Late Neo-natal Mortality Rate*	2.00	8.00
11	Post Neo-natal Mortality Rate*	4.00	18.00
12	Death Rate*		
	(a) Children (0-4)	3.10	20.70
	(b) Children (5-14)	0.20	1.00
	(c) Children (15-49)	2.50	3.70
	(d) persons (60 and above)	42.10	46.60
	(e)Percentage of death receiving medical attention*		
	Government	38.00	17.40
	Private	33.40	12.10
	Qualified professional	12.20	37.90
	Untrained/others	16.40	32.60
13	Still Birth Rate*	7.00	8.00
14	Total Fertility Rate*	1.70	2.60
15	General Fertility Rate*	52.00	88.00
16	Total Marital Fertility Rate*	3.50	4.30
17	Gross Reproduction Rate*	0.80	1.20
18	Female age at effective marriage*		
	(a) Below 18	16.70	16.30
	(b) 18-20	19.20	19.00
	(c) Above 21	24.40	23.90
	(d) All age	24.40	20.70
19	Couple Protection Rate	62.30	52.00
20	Maternal Mortality Ratio**	66.00	178.00
21	Expectancy of Life at Birth*		
	Male	71.40	62.60
	Female	76.30	64.20

Source: Directorate of Health Services # SRS 2016, July *SRS 2009 **Special Bulletin on MMR 2010-12

Draft National Health Policy 2015

The National Health Policy (1983 and 2002) has guided the approach towards the health sector in the country. Thirteen years after the health policy in 2002, the draft National Health Policy 2015 was formulated, which addressed the issues of universal health coverage, reduction of maternal mortality and infant mortality, improved access to free drugs and diagnosis. Salient features of the draft National Health Policy 2015 are;

- i. Improve the care delivery system
- ii. A National Health Rights Act to make health a Fundamental Right
- iii. Denial of health care will be justiciable
- iv. Raise public health expenditure to 2.5 per cent of GDP (Rs.3800 per capita) from current spending of 1.04 per cent of GDP (Rs.957 per capita)
- v. Creation of health cess on the lines of educational cess
- vi. Ensure universal access to free drugs and diagnosis in government hospitals
- vii. States may voluntarily opt to adopt the Act through a resolution in the Legislative Assembly

Committee to Draft New State Health Policy

The Government has constituted a 17-member panel headed by Dr B Ekbal, Member, State Planning Board to draft a health policy for the state. The main thrust of the new Health Policy will be to provide universal comprehensive free health care to all the people of the State. The Policy will be based on primary health care, disease prevention, health education and family doctor approach. The health policy aims to take care of the needs of the marginalized sections like Adivasis and fisher folk. The Committee is formulating the health policy by organizing public hearings and discussions with various organizations.

Sustainable Development Goals

The sustainable development goal set by the United Nations for health and well-being aims at ensuring healthy lives and promoting well-being for all at all ages. The Government of Kerala has formulated short and medium term targets (draft) to be achieved by the state in the health sector. This is in keeping with the Sustainable Development Goals (SDG) Framework so that targets finalized by Kerala would be aligned to national and international targets. The relevance of the targets set by the UN to the State was examined by the Working Groups. The targets to suit the State's current epidemiological status and capacity were adopted. In addition to the targets listed by the U.N., Kerala has included targets in Dental, Ophthalmic and Palliative care also as they were considered important for the state. The Working Groups have recommended key strategies to achieve these targets. A survey is proposed to be conducted to assess the baseline values which will be the benchmark to measure progress in achievement of the targets. A repeat survey is intended to be carried out in 2021 to evaluate the performance of the state.

Health Sector Financing During Twelfth Plan

Even though State allocates less than five per cent of its total plan outlay, health has been a major area of allocation in the budget in the State in the past years. The healthcare expenditure has been showing a steady increase in recent years. During the first year of Twelfth Plan (2012-13) an amount of ₹47,000 lakh had been allotted for the sector, of which 82 per cent was expended. During the second year of the Twelfth Plan (2013-14) an amount of ₹54100 lakh was allocated for Health Sector, a 15 per cent increase over 2012-13 outlay and the expenditure was 94.72 per cent of the outlay. In the third year (2014-15), an amount of ₹62940 lakhs was allocated and 87.76 per cent

expended. The outlay earmarked for 2015-16 was ₹66537 lakhs and the corresponding expenditure percentage was 79.65. Department wise plan outlay and Expenditure during the Twelfth Plan and total outlay and expenditure up to October 2016 (2016-17) is given in **Table 4.9**.

Table 4.9
Department wise Outlay and Expenditure for the XIIth Plan (Annual plan 2012-17)
(₹ in lakh)

Department	Annual plan 2012-13		Annual plan 2013-14		Annual Plan 2014-15		Annual Plan 2014-15		Annual Plan 2016-17	
	Outlay	Per cent Exp.	Outlay	Per cent Exp.	Outlay	Per cent-Exp.	Outlay	Per cent Exp.	Outlay	Per cent Exp.*
Directorate of Health Services	20564	90.15	24530	97.67	29693	78.90	32216	67.86	52174	42.32
Directorate of Medical Education	20220	81.15	22665	93.85	25750	97.40	26699	89.69	39388	5.55
Indian Systems of Medicine	1665	101.38	2330	95.11	2545	78.15	2670	93.85	3412	14.78
Directorate of Ayurveda Medical Education	1760	59.16	2300	94.04	2567	84.10	2567	94.60	3364	7.23
Directorate of Homoeopathy	1721	40.66	1475	61.80	1440	88.76	1440	91.26	1983	9.20
Homoeo Medical Education	1070	32.01	800	90.50	945	97.60	945	93.78	990	6.26
Total	47000	82.38	54100	94.72	62940	87.76	66537	79.65	101311	24.84

Source : Plan Space

*Exp. upto October 2016

Box 4.6

Working Groups on Health Sector for 13th Five Year Plan

The State Planning Board constituted separate Working Groups for Medical and Public Health and Ayush for 13th Five year Plan Period. The Working Group on Medical and Public Health was constituted with Sri. Rajeev Sadanandan IAS, Additional Chief Secretary to Government, Health and Family Welfare Department and Dr. K.R. Thankappan, Professor and Head, Achutha Menon Centre for Health Sciences Studies, Sree Chitra Thirunal Institute for Medical Sciences and Technology, Thiruvananthapuram as Co-Chairpersons and 13 Members. The Working Group on Ayush was constituted with Dr. B Ashok IAS, Secretary to Government, Ayush Department and Dr. Ravi M Nair as Co-Chairpersons and 16 Members. The Working groups deliberated on the various challenges faced by the State's Health System and the strategies to be adopted during the Thirteenth Five Year Plan period. The Working Group identified priority areas in Health Sector for the 13th Five Year Plan and will submit its report shortly. The recommendations of the Committee will be incorporated in the schemes of the health sector.

Major Health Problems In Kerala

Communicable Diseases

Kerala is witnessing an increasing burden of communicable and non-communicable diseases. Although the State has been successful in controlling a number of communicable diseases earlier, the emergence of Dengue, AIDS, Malaria, Leptospirosis, Hepatitis, Chikungunya, and H5N1 in recent years has led to considerable increase in morbidity and mortality.

Bird Flu

The bird flu, highly infectious virus strain, has affected largely the southern districts of Kerala viz., Pathanamthitta, Kottayam and Alappuzha during 2014, and Kottayam and Alappuzha during 2016. There have been no reports of the virus affecting humans. Avian influenza, commonly called bird flu, is an infectious viral disease affecting birds. Influenza virus circulating in animals poses threat to human health. Humans can become ill when infected with viruses from animal sources. Controlling the disease in animals is the first step in decreasing risks to humans. According to the World Health Organisation, while millions of fowls have died due to the Avian Influenza, 452 human deaths (zero in India) have been recorded globally between 2003 and 2016.

Leptospirosis

Leptospirosis has been causing a large number of deaths during the last few years in the State. Out of the 510 Leptospirosis cases reported in 2012, 11 deaths were reported. The number of cases increased to 613 with 15 deaths during 2013. During 2014, a total of 717 cases were confirmed resulting in 19 deaths. During 2015, 666 cases and 15 deaths have been reported. Number of patients treated during 2016 was 13339 and death reported was 21 which are slightly higher compared to previous years. The details of district wise patients treated for leptospirosis and death reported during 2016 is given in **Appendix 4.52**.

HIV/AIDS

It is estimated that around 2.4 million people in India are currently living with HIV. Kerala State Aids Control Society is the pioneer organization in the State working with the objective of controlling the spread of HIV as well as strengthening the State's capacity to respond to HIV/AIDS. It was formed to implement the National Aids Control Programme in the State.

In Kerala, the prevalence of HIV / AIDS is 4.95 per cent among injecting drug users (IDU), 0.36 per cent among men having sex with men (MSM) and 0.73 per cent among Female Sex Workers (FSW). The HIV prevalence among FSWs and MSM is nearly 1 per cent, but the prevalence among IDUs is 4.95 per cent, though it shows downward trend from 9.57 per cent in 2007, 5.3 per cent in 2008 and 4.95 per cent in 2011. Current data suggest that the HIV epidemic in the State is largely confined to individuals with high risk behaviour and their sexual partners.

Chikungunya

During 2006, Chikungunya emerged as a major epidemic in India affecting 151 districts in 8 States including Kerala. During 2011, while 58 chikungunya cases were reported in Kerala, it increased to 169 cases during 2013. Among the districts, highest number of cases (149) was reported in Thiruvananthapuram and 11 cases were reported in Idukki. During 2014, out of the 139 cases of chikungunya reported 106 were from Thiruvananthapuram. During 2015, 104 cases were reported and 99 were from Thiruvananthapuram district alone, it was 106 and 77 respectively during 2016 (up to September). A total of 2,046,455 viral fever cases were reported in Kerala during 2014 and in 2015 it was 1,925,690 cases. It was 2,040,667 cases during 2016 (upto September 2016). The details of district wise patients treated for Chikungunya and viral fever during 2016 (up to September) is given in **Appendix 4.53**.

Leprosy

The National Leprosy Eradication Program (NLEP) of the Government of India is implemented throughout the State for the control and eradication of leprosy. It has become a Centrally Sponsored Program with 60 percent funding support from Central Government from 2015-16 onwards.

Kerala is a low endemic state for leprosy. The Annual New Case Detection Rate (ANCDR) is 1.88 per lakh population and Prevalence rate (PR) is 0.17 per 10,000 (as on October 31, 2016). Kerala contributes 0.45 per cent of the total annual case detection in India. Total number of leprosy cases under treatment in Kerala as on September 30, 2016 is 745. The number of reconstructive surgeries done during the year was 26 in 2015-16 and 6 in 2016-17 (up to September). During 2015-16, MCR chappals distributed was 587 and self-care kits distributed was 230. The same were 102 and 89 respectively during 2016-17 (up to October). The present scenario of leprosy is given in **Appendix 4.54**. There are three leprosy sanatoriums in Kerala with bed strength of 1692 and the details of leprosy cases during 2016 are given in **Table 4.10**.

Non Communicable Diseases

Common non-communicable diseases causing serious threat to life are cancer, diabetes, cardiovascular diseases and lung diseases. Unless

interventions are made to prevent and control non-communicable diseases, their burden is likely to increase substantially in future, due to ageing population and changes in life style. Considering the high cost of medicines and longer duration of treatment, this constitutes a greater financial burden to low income groups..

Cancer

Cancer is a major life threatening disease that is affecting many sections of human population. Every year, nearly 35,000 new cases of cancer are getting detected in Kerala. Nearly 1 lakh people are under treatment for this disease annually. Apart from Medical Colleges, Regional Cancer Centre, Malabar Cancer Centre and Cochin Cancer Centre, the hospitals in Government sector offer treatment for cancer patients. Delay in early detection, huge treatment cost, minimal treatment centres and lack of awareness contribute to high mortality rates due to this disease.

Malabar Cancer Centre

Malabar Cancer Centre, Kannur, an autonomous centre under the Government of Kerala, has been established with the aim of providing oncological care to the people of north Kerala. The Centre has bed strength of 200 and many latest facilities for the treatment of cancer patients. During 2015-16, a total of 60203 patients were treated in Malabar Cancer Centre including 3790 In-Patients and 56413 Out-Patients. The average number of new cases detected every year is 4034.

Table 4.10
District wise distribution of Leprosy unit in Kerala, 2016

Sl No.	District	Institutions	Sanctioned Bed Strength	IP as on 31st Oct. -2016
1	Alappuzha	Leprosy Sanatorium, Nooranadu	767	184
2	Thrissur	Koratty Gandhi Gram Govt. Dermatology Hospital	660	173
3	Kozhikode	Govt. Leprosy Hospital, Chevayoor	265	100
Total			1692	457

Source: Directorate of Health Services

Indian Institute of Diabetes

The Indian Institute of Diabetes (IID), Thiruvananthapuram, is an autonomous institution under the Government of Kerala. It has been functioning for the last two decades and is the only institution under the Government offering services exclusively for Diabetes Mellitus and its complications. IID made operational in the year 2001, functions with main centre at Pulayanarkotta near Akkulam in Thiruvananthapuram city and one sub centre at Public Health Laboratory Campus, in Pattoor, Thiruvananthapuram. The major activities of this institute are to investigate the genetic basis of diabetes, to provide adequate training for physicians and paramedical staff, to provide research support to develop novel methods of treatment, to endow academic chairs in diabetes, and to organize state-of-the-art conferences in India on various aspects of the disease. Total bed strength of the IID is 60. Average number of new cases detected every year is between 300 to 350. Out Patient treated in 2015-16 was 43,650, IP was 102 and new cases were 215.

Prevalence Of Other Public Health Diseases During 2015 And 2016

A comparative analysis of the prevalence of public health diseases during 2015 and 2016 is given in **Table 4.11**.

Mental Health

As per Census of India 2011, 0.20 per cent of the population of Kerala suffers from mental illness and 0.20 per cent suffers from mental retardation compared to a national average of 0.06 per cent and 0.12 per cent respectively. Although Kerala reports higher levels of mental illness compared to all India, less importance is given to the field of mental health in Kerala.

A mental health policy was approved by the state government in May 2013. The policy suggests that the treatment for mental illness should start from the primary health centres making the mental hospitals and the Department of Psychiatric Medicines as referral centres by upgrading them. Research should be encouraged for prevention and cure of mental illness. An awareness programme among the general public about mental illness has also been suggested in the policy. Proper training should be imparted to the doctors free of cost whether they come from public or private sector if they show their willingness to undergo the training. The new State Mental Health Policy envisages convergence of various departments for the care and rehabilitation of the mentally ill.

In Kerala three mental health centres are functioning with bed strength of 1366. District Mental Health Programme is functioning in all the districts with a total of 10,080 OP per month. Rehabilitation facilities are offered through these centres. Lack of awareness, attitude of general

Table 4.11
Prevalence of Public Health Diseases during 2015 & 2016

Sl.No.	Diseases	2015		2016*	
		Attack	Death	Attack	Death
1	Diarrheal Diseases	448374	2	351427	8
2	Enteric fever	2862	0	2780	4
3	Measles	1782	0	1197	0
4	Chickenpox	17798	0	14711	1

*upto September

Source: Directorate of Health Services

public, neglect of family members, and lack of proper follow up are the major problems noticed in this area. State Government has started 26 day care homes and 506 cured mentally ill patients are being given day care.

Delivery, Maternal Death and Maternal Mortality Ratio

On the basis of the reports of Directorate of Health Services, the number of deliveries during 2013-14 was 4,93,534 and maternal death reported was 182 and MMR 37 which was higher compared to the maternal death 165 and MMR 33 of 4,95,613 deliveries during 2012-13. Total number of deliveries during 2014-15 was 4,94,479 and maternal death was 158 and MMR 32. Maternal death and MMR has reduced during 2014-15 compared to previous years. Total number of deliveries during 2015-16 was 4,81,388 and the maternal death reported was 161 and MMR 33.

MODERN MEDICINE – ALLOPATHY

Modern medicine services in the state are offered by the Directorate of Health Services (DHS). Directorate of Medical Education (DME) deals with the education aspects of modern medicine.

Health Care Institutions under DHS

At present there are 1281 health institutions with 38,302 beds and 5,335 doctors under Health Services Department consisting of 849 Primary Health Centres, 234 Community Health Centres, 79 Taluk Head Quarters hospitals, 18 District hospitals, 18 General hospitals, 3 mental health hospitals, 8 W and C hospitals, 3 leprosy hospitals, 17 TB clinics, 2 TB hospitals, 5 other specialty hospitals and 45 other hospitals. Primary health centres are institutions providing comprehensive primary care services including preventive care and curative care. CHCs and Taluk level institutions form the basic secondary care institutions. District hospitals, General Hospitals and Maternity

Hospitals provide specialty services and some super specialty services. In the 13th Five Year Plan focus will be on the implementation of the specialty cadre in all health care institutions up to the level of community health centres and modernization of the functioning of the PHCs as Family Health Centres. The bed population ratio in Kerala is 872 and the average Doctor Bed Ratio is 7.18. Category wise major medical institutions and beds in Kerala, details of IP, OP cases, major and minor operations conducted and Medical and Para medical personnel under DHS during 2016 are given in **Appendices 4.55, 4.56 and 4.57.**

Financial Protection Against Catastrophic Health Care Expenditure

Rashtriya Swasthya Bima Yojana (RSBY) is a Health Insurance Scheme, sponsored by the Government of India, for providing free and quality inpatient care to the families falling below poverty line (BPL) in the society. The scheme promises inpatient treatment facility upto Rs.30,000/- on paperless, cashless and floater basis to a maximum of five members in a family, for a period of one year through selected public and private hospitals with a prefixed medical and surgical rates for treatment in general ward. RSBY does not cover outpatient treatment cases. Minimum period of 24 hour inpatient treatment is required for getting the benefit under the scheme. More than 1100 surgical procedures with prefixed rates are included in the benefit package.

Government of India pays 75 per cent of the premium and the State pays the rest. Three important features of RSBY are (i) there is no age limit for joining the scheme; (ii) it covers existing diseases; and (iii) a transport allowance of Rs.100 is being paid in cash to the patient at the time of discharge from the hospital. Maximum transportation allowance payable in a year is restricted to ₹1,000. It has a component to pay the wages foregone as well.

As the BPL population according to the definition adopted by the State is over and above the Planning Commission estimate by more than 10 lakhs, the State Government formulated its own Scheme for catering to the needs of the additional 10 lakh population. These two schemes are being jointly run under the banner COMPREHENSIVE HEALTH INSURANCE SCHEME (CHIS). A special purpose vehicle by name CHIAK (Comprehensive Health Insurance Agency, Kerala) has been formed and entrusted with the task of running the schemes.

Government of India extended the scheme to cover families of the participants of Mahatma Gandhi National Rural Employment Guarantee Scheme who have worked for more than 15 days in the previous year, street vendors, and domestic workers. Overall, workers in the unorganised sector are being covered by the scheme in increasing numbers. The State has been trying to bring other categories of population into the CHIS net. In 2014-15, the Government sought to bring the members of the various welfare fund boards and its pensioners, all Scheduled Caste and Scheduled Tribe population, and families engaged in fishing and workers of various unorganized sectors. The two schemes together cover a sizeable proportion of the population in the State. The progress of the scheme is presented in **Table 4.12**. The number of families covered has steadily increased to reach 32.54 lakh by 2016-17.

Financial protection in the form of RSBY offered the option of using private sector services by all those enrolled in the scheme. Interestingly, instead of the proportion of users of the private institutions increasing over the years, the share of the government hospitals in the total has steadily increased (**Table 4.13**).

A new scheme for providing tertiary care treatment with a benefit package of maximum Rs.70,000 for critical illness like cancer, cardiac and renal failure to all the RSBY and CHIS card holder families was designed during 2010-2011. The scheme, named as CHISPLUS, was launched by the middle of February 2011. The Coverage of CHISPLUS has been extended by including diseases relating to Liver, Brain and treatment of Accident Trauma care during 2012. The scheme is implemented through all the five Government Medical Colleges in the State, Regional Cancer Centre, Thiruvananthapuram, Malabar Cancer Centre and all Government District Hospitals, General Hospitals, and Taluk Hospitals. The scheme is monitored by CHIAK with the help of software developed by Keltron. The scheme, implemented through a non-insurance route, has benefited 2,91,812 patients upto September 2016 and the claims have totalled ₹312.56 crore.

The RSBY benefit package does not cover tertiary care. The CHIS Plus covers limited tertiary care for the population groups registered under the scheme.

Table 4.12
Progress of RSBY/CHIS

Year	Number of Families Enrolled (Lakh)	Premium Paid	Number of Claims	Claims Paid (₹crore)
2008-10	11.78	51.27	1.64	56.00
2010-11	18.75	80.49	3.65	125.00
2011-12	28.01	205.00	6.99	211.00
2012-13	28.28	310.00	7.00	198.00
2013-14	29.73	219.49	5.57	172.15
2014-15	31.94	235.77	5.87	194.18
2015-16	31.94	216.48	5.25	159.92
2016-17*	32.54	167.03	2.94	81.79

Source: CHIAK

*Upto September 2016

Table 4.13
Utilisation of CHIS by Sector

Year	Claim Settlement by Sector (Count in lakh and amount in ₹ crore)							
	Govt. Hospitals			Pvt. Hospitals			Total	
	Count	Amount	per cent	Count	Amount	per cent	Count	Amount
2008-10	0.48	18	40	0.95	27	60	1.43	45
2010-11	1.44	52	46	2.16	61	54	3.60	113
2011-12	3.78	119	56	3.20	93	44	7.00	212
2012-13	4.82	125	70	2.18	56	30	7.00	181
2013-14	4.02	143.13	72	1.56	55.9	28	5.58	199.03
2014-15	4.16	158.7	70	1.7	69.36	30	5.86	228.06
2015-16	3.71	145.32	71	1.53	60.27	29	5.24	205.59
2016-17	1.97	81	64	0.98	45.02	36	2.95	126.02

*Upto September 2016

Source: CHIAK

Table 4.14
Progress of the CHIS Plus Scheme

Year	Number of Patients	Amount ₹crore
2010-11	158	0.29
2011-12	14453	26.08
2012-13	42228	56.94
2013-14	50945	53.08
2014-15	66738	68.03
2015-16	80017	73.42
2016-17*	37273	34.72

*Upto September 2016

Source: CHIAK

This leaves out the other groups for whom tertiary care treatment becomes unaffordable. Realising the need for intervention in this area, a new scheme was designed called Karunya Benevolent Fund (KBF) to meet the tertiary care expenditure of deserving individuals. Unlike the CHIS, which is a cashless scheme, the KBF requires a prior authorization. The amount is paid to the hospital which has to submit the utilisation certificate. In addition, there is also provision to provide a one-time assistance of Rs 3,000 per family. Treatment can be availed at all government hospitals and empanelled private hospitals. (Table 4.14)

Arogyakiranam

Arogyakiranam was one of the flagship Health programs of the Government of Kerala. The program provides free treatment and related medical services to all patients from birth to 18 years, as an entitlement. Expenses covered by this entitlement include costs incurred for OP registration, investigations, drugs/ implants/ materials used in treatment and procedures. The fund for coverage of treatment expenditure was allotted to districts, to be maintained as corpus fund, from which all said expenses were debited. During the period October 2013- April 2016, this scheme benefited 1, 04, 81,613 patients.

National Health Mission

National Health Mission (NHM) is the major Centrally Sponsored Schemes on health sector relevant to Kerala. The scheme is categorized as 'Core Scheme' with funding pattern 60:40 between Centre and State. This umbrella scheme includes the following schemes

- a. National Rural Health Mission
- b. National Urban Health Mission
- c. Tertiary care Programmes
- d. Human Resources in Health and Medical Education
- e. National Ayush Mission

NHM has five financing components to the States, namely (i) NRHM/RCH Flexi-pool, (ii) NUHM Flexi-pool(iii) Flexible pool for Communicable Diseases (iv)Flexible pool for Non Communicable Diseases including injury and trauma and (v) Infrastructure Maintenance. Under the component of infrastructure maintenance, support has been given over several Plan periods, to States to meet salary requirement of Schemes viz. Direction and Administration (Family Welfare Bureaus at State and district level), Sub Centres, Urban Family Welfare Centres, Urban Revamping Scheme (Health Posts), ANM/LHV Training Schools, Health and Family Welfare Training Centres, and Training of Multi-Purpose Workers (Male).

NHM is functioning in the State for the development of health institutions with Central Government funding. 40 per cent of the cost has to be borne by the State Government as State share. NHM is supporting the Health Services Department, Directorate of Medical Education and AYUSH Departments. National Rural Health Mission aims to provide accessible, affordable and accountable quality health services to the poorest households in the remote rural regions. Under NRHM, the focus is on a functional health system at all levels, from the village to the district. Total GoI release to the State during 2014-15 was ₹224.94 crore, in

2015-16 it was ₹219.19 crore and in 2016-17 it was ₹163.51 crore (upto October 2016).

Pradhan Manthri Swasthyasuraksha Yojana (PMSY)

Pradhan Manthri Swasthya Suraksha Yojana is a Government of India supported scheme to improve infrastructure facilities and technology in Government Medical College, Thiruvananthapuram (Phase I) and Kozhikode and Alappuzha (Phase III) with a total outlay of ₹ 150 crore each of which ₹30 crore is the State share. The project for Government Medical College, Thiruvananthapuram (Phase I) has already been completed and the rest are ongoing during 2016-17.

State Institute Of Medical Education And Technology (Si-Met)

State Institute of Medical Education and Technology (SI-MET) was established in the State in 2008 to promote medical education and research. There are seven nursing colleges functioning under SI-MET with an annual intake of 340 students. A total of 838 students are studying in the Nursing Colleges of SI-MET as on October 2016.

Child Development Centre (CDC)

Child Development Centre (CDC), an autonomous centre established by the Government of Kerala, is a centre of excellence in Early Child Care and Education, Adolescent Care and Education, Pre-marital Counseling, Women's Welfare and other related fields to reduce childhood disability through novel scientific initiatives. It aims to create a generation of prospective and responsive parenthood through healthy children and adolescents. The number of patients treated during 2015-16 was 14,174 and 2016-17 (upto October) was 9087. Only Out-patient services are available and there is no facility for admitting patients.

Drugs Control Department

The responsibility of the Drugs Control Department is to ensure the availability of quality drugs to the public and see that the market is free from counterfeit, spurious and substandard drugs and no drugs are sold at a price higher than the retail price marked on the container. The Department has 6 Regional Offices, 11 District Offices, 4 Ayurveda Wing Offices and 2 Drugs Testing Laboratories. Drug testing laboratories are functioning at Thiruvananthapuram and Ernakulam. Major achievements of the department during 2015-16 is given in **Table 4.15**.

Medical Education

In Kerala, Medical Education is imparted through 11 Medical Colleges at Thiruvananthapuram (2), Alappuzha, Kozhikode, Kottayam, Manjeri, Idukki, Ernakulam, Konni, Kollam and Thrissur districts and Nursing Education through 6 Nursing Colleges in Thiruvananthapuram, Kozhikode, Kottayam, Alappuzha, Ernakulam and Thrissur districts. Five Dental Colleges are functioning at Thiruvananthapuram, Kozhikode, Alappuzha, Thrissur and Kottayam districts. Besides, four colleges of Pharmacy and one Paramedical Institute is functioning under the Department.

Medical and Para medical courses conducted in Government Medical Colleges with annual intake of students, details of clinical and non-clinical personnel in Medical Colleges under DME, during 2015-16 are given in **Appendix 4.58** and **4.59**. A comparative analysis of the status of medical

college hospitals and attached institutions during 2015 and 2016 is given in **Table 4.16**.

An increase of 951 numbers of beds has increased the bed strength to 13025 during 2016 in Medical College institutions compared to previous year figure of 12074. The number of outpatients and major operations conducted has increased during 2016. Major achievements of Medical Education Department during 2016 include;

- Successfully fulfilled Heart Transplantation Surgery in Kottayam Medical College
- Conducted administrative improvement training for 230 faculties
- Initiated steps for implementing e-governance
- Completed construction of Poly Trauma Building in Medical College, Trivandrum.
- Construction of corridor connecting OP Block
- Burns unit put in motion in Medical Colleges, Trivandrum and Thrissur
- Construction of Multi-disciplinary research lab in Trivandrum Medical College
- Started construction of Super Specialty block and administrative block in Medical College, Alappuzha
- Construction of Clinical Skill Laboratory in H1 and H2 block of Alappuzha Medical College hospital.
- Construction of Tertiary Cancer Centre in Kozhikode Medical College having estimate of Rs. 45 Crores is carrying on through financial assistance of central government

Table 4.15
Major achievements of the Drugs Control Department during 2015-16

Number of Inspections conducted	16844
Number of Prosecutions Initiated	96
Number of sale Licences Suspended as Deterrent Measure	635
Number of Samples Tested	5528
Number of new Manufacturing Licenses Issued (Allopathy and Cosmetics)	25
Number of Price Violations detected and reported to NPPA	50
Number of New Blood Bank Licenses Issued	8

Source: Drugs Control Department

Table 4.16
Status of Medical College Hospitals and Attached Institutions during 2015 and 16

Medical College Hospitals	Beds		Inpatients		Outpatients		Major Operations conducted	
	2015	2016	2015	2016	2015	2016	2015	2016
Medical College Thiruvananthapuram	2637	2941	89826	116169	1043789	368380	16716	15115
SAT Hospital Thiruvananthapuram	502	502	18127	13143	100201	75373	990	794
Medical College Alappuzha	1125	1051	62398	57134	912092	909174	1743	3180
Medical College Kottayam	1463	1722	73126	74863	769027	871670	5623	14765
ICH Kottayam	203	170	9614	8454	162454	173719	1289	504
Medical College Thrissur	800	1436	35427	37954	193124	277943	15450	7793
ICD Thrissur	475	330	29146	718	325039	8681	Nil	NIL
Medical College Kozhikkode	2200	2694	81324	73927	484651	1032065	8671	11788
IMCH Kozhikkode	1200	740	41290	39065	92456	188241	2198	2076
ICD Kozhikkode	140	110	4218	3887	58901	55132	Nil	Nil
Medical College Idukki	192	192	7830	20837	139185	88321	928	597
Medical College Ernakulam	500	500	4057	5537	66818	75932	1244	1563
Medical College Manjeri	637	637	29146	29146	116791	828057	6636	3841
Total	12074	13025	485529	480834	4464528	4952688	61488	62016

Source : Directorate of Medical Education

Kerala University of Health and Allied Sciences

Kerala University of Health Sciences was established as per the Kerala University of Health Science Act 2010 with the aim of ensuring proper and systematic instructions, teaching, training and research in Modern medicine, Homoeopathy and Indian System of Medicine and allied health sciences in Kerala. Academic activities of the University has commenced in academic year 2010-11. The number of institutions affiliated to University is

282 (upto October 2016) with 32 Government colleges, 5 Government Aided Colleges and 245 Self-financing Colleges. The colleges fall under all systems of medicine such as Allopathy, Ayurveda, Homoeopathy, Sidha, Unani, Yoga, Naturopathy, Nursing, Pharmaceutical Science and Paramedical courses. The annual intake of students is almost 20,000 under various health sciences stream. Details of the Government, Aided, Unaided colleges affiliated under various streams is given in **Table 4.17**.

Table 4.17
Details of the Government, Aided and Unaided colleges affiliated under various streams in number

Stream	Government	Aided	Unaided	Total
Medicine	9	0	24	33
Ayurveda Medicine	3	2	11	16
Homoeo Medicine	2	3	0	5
Dental	5	0	20	25
Sidha Medicine	0	0	1	1
Unani Medicine	0	0	1	1
Nursing	5	0	114	119
Paramedical	4	0	36	40
Pharmacy	4	0	37	41
Ayurveda Pharmacy	0	0	1	1
Total	32	5	245	282

Source: Kerala University of Health and Allied Sciences

Indian System Of Medicine

Ayurveda is a science dealing not only with treatment of some diseases but also a complete way of life. The Department of Indian System of Medicine (ISM) renders medical aid to the people through the network of Ayurveda hospitals and dispensaries, grant-in-aid Ayurveda institutions, Sidha, Unani, Visha, Netra and Naturopathy. Specialty hospitals such as Mental Hospital, Panchakarma, Nature cure and Marma are functioning under this Department. At present there are 125 hospitals and 818 dispensaries under the department. The State Medicinal Plants Board co-ordinates matters relating to the cultivation, conservation, research and development and promotion of medicinal plants in the State. List of major institutions and district wise distribution of institutions, beds and patients under ISM department during 2015 and 2016 are given in **Appendix 4.60**.

Special projects were implemented by the ISM Department during 2015-16 in addition to the normal medical treatment. The specialised treatments and number of beneficiaries are as follows; Balamukulam (2968), Ritu (3339), Prasadam (1583), Koumarashtoulyam (209), Drishti (420), Jeevani (500), Punarnava (138), Karalrogamukthi (2212), Snehadhara (717), Geriatric Care (3003), Yoga

(10507), Sports Medicine (8505), Panchakarma (47322), Ksharasutra (9614), Manasikam (1784), Vayoamritham (651) and Bhamini (100).

Ayush (Ayurveda, Yoga and Naturopathy, Siddha, Unani and Homoeopathy)

Government of India has set up two regulatory bodies to set standards of medical education. The Central Council of Indian Medicine (CCIM) under Indian Medicine Central Council (IMCC) Act 1970 regulates educational institutions and practitioners in respect of Ayurveda, Unani and Sidha systems of medicines. The Central Council of Homoeopathy (CCH) under Homoeopathy Central Council Act, 1973 regulates educational institutions and practitioners in respect of Homoeopathy system of medicines. At present Yoga and Naturopathy, being drugless systems, are not regulated.

National Ayush Mission

Department of AYUSH (Ayurveda, Yoga and Naturopathy, Siddha, Unani and Homoeopathy), Ministry of Health and Family Welfare, Government of India has launched National AYUSH Mission (NAM). The basic objective of NAM is to

promote AYUSH medical systems through cost effective AYUSH services, strengthening of educational systems, facilitate the enforcement of quality control of Ayurveda, Siddha, Unani and Homoeopathy drugs and medicinal plants. The funding pattern will be 60:40 by Centre and State. Government of Kerala started Ayush Department in the State on August 8, 2015.

Ayurveda Medicine Manufacturing- Oushadhi

OUSHADHI is the largest manufacturer of Ayurvedic medicines functioning in India in the public sector. It is one among the few profit making public sector undertakings. Oushadhi is the exclusive supplier of Ayurvedic medicines to Government Hospitals and dispensaries of Ayurveda Department. In Kerala, Oushadhi supplies medicines each year to State ISM department at 30 per cent less than market price and ISM Department supplies this medicine to the poor patients in the State free of cost. The company also caters to the demand of the public through a network of 492 exclusive agencies spread all over the State. The sales proceeds of the company during 2015-16 was Rs. 92.81 crore and the profit was Rs.20 crores.

Ayurveda Colleges

There are 3 Government Ayurveda Colleges situated at Thiruvananthapuram, Thrissur and Kannur having bed strength of 1389. Total numbers of inpatients treated during 2015 were 6648 and outpatients treated were 523915. It was 13099 and 460581 respectively during 2016 (upto November 2016). Panchakarma hospital and Women and Children hospital are also functioning under the Government Ayurveda College Thiruvananthapuram. There are two aided Ayurveda Colleges, 11 self-financing Ayurveda Colleges, one self-financing Siddha College, one self-financing Unani College and 6 Paramedical self-financing colleges are functioning for imparting Medical education. Annual intake of

students for UG Degree is 980, PG Degree is 127 and Paramedical Courses is 700.

HOMOEOPATHY

There are 659 homeopathic dispensaries and 34 hospitals with total bed strength of 955 under Homoeopathy Department in the State. In addition, Kerala State Homoeopathic Co-operative pharmacy (HOMCO) Alappuzha, a medicine manufacturing unit is also functioning under the Directorate of Homeopathy. HOMCO is running in profit for the last 20 years. District wise distribution of institutions, beds and patients treated under Homoeopathic Department during 2015 and 2016 is given in **Appendix 4.61**.

Homoeo Medical Education

Homoeo Medical Education is imparted through two Government Homoeopathic Medical Colleges, at Thiruvananthapuram and Kozhikode. In addition to this 3 aided colleges and one unaided college are functioning under this Department. Total bed strength of the Government Homoeopathic Medical College at Thiruvananthapuram is 108 and the patient treated during 2015-16 in IP was 1106 and OP was 1,17,433. Total bed strength of the Government Homoeopathic Medical College at Kozhikode is 100 and the patient treated during 2015-16 in IP was 1546 and OP was 121442. Annual intake of students and courses in the six Homoeo Medical Colleges are given in **Appendix 4.62**.

Immunization Coverage

Immunization is one of the most successful and cost effective health interventions and prevents debilitating illness, disability and death from vaccine preventable diseases such as diphtheria, hepatitis A and B, measles, mumps, pneumococcal disease, polio, rotavirus diarrhea and tetanus. The coverage of immunisation programmes in Kerala during six years from 2011-12 is given in **Appendix 4.63**.

Box 4.7

Major Achievements of Homoeopathy Department during 2016

- AYUSH Holistic centres for prevention and management of lifestyle diseases were started in Thiruvananthapuram, Kollam, Ernakulam, Malapuram and Kozhikode integrating the merits of Homoeopathy, Ayurveda, Yoga and Naturopathy systems of medicine.
- Seethalayam is a gender based scheme for the multi- level support, welfare and health care service exclusively for the suffering womenfolk implemented in all District Homoeo Hospitals. De- addiction centres and infertility clinics are also functioning as part of this programme.
- Floating Homoeo Dispensaries were started in the coastal area of Kuttanad in Alappuzha District.
- Endocrine disorder care centre at Idukki, Motherand Child care centre at Kannur, Geriatric care centres at Alappuzha, Kollam, Kozhikode, Kottayam and Wayanad and speciality mobile clinic at Idukki were started under the scheme 'Homoeopathy Speciality Care Centres'.
- 16 Temporary Homoeo Dispensaries were started at various pilgrim centres during festival season.
- 14 Homoeo Dispensaries (one Dispensary in each district) were upgraded as Model Homoeo Dispensaries and standardised existing 56 Model Homoeo Dispensaries across the State.
- One clinical lab was set up in Government Homoeo Hospital, Pala.
- Regional Medical Stores were started in Kottayam, Malappuram and Kannur
- Adolescent Health Care and Behavioural Management Programme was implemented in all District Homoeo Hospitals
- Second phase expansion of HOMCO was initiated.
- First phase construction of Homoeopathy Directorate Building was completed.

Source: Directorate of Homoeopathy

A healthy society can contribute more significantly and effectively to economic development. Long term illness and expensive treatment costs can even drive non-poor into poverty. High levels of education especially among women and greater health consciousness have played a key role in the attainment of good health standards in Kerala. In the present day, with the mushrooming of private hospitals that offer quality services matching international standards and with the tie up of the healthcare industry with the tourism sector, healthcare in Kerala is growing by leaps and bounds. However, the issues to be addressed are nutritional imbalance of tribal population, second generation issues like old age care, lifestyle diseases viz. heart diseases, diabetes, high blood pressure, and obesity, the changing morbidity pattern in the state viz. Cancer and trauma care and re-emergence of communicable diseases which will have to be matter of serious concern in the coming years. There are issues to be addressed in different areas of general health, rural health, tribal health, women health, mother-child health care, traditional health care system, health insurance, and medical tourism, during the 13th Plan period. The health care system has to be strengthened to face these challenges.

Section 3

SOCIAL SECURITY AND WELFARE

Social security provides protection to people living in economic and social distress. It can “protect” people against a fall in living standards and living conditions through ill-health, unemployment, and accidents, and also “promote” enhanced living conditions, helping the poor to overcome persistent deprivations. There has been a growing demand that the approach to social security programmes and schemes should progressively shift to a rights based framework and should not be viewed merely from a welfare prism. Kerala has several achievements in introducing social security measures to the vulnerable groups like persons with disabilities, aged people, women and children in difficult circumstances. In Kerala, the Department of Social Justice and its allied agencies are involved in addressing the problems of social security and welfare. The major activities of the departments and agencies are given in **Appendix 4.64**.

Importance of Social Security Programmes in Five Year Plans

Social Security programmes have found an important place in the five year plans. The proportion of the outlay of the sector, including nutrition, to State plan outlay during the Eleventh Five Year Plan (2007-12) was nearly 2 percent which increased to 2.37 percent in the Twelfth Five Year Plan(2012-17). Among the entire Social Services sector, the outlay of social security and welfare increased from 6 percent in the Eleventh Five Year Plan to 7.5 percent in the Twelfth Five Year Plan. This reflects the priority given by the State to the social security programmes in its Five Year Plans and Annual Plans.

Categorisation of Social Security Programmes in Kerala

The social security programmes in Kerala can be categorised into two:

- A. Institutional Care and
- B. Social Assistance Programmes.

A. Institutional Care

In the State, Government as well as NGOs and Voluntary Organizations (VOs) provide institutional care to the weaker sections. There are 78 welfare institutions under the aegis of Social Justice Department (SJD) for the care, protection and rehabilitation of children, disabled, women and aged. Out of this, 33 institutions are for children, 20 for women, 12 for aged people and 13 for disabled. About 2,955 persons were benefited in 2015 through the network of these institutions which is an increase of 6 percent compared to the beneficiaries in 2014. Apart from this, 82,070 persons were benefitted through 2,218 different registered welfare institutions run by NGOs and VOs, of whom, 16,876 were old people, 1,221 women, 10,017 disabled, 472 abandoned children, 51,546 orphaned children, 770 beggars and 1,168 others.

During this period, the number of occupants was less compared to the sanctioned strength of inmates for certain categories of institutions run by SJD. It could be that the sanctioned strength no longer exists in practice due to financial difficulties in maintaining large numbers. As against the total sanctioned strength of 3,860 inmates in the 78 welfare institutions, the occupants were 2,955 in 2015. This is about 77 percent of the total

sanctioned strength of inmates. Substantial gap is noted in Old age homes, Mahila Mandirams, Vocational Training Centres, Care homes for disabled children and Rescue homes. However, the number of occupants in the case of Ashabhavans for mentally ill persons, Pratheeksha Bhavans for mentally challenged persons and Children's homes are almost near the sanctioned strength or much more than it. In the welfare institutions registered under SJD, the number of inmates is higher than sanctioned strength in Nirbhaya shelter homes, but much less in homes for persons with disabilities, Old Age, institution of MR and orphanages.

The number of welfare institutions in Government sector increased from 74 in 2012 to 78 in 2015. However, that the State does not have any care institutions/assisted living homes for children with intellectual disabilities (Autism, Cerebral Palsy, Multiple Disabilities and Mentally Retardation) is a matter of concern. All these necessitate an integrated policy framework and careful planning for establishing new institutions different from those in the past. The district wise coverage of beneficiaries in major welfare institutions run by SJD is given in **Appendix 4.65** and that of registered welfare institutions in **Appendix 4.66**.

B. Social Assistance Programmes

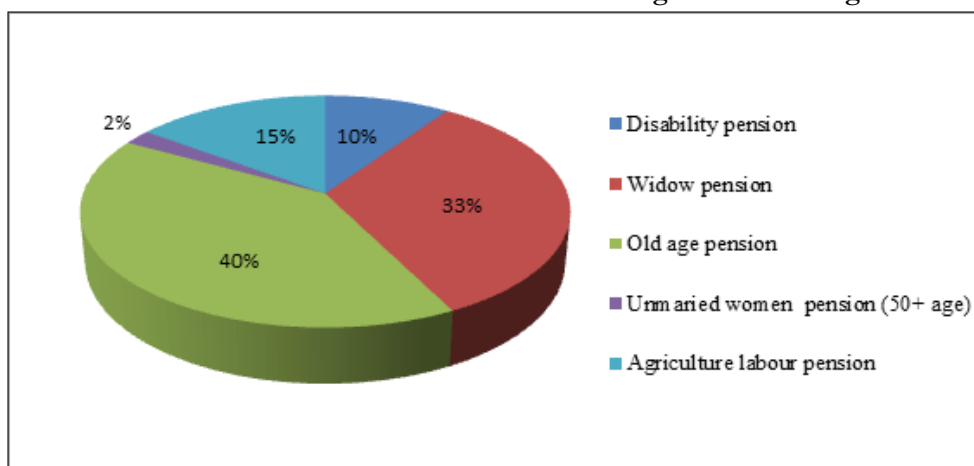
Social assistance programmes aims to reduce poverty and vulnerability among the people having little or no regular means of subsistence. Various social assistance programmes are listed below.

Social Security Pension Schemes through LSGIs

Old age pension, disability pension, widow pension, pension for unmarried women above 50 years and agriculture labour pension are the major pension schemes. Of these, the first three are part of the National Social Assistance Programme (NSAP) for which central assistance is received. From April 2015, the disbursement of pensions is being done at the State level through the newly introduced Direct Benefit Transfer (DBT) system. As on March 31, 2016, there were 34 lakh pensioners in the State. The total expenditure on account of the social security pensions was Rs.3434.50 crore. The highest category of pensioners is of old age pensioners (40 per cent) followed by widow pensioners (33 per cent) (**Figure 4.5**).

Among the districts, Thiruvananthapuram is on top with highest number of beneficiaries and Wayanad

Figure 4.5
Beneficiaries of Pension Schemes in Kerala through LSGIs during 2015-16



Source: Directorate of Panchayats

the least. If the entire system of social security pension scheme in the State was operated under one head, a comprehensive list of pensioners will be available which would help us to ascertain the actual beneficiaries and extending its coverage to the needy people who may have been left out. The district wise coverage is given in **Appendix 4.67**.

Social Security and Welfare of Unorganized Sector Workers

Social security coverage to workers in the unorganized sectors is given through the Welfare Fund Boards. There are 33 Welfare Fund Boards in the State, of which 16 are under the direct control of the Labour Department. These boards provided social security to around 55.41 lakh workers in 2015, of whom, 24.17 lakh were female workers. About 56 percent of the workers were from agriculture and allied sectors. Bringing all these boards under one umbrella would facilitate monitoring and bringing uniformity. Details

of workers enrolled in the WFBs are shown in **Appendix 4.68**.

WELFARE OF SENIOR CITIZENS

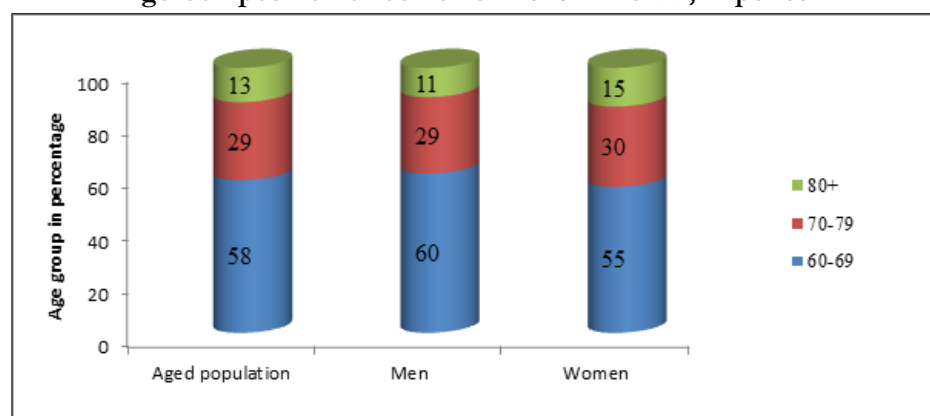
Kerala is aging faster than the rest of India; almost 13 percent of the population is already past 60 years. By 2025 the population of senior citizens is expected to reach 20 percent. Currently 42 lakh people of Kerala are 60 and above; 13 percent of them are 80 years of age and over, the fastest growing group among the old. Women outnumber men among the 60 plus and among them, majority are widows. Life expectancy among women is generally higher than men (for all-India also); however, it is much higher in Kerala and men marry women a few years younger which explains the high proportion of widows among the old. NSS Survey 2015 on morbidity indicates that 65 percent old are morbid. The age composition of Kerala's Senior Citizens is given **Table 4.18** and **Figure 4.6**.

Table 4.18
Age Composition of Senior Citizens in Kerala, in number

Age composition	Total	Men	Women
Total population	33406061	16027412	17378649
Total old age population	4193393	1853595	2309798
60-69	2416805 (58 per cent)	1114368 (60 per cent)	1272437 (55 per cent)
70-79	1234739 (29 per cent)	534879 (29 per cent)	699860 (30 per cent)
80+	541849 (13 per cent)	204348 (11 per cent)	337501 (15 per cent)

Source: Census of India, 2011

Figure 4.6
Age Composition of Senior Citizens in Kerala, in per cent



Source: Census of India, 2011

The marital status at older ages in Kerala shows that for an overwhelming majority of men (89 per cent) their wives are alive at older ages, while for only 38 percent of women their husbands were living at old ages. Also, 8.8 per cent of men and 57 percent of women are widowed. 62.2 percent of women are without partner (never married/divorced/separated/widowed) which reflects a real sign of loneliness in later years. The marital status of Kerala's Senior Citizens is given in **Table 4.19**.

Programmes for Senior Citizens

The programmes and schemes for senior citizens implemented through the Social Justice Department aims at their welfare and care by supporting old age homes, day care centres, and mobile medicare units. Major programmes for older people are listed below.

Vayomithram Programme

Kerala Social Security Mission is implementing this programme in 6 Corporations and 38 Municipalities of the State giving welfare services to persons above 65 years. Free medicine, palliative home care, medical camps and help desk facilities are the services provided. During 2015-16, the programme assisted nearly 833754 older persons, of whom, 49190 were women.

Age Friendly Panchayat

The age friendly panchayat implemented by SJD is a new initiative associated with State Old Age Policy, 2013. Converting all the panchayats in the State into age-friendly panchayats for ensuring good health, participation and assuring quality of life to the elders is the objective of the programme. Accordingly, the Manickal Panchayat in Thiruvananthapuram district has been selected as the first integrated age-friendly panchayat.

Vayo Amrutham Programme

The Social Justice Department with the support of Indian System of Medicine department has implemented this new programme in 14 Old age homes for the treatment of inmates who are suffering from health problems like Diabetes mellitus, Asthma, and Arthritis. 674 inmates of the homes got benefited from the Ayurvedic treatment, of whom, 372 were females.

WELFARE OF PERSONS WITH DISABILITIES (PwDs)

The UN Convention on the Rights of Persons with Disabilities (UNCPRD) urges the signatory countries (India has ratified it) to promote, protect and ensure the full enjoyment of human rights by persons with disabilities and ensure that they

Table 4.19
Marital Status of Kerala's Senior Citizens, in per cent

Category	Total	Men	Women
Never married	2.6	1.8	3.3
Currently married	60.8	88.9	37.8
Widowed	35.7	8.8	57.0
Others	0.9	0.5	1.9
Without partner	39.2	11.1	62.2

Source: Census of India, 2011

enjoy full equality under the law. PwDs often lack access to good quality basic and higher education. In Kerala, a state wide survey of PwDs was undertaken by the Kerala Social Security Mission in 2015, the first of its kind in India, covering 22 types of disabilities. As per the survey, 7.94 lakh people equivalent to 2.32 percent of the total population of the State are disabled, of whom, females constitute 44.57 percent, SC 10.93 percent and ST 2.15 percent. The highest number of disabled persons is in Malappuram district (12.5 per cent) followed by Thiruvananthapuram (9.72 per cent) and the lowest in Wayanad district (2.91 per cent). Regarding type of disabilities, locomotor disability stands top with 32.89 percent and multiple disabilities stand second 17.31 percent.

State Policy for Persons with Disabilities

Government of Kerala enacted a policy for PwDs in the year 2015 recognising the necessity and inevitability of including disability dimensions in the development agenda, programmes and action plans of the State. Participation of PwDs in the developmental process, viewing disability as a human rights issue, protection from abuse and creating a positive environment and attitude for inclusive development and empowerment of PwDs are the key strategic focal dimensions of the policy. From being passive beneficiaries, the disabled have to be considered as equal partners and contributors to development.

Institutions for Empowering Persons with Disabilities

National Institute of Speech and Hearing (NISH)

NISH is a premier institute in the area of disability and declared as a National University for Disability Studies and Rehabilitation Sciences. The institute was set up to provide an excellent environment for pursuit of higher studies for people with disabilities. The facilities of the NISH

include audiological evaluation, speech languages rehabilitation, pre-school and parent guidance programme, ENT services, psychological services, speech therapy, degree courses for persons with hearing impairment, graduate and post graduate programmes in human resource development, and research activities.

From April 2015 to March 2016, NISH has attended 214 cases (no. of students) under early intervention programmes, 10787 cases seen under hearing and speech language disorders programme and 990 cases under medical, psychology and allied services. The academic programmes conducted by NISH benefited 218 students. Among them 160 were girls students. The training and industry placement benefited 11 persons and the volunteering and internship opportunity benefitted 14 persons. Of whom, the women beneficiaries were 5 and 13 respectively.

Kerala State Handicapped Persons Welfare Corporation

The Corporation provides economic empowerment and rehabilitation to the persons with disabilities. During 2015-16, the Corporation supplied aids and appliances to 1658 differently abled persons under ADIP scheme of Government of India and distributed 500 motorised scooters (General category: 384, SC category: 116) under the plan scheme of Government of Kerala. Equipment like tricycle, wheel chair, and hearing aid, were distributed to 3928 differently abled persons and issued motorized tricycle subsidy at the rate of ₹10000/- to 47 such persons. Also, the Corporation distributed loans to 123 disabled persons for self-employment from the funding provided by National Handicapped Finance and Development Corporation. In addition, the Corporation itself distributed bank loan subsidy to 310 differently abled persons across the state for self-employment. The Corporation also assisted 196 children through the fixed deposit scheme (₹15,000/- for male and ₹20,000/- for female) for severely disabled children. Among them, 101 were male and 95 were female children.

State Commissionerate for Persons with Disabilities

The State Commissionerate was set up as per the Persons with Disabilities Act (PwD Act) enacted by the Government of India in 1995. Co-ordinating the programmes implemented by different departments and monitoring the utilization of funds for the benefit of the disabled in the State are the functions of the Commissionerate. The other functions of the Commissionerate are conducting awareness camps, redressal of the complaints of disabled persons, and inspection of institutions for disabled.

National Institute of Physical Medicine and Rehabilitation (NIPMR)

NIPMR is an institute under Department of Social Justice dedicated to the assessment and therapy of children and adults with multiple disabilities especially Cerebral Palsy and other associated disorders. An average of 20 clients mostly children are attending the speech therapy sessions under the Audiology and Speech Language Pathology department. The persons affected with stroke and accidents are also to be treated with available facilities in NIPMR. Institute for Cognitive and Communicative Disorders and Neuro Sciences (ICCONS) and Child Development Centre are the other major institutions working in this area. The particulars of these institutions are given in the chapter of Medical and Public Health.

Programmes for Persons with Disabilities

The schemes for the welfare of persons with disabilities are being implemented through Social Justice, Health and Education Departments. The schemes implemented through SJD and KSSM are listed below.

Issuing Disability Certificate to Differently Abled

According to the Persons with Disability Act, 1995 it is mandatory to provide disability certificate to all the disabled. From 2009 to March 2015, Kerala Social Security Mission distributed 2,83,277 identity cards through disability certification camps. The impact of such camps is that it reduces the difficulties faced by PwDs to travel to distant places for getting the medical certificates.

Aswasakiranam

Kerala Social Security Mission provides monthly assistance to the caregivers, primarily women of severe mentally challenged persons and bed ridden persons with severe physical disability. Such assistance was given to 72,350 caregivers during 2015-16, of whom, 50,640 were women caregivers.

State Initiatives on Disabilities (SID)

This is a special initiative of the Government for prevention, detection, early intervention, education, employment and rehabilitation of the persons with disabilities through Social Justice Department with the joint support of Education and Health Departments. The major achievements are:

- **MMR Vaccination:**-MMR vaccination was started and given free of cost to new-borns from January 2014 onwards in Govt. Maternity Hospitals and about 3 lakh doses of vaccines were supplied as against the target of 6 lakhs.
- **Rubella Vaccination:**-Rubella vaccination was administered to 5,44,692 adolescent girls in schools. The MMR and Rubella vaccination programme would reduce the number of children born with various disabilities.
- **Universal Hearing Screening:**-To conduct hearing screening of new born babies, Oto

Acoustic Emission Screeners were given to 5 Govt. Medical Colleges and 35 Govt. Hospitals. Since its commencement in the year 2014-15, the number of neonates screened was 178,523, of which 20,514 babies were referred to further check-up and correction.

- District Early Intervention Centres:-Land for DEICs has been identified in all the 14 districts. The expected outcome of DEIC is an “Accessible Service Hub” for PwDs and a centre for education and training for their parents and other stakeholders.
- Establishing of Special Anganawadies for Pre-school Children with Disabilities:-The project initiated by Department of Social Justice for the children with disabilities is being piloted in Kozhikode district. This programme has a greater impact on the children in performing their Activities of Daily Living (ADL) by themselves, enabling them to become more accommodative in their further schooling and reducing the constraints in mainstreaming.
- Mobile Intervention Units (MIUs):- Mobile Intervention Units on pilot basis started in Kozhikode and Malappuram districts accessed 1000 children with development delay and disabilities.

State Initiative on Dementia

The Department of Social Justice has started a Day Care Centre at Thrissur Municipality and a full time centre at Edavanakkad Old age home for the rehabilitation of dementia patients in the State.

Insight project

The project initiated under Kerala State IT Mission and handed over to Social Justice Department in 2013 offers preparation of ICT based lesson plans for visually challenged teachers, technical assistance to visually challenged students for their

various academic needs, and consultancy services for visually challenged employees for increasing productivity.

WELFARE OF WOMEN

The present status of women in Kerala is given in the section on gender development. However, the activities of the institutions set up for women empowerment and major schemes promoting social and economic rehabilitation of women are as follows.

Indira Gandhi Matritva Sabyog Yojana

This centrally sponsored scheme provides financial assistance to pregnant women of 19 years and above for the first two live births in Palakkad district. The scheme assisted 88,527 beneficiaries till March, 2016.

Snehasparsham

This scheme implemented by KSSM aims to address the problem of unwed mothers. Monthly assistance of ₹1000/- is given to all unwed mothers and the scheme has benefited 6155 women till March, 2016.

Women Development Programmes

This is a major programme of Social Justice Department focusing on implementation of dowry prohibition, protection of women from domestic violence and sexual abuse, rehabilitation of victims including health care and compensation, economic support to women headed families and women belonging to BPL families and assistance to low salaried women for self-improvement through capacity building. During 2015-16, educational assistance was given to 13540 women headed families.

Nirbhaya Programme

Nirbhaya programme of Social Justice Department envisages setting up of 'Nirbhaya Homes' for sexually abused women. 10 such homes were started in 9 districts sheltering 200 women. Under this programme, One Stop Crisis Cell was established in 14 District Hospitals and 7 Taluk hospitals providing all required services to women victims of sexual violence - emergency health care, psychological counselling, police assistance, legal aid and safe shelter service. 11 Nirbhaya shelter homes were also started for catering to the special needs of the women above 18 years of age and accompanying children. During 2015-16, these shelter homes benefited 275 women

Gender Park

Gender Park, proposed at Kozhikode, was conceptualised by the Department of Social Justice in 2013 as a platform where State, Non-Government Organizations (NGOs), academia and civil society could come together for learning and research on gender equality and empowerment of women. It provides a space for all gender identities to overcome the socio-economic and political boundaries imposed on them by society and contributes to the economic, cultural, and social aspects of the state and the country. She Taxi flagship project of Gender Park is India's first 24x7 women-specific taxi network managed and employed by women to promote entrepreneurship, self-employment and security of women. Currently, there are 32 She Taxis across three cities, of which 16 are in Trivandrum, 12 in Cochin and 4 in Kozhikode. She Taxi project provided entrepreneurial opportunity to 32 women drivers cum entrepreneurs.

Beti Bachao Beti Padhao

This centrally sponsored scheme implemented by the Department of Social Justice was launched in Thrissur district on a pilot basis addressing the issues of women in the longer term and to reverse the trend of declining child sex ratio. As per the scheme, the State received financial assistance

from GoI to empower the girl child and enabling her education.

Institutions for Women

Empowerment

Kerala Women's Commission

The Commission was established in 1996 to improve the status of women in Kerala and enquire into unfair practices against women and recommend remedial measures. The Commission implements gender awareness programmes and undertakes legal workshops / seminars, adalaths, and DNA test. During 2015-16, the Commission had conducted 154 legal workshops/seminars on various problems faced by women; conducted 49 counselling/skill training programmes to Panchayat Jagrathasamathis on various laws related to women and other legal procedures and disposed of 5085 petitions through 143 Adalaths. Under gender awareness programme, the Commission undertook 27 pre-marital counselling sessions across the state with the participation of women NGOs and conducted gender sensitisation programmes in 433 educational institutions. During 2015 to 2016, the Commission received 6377 complaints. The nature of complaints shows that domestic violence, harassment of women and family problems dominate and are on the increase. The category wise and district wise details of complaints received as on March, 2015 are given in **Appendix 4.69**.

Kerala State Women's

Development Corporation

Self-employment schemes for women, flagship programme on gender awareness and Finishing Schools are the major programmes of the Corporation. The Corporation distributed over ₹2.50 crore from National Corporations to 2280 women under self-employment loan scheme and ₹0.75 lakh to 293 women in general category through plan fund. The Corporation has so far installed 49 She-toilet units across the state and

8 in major railway stations. As part of ensuring menstrual health and hygiene for adolescent girls and women, the Corporation launched the supply of high quality sanitary pads at affordable cost and installed vending machines and incinerators in 623 schools across the state. Under the flagship programme on finishing schools, the Resource Enhancement Academy for Career Heights (REACH) at Thiruvananthapuram and Kannur imparted skill training to 4157 students. The EDP/Vocational training programme benefited 3200 women in 64 panchayats and the Gender awareness campaign conducted in 40 women colleges benefited 12,000 girls.

Welfare of Ex-Servicemen and War Widows

As on March 30, 2016, there were 1,70,200 ex-service men, 57,186 widows and 290 war widows. Rehabilitation training on vocational/professional/technical courses for equipping the ex-service men/war widows and their dependents is a major programme. During 2015-16, the

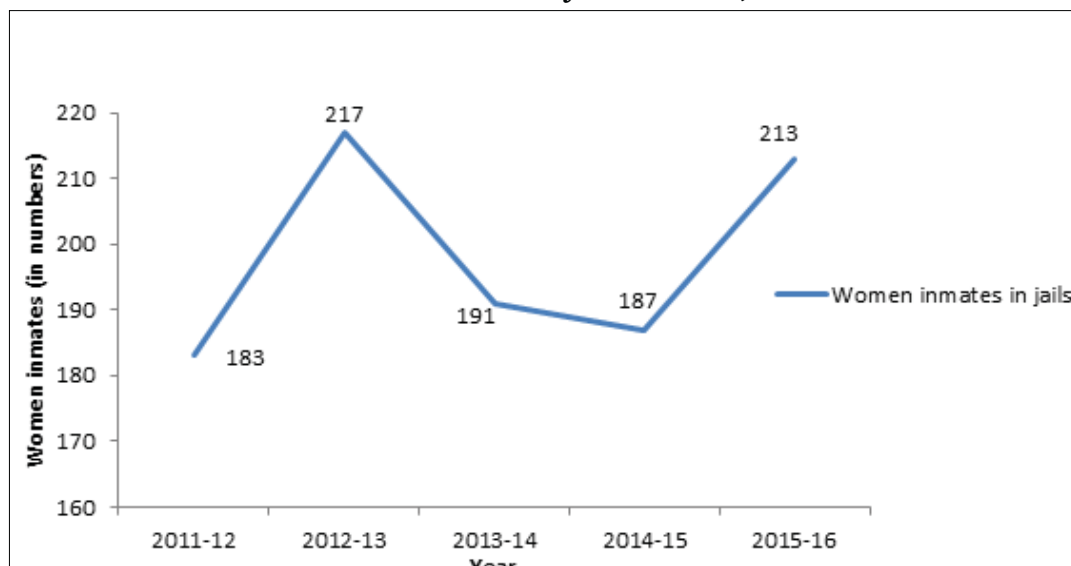
computer training centres at Thiruvananthapuram, Kozhikode and Thrissur provided rehabilitation training to 194 beneficiaries, of whom, 12 were women.

Welfare of Prisoners

In Kerala, the jail infrastructure consists of 44 jails and 11 prisons. As on March 2016, there were 7,770 prisoners, of whom 213 are women. The women prisoners in Kerala are marginal (3 per cent) compared to other southern states where this proportion ranged from 4 to 6 per cent (**Figure 4.7**).

Overcrowding in jails is the major problem as it is very difficult to accommodate further prisoners. The authorised capacity as per living space is only 6217 (Male-5840, Female- 377). Modernization of Prison and Welfare of Prisoners are the two major schemes implemented by the Prison department. Computerization of jails, paperless office programme, and installation of CCTV in 31 jails are the major programmes. Details of prisoners in jails are given in **Appendix 4.70**.

Figure 4.7
Trend of Women Inmates in Jails of Kerala, in number



Source: *Economic Reviews*

Welfare of Children

The children in the age group 0 to 18 constitute less than 30 percent of the State's total population and that of girl child 0 to 6 years is 9.36 percent. Kerala has achieved marked improvement in promoting survival, protection, development and participation rights of children in a holistic manner.

Children's Right to Protection

Child protection means to create a safe and caring environment for all children, free from neglect, violence, abuse and exploitation. Kerala performs much better in protecting children from all kinds of ill-treatment and violence. However, following constraints remain which prevent the state from providing social safety net for children, in particular those specifically vulnerable.

Crimes against Children

Crimes against children continue to show an upward trend, with rising figures for kidnapping and rape. As per the report published by the State Crime Records Bureau, the crimes against children in the State have increased by 143 percent from 2008 to 2016.

Girl Child

The sudden decline in the Child Sex Ratio (0-6 years) at the all India level from 927 females per 1000 males in 2001 to 919 in 2011 is a major indicator of women disempowerment. As per 2011 Census, the child sex ratio for the State is 964 which is only four points higher than in 2001 Census (960). The child sex ratio in all the districts of Kerala is less than 1000. However, the districts of Alappuzha (951), Ernakulam (961), Kasaragod(961) and Thrissur (950) show ratios below the state average which is quite alarming. Discouraging the use of sex selection techniques, rewarding the girl child and awareness creation are the interventions needed to promote the girl child.

Child Marriage

Child marriage is a violation of child rights. According to UNICEF, child marriage has been found to be on the rise in Kerala in recent years due to migration from the northern part of the country. There are pockets in the state, including tribal areas, where this practice continues to exist with social sanction.

Child Abuse

The child abuse cases especially sexual abuse incidence of girl children are on the increase. As per State Crime Record Bureau, 1718 sexual abuse cases were reported in Kerala under Protection of Children from Sexual Offences (POCSO) Act up to October, 2016. The growing tendency, especially in adolescent years, towards substance abuse, use of alcohol and cyber abuse is another key area of concern.

Children Infected and Affected by HIV/AIDS

As per the statistics of Strategic Information Management System of the National AIDS Control Organization, there are 884 children at present in Kerala who are infected with HIV, as against 1.5 lakh children infected across the country.

Children's Right to Development

Early childhood is the most significant developmental period of life. Holistic development of children up to 18 years includes all areas of growth-physical, mental, emotional and social development. Kerala has always been in the forefront for promoting the above four domains of child development. However, some lacunae in early childhood care remain. Even though the State shows a high level of immunization coverage (District Level Health Survey (DLHS)- 4 report-full immunization coverage for 12-23 months is

82.5 per cent), anti-vaccine campaigns are noted in some of the northern districts of Kerala. Exclusive breastfeeding (first six months of infancy) rates in Kerala shows slow progress (prevalence of exclusive breastfeeding among 0-5 months is 69.1 per cent and 69.8 per cent in DLHS-3 and DLHS-4 respectively). Unhealthy feeding practices such as pre lacteal feeding practice, late initiation of breast milk and bottle feeding practices are noted in several research studies conducted in Kerala.

Absence of Universal pre-school education in the state is another major issue which requires much attention. As per Rapid Survey of Children (RSOC)-14, 26.2 percent of children in the age group 3-6 years are not attending pre-schools. Also, absence of scientifically prepared uniform curriculum is another area of concern needing redressal.

Children's Right to Survival

Infant mortality and prevalence of low birth weight babies are the two major distress of child survival. The State's SDG target for IMR is to reduce it from 12 per 1000 live births to 8 per 1000 live births, MMR from 66 to 30 per 1 lakh live births and Under 5 mortality rate from 14 to 9 per 1000 live births by 2020. Although the State has done well in above parameters, the prevalence of malnutrition (DLHS-4, around 21 per cent children below 5 years are underweight and 19.4 per cent are stunted), anaemia (DLHS-4, 34.6 per cent have anemia and 2.4 per cent have severe anaemia), shortfall in full immunization (around 17 per cent of children in the State do not get all 5 vaccines before their first birthday) are high in certain districts of the state, particularly in the tribal population. All of these present a huge challenge for the Government to achieve the target of SDG.

Children's Right to Participation

Rights to participation provide children with an environment to participate in decision making processes and to give them an opportunity to

express their views freely. Kerala's model of Balasabha and Balapanchayat as neighborhood network of children in LSGs for holistic development of child health has been widely acknowledged. As on March, 2015, the formation of 53792 numbers of Balasabhas across the State has been completed with a membership of 8,21,102 children.

Major Programmes on Child Protection, Care and Development

The programmes and schemes related to the protection, care and development of children are being implemented by the Department of Social Justice and KSSM. The major Acts, policies and programmes in addressing the rights of children are detailed below.

Protection of Children from Sexual Offences (POCSO) Act, 2012

The Act deals with child abuse and provides protection to children from the offences of sexual assault, sexual harassment and pornography. Many steps have been taken in the state for the effective implementation of the Act. 11 Special care homes have been set up to provide care and protection to children covered by this Act in 9 districts. Special Juvenile Police Units are being set up in all districts. To expedite the trial of cases registered under the Act, Special Courts have already been notified in the State.

Kerala State Commission for Protection of Child Rights

The Commission functioning as a statutory body has the mandate to examine and review the existing laws for the protection of child rights, inquire into cases of violation of child rights, look into factors inhibiting the enjoyment of those rights and suggest remedial measures. During 2015-16, 1582 complaints were received by the commission

and 1042 cases were disposed. Of these, 46 cases were related to POCSO, 197 cases related to RTE and the remaining to child rights violation. The Commission has also conducted annual survey in 140 schools per district to assess the level of implementation of the RTE Act, 2009.

Adoption Services

There are 20 Specialized Adoption Agencies, 5 recognized adoption placement agencies for inter-country adoption and 20 licensed adoption placement agencies functioning in Kerala. During 2012-13 to 2015- 2016, 748 in-country and 67 inter-country adoptions took place. Details of adopted children are given in **Appendix 4.71**.

Childline Services

Childline system is a 24-hour toll free telephone service (1098) for children in distress. The service is now available in 278 cities in India and 15 in Kerala (3 in Rural and 12 in Urban). The Childline service would be strengthened further in consultation with NGOs and other voluntary organizations.

Juvenile Justice Services

Juvenile justice endeavours to undertake steps for all round development and rehabilitation of children such as orphans, destitute, neglected, street children, and victims of violence . Now, there are 9 children's homes, 7 special homes, 14 observation homes and 3 Balasadanams (certified as juvenile homes) with a capacity of 1450 which provide care and protection to 1054 children in the age group of 5 to 18. The need for children's homes for girls in all districts and providing Aftercare Homes for children over 18 who are not in a position to be rehabilitated as yet are issues that still need to be tackled.

Integrated Child Development Services (ICDS)

ICDS, one of the flagship programmes of GoI, aims at early childhood development by providing an integrated package of services such as supplementary nutrition, immunization, health check-up, referral service, health and nutrition

Box 4.8

State's Child Policy, 2016

The Government has declared a new child policy to address the continuing and emerging challenges in the situation of children. The vision of the policy is to create a State where every child has equal and equitable rights to live and develop her or his potential to the best of their abilities. Providing quality services to ensure a just and secure environment for all its children, opportunities for development, prevention and protection from all forms of violence, and forums for appropriate participation are the specific objectives of the policy. The guiding principles of the State Policy for Children are based on the National Children's Policy of India (2013). These principles include the following:

- Child friendly approach in all matters.
- Right to survival, protection, development and participation are the inalienable and indivisible right of every child.
- Strengthened inter-departmental convergence.
- All children are to be treated equally.
- Free and compulsory education and protection from all forms of exploitation.
- Promotion of a safe, secure and protective environment for children.
- Strong focus on differently abled children, children of migrant labour and children of vulnerable segments of society.
- Accountability and respect for the voice of the child, especially the girl child.

education and pre-school education to children less than 6 years along with pregnant and lactating mothers. As on March, 2016, 258 ICDS projects and 3,3115 AWCs are operational across the state, covering 10.20 lakh beneficiaries under supplementary nutrition programme and 4.42 lakh children in the age group 3-6 years under pre-school education. Of the beneficiaries of supplementary nutrition programme 1.67 lakh were pregnant and lactating women and that of pre-school education 2.20 lakh were girls in the age group 3 to 6 years. District wise coverage is given in **Appendix 4.72**.

There is no significant improvement in the coverage of ICDS beneficiaries during the 2015-16. Less than 1 percent increase is noted as compared to 2014-15. Inadequate infrastructure facilities are a major constraint of ICDS in ensuring quality of service delivery through AWCs. Of the 33,115 Anganwadi centers in Kerala, only 12,718 are in A grade and 15,904 in B grade, 3,979 are still in C grade and 512 in D grade. Moreover, as per the annual report on ICDS, 22,536 centres have their own building and 1,803 centres are functioning in public buildings and remaining 8,776 are functioning in rented buildings. 42 percent of centres have no electricity facility, 9 percent are still using fire wood/ kerosene, 87 percent have no baby friendly toilets, and 28 percent does not have drinking water facilities and 47 percent any compound walls.

Integrated Child Protection Scheme

This centrally sponsored scheme provides preventive, statutory care and rehabilitation services to children who are in need of care and protection and children in conflict with law. Child Protection Units, Child Welfare Committees, Special Juvenile Police Units, State Child Protection Society and District Child Protection Units and JJ Boards have already been established in the State to speed up implementation of the provisions contained in the JJ Act. The programmes related to various social legislations like Child Marriage Restraint Act, Kerala Beggary Prevention Act, programmes on Child Rights Convention, and adoption related laws are also being implemented under the scheme. During 2015-16, the various activities of ICPS benefited 8120 children.

Rajiv Gandhi Scheme for Empowerment of Adolescent Girls

As a centrally sponsored scheme, launched in Kollam, Idukki, Malappuram and Palakkad districts, it aims at empowering the nutritional and health status of the adolescent girls in the age group of 11-18 years through 84 ICDS projects of the districts. Extending the scheme to the districts covering

Box 4.9

New Initiatives on ICDS of Social Justice Department

- Community kitchen programme for Attappady ICDS project area
- Supply of Energy Dense Special Food to Severe Acute Malnutrition children in Attappady
- New pre-school education curriculum in Anganwadi Centres
- Assessment card, pre-school certificate and theme and activity chart introduced in Anganwadi Centres
- Grading of Anganwadis introduced
- Introduced scheme for safe drinking water and baby friendly toilets to all Anganwadis
- Social audit of Anganwadis started

coastal and tribal areas of the State was the most recent development. During the 12th plan up to 2015-16, the scheme assisted 5.13 lakh beneficiaries.

Kisori Sakthi Yojana

This is a centrally sponsored scheme with the objective to improve the nutritional status of adolescent girls in the age group of 11 to 18 years by using the platform of ICDS. The activities proposed are vocational training to adolescent girls, health and nutrition day celebration including health clinic activities, monitoring and evaluation at different levels, and orientation. During the 12th plan up to 2015-16, the scheme assisted 10.61 lakh adolescent girls.

Cancer Suraksha and Thalolam Schemes for Child Patients

These schemes of KSSM give free treatment through Government approved hospitals to children below 18 years who are suffering from cancer and life threatening diseases. During the 12th plan up to 2015-16, the Cancer Suraksha scheme benefited 15273 children and the Thalolam scheme 32934 children.

Snehapoorvam

Kerala Social Security Mission provides financial support to children who lost both parents or either of them and the other parent is not in a position to look after the child due to financial problems. This programme benefited 48,550 children till March, 2016. Among them 26,046 were females.

Our Responsibility to Children Kerala (ORC)

This is a project implemented by the Department of Social Justice. It offers psycho-social and emotional support to children to prevent inculcation of harmful habits like substance abuse with the support of other stakeholders like Police, Education/Health departments, and LSGD. The

project was implemented in 36 selected schools in Trivandrum, Kozhikode, Ernakulam and Thrissur districts.

Psycho Social Services for Adolescent Girls

This scheme of Social Justice Department provides counselling and guidance support to adolescent girls. The department has so far developed separate adolescent health clinics in 807 selected schools with the support of concerned PTAs and LSGIs.

Cochlear Implantation in Children

The project of KSSM provides cochlear implant to children in the age group of 0-5 years selected by regional and state level technical committees and provides financial support for Auditory Verbal Habilitation (AVH) to operated children through empanelled hospitals. The project assisted 167 children during 2015-16. Among them, 77 were female children.

First 1000 Days Programme for Infants in Attappadi

This is a special programme by Social Justice Department for infants in Attappadi focusing on early initiation of breastfeeding, timely introduction of complementary foods at six months, hygienic complementary feeding practices and full immunization and vitamin A supplementation with de-worming. So far the programme has benefited 5528 children in Attappadi.

Gis Based Mother and Child Health Tracking System in Mananthawadi Block

This is a pilot programme run by Social Justice Department for tracking the health status of pregnant women and children in Mananthawadi block of Wayanad district with the support of

the JATAK and JANANI software applications. The health condition of 15128 children in Mananthawadi block is being monitored through this programme.

Model Anganwadis

Model Anganwadi Centre is a concept of bringing the aged persons and the children below six years,

adolescent girls and mothers into a common centre for sharing their experience. The centre shall have facilities for all the functions of the regular Anganwadi Centre along with a separate reading room for the elderly. Out of the 115 model Anganwadis Centres for which administrative sanction has been obtained, 44 were completed.

There has been a continuous endeavour on the part of the Government to specially focus on the vulnerable groups. However, a considerable number of them are still not economically empowered and continue to face discrimination and lack access to various services. This is due to social exclusion, disability, malnutrition, destitution, chronic or life threatening diseases. Lack of co-ordination among the departments often results in the duplication of schemes with the exclusion of deserving individuals. Presently the State follows a dole based approach for providing social security coverage to the marginalized communities. Consequently the social security framework misses the mark to provide need based support to the marginalized groups since each group has their own needs and ambitions. There are also emerging groups who are outside the social safety net like children with intellectual disabilities, paraplegic and dementia patients. Based on the premise that social security is a human right and a social and economic necessity the State should aim at achieving universal protection of the population, including all marginalized groups, by ensuring at least minimum levels of social protection, that is building a special protection floor. For this, focused intervention is necessary at the Government level to forge a vibrant partnership with LSGs, citizens groups, community based organizations and NGOs to provide institutional support and protection to those who need it. These interventions should restore them to a life of dignity and self-respect.

Section 4 Drinking Water

Water is inextricably linked to the development of all societies and cultures. At the same time, this development also places considerable pressure on water resources. These are critical to the survival of people on the planet. The World Water Development Report 2015 says that around 748 million people today still do not have access to an improved source of drinking water. The complexity of linkage between water and development provide us to rethink the present development challenges through the lens of water scarcity. The availability of fresh water resources on the earth has remained same but the gap between supply and demand of fresh water has increased over the years. The world is going to face the problem of global water deficit in the near future unless we could restore the balance between demand and limited supply of drinking water. The progress in social, economic and environmental dimensions of sustainable development is bound by the limits imposed by and the management of water resources.

Kerala is considered as the land of water resources with high rainfall, rivers, backwaters, lakes and many streams. However, Kerala is frequently facing drought and acute water scarcity in many districts.

Water Resource

Kerala has 41 west-flowing and 3 east-flowing rivers originating in the Western Ghats. When compared to rivers in the other parts of the nation, the significance of rivers in terms of water discharge is very minimal. There are only medium (4) and minor (40) rivers in Kerala. The State doesn't have a single major river as per the national norms. Kerala is also bestowed with a number of lakes and backwater lagoons.

Kerala receives two monsoons every year. Due to the geographical pattern of Kerala, the water drains very fast into the sea. The average rainfall of the State is 3055 mm, which is 2 times more than that of national average. In Kerala, 69 per cent of the annual rainfall is received during the Southwest monsoon (June to September), 16 per cent during Northeast monsoon (October to December) and the remaining as summer rains. The rain received during the year 2016 monsoon is far below the

normal rainfall. The deficiency of rainfall during monsoon is more in the district of Wayanad (59 per cent), which is higher than the State average deficiency (34 per cent) during 2016. The occurrence of rainfall is termed as normal if its deviation is between plus or minus 19 percentage of the normal rainfall. The district wise percentage deviation of rainfall in Kerala shows high temporal variations in the distribution, which is shown in **Table (4.20)**. Due to the deficiency in rains, the State has been declared as drought affected. Shortage of drinking water is a serious issue in many parts of the State. Since the prime source of all our water sources is rainfall, the deficit in occurrence of rainfall will affect the drinking water potential of the State. The reduction in number of rainy days and change in untimely rainfall pattern also causes undue strain on an agrarian society, which in turn affects the food security also. Along with surface water, groundwater is also an important source of water supply for various uses in the State. Groundwater is extracted through open

Table 4.20
District wise Pattern and Occurrence of Rainfall (Per cent Departure) from
October 2015 to September 2016

DISTRICTS	Northeast Monsoon (Oct to Dec 2015)	Winter rainfall (Jan to Feb 2016)	Pre-monsoon rainfall	Basin covered
Kerala	27	-21	-18	-34
Thiruvananthapuram	51	-83	37	-34
Kollam	19	0	7	-29
Pathanamthitta	53	-92	11	-36
Alappuzha	20	28	-23	-35
Kottayam	35	45	-3	-30
Idukki	12	-71	-16	-31
Ernakulam	75	187	-17	-24
Thrissur	18	37	-22	-45
Palakkad	-14	-98	-37	-34
Malappuram	25	-68	-50	-39
Kozhikode	32	-100	-16	-27
Wayanad	-9	-75	-47	-59
Kannur	53	-100	-53	-25
Kasargod	21	3	-49	-25

Source:-Meteorological Centre, Thiruvananthapuram

dug wells, bore wells and tube wells for different needs of the society. Increasing population, rapid urbanization and industrialization has resulted in increasing use of groundwater resources over the last few decades in the State. The occurrence and availability of groundwater vary from place to place within the State depending on the prevailing climate, geomorphologic and hydrogeological conditions. The net groundwater availability of the entire State was calculated as 6.07 billion cubic meters (bcm) by deducting unaccounted losses and natural discharge during the non monsoon season from the Total Annual Recharge available. The annual groundwater draft and net groundwater availability for future irrigation development of the State was calculated as 2.84 bcm and 3.07 bcm respectively. The blocks in the State were considered as assessment units based on the availability of groundwater for future use, stage of development and long term groundwater level trends. As per the Ground water Estimation Committee Report March 2011, out of 152 assessed units in the State, Chittur block in Palakkad District has been categorized as over-exploited (stage of groundwater development >100 per cent), Malampuzha block of Palakkad District and Kasaragod block of Kasaragod District have been categorized as critical (stage of groundwater development >90 per cent and ≤100 per cent) and 23 block as semi critical (stage of groundwater development >70 per cent and ≤90 per cent) and the remaining 126 blocks as safe (stage of groundwater development ≤70 per cent).

The issues related to the ground water in the state are source as well as resource related. It is highly considered to be location specific. The steep sloping terrain conducts all rain water swiftly (within 48 hrs) to Arabian Sea giving limited chance for percolation and augmentation of ground water.

Availability of Drinking Water

As per NSSO 69th round, 85.8 per cent households in rural India and 89.6 percent households in urban India, have sufficient drinking water. Among the States, Uttar Pradesh (97.1 per cent) has the highest

proportion of households and Jharkhand has the lowest (70.3 per cent) proportion with sufficient drinking water. Among the major States of India, Punjab has the highest percentage of improved source of drinking water both in rural (99.5 per cent) and urban (99.7 per cent) areas. Kerala stands at the bottom of the table with lowest percentage in rural (29.5 per cent) and urban (56.8 per cent) areas (**Appendix 4.73**). The district wise analysis of drinking water availability based on location is given in the **Appendix 4.74**.

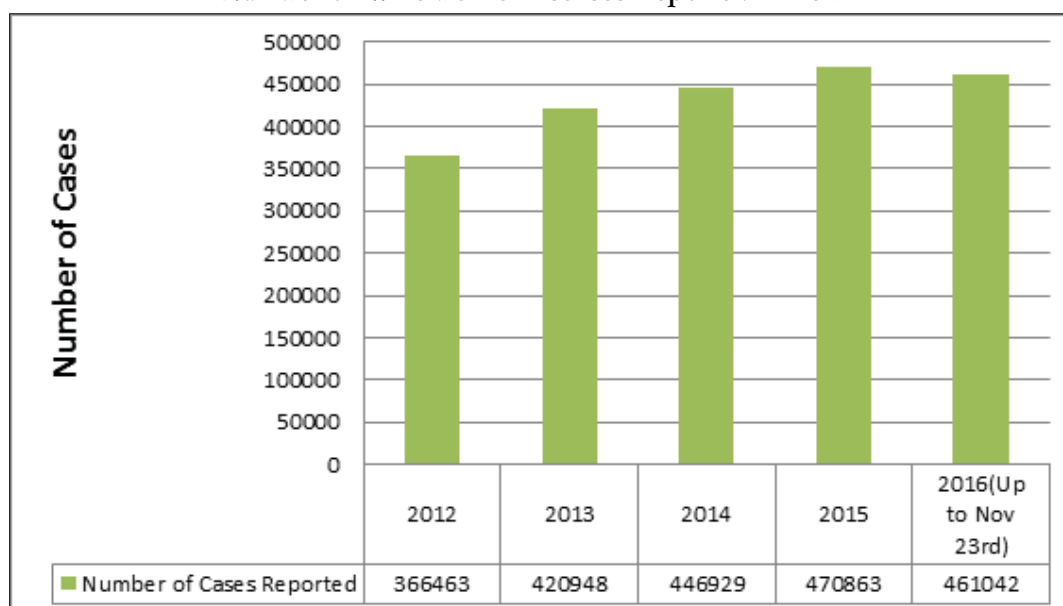
Kerala has a coastal belt of 570 km, which covers 15 per cent of the total area of the State. Majority of drinking water sources in our state are getting polluted due to unscientific sanitation practices and indiscriminate dumping of waste. A large majority of drinking water supply sources are bacteriologically and chemically contaminated. The main bacteriological pathogens are E coli and coliform. The district wise quality profile of drinking water in Kerala during 2015-16 is given in **Appendix 4.75**.

The use of polluted water causes several water borne diseases, which may be fatal. The data on the number of water borne diseases shows an increasing tendency over the years. The reported cases during 2012 were 3,66,463 which increased to 4,61,042 in 2016 (**Figure 4.8**). The population density, indiscriminate use and pollution results in increasing number of waterborne diseases. The detailed data on waterborne diseases is given in **Appendix 4.76**.

Coverage

Providing quality drinking water to all segments of the society is a major challenge in water supply sector. There are mainly two agencies viz. KWA and KRWSA (Jalanidhi) involved in the distribution of drinking water in Kerala. KWA is implementing major schemes and mainly focused in Urban Water Supply, while Jalanidhi concentrates on small Rural Water Supply Schemes. The KWA has three regional offices, 15 circles, 51 Divisions, 136 Sub Divisions and 293 Sections spread across Kerala.

Figure 4.8
Number of Waterborne Diseases Reported in Kerala



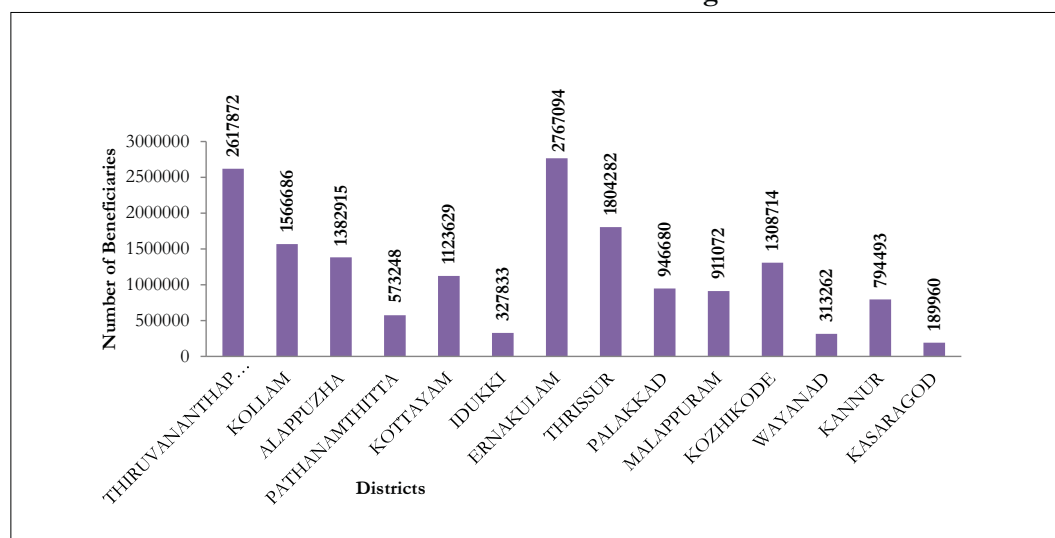
Source: Directorate of Health Services

There are 1,078 water supply schemes of KWA in operation as on March 31, 2016, with a total installed capacity of 3367.13 mld, which means the average percapita availability of piped water is 100.79 litres per day. The targeted average lpcd (litre percapita per day) in rural area is 100 lpcd and that of urban is 150 lpcd. However the lpcd varies in different habitations in the all districts. As per Integrated Management Information System (IMIS) data, out of 11883 rural habitations, 938 partially covered habitations were converted to fully covered habitations in financial year 2015-16 with piped water supply by commissioning the schemes in the area. Also the total number of quality affected habitations has reduced from 751 to 656 habitations during the same period. The existing average lpcd, computed based on production capacity, in the districts by existing schemes are given in **Appendix 4.77**. But even after accounting for the high percentage of Non-revenue water, the per capita availability is much less and also the schemes are mostly located in urban areas. The number of beneficiaries from all the drinking water supply schemes implemented so far by KWA is 16627740. The district wise

details shows that the percentage share of beneficiaries is highest in Ernakulam (16.64 per cent) district and the lowest in Kasaragod district (1.14 per cent). The district wise detail of beneficiaries as on October 31, 2016 is shown in the **Figure 4.9**.

Water Supply schemes of Kerala Water Authority covers around 1.75 crore population which accounts for 52.30 per cent of the population. The district wise analysis shows that Ernakulam district has the highest coverage (81.57 per cent) followed by Thiruvananthapuram (71.87 per cent). The district of Kasaragod has the least coverage by water supply schemes of KWA, which is only 19.33 per cent (see **Appendix 4.78**). The total water supply schemes of KWA in operation as on March 31, 2016 in the State is 1078, of which, 1029 are Rural and 49 are Urban Water supply Schemes. As per the data, the district of Thrissur has 107 water supply schemes followed by Thiruvananthapuram (104). The least covered areas under water supply schemes of KWA is Wayanad (see **Appendix 4.79**). KWA has a total of 18,12,528 water supply connections in the State,

Figure 4.9
District wise Number of Beneficiaries from Drinking Water Schemes of KWA



Source: Kerala Water Authority, 2016

which constitute 93.61 per cent domestic and 6.31 per cent non-domestic water supply connection. The water connection for industrial use is only 0.08 per cent. The total street taps as per the data is 2,08,034, out of which 1,62,568 are in Panchayats and 18,131 and 27,335 in Corporations and Municipalities respectively (see **Appendix 4.80**).

A study by Centre for Water Resources Development and Management Kozhikode in 2013 in selected areas of Calicut Corporation reveals that irrespective of the high levels of sanitation coverage the bacterial contamination in drinking water sources is high. The important findings of the study is that majority of water samples collected from open wells of Calicut Corporation area is bacteriological contaminated

and the contamination is mainly of fecal origin. E-coli were present in majority of the samples, and high level of fecal streptococcus present in the wells of polluted areas. The study is a pointer for the state to look into the issues prevailing in the sector. The important factors that can be attributed to the situation are wrong positioning of well and toilets without considering the distance and gradient, direct discharge of toilet waste into canals and water bodies in high water table and low lying areas, insanitary toilets due to damage of digester part sewage from flats, hospitals, commercial complexes reaching water sources directly. The coverage of sewerage shows that the Thiruvananthapuram city has only 37 per cent coverage with about 90,000 connections and it is only 1000 connections in Ernakulam district.

Box 4.10 **Working Group on Drinking Water and Sewerage**

As part of the 13th five year plan, a working group has been constituted on Drinking Water and Sewerage by Kerala State Planning Board with Sri. V.J Kurian IAS, Addl. Chief Secretary, Department of Water Resources as Co-chairperson. The committee was asked to look specifically into the identification and formulation of set of output and outcome indicators for the sector, location specific needs and remedies, setting up of criteria for rain water harvesting and ground water recharge and the preparation of scientifically verified data base to make it accessible to every person.

Box 4.11
Save water! Save life!

Kerala has been facing severe drought for the last several years primarily due to rainfall deficiency. There are three types of droughts classified by scientific community and they are meteorological, hydrological and agricultural. Kerala is presently in the transition stage of meteorological to hydrological and agricultural drought, where water stress and crop drying is reported from selected highly drought susceptible parts of the State. Drought in Kerala principally relates to drinking water shortage. The State's economy, which depends on the South West Monsoon rainfall for majority of the electricity production, increases the vulnerability of the State to drought, particularly hydrological drought.

In the year 2016, the annual monsoon rainfall had registered a shortfall of 34 per cent in the State. An alarming 70 per cent deficit is reported in this year's North East Monsoon as well. Taking into account the seriousness of the situation, Government of Kerala has declared the entire State as drought affected. The expected acute shortage of drinking water, water for irrigation, lowering of water in the dams of power stations resulting in power crisis is threatening the very same existence of life in the State

It is scientifically ascertained that the frequency of monsoon breaks are increasing, total amount of rainfall is showing a declining trend, and onset of monsoon is getting delayed. This also leads to the unsustainable land use practices. Polluting drinking water sources and dumping solid and liquid waste into perennial water sources have become a common practice. The techniques like mazhapolima, jalavarshini, rubber check dams and atmospheric water maker were introduced as drought reduction strategies supported by Kerala State Disaster Management Authority (KSDMA). The newly announced Harithakeralam Mission has also given emphasis to rejuvenate the water resources with the participation of local bodies and the public. The concept of Water Kiosk is a highly effective method in mitigating the problem of drought. Kiosk is a 5,000 to 10,000 litres of PVC water tank located on a pedestal in a public area with a tap attached to it. The water is filled and distributed by the district administration. The scheme has been implemented in Kannur (355), Kasargode(1), Thiruvananthapuram(27), Kozhikode(6), Alappuzha(264), Malappuram(34) and Ernakulam (77). Mazhapolima is another effective method of recharging the ground water, which is used widely in some districts. Rubber check dams are inflatable or hardened rubberised impediments that could be installed in streams to delay water flow. Jalavarshini- aims to identify and provide financial support to model water conservation projects. 'EntaeKulamErnakulam', 2016:- cleaned 51 ponds with the help of 'Anbodu Kochi', a social media group of likeminded individuals, 'Kulam Koru BiriyanTharam' scheme of Kozhikode district, 2016:-cleaned 26 ponds. Atmospheric water maker is a device to produce potable and purified water from the air.

With a vision towards a 'Safer State', the entire state must be ready to face the crisis looming over us. A concentrated effort from the part of all individuals is essential in addressing the issue, Every drop saved may help in saving a life. In the long run, for a water secure future of the State we must join hands in rewriting 3Rs-Reduce, Reuse and Recycle as 4Rs-Respect, Reduce, Recycle and Reuse.

Source: SDMA, Kerala

Jalanidhi

Jalanidhi Phase I was implemented during the period 2000 to 2008. The GramaPanchayaths have a pivotal role in implementing community based water supply projects under Jalanidhi. The schemes are implemented through community participation with the involvement of NGOs. Though, KW RSA is mainly involved in small water supply schemes, it also engages in the distribution of bulk water supply through GramaPanchayaths. There were 3,694 small water supply schemes and 16 large water supply schemes commissioned benefiting 10.56 lakh population during the first phase (2000-2008). The second phase (2012-2018) which is being implemented is based on the need of the people with the participation of beneficiaries in planning and execution of projects. The project aims to cover about 18 lakh rural people for water supply and sanitation services in 200 Gramapanchayaths of Kerala. The funding pattern of scheme implementation is shared by State, Panchayath and beneficiaries with the percentage of 75, 15 and 10 respectively. The total project expenditure of Jalanidhi Phase II up to March 31, 2016 was ₹573.09 crore, and the total fund mobilised from the stakeholders is ₹729.27 crore. The total number of population covered by the Water Supply Schemes of Jalanidhi is 13.65 lakhs. The details are given in **Appendix 4.81**. The Rain Water Harvesting (RWH) Structures under Jalanidhi Project helped 18,239 households to meet their demand of drinking water in acute summer. Data on RWH by the KRWSA is given in **Appendix 4.82**. Apart from the water supply schemes, KW RSA is also involved in ground water recharge activities. 53 GWR structures have been constructed up to September 30, 2016 during Phase II. The details of Jalanidhi phase II project are given in **Appendix 4.83**.

Income From Water Charges

The major income for KWA is from the sale of water and KWA is the only state in the country with 100 per cent metered water connections. During 2015-16 an amount of Rs. 460.25 crore has been

collected as income from water charges by KWA. The details of income from the water charges from 2007-08 to 2015-16 is given in **Appendix 4.84**. The government has fixed varying tariff based on the category and consumption level. The water tariff set in 2014 is given in **Appendix 4.85**. The details of district wise and category wise rural and urban water supply schemes implemented in Kerala and district wise slipped back habitations are given in **Appendices 4.86** and **4.87**. The receipts of Kerala Water Authority from various sources and plan and non-plan expenditure are given in **Appendices 4.88** and **4.89** respectively.

Issues And Concerns

Safe drinking water and proper sanitation is essential for a healthy life. One of the major challenges faced by Kerala Water Authority is interruption in providing water supply to the public due to frequent leakages of pipes. Due to lack of preventive maintenance and replacement of old pipes, a considerable portion of the produced water has been reported as distributional loss. It is estimated that around 40 per cent of the produced water in Kerala is lost in distribution.

Way Forward

To provide quality drinking water, there should be an integrated water resources management system in water supply. The distribution of water should be equitable across users. Waste water collection and disposal are equally important like supply of protected water in maintaining public health. The challenge is to find ways of managing the available water resources and use it in a sustained manner without degrading the environment so as to sustain the resources for the future generations. The conservation of traditional water resources and effective implementation of rain water harvesting is essential for resource sustainability. The role of local bodies in this regard is very important and there is a need for the convergence of State line Departments and Local Bodies to work towards water conservation.

Section 5

GENDER AND DEVELOPMENT

Gender based discrimination that assigns to women lesser status and power, is deeply ingrained in the consciousness of both men and women and has remained remarkably stubborn, being generally viewed as a natural corollary of the biological differences between them. Religious beliefs, cultural practices and the educational system, reinforce this. The existing highly unequal economic and political structures by class and gender and systems of male domination that, on the one hand deny or limit women's access to economic resources and on the other impose sexual divisions of labour that allocate the most onerous, unpaid or poorly paid tasks to women inside and outside the household, adds to their vulnerability. The experiences of women with the development process as revealed by the Report of the Committee on the Status of Women in India (CSWI) in the early 70s were largely inimical to their needs and interests. In fact one of the shocking discoveries of the Committee (1974) was that the dynamics of social change and development in post Independent India, despite almost three decades of planned development, had adversely affected a large section of women and had created new imbalances, manifested specifically in declining work participation rates and a declining sex ratio.

A debate was sparked off on issues surrounding women's rights – to gainful employment when they did not have it; to recognition of their substantial contribution (paid and unpaid) to the national economy and towards their families' survival; to adequate rewards to their labour they do not enjoy; and to a share of resources, benefits and decisions regarding development to which they are entitled as citizens of a country which guarantees to them equality in all spheres of life. Perhaps the most useful debate in terms of visibility of women's contribution to the economy has been around

women's work. The inferior position of women in the labour market has been extensively discussed; over 60 percent of women in India still engage in household duties and are out of the labour force; and 30 -40 percent of self employed women are unpaid workers. Agriculture and related activities still continue to absorb almost 75 percent of the rural working women. It is also estimated that 81 percent of the rural women workers belong to socio-economically marginalised communities, with little voice and agency. The persistence of a high proportion of unpaid women workers within the officially enumerated female work force, continues to be an enigma.

To capture this scenario of gender inequality among the member nations, UNDP started to publish Gender Development Index (GDI) and Gender Empowerment Index (GEM) together with the Human Development Index (HDI) from 1995 onwards. These indices capture women's status in terms of their health, education, economic participation, control over economic resources, and political participation.

From 2010 onwards UNDP has started to release another index intended to measure the level of inequality sustained in societies. Gender Inequality Index (GII) is an attempt to have a clearer understanding of gender inequality as it prevails in three important aspects of human development, namely, 1) *Reproductive health, 2) Empowerment and 3) Economic status. According to the performance in the GII, India's status has been very dismal. In a list of 155 countries it occupies an abysmal position of 130 with a GII value of 0.563 whereas the top ten countries have values below 0.05. This signifies not just a big gap between our country and the developed societies but also serious flaws in both

**Of these the factor of Reproductive health is calculated by measuring the maternal mortality ratio and the adolescent birth rates, Empowerment is calculated by working out the ratio between the total number of seats and the number of women representatives in parliament and the proportion of adult females and males with secondary education, and the third factor of economic status is calculated by analysing the labour market participation of women.*

the policies and in their implementation by the state to mitigate gender asymmetries. According to the Human Development Report released in 2015 the indicators “highlight areas in need of critical policy intervention and it stimulates proactive thinking and public policy to overcome systematic disadvantages of women” .

Kerala is very well known for its achievements in the area of social development. Its human development indicators have remained much higher compared to other states within India. Several scholars have equated Kerala’s achievements in the context of health and education with that of some of the developed countries. In the Gender Inequality Index mentioned above the state’s performance in the context of maternal mortality rate, adolescent birth rates and proportion of adult females with secondary education have remained quite impressive. However, gender disparity is quite evident in the realms of two forms of participation: one is labour participation, and two political participation. Women’s participation in the labour market and their presence in the state legislatures and parliament have been comparatively very low. This appears to be a paradox when compared to women’s achievements in the areas of education and health. The state is yet to improve its performance in order to translate

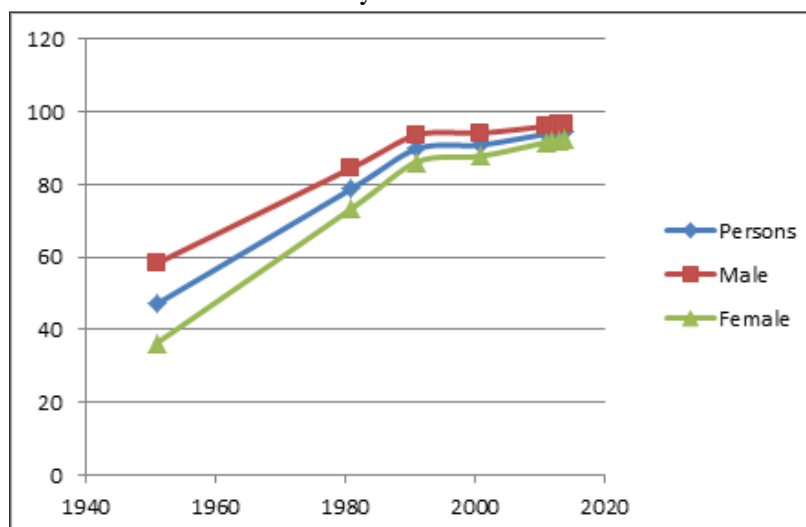
these achievements into better participation of women both in the realms of economy (labour market) and in politics.

With 52 per cent of the population consisting of women, Kerala is a state known for its positive sex ratio. The overall sex ratio of Kerala is 1084 females per 1000 males up from 1058 in 2001. Though child sex ratio has remained more or less constant over the period 1991-2011, yet a fall from 963 in 2001 to 959 in 2011 is a matter of concern. The proportion of child population in the age group 0-6 decreased from 11.9 per cent in 2001 to 10.4 per cent in 2011; the proportion of male child population declined from 12.5 per cent to 10.4 per cent and that of the female from 11.3 per cent to 9.8 per cent. In central Kerala, it is below the state average. However, the child sex ratio of Kerala is much better than the national average of 914. A comparison of Kerala’s Sex Ratio to that of all India and other neighbouring States is given in **Appendix 4.90**.

Literacy And Education

At 92 per cent, the female literacy rate in Kerala is the highest among Indian states. However, the male literacy rate in Kerala is still higher at 96 per cent (**Figure 4.10**). Hence a small gender gap exists.

Figure 4.10
Literacy Rate in Kerala



Source: Kerala State Literacy Mission Authority

Table 4.21
Enrolment of Girls and Boys at Different levels-2015-16

	Boys	Girls	Total	Per cent of Girls
School Education	1869255	1832322	3701577	49.50
Higher Secondary	182826	200756	383582	52.34
Graduation	65564	164783	230347	71.54
Post Graduation	9056	24008	33064	72.61
B Tech	4022	2348	6370	36.86
M Tech	639	742	1381	53.73
Total Engineering	4661	3090	7751	39.87
Polytechnic	21587	10518	32105	32.76

Source: Source: DPI, DCE and DTE, 2015

But it is seen that the gender gap has narrowed during these 6 decades.

In the case of education, enrolment is universal at the primary level and gender parity has been achieved; girl students constitute 49.4 per cent of total student enrolment in schools. Girls outnumbered boys in terms of enrolment in higher secondary education at 52.34 per cent. Dropout rates are low for both boys and girls. At the tertiary level also, the enrolment of girls is higher than boys. For example, girls constitute 71.54 percent of total enrolment for degree courses in various Arts and Science colleges under the four general universities in Kerala during 2015-16. When post-graduation is considered, the girls' position is highest with 72.61 per cent. Hence, girls perform well in terms

of education in Kerala. But when the intake of girls in engineering colleges and polytechnics is considered, the situation is different. Out of the total enrolled students, girls constitute only 39.87 per cent in engineering colleges and 32.76 per cent in polytechnics(**Table 4.21**). The high levels of education of women do not however, appear to be translated into marketable skills reflected in low levels of work force participation.

Health Status of Women In Kerala

In Kerala, most of the health indicators are highly favourable to women. Health indicators of women in Kerala are much better than their counterparts in the country as well as their male counterparts in the State. Life Expectancy at birth of women in

Box 4.12 **13th Five Year Plan Working Group on Gender**

The State Planning Board constituted a Working Group on Gender as part of the formulation of the Thirteenth Five Year Plan (2017-22) with Co-chairpersons as Sri A. Shajahan IAS, Secretary to Government, Social Justice Department and Ms MeeraVelayudhan, Sr. Policy Analyst, Centre for Social and Environment Concerns (CESC), Ahmedabad. The Working Group has discussed the achievements with regard to the plan projects launched in the sector during the last two Plan periods and also outlined special problems of growing violence against women, their economic disempowerment, severe problems of marginalised social groups and strengthening gendered governance at the local level. The Working Group has submitted the draft report focusing on the various issues related to Gender including Transgenders and has also put forward the project ideas to be implemented in the coming years.

Kerala at 76.9 years is the highest in India; much higher than for women in India as a whole, which is 67.7 years. As per the figures released by Registrar General of India, all the demographic indicators seem to be favourable in Kerala (Table 4.22).

When we look at the data on the number of patients in various hospitals (data given by Directorate of

Health Services, Kerala) in the state during the last year, it is seen that the number of women is lower than that of men except in the cases of diabetics and blood pressure (Table 4.23).

However the State has to do much more in areas like economic participation and political empowerment of women so that they can reap the

Table 4.22
Health Status of Women in India and Kerala

Sl. No	Indicator		Kerala	India
1	Death Rate #		6.6	6.5
		Male	7.6	6.9
		Female	5.7	6.1
2	Infant Mortality Rate #		12	37
		Male	10	35
		Female	13	39
3	Mean age at effective marriage			
		Male	27.3	23.2
		Female	21.4	20
4	Knowledge and practice of Contraceptive Use by Currently Married Women		97.3	94.5
			58.7	50.2
5	Maternal Mortality Ratio	66	66	178
6	Expectancy of Life at Birth	Male	71.4	62.6
		Female	76.9	67.7

Source: SRS Bulletin, Govt of India and Directorate of Health Services, Kerala

Table 4.23
Number of Patients 2015 - 2016 (up to Nov 2016)

Name of the disease	Number of Patients 2015 - 2016			Service
	Male	Female	Total	
Cancer	22911	21368	44279	48.26
Diabetics	917276	1002429	1919705	52.22
B.P	1029662	1137907	2167569	52.50
Heart diseases	70567	60388	130955	46.11
Stroke	27518	21636	49154	44.02
mental diseases	82082	70412	152494	46.17
Bronchitis	591373	565245	1156618	48.87
Lung diseases	37344	32363	69707	46.43
Asthma	474020	443404	917424	48.33

Source: Directorate of Health Services, Kerala

benefits of enhanced and equitable development. It is generally agreed that the attainments in health and education can be considered as the pre-conditions for the take-off and the other two can be considered as the measures of take-off.

Women's Participation in Employment

In countries with high human development, the share of economically active women seems to be high. Labour Participation Rate (LPR) of women in 10 countries having highest Human Development Index is around 60 percent and that of men is around 70 percent (Human Development Report, 2015). It is surprising to note that Female LPR is much higher in some of our neighbouring countries, whose HDI rank is lower than that of India. For example Female LPR in Bhutan is 66.4, in Cambodia is 78.9, in Bangladesh is 57.3, in Nepal is 54.3, and in Myanmar is 85.7 (Source: HDI Report 2014). It cannot be ignored that less women in labour force means under-utilization of human resources that holds back productivity and economic growth.

Women of Kerala outperform their male counterparts in many developmental indicators. But in the case of economically active persons, the outcome is not favourable to women. There are two major sources of data on workers, unemployed, and non-workers- Census and the Quinquennial Rounds on Employment-Unemployment of

the NSSO. Given the more inclusive definition of “worker” in the NSSO, the latter is generally used for understanding the employment situation in a country/state and therefore NSSO data has been referred to in this section. The Census has the advantage of readily available data at a disaggregated regional level of the district or even lower.

As per the 68th Round of NSSO (for the year 2011-12), a wide gap between male and female LPRs (principal and subsidiary status) is seen in the State. While the State average is 40.3 per cent, female LPR (per 100 persons) in Kerala is 24.8 percent and that of male is 57.8 percent. Consequently the difference between male and female LPR in Kerala is very high. Himachal Pradesh with a female workforce participation rate of 49.8 percent is the best performer. It is surprising that the North-eastern states like Nagaland, Sikkim, Manipur, Mizoram, Arunachal Pradesh and Meghalaya too have higher FWPRs than Kerala. Hence we have to relook at our strategies in this direction and perhaps learn from experiences elsewhere; the need to empower Kerala women with decent employment is urgent.

Disaggregating by region, we find that the labour force participation rate of women in rural Kerala is lower than that of India. But in urban areas, labour force participation of Kerala women is better than that of their counterparts at the all India level (Table 4.24).

Table 4.24

Labour Force Participation Rate for Kerala and India (percent) Urban and Rural (PS+SS)*

Year	Rural				Urban			
	India		Kerala		India		Kerala	
	Male	Female	Male	Female	Male	Female	Male	Female
1987-88	54.9	33.1	55.8	33.6	53.4	12.9	59	26.1
1993-94	56.1	33	56.8	26.4	54.3	16.5	59.9	25
1999-2000	54	30.2	58.7	27.3	54.2	14.7	59.1	25.4
2004-05	55.5	33.3	58.9	32.1	57	17.8	58.3	30.1
2009-10	55.6	26.5	58.3	26	55.9	14.6	56.4	23.3
2011-12	55.3	25.3	58.3	25.8	56.3	15.5	56.7	22.2

Source: Various Reports of NSSO

*Refers to principal status plus subsidiary status, the most inclusive definition of worker

A comparison of labour force participation of males and females in Kerala is shown in **Figure 4.11**. It is seen that the gender gap is widening over the period.

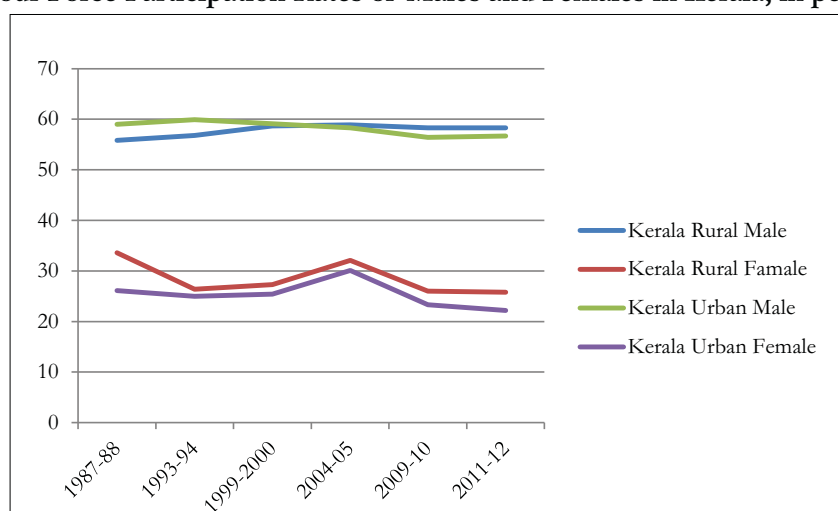
The gender gap in levels of employment is also brought out by the female work participation rates (**Table 4.25**) and while the male WPRs show a mild upward trend or constancy, there is a declining trend in female WPRs; that Kerala women have a higher participation rate in urban areas vis-a vis all India is also seen.

As per Census 2011, the FWPR of the state has increased by 2.8 points in the last decade. This may

appear to contradict our findings from the NSSO of a declining female workforce participation; but it must be remembered that between 1999-00 and 2004-05 (NSSO) FWPRs had increased in Kerala as also most other states; however, in the next Round for the year 2009-10 there was a decline again. Nonetheless the rates in 2009-10 remained higher than in 1999-00 in rural Kerala but declined marginally in urban areas which is largely in line with the results of the 2001 and 2011 Census. Hence the picture if we take the latest data is one of declining female workforce participation rates in Kerala as for all- India.

Using the Census data, we find that in four

Figure 4.11
Labour Force Participation Rates of Males and Females in Kerala, in per cent



Various Reports of NSSO

Table 4.25
Work Participation Rates of Males and Females in Kerala, in per cent

Year	Rural				Urban			
	India		Kerala		India		Kerala	
	Male	Female	Male	Female	Male	Female	Male	Female
1987-88	53.9	32.3	56.7	31.6	50.6	15.2	59.2	21.8
1993-94	55.3	32.8	53.7	23.8	52	15.4	56	20.3
1999-2000	53.1	29.9	55.3	23.8	51.8	13.9	55.8	20.3
2004-05	54.6	32.7	55.9	25.6	54.9	16.6	54.7	20
2009-10	54.7	26.1	56.4	21.8	54.3	13.8	54.7	19.4
2011-12	54.3	24.8	56.5	22.1	54.6	14.7	55.2	19.1

Source: Various Reports of NSSO

Table 4.26
Percentage of females(of age 5 years and above usually engaged in domestic duties in the Usual Principal Status) who carried out specified activities- All India

Sl No:	Activity	All India Rural	All India Urban	Kerala Rural	Keral Urban
		2011-12	2011-12	2011-12	2011-12
1	Maintenance of kitchen garden	23.3	7.8	16.5	11.3
2	Maintenance of animal resources	21.5	2.4	14.2	5.3
3	Free collection of fuel/cattle feed	43.5	5.3	16.5	3.6
4	Preparation of cow-dung cake	40.9	4.6	0.7	0.1
5	Fetching water from outside	30.6	9.6	7.7	6.0
6	Sewing/tailoring etc	27.3	23.5	10.0	11.7
7	Tutoring own children or other children for free	6.8	12.0	12.2	13.7

Source: NSSO 68th Round: Participation of Women in Certain Specified Activities along with their Household Duties, Report No.559.

districts of the state namely: Kannur, Kozhikode, Malappuram and Pathanamthitta have FWPR which is lower than that of the state as a whole. Moreover, the performance of Kozhikode and Malappuram is very poor. Two districts, namely Wayanad and Idukki have FWPR which is higher than the all-India rate. Idukki has the highest FWPR in the state as the women in the rural sector of the agrarian district are more economically active. The district-wise comparison is provided in **Appendix.4.91**.

Both the Census and NSSO estimates depict a picture of low work participation rates of women. As is well known it has been debated extensively in the literature that work participation of women is much higher than what is measured, given the invisibility or non-recognition of economic work that women do at home. Both the investigator (from the official sources of data collection) and women themselves do not perceive the work status of home based women workers, despite intensive efforts at broadening the concept of work. To capture this to some extent, **Table 4.26** shows that

a proportion of women who are enumerated as ‘usually’ engaged in household duties and hence non-workers, perform a number of economic activities at home- like poultry keeping, kitchen garden, and tailoring.

The role of self-employment in enhancing the share of economically active women is very important in a state like Kerala where the educational level of women is very high and women appear unwilling to take up wage employment in low paid informal jobs. Surprisingly, even with a large number of opportunities for self-employment, the share of female self-employed workers seems to be significantly lower in Kerala than many other states in India. The percentage of female self-employed workers (FSEW) in Kerala is 36.4 in rural areas and that in urban areas is 36.3. But in rural areas, percentage of FSEW is 89.5 in Arunachal Pradesh, 87.9 in Himachal Pradesh, 94.9 in Nagaland and 90.2 in Sikkim. In all these North Eastern states, FWPR is above 35 per cent (NSSO Report, 68th Round).

Gender disaggregated data on employment can capture more clearly a picture of women's economic involvement. The sectoral distribution of employment of women in Kerala (**Table 4.27**) shows that relative to men, a larger proportion of women are engaged in the agricultural sector. The percentage share of males engaged in service sector is much higher compared to females; however in industry the relative proportions are not very different; but a further disaggregation would show that this is because large numbers of women are engaged in low productivity, labour intensive traditional industries like handlooms, khadi, coir, and cashew.

Membership of females in different Welfare Fund Boards in Kerala shows the participation of women in some specific industries (**Appendix 4.92**). It is clear that women's participation in traditional industries is very high in which wage/remuneration is comparatively low. For eg, among cashew workers and beedi workers, women

constitute 95 per cent and 99 per cent of the work force respectively.

Together with low and declining female work force participation rates in Kerala, the inferior economic position of women is aggravated further by high rates of unemployment, in particular of educated women (**Table 4.28**). This suggests that there are large numbers of women who are seeking or available for work but unable to find it. The fact that the unemployment rate shows a fall in the recent year, even as work participation rate has also declined suggests that one of the reasons could be a 'discouraged worker' effect pushing women out of the workforce due to long waiting periods in the labour market for work. Some scholars argue that the decline in female work participation rate could be on account of 'income effect', that is with a growth in household income there is a tendency for women to withdraw from labour force. Needless to state this requires further probing.

Table 4.27
Sectoral Distribution of Employment in Kerala, in per cent

Persons	Agriculture	Industry	Service
Male	22.8	32.4	44.8
Female	31.9	30.4	37.7
Total	25.5	31.8	42.7

Source: NSSO Report, 68th Round.

Table 4.28
Unemployment Rates (PS+SS) of Males and Females in Kerala and India, in per cent

Year	Rural				Urban			
	India		Kerala		India		Kerala	
	Male	Female	Male	Female	Male	Female	Male	Female
1987-88	1.8	2.4	5.2	6.00	5.2	6.2	6.0	6.3
1993-94	1.4	0.8	5.5	6.6	4.0	6.2	6.6	18.7
1999-2000	1.7	1.0	5.7	5.6	4.5	5.7	5.6	20.0
2004-05	1.6	1.8	5.1	6.2	3.6	6.9	6.2	33.4
2009-10	1.6	1.6	3.2	2.9	2.8	5.7	2.9	16.8
2011-12	1.7	1.7	3.1	14.2	3.0	5.2	2.7	13.9

Source: Various Reports of NSSO

Inequality in Wage Rates

Women are engaged in agricultural work as well as in traditional industries (which mainly comes under informal and unorganized sector) in India as well as in the State (Census, 2011). But in terms of wages and remuneration, significant gender inequality exists in unorganized sector. The **Table 4.29** shows average daily wage rates in agricultural occupations in the state in to all India.

Economic empowerment and social empowerment are complementary to each other. The economic empowerment of women is attained when they become an integral part of labour force and are gainfully employed without having to bear the full burden of household and care responsibilities. It is necessary that this is recognised, and efforts are to be taken to reduce and redistribute unpaid household and care work in more just ways promoting shared responsibility within the household, The State also plays a crucial role in designing appropriate policies/schemes that support its reduction and redistribution. Goal 5 of SDGs on Gender Equality recognises the value of unpaid care and domestic work in target 5.4 of SDG (**Box 4.13**).

Women in Political Leadership

Political representation is taken as an important dimension to measure gender position in many of the indices currently being used. For example,

Gender Inequality Index developed by UNDP measures empowerment by the proportion of parliamentary seats occupied by females. The Global Gender Gap Report brought out by World Economic Forum measures political empowerment, economic participation and opportunity, educational attainment and health and survival.

Achievements in health and education have empowered the women of Kerala and enabled them to take part in the practices of democracy. Democracy will be complete only when the women get equal participation in direct decision making too. It is in this regard that the representation of women in legislative bodies becomes important. Political participation must not be restricted to casting votes during elections. Rather women must occupy leadership positions in decision making bodies. Women of the state can be empowered through their direct participation in policy making. An appropriate example is the local governments in Kerala, where 50 per cent of the seats are reserved for women including the higher positions in the local bodies

However, gender empowerment is politically meaningful only if women have decision making powers in higher bodies like State legislatures and Parliaments. The developed nations with high HDI levels have a much higher representation of women in their legislative bodies. The top eight countries where percentage of women in legislative bodies is high are Norway (39.6 per cent), Sweden (44.7 per

Table 4.29
Average Daily Wage Rates in Agricultural Occupations in Rural India
during March, 2015, in ₹

State	Sowing (including Planting/ Transplanting/weeding workers)		Gender Attainment* Index	Harvesting/Winnowing/ Threshing workers		Gender At- tainment Index
	Male	Female		Male	Female	
AP	233.87	163.46	0.70	235.32	192.42	81.77
Kerala	638.29	446.88	0.70	582.14	439.1	75.43
Bihar	225.5	185.51	0.82	218.13	196.3	89.99
Tamil Nadu	317.72	233.51	0.73	393.55	201.72	51.26
All India	238.67	194.32	0.81	238.43	203.16	85.21

Source: *Wage Rates in Rural India, Ministry of Labour and Employment, Govt of India*
• Gender attainment index of wage rate is calculated by female wage rate / male wage rate.

Box 4.13

Sustainable Development Goal- Gender

Goal 5: Achieve gender equality and empower all women and girls

- End all forms of discrimination against all women and girls everywhere
- Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
- Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
- Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
- Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
- Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Source: Official website of UNDP

cent), Iceland (39.1 per cent), Denmark (39.1 per cent), Belgium (38.9 per cent), Finland (42.5 per cent), Netherlands (37.8 per cent) and Cuba (48.9 per cent).

However the achievements of the state with respect to women representation in the Central and State Legislative bodies are not noteworthy. The same is the case when we take women in India as a whole. It is quite surprising that the women's status in the state in this regard is lower than that of many states in India as also the all India average (Table 4.30 and 4.31).

CRIMES AGAINST WOMEN

As per the figures brought out by the State Crime

Records Bureau, the total reported cases of crime against women are increasing over the period. The number of 'Rape cases' has increased from 500 in 2007 to 1319 in 2016 (up to October) (Appendix 4.93). The 'cruelty by husband/relatives' still constitutes a major component in crime against women. As per data from National Crime Records Bureau, Kerala is a state where 'Rate of total cognizable Crimes' (incidence of crime per one lakh female population) is much higher than the national level. Even when we want women to come out of their homes and take up employment, the safety of women is a serious issue. Greater efforts are required in this direction, to enable women to take up gainful economic activities outside the home. As shown in Figure 4.12, the number of crime against women in Kerala is steadily increasing from 2007 to 2014.

Table 4.30
Elected Women in Lok Sabha- India and Kerala

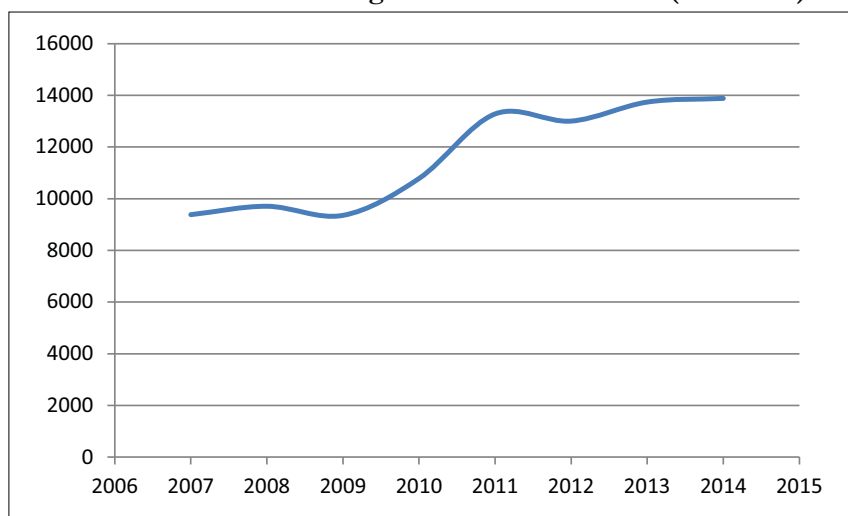
Year	All India			Kerala		
	Total No. of Seats	Women	Per cent of Women	Total No. of Seats	Women	Per cent of Women
2009	543	58	10.7	20	0	0
2014	543	62	11.5	20	1	5

Table 4.31
Female Representation in Legislature – Kerala

Name of Legislature	Number of Women	Total no of seats	Per cent
Kerala Legislative Assembly			
2006	7	140	5
2011	7	140	5

Source: Worked out from data available at the Website of the Lok Sabha, Rajya Sabha & Chief Electoral Officer, Kerala

Figure 4.12
The number of crimes against women in Kerala (2007-2014)



Source: State Crime Records Bureau

Transgender Policy in Kerala

The presence of transgender (TG) is now being increasingly accepted in the society. However, the survey conducted by the Social Justice Department on TGs reveals that they are unable to acquire even basic capabilities essential to a life of well-

being and dignity. While women's interests and expressed needs are now accepted, at least partially, widespread and intense conservatism denies the same status to the interests and demands of people of non-normative sexual orientations, and though they have gained legal recognition, they face terrible invisibility and violence. "The condition

³Department of Social Justice, State Policy for TGs in Kerala, 2015, p.8

Box 4.14**Transgender Policy of Government of Kerala, 2015**

Kerala is the first State in India which declared a Transgender Policy in 2015. GOK has issued a rights based State Policy for Trans genders within a clear results framework. In addition, consistent with the 2014 Supreme Court judgement, the policy allows for the self-identification of a person as a Transgender. The Policy also recommends the establishment of District-level TG Boards that can register TGs and issue identification cards. The Department of Social Justice is planning to establish these boards as soon as a Government Order is issued.

of non-normative sexualities in Kerala cannot be described as only that of deprivation-then lack of resources that cause ill-being. Rather, it is better described as abjection – which refers to a form of ‘enforced invisibility’ of these people in the eyes of civil society and the state” (Draft Report of Working Group on Gender, State Planning Board, 2016).

Hence, interventions for inclusion of TGs cannot be limited to merely economic measures. The recent Supreme Court judgments, have given some space to remedy certain of the issues of TGs. While the recognition of all non-normative sexual orientations as legal remains a distant dream, the Honourable Supreme Court of India (vide Judgment dated April 15, 2014) firmly established the right to equality and equal protection for transgender persons (TGs) and emphasized their right to live free from discrimination on the ground of gender identity. Following the Supreme Court Judgements, to understand the issues faced by TGs, the Social Justice Department of the Government of Kerala (GoK) conducted a State-wide survey seeking information on all aspects of their social and personal life. The survey, which collected information from over 4000 TG individuals, indicated that their population in Kerala may be over 25,000³.

Gender Budgeting

As policies and programmes have a differential impact on women and men, it is necessary to strengthen Gender Responsive Budgeting. Gender Budget is not a separate budget for women but

one in which gender has been mainstreamed. It is a methodology to assist governments to integrate a gender perspective into the Budget recognizing the economic significance of women’s unpaid work in the household and the need for public investment in these activities. The Gender Budget Statement is an important tool for bringing together all information regarding allocations for women. It is now considered as an instrument to address gender inequality and reallocate the resources more favourably to women. This serves as an important reporting mechanism and provides an indication of funds flowing to women. It is a major step in strengthening inclusive growth.

To institutionalize the process of Gender Budgeting, the Gender Budget Statement had been introduced in the Union Budget 2005-06. Kerala is perhaps the first State to undertake a ‘gender aware planning’ aimed at bringing transformations in outcome for women even earlier within the context of decentralised planning in the 9th Plan Period. With the inclusion of Women Component Plan (WCP) in local bodies’ annual plan, an attempt at integrating gender into the budgeting process was made and subsequently gender-responsive budgeting was introduced in the state at the time of the 9th Plan itself. With the devolution of 35-40 per cent of funds from the state to the Local Self-Government Institutions (LSGIs), the first form of Gender budgeting was seen in the state in 1996 where each Panchayat was directed to prepare a chapter on the status of women in their development plan document, 10 per cent of the plan outlay of the local bodies had to be set apart for needs of women or women specific projects. Percentage of Plan allocation and expenditure on

WCP of local bodies during 11th and 12th (first three years) are given in the following **Table 4.32**.

It is seen from the table that though 10 per cent is mandatory, in terms of allocation and expenditure, more than 10 per cent of the fund goes to women. Compared to 11th plan, percentage of WCP allocation has fallen from 13.22 per cent to 10.63 per cent and expenditure has fallen from 12.35 per cent to 10.70 per cent during 12th plan. However, since then, there has been considerable debate on the type of schemes/projects implemented under the WCP, some of which may not be gender sensitive. While the special attention given to gender in decentralised planning has left some positive imprints on outcomes and a number of good practices can be identified across the state, WCP has fallen short of expectations on advancing gender equality and is being reviewed in the context of the renewed emphasis on LSGIs and people's participation in the 13th Five Year Plan.

A conscious attempt was made at Gender Responsive Budgeting in Kerala's 11th Five Year Plan, integrating gender into the Planning/Budgeting process with a visible increase in Annual

Plan allocations flowing to women over the years addressing women's felt needs, including women friendly infrastructure. The problem has been that since many projects benefit both women and men it may not be possible to capture a total estimate of the resource outlay for women due to non-availability of gender differentiated data.

In the 12th Plan while there was no conscious attempt at Gender Budgeting, in 2015 a manual was prepared on Gender Planning and Budgeting (**Box 4.15**) and in 2016-17 some estimates of fund flow to women were given in the Summary Document 2016-17 brought out as part of budget documents. The percentage of allocation to women in the past three years can be seen in **Table 4.33**. The details of expenditure related to women specific schemes and programmes in

Annual Plan 2014-15 and 2015-16 are provided in **Appendix 4.94**.

The Revised Budget for 2016-17 announced its intention of reviving Gender Budgeting in the 13th plan with at least 10 percent of total Plan outlay flowing to women, addressing their needs and interests. The major schemes benefiting

Table 4.32
Percentage of Allocation and Expenditure of WCP Projects to the Total Allocation and Expenditure

Five Year Plan	Per cent of WCP allocation	Per cent of WCP Expenditure
11th Plan	13.22	12.35
12th Plan- first three years	10.63	10.7

Source: IKM

Table 4.33
Percentage of Allocations to Women in Annual Plans, ₹ in crore

Annual Plan	Total Allocation*	Allocation to WCP	per cent to total allocation
2014-15	15300	943.18	6.16
2015-16	15200	537.00	3.53
2016-17	18500	747.25	4.03

Source: Plan Documents *excluding LSGs Outlay

Box 4.15**Gender Planning, Budgeting and Auditing Manual of Social Justice Department**

The Manual on Gender Planning, Budgeting and Auditing developed by Social Justice Department gives general guidance, methodology and tools on how to develop, implement, and monitor a gender action plan at the departmental level within the results framework of the GEWE Policy, 2015. As per the Manual, within each Department, the Head of Department (HOD) is responsible for Gender Mainstreaming. To fulfill this responsibility, each department must:

- Designate a gender resource person (GRP) as a focal point in the Department
- Strengthen the Department's capacity for Gender Mainstreaming
- Prepare a Departmental Gender Action Plan (DGAP); and earmark funds for training and evaluation within the Department
- Set aside sufficient budget for implementing and development purposes
- Ensure that gender-related issues are being systematically monitored and reported by program or project managers

Steps on Gender Planning and design of Programmes, Projects and Schemes (PPSs)

- A thorough gender analysis and identification of barriers and constraints (issues) to gender equality and women's empowerment needs to be done
- Understand the consequences resulting from the identified barrier or constraint.
- Prioritize and determine which of the identified issues should be best addressed through the proposed intervention
- Identify the outputs that need to be delivered to achieve objectives.
- Determine whether the desired outcomes or impacts will occur if the needed outputs are generated.

Monitoring and Evaluation

Monitoring will be done at two levels – Government and Departmental levels. In addition to an annual gender audit, each Department must conduct an evaluation of a sample of its projects which are wholly targeted to women (100 per cent projects) and projects which are benefited to men and women, three years after initiation of policy implementation.

Budgeting for Gender Equality

The information for compilation of gender responsible budget can be furnished in three parts:

- Details of schemes in which 100 per cent provision is for women
- Schemes where the allocation for women-centric activities constitute at least 30 per cent of the total provision
- Schemes which are meant to create public goods but have the potential to affect both women and men.

Gender Audit

Each Department must conduct a gender audit in the first year after policy implementation, and once every two years thereafter.

women under the major departments are given in the following **Table 4.34**.

The development policy in Kerala has been more sensitive to gender equality in terms of human resource development as reflected in the much lower gender gap in basic capabilities, such as

education and health. However, the positive indicators in basic entitlements did not result in improving women's position in society. The high ranks in both literacy and health did not translate into growth of paid employment for women nor into upward occupational mobility. Female work participation rates (WPR) in Kerala remains low, even among the educated women. Also levels of

Table 4.34
Some Major Schemes Benefiting Women

Sl. No.	Name of the Scheme	Objective of the scheme
Agriculture and Allied Sectors		
1	Theeramythri and micro enterprises scheme	Stabilization package for promoting livelihood diversifications and to improve the income level of fishermen families through women members of the fisher family
Rural Development Sector		
2	Indira Awaaz Yojana (IAY)	Comprehensive rural housing programme of GOI provides dwelling units to the homeless rural poor
3	Mahatma Gandhi National Rural Employment Guarantee Programme	Flagship programmes of GOI for employment generation. Majority of beneficiaries are women
Industries		
4	Mahila Coir Yojana	First women oriented self-employment scheme in the Coir Industry which provide self-employment opportunities to the rural women artisans
Health Sector		
5	Women Health Care Centre (Seethalayam)	Seethalayam provides aid to suffering women in the society through Homeopathic treatment.
6	Bhoomika- Gender Based Violence Management centre (GBVMC)	Provide counseling services and medical and legal assistance to the victims of gender based violence.
SC and ST Development Sectors		
7	Assistance for Marriage of SC girls	₹50000/- for the marriage of BPL SC girl
8	Assistance to Marriage of ST girls	₹50000/- for the marriage of ST girl and Rs.1 lakh for the marriage of ST orphan girl
9	Janani-JanmaRaksha	Timely assistance to maternal care
10	Housing scheme for the Divorcees/Widows/Abandoned Women	Housing scheme for the women in these categories
Education		
11	Sarva Siksha Abhiyan	To ensure universal elementary education

Social Security and Welfare Sector		
12	Institutional care to women	There are 17 welfare institutions under the aegis of Social Justice Department (SJD) for the care, protection and rehabilitation of women in distress
13	Pension schemes for women	Indira Gandhi National Widow Pension (IGNWP) and pension for unmarried women above 50 years are the major pension schemes.
14	Nirbhaya	Envisages setting up of Nirbhaya Homes for sexually abused women so as to give skill development training for providing employment opportunities. 10 such homes were started in 9 districts which provided shelter to 200 women.
15	Gender Park	It is a platform where the State, Non-Government organizations (NGO), academia and civil society can come together for learning and research on gender equality as well as to formulate innovative and new interventions to support the empowerment of women and gender equality
16	Beti Bachao Beti Padhao	Financial assistance to the state to empower the girl child and enable her education
17	Snehasparsham	Aims to address the problems of unwed mothers
18	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls	It aims at empowering the nutritional and health status of the adolescent girls in the age group of 11-18 years
Local Self Government Department		
19	Kudumbashree	State's poverty alleviation scheme focussing on women members of the family. Kudumbashree works through the Community Organisations at the grass root level.

Source: Plan Documents

gender based violence remain high and insecurity in the public sphere is prevalent.

Over time policy approaches to women have changed, from 'welfare' to 'development', 'empowerment' and now 'inclusion', seemingly

towards more gender favourable outcomes. There has been a proliferation of policies, programmes and schemes since then, to assist poor women and address gender gaps in social, economic and political spheres. There also exists a visible, strong and vibrant women's movement and

large numbers of women in grassroots politics. However, the concrete improvements in women's economic and social position are inadequate and there is a need to focus on the urgent need for a transformative agenda to move towards greater inclusion and gender equality. International development institutions have shifted emphasis from the MDGs to 17 SDGs with 169 targets to be achieved by 2030 in response to varied dialogues involving representatives of nation states, civil society organizations and platforms, other national and international forums. Nations are moving towards SDGs perceived as representing a more

sustainable and resilient path of development and more substantial compared to previous MDGs. Goal 5 "Gender equality and empowerment of women" with a comprehensive set of 9 targets has also been mainstreamed into a majority of the SDGs and targets. Target 5.4 is to recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family.

Section 6 *WELFARE OF SCHEDULED CASTES, SCHEDULED TRIBES, OTHER BACKWARD CLASSES AND MINORITIES*

The Scheduled Caste population of Kerala is 30,39,573 persons as per 2011 Population Census constituting 9.10 per cent of the total population of the State. According to the amendment to the constitution in 2006, there are 53 communities among the Scheduled Caste. The settlement pattern of Scheduled Caste in the state is entirely different from other parts in the country. Major share of the Scheduled Caste in the state live as scattered along with other people. The highest distribution of Scheduled Caste is in the Palakkad District (13.29 per cent) followed by Thiruvananthapuram (12.27 per cent), Kollam (10.80 per cent), Thrissur (10.67 per cent) and Malappuram (10.14 per cent). These five districts accommodate 57.17 per cent of the total Scheduled Caste in the state. In Palakkad District 14.37 per cent of the total population is Scheduled Caste. In Pathanamthitta the representation is 13.74 per cent. In the districts like Idukki, Kollam, Thiruvananthapuram and Thrissur, the population of Scheduled Caste is more than 10 per cent of the total population. The Vedar, Vettuvan, Nayadi, Kalladi, Arundhathiyar/Chakkiliar are the vulnerable communities among

Scheduled Caste. They constitute 3.65 per cent of the SC population in the State.

The Scheduled Tribe population of Kerala is 4,84,839 persons constituting 1.45 per cent of the total population of the State (3.338 crore) as per 2011 Census. There has been an increase of 0.63 per cent as compared to 2001 population census. Sex ratio of Scheduled Tribe population in Kerala is 1035. A comparative picture regarding literacy and sex ratio of Scheduled Castes and Scheduled Tribes population in Kerala with national level is furnished in **Appendix 4.95**.

The Scheduled Tribes in Kerala are not only geographically concentrated, but are overwhelmingly rural. Highest concentration of Scheduled Tribes is seen in Wayanad District (31.24 per cent) followed by Idukki (11.51 per cent), Palakkad (10.10 per cent) and Kasaragod (10.08 per cent). These four districts together account for 62.93 per cent of Scheduled Tribes in the State. The coastal district of Alappuzha has the lowest percentage (1.36 per cent). District wise Scheduled

Caste/Scheduled Tribe population details are given in **Appendix 4.96** and **4.97**.

As per Census of India 2011 (**Appendix 4.98**) Scheduled Caste households in Kerala have much greater access to banking services, landline phones, computers with internet and car than an average Scheduled Caste household in India. Compared to other southern states like Tamil Nadu, Karnataka, and Andhra Pradesh, only SC households in Tamil Nadu have greater access to televisions than those in Kerala. SC households in Kerala do not seem to have as much access to two wheelers as other SC households in India. While more than 22 per cent of SC households in India did not have access to any of these assets, Kerala performed better with only around 11 per cent of SC households being deprived of these assets.

Similarly in the case of Scheduled Tribes, households in Kerala have much greater access to banking services, television, computer with internet, land line and car than an average Scheduled Tribe household in India (**Appendix 4.99**). Compared to other southern states, only Scheduled Tribe households in Tamil Nadu have greater access to televisions, computer with internet, landline phones and car than Kerala. Scheduled Tribe households in Kerala do not seem to have as much access to two wheelers as other Scheduled Tribe households in India. While more than 37 per cent of Scheduled Tribe households in India did not have access to any of these assets, Kerala performed better with only around 24 per cent of Scheduled Tribe household being deprived of these assets.

Scheduled Caste and Scheduled Tribe households in Kerala have a better standard of living than their counterparts in the rest of the country in general. However Tamil Nadu has shown an even better standard of living for Scheduled Tribe households than Kerala.

Occupational Pattern

Decadal growth rate of Kerala's population as per

Census 2011 Population Census was all time low of 4.9 per cent. The work participation rate shows an increasing trend during the decade (2001-11). The proportion of main workers is more than that of marginal workers in all cases. Especially the female main workers have considerably increased from 19.90 per cent in 2001 to 22.71 per cent in 2011 in the case of ST population. In respect of SCs same has increased from 18.51 per cent to 19.59 per cent during this period. The percentage of main workers engaged in household industry shows a decreasing trend. The category of main workers shows that 29.90 per cent of SCs and 59.49 per cent of STs are doing agricultural labour where as in the case of general population it is only 14.18 per cent. Details of occupational pattern is shown in **Appendix 4.100**.

In Kerala, as per Rule 14(a) of the Kerala State and Subordinate Service Rules 1958, 10 per cent representation (8 per cent for SCs and 2 per cent for STs) is reserved to Scheduled Castes/Scheduled Tribes in Gazatted, Non-Gazatted and Last Grade Categories in Government Departments. The Scheduled Castes have already got a benefit of more than 8 per cent reservation in all the three categories. But in the case of Scheduled Tribe candidates it can be said that they are nearing the required 2 per cent reservation in State service on a faster pace. The total representation of Scheduled Castes and Scheduled Tribes in public service is 13.25 per cent during 2015 (Data is based on the furnished review report from General Administration (employment-cell) Department, review of 51 out of 83 departments were only completed as on January 1, 2016. Details of representation of SC/ST employees in Government service is given in **Appendix 4.101**.

Development Programmes for Scheduled Caste and Scheduled Tribes

Kerala Government earmarks fund for Scheduled Caste Sub Plan (SCSP) from State Plan outlay in proportion to the percentage population of Scheduled Caste and allocates fund for Tribal Sub Plan (TSP) more than that of ST population

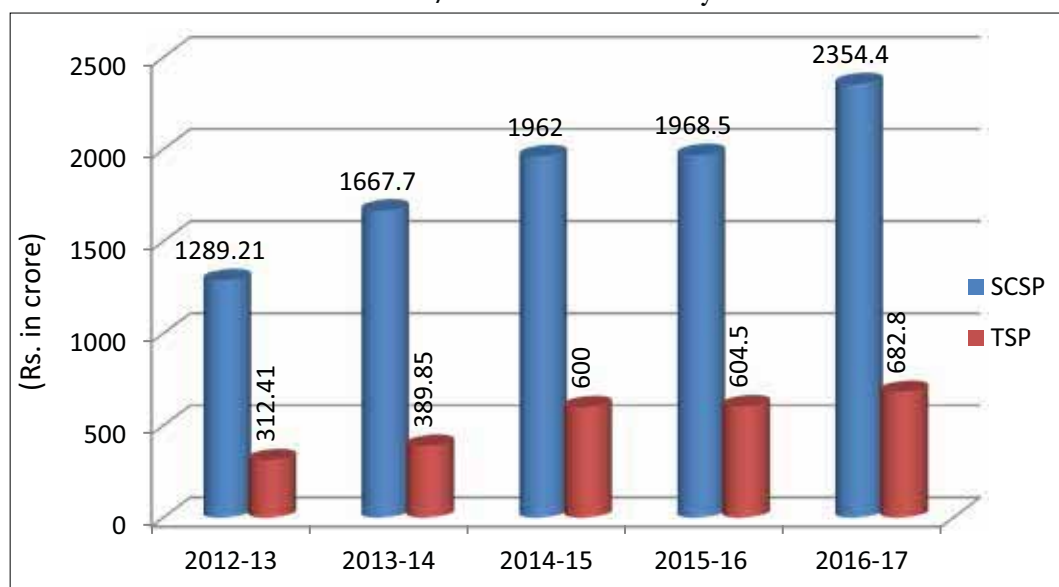
percentage. A two pronged strategy is followed for the development of SC/ST in the State. One is the assistance provided through the LSGs and the other through SC/ST Development Department. Out of the total SCSP/TSP Plan outlay, a certain percentage of funds are allocated to Local Governments for implementation of schemes under decentralized planning and the remaining to the SC/ST Development Department. A system of earmarking certain amount of SCSP/TSP as pooled fund under SCSP and TSP for taking up schemes adopting a project approach was introduced. This gives scope to get wide range of schemes with varied objectives and physical targets, which put together, will help the all-round development of the targeted groups. The total plan provision set apart for the development of Scheduled Caste and Scheduled Tribes during 2016-17 is ₹2354.40 crore and ₹682.80 crore respectively. Year-wise details from 2012-13 onwards are given in **Appendix 4.102** and in **Figure 4.13**.

Programmes of Scheduled Caste Development Department

Plan fund devolved to Scheduled Caste development has been earmarked as plan allocation to the department and the local governments. Centrally Sponsored Schemes and schemes/projects included in State plan for the development of scheduled caste population are implemented by the Scheduled Caste Development Department. The institutions for the welfare of scheduled castes managed by the department are given in **Box 4.16**.

The programmes under SCSP cover a wide area comprising education, economic and social welfare activities for the development of Scheduled Caste. Scheme-wise outlay and expenditure of welfare of Scheduled Caste for 2015-16 and 2016-17 (as on October 31, 2016) and the physical targets and achievements are given in **Appendix 4.103** and **4.104** respectively. Some of the major programmes of SC development department are given in **Box 4.17**.

Figure 4.13
SCSP/TSP-Yearwise Outlay



Source: Budget Documents

Box 4.16 Major Institutions under Scheduled Caste Development Department		
Sl No.	Name of Institution	No.
1	Nursery Schools	88
2	Model Residential schools (including Ayyankali Memorial Government Model Residential Sports School)	10
3	Pre-metric hostels for girls and boys (transferred institutions to Local Governments)	87
4	Post –metric hostels for girls and boys	17
5	Pre-Examination Training Centres	4
6	Institute of Civil service Examination Training Society (ICSET)	1
7	Industrial Training Institutes	44
8	Centre for Research and Education for Social Transformation (CREST) Kozhikkode(an autonomous institution)	1
9	Medical College, Palakkad	1
10	Para medical institutes	2
11	Model Residential Polytechnic, Palakkad	1

Source: SC Development Department

Box 4.17 Major schemes of Scheduled Caste Development Department		
Name of Schemes	Objectives	Achievements
Educational Schemes	Provide educational assistance to <ul style="list-style-type: none"> • Pre-matric studies • Post-matric studies • Running of Model Residential Schools • Students studying in self financing colleges. • Aadhar linked bank account system. 	During 2015-16 ₹55.70 crore was expended in education schemes.As on October 31, 2016, ₹30.26 crore was expended from budget estimate 2016-17 (Appendix 4.105).
Housing Scheme	Financial assistance for <ul style="list-style-type: none"> • Construction of new houses for the houseless SC families • Online system of granting financial aid through e-housing 	During 2015-16, altogether 5215 houses were sanctioned and 1183 houses were constructed. 7500 houses were sanctioned during 2016-17 (as on October 31, 2016) where the construction activities are under progress (Appendix 4.106).
Land to Landless	<ul style="list-style-type: none"> • Purchase of land to the poor and eligible landless SC families for house construction 	During 2015-16 an amount of ₹149.67 crore was provided benefitting 3767 persons. An amount of ₹160.29 crore is provided for the scheme during 2016-17 (as on October 31, 2016) Appendix 4.107 .

Name of Schemes	Objectives	Achievements
Health Scheme- Financial assistance to Seriously ill People	Illness assistance to <ul style="list-style-type: none"> • Serious diseases like Cancer, Heart/kidney/brain ailments to SC families below poverty line as per the recommendation of the doctor 	During 2015-16, financial assistance was given to 21673 persons and expenditure incurred was ₹ 45.67 crore. During 2016-17, 18.80 crores expended for the scheme benefiting 8309 persons (as on October 31, 2016).
Development programmes for the vulnerable communities Among Scheduled Castes	<ul style="list-style-type: none"> • Rehabilitation of landless and homeless SCs belonging to vulnerable communities by providing assistance for purchase of five cents of land and assistance for house construction. • Providing infrastructure, connectivity, communication facilities, education, treatment, drinking water, electricity and road. 	An amount of ₹13.10 crore was expended during 2015-16 benefiting 168 persons. During 2016-17, ₹2.91 core was expended October 31, 2016 which benefited 16 persons (as on October 31,2016).
Self employment scheme	Financial assistance for <ul style="list-style-type: none"> • promoting new ventures among Scheduled Caste in the ratio 1: 2 as subsidy and loan 	During 2015-16, ₹3.70 crore was expended benefiting 569 persons. During 2016-17 ₹1.33 crore expenditure incurred (as on October 31,2016) benefiting 309 persons. Financial Assistance provided to brilliant SC/ST students those seeking admission to national and international institutions. Students got assistance for courses like M.SC Nursing and MBA during 2015-16. (Appendix 4.108).
Assistance for marriage of SC girls	Financial assistance to <ul style="list-style-type: none"> • Daughters of SC parents to reduce the burden of marriage expenses 	During 2015-16, expenditure incurred was ₹38.33 crore and benefitted 7667 persons. During 2016-17, 7451 families benefited and ₹37.25 crore was expended under this scheme (as on October 31, 2016).

Source: SC Development Department

Self-Sufficient Village Scheme, Primary Education Aid, Homoeo Health Centres, Assistance for seeking employment abroad, Cyber-Sri, and Treatment Grant from the Relief Fund of the Minister for Scheduled Caste Development .are other schemes implemented by the Scheduled Caste development department. During 2015-16, 180 persons benefited for seeking employment abroad and ₹1.65 core was expended. During 2016-17, 254 persons are benefited so far and ₹0.98 crore was expended (as on October 31, 2016).

Protection of Civil Rights And Enforcement of Prevention of Atrocities Act

The Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989 is enacted in the Parliament mainly to prevent atrocities against scheduled castes and scheduled tribes. The main objective is to free Indian society from blind and irrational adherence to traditional beliefs and to establish a

Box 4.18**Palakkad Medical college-a new initiative**

A new medical college was started in Palakkad district under the Scheduled Caste Development Department during 2014-15 and 100 students were admitted as first batch. During 2015-16, ₹150.00 crore was earmarked for the scheme. During 2016-17, 71 SC students, 4 ST students and 25 general category students were admitted for MBBS course.

Source: SC Development Department

bias free society. According to the National Crime Records Bureau, during 2015-16, 245 cases were registered and an amount of ₹54.79 lakh has been disbursed as compensation to the victims. Details are given in **Appendix 4.109**.

Critical Gap Filling (Corpus Fund)

This scheme intends to provide funds for filling critical gap in the SCSP provision made under various schemes on project basis with emphasis on human resource development, basic needs, and economic development. From 2014-15 onwards one third of the outlay has been allocated to districts on population proportion basis. Schemes/projects up to ₹25 lakh are cleared by the District Level Committee for SC/ST. Project above ₹25 lakh are cleared by State Level Working Groups/Special working Groups. Schemes undertaken during 2015-16 are treatment grant, construction of toilets, honorarium to SC promoters, stipend for apprentice clerk cum typist, Vinjanvadi, self employment subsidy, vision 2013, renovation of crematorium, trade fair, and paithrukotsavam. Outlay and expenditure under the scheme from 2011-12 to 2015-16 is given in **Appendix 4.110** and the details of schemes taken during 2015-16 are given in **Appendix 4.111**.

Pooled Fund

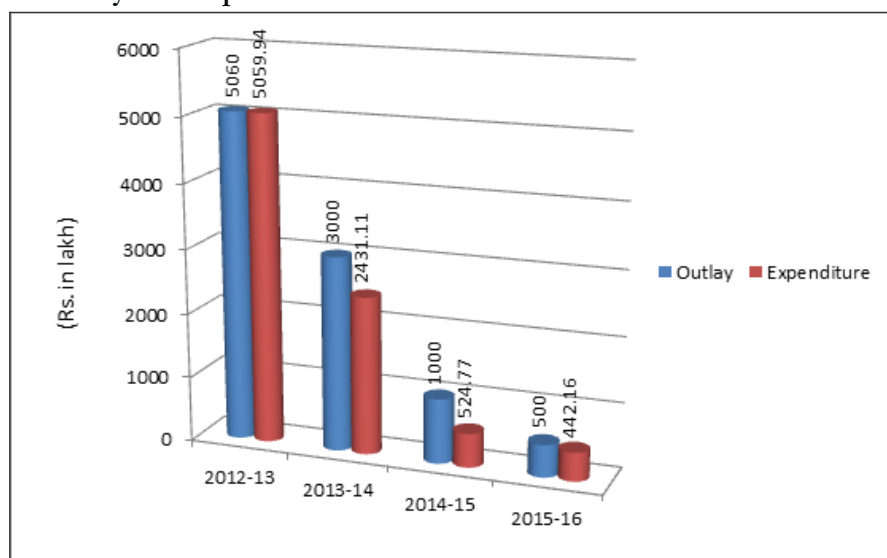
Pooled fund is a system of earmarking certain amount of SCSP/TSP as pooled fund under SCSP and TSP. The development departments and

agencies furnish projects to State Planning Board for consideration. After vetting by State Planning Board, the proposals are forwarded to Scheduled Caste Development Department for placing before State Level/ Special Working Group for approval. Outlay and expenditure under the scheme from 2011-12 to 2015-16 are given in **Appendix 4.112** and in **Figure 4.14**.

Special Central Assistance to Scheduled Caste Sub Plan (SCA to SCSP)

The Special Central Assistance to Scheduled Caste Sub Plan is provided by Government of India to States for undertaking mainly economic development programmes for Scheduled Castes. It is not on a schematic pattern. It helps to fill the gaps which are not met from the Central, State and Local body plans. Out of the total funds received under SCA to SCSP, 75 per cent of the funds are distributed to the District Collectors on the basis of Scheduled Caste population in the districts. The balance 25 per cent is kept with the Director, Scheduled Caste Development. Activities that can be taken up under SCA are to assist Scheduled Caste families for taking up viable income generating activities, through a mix of institutional finance and subsidy. The families may be provided assistance under SCA in a manner similar to those admissible under NRLM (National Rural Livelihood Mission). The Outlay and Expenditure details of SCA to SCSP from 2011-12 to 2015-16 are given in **Appendix 4.113**.

Figure 4.14
Outlay and Expenditure under Pooled fund from 2011-12 to 2015-16



Source: SC Development Department

Programmes of Scheduled Tribes Development Department

Tribal Sub Plan was a concept introduced for the development of Scheduled Tribe population during the Fifth Five Year Plan (1974-75). The objective of the Tribal Sub Plan was to give a special care to Scheduled Tribes through a Sub Plan approach. Since 1983-84, the strategy has undergone changes and it has been decentralised at the district level. The 73rd and 74th Constitutional amendments were coincided in the Ninth Five Year Plan and the local governments have been entrusted with specified responsibilities relating to development and welfare of Scheduled Tribes’.

The Tribal Development Block of Attappady became the first Integrated Tribal Development Project (ITDP) in Kerala (1976). Later six more ITDPs were formed with specific jurisdiction for the betterment of tribal population. The development of Scheduled Tribes outside the ITDPs is now covered by ten Tribal Development Offices (TDOs).

Due to the typical settlement pattern, cultural practices and traditional identities the Scheduled

Tribes population are consolidated in clusters and are concentrated in interior forest and adjoining areas. By considering this the strategy of TSP was to protect tribal people and there by attain their development. As per the TSP strategy, the State allocates an amount which is more than proportional to the tribal population (1.45 per cent) in the State. The TSP provision in the budget is for the exclusive development of Scheduled Tribes in the State. During 2015-16, about 3.02 per cent of the state plan outlay was provided under TSP. For the year 2016-17 the percentage allocation to TSP has declined to 2.84 per cent.

The major sources of funds for tribal developments are (i) State Plan allocation, (ii) Funds under TSP components of Centrally Sponsored Schemes (CSS) (iii) Special Central Assistance to Tribal Sub Plan (SCA to TSP), Grant under Article 275 (1) of the Constitution, other allocation for schemes implemented by Ministry of Tribal Affairs and (iv) institutional finance.

The expenditure of the Scheduled Tribes Development Department during 2015-16 was ₹391.27 crore (84.10 per cent) as against the allocation of ₹465.28 crore. The total State plan provision set apart for the development of

Scheduled Tribes during 2016-17 was ₹682.80 crore. Out of this, an amount of ₹526.80 crore (77.15 per cent) was earmarked to the ST Development Department and an amount of ₹156.00 crore (22.85 per cent) was provided as grant-in-aid to local governments. For the schemes and programmes with 50 per cent and 100 per cent CSS, the Central share was ₹20.62 crore and ₹95.04 crore respectively. In addition to this, ₹ 12.00 crore was included as Special Central Assistance to TSP. Details of financial achievements are given in **Appendix 4.114** and physical achievements of

schemes implemented by the department during 2015-16 and 2016-17 (as on October 31, 2016) are given in **Appendix 4.115**.

The major schemes implemented by Scheduled Tribes Development Department can be broadly classified as educational programmes, housing, health, socio economic upliftment and legal protection measures. The objectives and achievements of major schemes implemented during 2015-16 and 2016-17 (up to October 31, 2016) are given in **Box 4.19**.

Box 4.19		
Major Schemes of ST Development Department		
Name of Schemes	Objectives	Achievements
Educational Programmes	Provide educational assistance to <ul style="list-style-type: none"> • Pre-matric studies • Post-matric studies • Running of Model Residential Schools • Students studying in self financing colleges 	During 2015-16, an amount of ₹3.83 crore has been expended benefitting 14980 students under pre-matric assistance and an amount of ₹24.99 crore has been expended benefitting 13597 students under post-matric assistance. During 2016-17 (up to October 31, 2016) an amount of ₹2.87 crore has been disbursed as educational assistance benefitting 15210 students under pre-matric assistance and an amount of ₹8.42 crore has been expended benefitting 12612 students under post-matric assistance. During 2015-16, for implementing various educational programmes Scheduled Tribes Development Department provided an amount of ₹ 134.80 crores and expended ₹ 89.20 crores. For the year 2016-17 (up to October 31, 2016) an amount of ₹ 47.07 crore has been expended out of the total provision of ₹.155.30 crore. (Appendices 4.116 to 4.119)
Housing Scheme	Financial assistance for <ul style="list-style-type: none"> • Construction of new houses for houseless ST families 	During 2015-16, an amount of ₹48.73 crore was provided for spill over houses under the general housing scheme and an amount of ₹88.99 crore was provided under ATSP housing by the Scheduled Tribes Development Department for sanctioning 9448 houses. During 2016-17, under general housing an amount of ₹50.47 crore was provided and expended ₹35.16 crore (as on October 31, 2016) and an amount of ₹150.00 crore was provided under ATSP for spill over works and expended ₹119.35 crore (as on October 31, 2016) (Figure 4.15, Appendix 4.120 and 4.121).

Health Scheme	<p>Illness assistance to</p> <ul style="list-style-type: none"> • Serious diseases such as TB, Leprosy, Scabies, Sickle Cell Anaemia, Waterborne diseases. 	<p>During 2015-16, an amount of ₹20.85 crore was provided for health care activities under the plan and the expenditure incurred was ₹20.62 crore. During 2016-17 an amount of ₹15.00 crore was provided to health schemes and ₹15.39 crore has been expended as on October 31, 2016 (Appendix 4.122).</p>
Assistance for the Welfare of Scheduled Tribes	<p>Financial assistance to</p> <ul style="list-style-type: none"> • Daughters of ST parents to reduce the burden of marriage expenses • Sickle Cell Anaemia Patients • Mother and Child • Traditional Tribal Healers 	<p>During 2015-16 (up to October 31, 2016) the department had given marriage assistance to 30 ST parents. The rate of assistance was ₹50,000 per beneficiary. During 2015-16 the department provided to give financial assistance to 593 Sickle Cell Anaemia patients. The rate of assistance was ₹2,000 per month per beneficiary. Janani Janma Raksha scheme addresses the nutritional issues of mother and child. It provides timely financial assistance of ₹1000 per month for 18 months beginning from third month of the pregnancy to the month when child attains one year. The scheme also provided financial assistance as annual grant of ₹10,000 to selected traditional tribal healers.</p>
Resettlement of Landless Tribes	<ul style="list-style-type: none"> • To provide at least one acre of land per family to landless ST people subject to ceiling of 5 acres based on a master plan. • Resettlement will be done on project basis with emphasis on planning and implementation through Oorukotoms. 	<p>As on October 31, 2016, 7051 families have been distributed 9179.49 acres of land. Total extent of 280.313 acres of land for 469 landless families has been purchased. District-wise details of land distribution are shown in Appendix 4.123.</p>

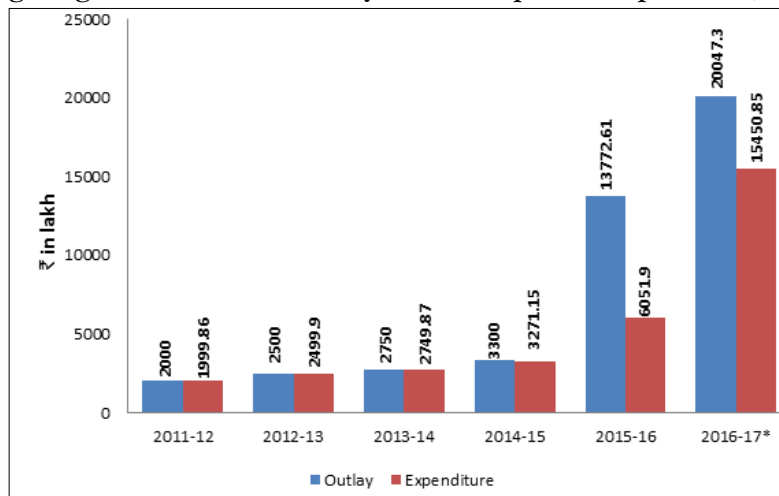
Source: ST Development Department

Corpus Fund

An amount of ₹4924.99 lakh was provided during 2015-16 for undertaking various development activities under the scheme and the amount expended during the period was ₹941.10 lakh (19.11 per cent). The components of the Corpus fund include self-employment, skill development,

water supply and sanitation, communication facilities, foot bridges, technology transfer, improvement of education and health. Statement showing the outlay and expenditure under corpus fund from 2009-10 to 2016-17 (up to October 31, 2016) is given in **Appendix 4.124** and **Figure 4.16**. District wise details during 2016-17 are given in **Appendix 4.125**.

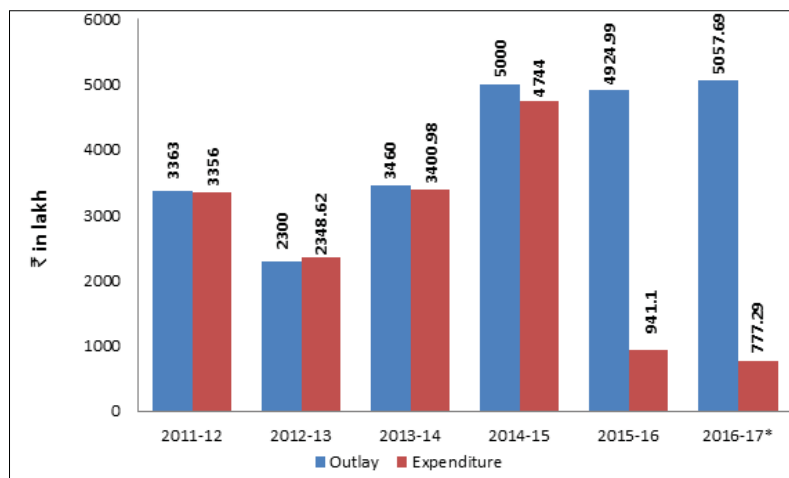
Figure 4.15
Housing Programmes undertaken by ST Development Department, ₹ in lakh



* Upto October 31, 2016

Source: ST Development Department

Figure 4.16
Allocation and Expenditure under Corpus Fund, in ₹ in lakh



* Upto October 31, 2016

Source: ST Development Department

Pooled Fund for Special Projects Proposed by Other Departments under Tsp

During 2015-16, an amount of ₹1000 lakh was provided under the scheme Pooled Fund for special projects proposed by other departments. Out of this an amount of ₹839.00 lakh was allocated for various projects and expended the whole amount. An amount of ₹1000 lakh is earmarked during 2016-17 and the expenditure incurred (as on

October 31, 2016) is ₹128.58 lakh. The details of schemes under pooled fund taken during 2015-16 and 2016-17 as on October 31, 2016 are given in **Appendix 4.126**.

Atsp Fund/ Special Package

ATSP Fund is a special package in addition to the normal share of TSP to be utilised for the socio-economic betterment of tribal population living in

Box 4.20
Institutions under Scheduled Tribes Development Department

Educational Institutions	Health Institutions
<ul style="list-style-type: none"> • 19 Model Residential Schools • 23 Single Teacher Schools • 13 Nursery Schools • 9 Kindergarten • 7 Balavadies/Vikasvadies/ Balavinjan Kendrams • 7 Peripatetic Education Centers for Particularly Vulnerable Tribal Groups • 106 Pre-matric Hostels • 3 Post-matric Hostels • 12 Training Centres • 2 Vocational Training Centres 	<ul style="list-style-type: none"> • 1 Ayurveda Hospital • 17 Ayurveda Dispensaries • 5 Out Patient Clinics • 2 Mobile Medical Units • 4 Mid Wifery Centers

Source: ST Development Department

the tribal settlements in the State. During 2014-15 an amount of ₹150 crore was set apart as ATSP Fund/Special Package as a new initiative for the Integrated Sustainable Development of Scheduled Tribes in the Identified Settlements. Based on the approved DPR of 14 identified settlements an amount of ₹135.75 crore was allotted. Activities proposed during 2014-15 are continuing and the expenditure as on October 31, 2016 is ₹37.26 crore. This scheme was continued during 2015-16 also and an amount of ₹150 crore was earmarked as ATSP Fund by giving more emphasis on infrastructure facilities, economic activities, employment generation, health, education and housing. During 2016-17 also an amount of ₹150 crore was provided to ATSP Fund. Main focus was given to housing and an amount of ₹147.13 crore was earmarked. The expenditure incurred is ₹120.05 crore as on October 31, 2016. The details are given in **Appendix 4.127**.

Special Central Assistance to Tribal Sub Plan (SCA to TSP)

The Special Central Assistance to Tribal Sub Plan released by Government of India as an addition to State Plan Funds is meant for undertaking

employment cum income generation activities and the infrastructure incidental to activities based on family and Self Help Groups. 70 per cent of the fund has been utilized for implementing primary schemes supporting family/SHG/community based income generation activities and 30 per cent used for critical infrastructure in the sectors of drinking water, and watershed management. Under the scheme 30 per cent beneficiaries are women. The outlay and expenditure under SCA to TSP during 2009-10 to 2016-17 (up to October 31, 2016) is shown in **Appendix 4.128**.

Kerala Institute for Research Training and Development Studies for SC/ST

The institute was established in 1970 as Tribal Research and Training Centre (TR and TC) in national pattern, which subsequently got recognized as the Kerala Institute for Research Training and Development Studies of Scheduled Castes and Scheduled Tribes (KIRTADS). The Institute conducts research and intensive study on Scheduled Caste and Scheduled Tribe population of the State.

Anthropological investigation on doubtful community cases as requested by Scheduled Tribes Development Department, Scheduled Caste Development Department, Revenue Divisional Officers, Tahsildars and District Collectors has also been undertaken by the wing. Details are given in **Appendix 4.129**.

The training wing of KIRTADS co-ordinates and conducts a large number of programmes to promote Tribal Development. This wing also conducted many orientation programmes, capacity building programmes, empowerment programmes and educational programmes. The institute also undertakes Adikalagramam programme which includes traditional dance and music of the SC and ST communities of the State. The scheme wise outlay and expenditure of KIRTADS are given in **Appendix 4.130**.

Kerala State Development Corporation For Scheduled Caste and Scheduled Tribes

The major schemes implemented by the Corporation include agricultural land purchase, micro-credit finance, mini-venture loans, small enterprise loans, housing, educational loan, and marriage assistance. The sources of finance for implementing various schemes are Corporation's own share capital and assistance from other national refinancing agencies like NSTFDC, NSFDC and HUDCO.

The scheme-wise details of physical and financial achievements of the Corporation are given in **Appendix 4.131**.

Welfare of Other Backward Classes

The Backward Communities Development Department started functioning as a separate department in November 2011 to look after the developments of socially and economically

backward communities of the society. Though the directorate of this department was created at the end of the financial year 2011-12, it implemented two major educational schemes, Pre-Matric and Post-Matric Scholarships with the help of Scheduled Caste Development Department.

The department has implemented various educational schemes such as Pre-Matric and Post-Matric Scholarship for OBC and OEC students. During the period, the department started a number of schemes such as employability enhancement programme, overseas scholarship scheme, career in automobile industry, construction of hostels and assistance to traditional occupations. During 2015-16, an amount of ₹64.85 crore (72 per cent) was expended out of the budget provision of ₹90 crore. A total amount of ₹94 crores was earmarked by the State government for the sector during 2016-17, of this ₹36 crores is State share for CSS. An amount of ₹50 crore is anticipated as 100 per cent CSS during 2016-17. The expenditure incurred as on October 31, 2016 is ₹26.18 crore. The Scheme wise outlay and expenditure and the physical achievements of the department during 2015-16 and 2016-17 (up to October 31, 2016) are given in **Appendix 4.132** and **4.133**.

Kerala State Backward Classes Development Corporation

Kerala State Backward Classes Development Corporation is acting as a major State level Channelising Agency (SCA) of National Financing agencies, viz., National Backward Classes Finance and Development Corporation (NBCFDC) and National Minorities Development and Finance Corporation (NMDFC). KSBCDC implements their schemes by providing financing assistance at lower rate of interest to the members of backward and minority communities living below the poverty line for their overall development. KSBCDC also implements various welfare schemes by utilizing State government assistance and its own fund

reserves. The corporation has disbursed loans worth ₹27,602.86 lakh during 2015-16 benefiting 29,200 individuals. As on October 31, 2016 an amount of ₹14,917.93 lakh was distributed among 10,524 individuals during the year 2016-17.

The source-wise expenditure and the physical achievements of the Corporation during 2015-16 and 2016-17 (up to October 31, 2016) are given in the **Appendix 4.134**.

Kerala State Development Corporation for Christian Converts from Scheduled Caste and the Recommended Communities

The main objective of this corporation is to promote social, educational, cultural and economic upliftment and other living conditions of the converted Christians from Scheduled Castes and other recommended communities. The main schemes implemented by the corporation are agricultural land purchase, foreign employment, housing, cash incentive to students, marriage loan, agriculture and allied sector assistance, small business, and educational loan. The source of finance of the corporation is the financial assistance received from state government and the loan assistance from NBCFDC. Details of year wise disbursement of state government assisted loan schemes from 2011-12 to 2016-17 (as on October 31, 2016) are given in **Appendix 4.135**. The scheme-wise details of physical and financial achievements of the corporation are given in **Appendix 4.136**.

Welfare of Minorities

The Minority Welfare Department was constituted for addressing the socio-economic and educational backwardness of Minority Communities in the State. An amount of ₹8829.13 lakh was expended

from the budget provision of Rs 8700 lakh during 2015-16. An amount of ₹8300 lakh was earmarked to the Department during the year 2016-17 for various programmes. The major schemes are Multi Sectoral Development Programme (MSDP) (with 25 per cent state share), housing scheme for divorcees/widows/abandoned women from the minority communities, and drinking water supply scheme in minority concentrated areas. The scheme wise outlay and expenditure and the physical achievements of the department during 2015-16 and 2016-17 (up to October 31, 2016) are given in **Appendix 4.137** and **4.138**.

The State Government constituted the State Minority Development Finance Corporation to provide financial assistance to income generating projects, housing finance, educational loans, and vocational training to minority communities. An amount of ₹1500 lakh has been provided as share capital contribution to the Corporation during 2016-17. The financial and physical achievement of the corporation is given in **Appendix 4.139**.

Welfare of forward Communities (Sammunathi)

The State Government constituted the State Welfare Corporation for Forward Communities for the comprehensive development of economically backward sections among the forward communities. During 2015-16 an amount of ₹2057.44 lakh was expended out of the budget provision of ₹2140 lakh. An amount of ₹2440 lakh was earmarked to Welfare Corporation for Forward Communities during the year 2016-17 for various programmes. The major schemes are scholarship, coaching assistance, term loan assistance, skills and entrepreneurship development and renovation of aghararas. The Scheme wise outlay and expenditure and the physical achievements of the Corporation during 2015-16 and 2016-17 (up to October 31, 2016) are given in **Appendix 4.140**.

Section 7

Art And Culture

The culture of Kerala is a synthesis of Aryan and Dravidian cultures, developed and mixed for centuries, under influences from other parts of India and abroad. Kerala is endowed with a rich heritage of culture. There are many institutions set up for the promotion and encouragement of various art forms of Kerala. Academies, publishing houses, cultural centres, institutions of fine arts and folk arts, research centres, Culture Directorate and Directorates of Museums, Archives and Archaeology are some of such institutions that function under the administrative control of Cultural Affairs Department.

During the 12th plan period, an amount of Rs. 38,822 lakh was earmarked for Art and Culture. An amount of ₹29,700 lakh was earmarked during the first four years of the 12th plan period and the expenditure incurred during the four years was ₹25,067.46 lakh, which constitutes 84.40 percent of the outlay earmarked. Major initiatives of the sector during the twelfth plan period included the following; Setting up of Archaeology/Heritage Museums at District Level, Drama and Theatre workshop for school going students, preservation of old Malayalam film negatives and its digitalization, revival of dying art forms of Kerala, Medical cum accident insurance scheme for artists and diffusion of Kerala Culture.

A brief description of major achievements of some of the departments coming under the sector Art and culture during the reported period is given below.

Archaeology Department: One of the major achievements of the department is setting up of District Heritage Museum. The work of District Heritage Museum is progressing in the districts of Thiruvananthapuram, Ernakulam, Thrissur, Palakkad, and Wayanad. Initial steps are being

taken to set up District Heritage Museums in the districts of Idukki, Malappuram and Kannur. Renovation works of Koyikkal Palace, Hill palace Museum Thrippunithura and Pazhassi Raja Museum Kozhikode are progressing. The department conducted scientific excavations at Kakkodi at Kozhikode, Patyam at Kannur and Marakkara at Malappuram. Chemical conservation work was done on archaeological objects excavated from Chandaragiri Fort, Kozhikode, Wayanad and Thalassery. Department organised cultural festival named “Suvarnam 2015” from December 18 to 22, 2015 at Kottayam and also organised “Kerala Heritage Fest 2015-16” for creating Cultural awareness among the Non Resident Keralites at Mumbai on March 4 to 6, 2016.

Archives Department: Archives Department, through the nodal agency Keralam Museum, has set up a Freedom Struggle Memorial Museum at Vattiyoorkkavu for highlighting the contributions of Kerala’s Freedom struggle to the public and installed Mahathma Gandhi statue at Vaikom. The department has started the digitalisation of some important selected papers and palm leaf records such as Neevu volumes and Mathilakom records and work is on progress. For the conservation of paper records, department had implemented a conservation project through National Research Laboratory for conservation of Cultural Property. Department holds a huge collection of different categories of records but a large number of them is difficult to be located because of absence of subjects list index and descriptive list. The department therefore has started the preparation of reference media of records through Kerala Museum. It also has a huge collection of palm leaf records, which is the largest collection in the world. These records deal with political, social and cultural history of Kerala. Most of these records are written in

old scripts of Kerala such as Vattezhuthu and Kolezhuthu. In connection with the computerisation of Archives, Department has purchased 10 computers and related gadgets. For the security of archival records, the Department had installed 19 surveillance cameras at the Directorate. The International Archives Week celebration was conducted from January 23 to 30, 2016 at Kannur and Kasaragod districts and two books have been published on selected speeches of Freedom fighters (Volume I and II). Formation of community archives is a new initiative of the department and hopes to reach out to the society, create awareness about records, locate records through surveys, preserve or conserve them at

their site and acquire records from those who are willing to transfer their custody. As the first phase, department has conducted two community archives camp at Pandikkadu and Chembrassery in Malappuram district. Both the events turned out to be a huge success in terms of participation of public as well as identification of records.

Directorate of Museums and Zoos: During the reported period, Directorate renovated the Natural History Museum by redesigning the ticket counter, information counter and cloak room. Department has decided to renovate Natural History Museum with eye catching visual and three dimensional figures to give the visitors a new experience.

Box 4.21

Working Group on Art and Culture during Thirteenth Five Year Plan

A Working Group on Art and Culture was constituted for the Thirteenth Plan. Prof. K. Satchidanandan and Smt. Rani George IAS, Secretary Cultural Affairs Department were the co-chairpersons of the working Group with other 22 members. The Group held three sittings and has submitted its report. Major recommendations of the report are :

- Creation of a network of public/common space with modern amenities for cultural activities in urban and rural areas.
- A complete restructuring of the existing museum with the help of comprehensive plan prepared by experts. Setting up of new museums by synchronising lifestyle and tradition.
- Setting up of multi facility art galleries in all district headquarters
- Protection of sites of archaeological importance from encroachment and ensuring protection by entrusting it to appropriate agencies. Linking tourism plans with sites of archaeological importance and the network of museums
- Digitalising historical records with the support of research students. Collection of available records from outside State.
- Promotion and training of folk arts and artisans.
- Formation of a Cultural Council to ensure coordination of activities of cultural institutions and evaluation of schemes
- Promotion of Research on Malayalam Language, formation of new Malayalam words and translation
- Organising International Film Festival, drama festival, music festival and literature festival ensuring participation of women and children.
- Co-ordination of the activities of different institutions related to language development
- Organising cultural awareness programmes among youths and students
- Pension scheme for indigent artists.

State Institute of Encyclopaedia Publications:

The State Institute of Encyclopaedia Publication is an institution established for publishing encyclopaedia and other similar reference books in Malayalam Language. The Institute has so far published 16 volumes of the General Encyclopaedia and full volumes (10 volumes) of the encyclopaedia on World literature. Digitalisation of Volume 1 to 15 of SarvaVijnana Kosam is completed. During the reported period, Institute published Sarva Vijnana Kosam Volume 16 and ViswaS ahitya Vijnana Kosam Volume 9 and 10.

Kerala State Library Council: State Library Council has district libraries at Kozhikode, Wayanad, Kannur and Kasaragod besides Taluk libraries at Thalasseri, Thaliparambu, Vadakara and Kottarakkara. It has decided to start 2000 Balavedhi centres for children during 2016-17. During the report period State Library Council gave affiliation to 49 libraries.

Margi: Margi, a felicitous institution for teaching 'Kathakali', started in the year 1970 is a cultural centre for promoting 'Kathakali, 'Koodiyattam' and 'Nangiarkoothu. Three performances in Nangiarkoothu, five performances in Koodiyattom, nine in Kathakali were staged inside Margi during the reported period. Another important activity of Margi was free training to youngsters with the object of promoting Kathakali and Koodiyattom. Irregular Kathakali classes, more than 36 students were studying Chenda, 2 Maddalam, 4 Music and 6 students Kathakalivesham in the traditional format.

Vasthu Vidya Gurukulam: Vasthu Vidya Gurukulam has been approved by Ministry of Human Resource Development as national nodal agency for Vasthu and other related subjects. It has a very efficient consultancy wing which prepares sketches, plans and designs for those who are interested in building their houses and other structures in the traditional architectural pattern. Around 351 registrations have been done in the consultancy wing during the reported

period. 5 academic courses are being conducted in Vasthuvidya and mural painting. Gurukulam is documenting important traditional architectural structures in Kerala, listing out and documenting all heritage buildings in Kerala for State tourism department. Renovation of mural painting works at Thali temple is completed. Vasthu Vidya Gurukulam designed and prepared the sketch and plan for South Indian Performing Arts museum for Kerala Kalamandalam.

Kerala Sahitya Academy: Kerala Sahitya Academy conducted a seminar on "Cinema and Literature" at Mascot Hotel on December 9, 2015 and organised three days workshop on literature at Kollam from December 11 to 13. During 2016-17, Academy distributed Ezhuthachan Award on January 6, 2016, inaugurated Kamala Surayya Smarakam on January 26, 2016, organised national book festival and "Aksharapperuma" cultural festival on February 2-11, conducted seminar on Malayalam Language and Literature from February 18-20, 2016 and organised N.V. Krishna Varrier birth centenary seminar at Govt. Arts and Science College, Kozhikode on March 22, 2016.

Major Cultural Events during 2016-17

International Film Festival : The 21st International Film Festival of Kerala organised by Kerala State Chalachitra Academy was held from December 9 to 16, 2016 at Thiruvananthapuram. A competition section for the films from Asian, African and Latin American countries was the highlight of the festival.

Kochi Muziris Biennale: The Third Kochi Muziris Biennale was inaugurated by the Hon'ble Chief Minister on December 12, 2016 at Kochi. Dance, Music, Drama and traditional art forms were included in this biennale named "Ulkazhchakal Uruvakunnidam" which was curated by the famous artist Sudharshanan Shetti, in which 100 artists from 31 countries participated. The biennale has 12 stages and will be conducted for 108 days before concluding on March 29, 2017.

The State has been a model of social development for other states to emulate. Innovative, committed and focused policy initiatives and programmes have led to notable achievements in the social sector and the benefits have percolated to the majority of the citizens of the State. However, now the focus needs to be on quality than on quantity and consolidation of its achievements. The quality of education needs to be given serious attention if the State has to leverage on its human resources. The proposed health policy is expected to address the issues in this sector. Revival of gender budgeting would renew focus on women centric policies and programmes. The State needs to take measures to harness its achievements into meaningful outcomes.

5 CHAPTER

INFRASTRUCTURE



INFRASTRUCTURE

Infrastructure development in the State, of late, has been receiving the much needed thrust. Several major projects will become operational in the coming years. Through Kerala Infrastructure Investment Fund Board, the State is aiming to address the constraints of resource availability in financing infrastructure projects. This has been one of innovative and decisive steps taken by the State. Similarly, the State is creating a niche in the field of startups and has taken several encouraging measures in this regard. Much, however, still needs to be done in the field of energy as the State relies heavily on hydro sources of power for generation of electricity. The deficient rainfall this season has worsened the situation on this front. Availability of a sound infrastructure, including power supply is required to support the other sectors of the economy. The renewed thrust and focus on infrastructure needs to be continued with vigour for propelling the State's economic growth as well as social prosperity.

Section 1 TRANSPORT

Transport plays a significant role in the economic development of any region. As road transport provides door-to-door connection and flexible movement of goods and passengers, its patronage by people is on the rise day by day. The quality of life now greatly depends on the quality of roads. India has an extensive road network, which provides mobility to millions of people every day. Thus road transport is one of the important growth engines for social and economic development of the country.

India has the third largest road network in the world stretching 4.48 million km in length. According to

World Bank, National Highways in India account for 76,818 km, which constitute mere 2 per cent of the total road network, but carry about 40 per cent of the total road traffic in India. Only 24 per cent of the total national highways network has four - lane carriage way and the rest are from single - lane to two - lane standards. Indian Railway is the second largest in the world (63,500 km of route length) under single management. Freight accounts for 67 per cent of total revenue of Railway. Civil Aviation is gradually gaining importance in passenger movement with increase in private participation in operation of airlines and gradual improvements in airport infrastructure.

Other transport modes like inland waterways and coastal shipping are significantly used for freight transport. With an extensive coastline of 7,517 km, India has 12 major ports and 200 minor ports, of which, only 30 ports handle cargo traffic. The total traffic carried by both major and non major ports in recent years was estimated to be 53 million tonnes. However, in terms of domestic freight movement, coastal shipping and inland water transport meet only about one per cent of the total freight traffic demand.

Presence of quality infrastructure is vital for social, economic and industrial development of the country. The transport infrastructure in Kerala largely consists of roads, railways, airports and inland water transport system. Roads play a prominent role in Public Transportation over other modes of transportation owing to the geographic peculiarities of Kerala, widely scattered habitation with lesser rural urban divide and limited geographical area of 38,863 Sq.Km.

The category of roads includes National Highways (NH), State Highways (SH) & Major District Roads (MDR) and PWD & local body roads. The motor vehicle population in Kerala, which was around two lakh in 1980, increased to more than one crore vehicles in 2016. Nearly 65 per cent of registered vehicles in the state are two wheelers. Nearly 25000 buses are on roads in the state and major chunk of this is operated in urban areas causing traffic chaos and congestion. Although road transport dominates the transportation scenario in Kerala, people depend on railways for long distance transport needs.

The transport system in Kerala needs much improvement. Since the road infrastructure plays the pivotal role in the overall development of the State, there should be suitable policy, strategy and planning for repairs or maintenance of roads. Certain criteria should be developed for prioritizing road works in the State. Major emphasis should be in widening the State Highways and Major District Roads along with proper design and adequate drainage facilities.

Road improvements, repair and maintenance of existing roads, development and upgradation are the major activities taken up in the sector during the 11th Five Year Plan. Budgetary support, private finance and institutional supports were used for the purpose. A Road Development Policy has been approved by the Government and PWD Manual & Data Books have been revised. Quality Control Sub Divisions were set up in all districts. Rolling Heavy Maintenance Programmes for the State Highways were introduced to ensure upgradation of the SH and MDRs to cope with the heavy traffic flow on the roads. Web based online services were introduced to provide data base and all the services rendered by the Department. A Road Safety Authority has been set up for implementing various road safety initiatives and to create awareness among the drivers and to public regarding safe driving. Quality infrastructure creation in road construction was the focus area during the 12th Plan.

There is a need to undertake planned development of State Highways, important Major District Roads and City roads in the State which addresses geometrical improvement, junction improvements, re-laying the roads incorporating technical corrections and entering into maintenance contracts.

Transport Infrastructure

Transport infrastructure of the State consists of 2.05 lakh Km of road, 1588 Km of Railways, 1687 Km of Inland Waterways and 18 Ports. Kerala has a total fleet of 25,449 buses, of which 19145 are private buses (75 per cent) and 6304 are KSRTC buses (25 per cent). Private buses dominate the Bus Transport in all districts of Kerala except Thiruvananthapuram. Co-ordination between the physical infrastructure providers – Public Works Department (PWD), Railways, Inland Transport Authority, Airports and Coastal Shipping Agencies to build transport infrastructure and for the operation and the maintenance of the existing ones is required. Physical infrastructure has to

be designed to support an intermodal transport network. Road design should be done based on 15 year traffic forecasts even with an intermodal transport network.

Most of the roads in the State do not have adequate width so as to cater to the existing level of traffic and only one fourth of the roads have either two lanes or four lane capacity while most of the roads have single lane or intermediate lane capacity. In the case of National Highways, only about 12 per cent of the roads have four lane capacities while the remaining roads have only two lane or intermediate lane capacity. Bulk of the inter city and interstate traffic are carried out by the National Highways and State Highways which are only eight per cent of the total network. Considering the demand supply gap, there is a huge need for up gradation of existing road network. **Table 5.1** shows the outlay and expenditure of Transport Sector under different Five Year Plans.

A comparative analysis of the sector wise outlay and expenditure during the Tenth and Eleventh Five Year Plans reveals that the Transport Sector has utilized 12 per cent of the share of total expenditure of the State against 10 per cent of the share of outlay during the Tenth Plan. This trend continued during the Eleventh Five Year Plan also where the share of total expenditure was 15 per cent against the share of outlay of 10 per cent.

Roads are being maintained by various agencies in Kerala, like Local Self Governments, Public Works Department (Roads & Bridges) and National Highways, Municipalities, Corporations,

Irrigation, Forests, and Railways. Other agencies dealing with transport sector are National Transportation Planning and Research Centre (NATPAC), Motor Vehicles Department, Kerala State Road Transport Corporation (KSRTC), Roads & Bridges Development Corporation of Kerala (RBDCK), Kerala State Transport Project (KSTP), Kerala Road Fund Board (KRFB) and Road Infrastructure Company Kerala (RICK) Ltd. The outlay and expenditure in the Transport sector during 2014-15 to 2016-17 is given in the **Table 5.2**.

State Road Network Infrastructure

An efficient road infrastructure is an essential requirement for sustained growth of the economy and to ensure cost effective movement of people and goods. The major road network of Kerala, though well connected, faces severe constraints due to the urban sprawl and the haphazard ribbon development all along the routes. The existing traffic levels at most stretches are excessive and beyond the road capacity. The traffic on roads is steadily increasing at a rate of 10 to 11 per cent a year. Capacity augmentation of existing roads is beset with problems relating to limited right of way and land acquisition.

The most important challenge in the road sector involves building all weather roads connecting each and every village. Even though Kerala is comparatively better placed than most other States as regards road length, the condition of many of these roads is very poor. Therefore, the main

Table 5.1
Outlay and expenditure of Transport Sector under different Five Year Plans, in ₹ lakh

Five Year Plan	Budgeted Outlay	Expenditure	Per centage of Expenditure
Tenth Plan (2002-07)	247771.00	237819.00	96
Eleventh Plan (2007-12)	445881.00	658046.00	148
Twelfth Plan (2012-17)	638585.00	960728.89*	209.9

*Expenditure of the first four years of plan

Source: Budget, State Planning Board

Table 5.2
Outlay and expenditure in the Transport sector during 2014-15 to 2016-17, ₹ in lakh

Sl No	Sub Sectors	Annual Plan 2014-15		Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Exp.	Outlay	Expdr.	Outlay	Exp.*
1	Port Department	9869.00	5277.50 (53.48 per cent)	26928.00	20398.41 (75.75 per cent)	10721.00	1176.59 (10.97 per cent)
2	Roads and Bridges	83641.00	149420.40 (178.64 per cent)	95107.00	229039.04 (240.82 per cent)	120621.00	82731.63 (68.59 per cent)
3	Road Transport	10226.00	7578.57 (74.11 per cent)	7425.00	4847.68 (65.29 per cent)	7532.00	2061.42 (27.37 per cent)
4	Inland Waterways	14342.00	3930.93 (27.41 per cent)	15542.00	3336.52 (21.47 per cent)	15734.00	574.90 (3.65 per cent)

*Upto October 2016

Source: Accounts and Planspace, State Planning Board

emphasis under road development in Kerala has been on improvement and up gradation of existing roads rather than construction of new roads. This requires institutional strengthening, adoption of standards applicable to the Indian Road Congress (IRC)/Ministry of Road Transport and Highways (MORTH) specifications, strict quality control and adoption of self-financing revenue models suited to the State. The investment need in the road sector is of high magnitudes that are beyond the resources available with the Government. Therefore, there is an imperative need to motivate private and other non-governmental agencies/corporate sectors to participate in road construction and up gradation of selected highways.

The major development indicators of transport and communication sector in the State since 2010 are given in **Appendix 5.1**. On the road front, traffic has been growing at a rate of 10 to 11 per cent every year, resulting in excessive pressure on the roads of the State. Total road length in Kerala during 2015-16 is 205545.616 km. This includes classified and non classified roads as stipulated by Indian Road Congress. Road density in the State is 528.8 Km/100 sq.km and it is far ahead of the national average of 387 km/100 sq.km. The

length of road per lakh population is 615.5 km. Almost 90 per cent of the road network is single lane and below standard. The National Highways, considered to be the primary network, carries 40 per cent of the total traffic, and the State Highways and MDRs, the secondary road network, carries another 40 per cent of the road traffic. Thus less than 10 per cent of the road network handles almost 80 per cent of the total traffic. Roads maintained by different agencies of the State are given in **Table 5.3**.

The roads maintained by different Local Self Government Departments during 2015-16 is 139380.410 km (67.81 per cent), of which 63348.52 Km (45.45 per cent) are black topped and 16716.24 km (8.13 per cent) are cement concrete and of varying standards.

Public Works Department (Roads and Bridges)

Roads and Bridges wing of PWD is mandated to look after State Highways, and Major District Roads in the State. PWD roads constitute 15 per cent of the total road network in the State and

Table 5.3
Agency-wise distribution of State roads in Kerala during 2015-16

Sl.No	Name of Department	Length (Km)	Per centage
1	Panchayats (LSGDs)	139380.410	67.81
2	PWD (R&B)	31812.096	15.48
3	Municipalities	18411.870	8.96
4	Corporations	6644.000	3.23
5	Forests	4575.770	2.23
6	Irrigation	2611.900	1.27
7	PWD (NH)	1781.570	0.87
8	Others (Railways, KSEB)	328.000	0.16
	Total	205545.616	100

Source: Various Departments

carries nearly 80 per cent of the road traffic within the State. With road traffic growing at an average rate of 12-14 per cent every year, the pressure on PWD road network is on an increasing trend.

The total length of roads maintained by PWD (R&B) increased to 31812.096 km during 2015-16, of which 4342 km is State Highways and 27470 km is Major District roads. Out of the State highways of 4342 km, only 1640 km of roads is Standard Double Lane and 2,404 km of roads is Single Lane and the rest is Below Standard Single Lane. Out of the 27470 km of Major District Roads, only 1310 km are Standard Double Lane and 26160 km are Standard Single Lane. The total length of Double Lane PWD roads is only 2950 km which is only

9.27 per cent of the roads owned by PWD.

Out of the total roads of 31812.096 km maintained by PWD, Kottayam District has the major share with a length of 3456.214 km (10.86 per cent). Wayanad District has the lowest share with 1029.314 km (3.24 per cent). Details of district wise and category wise length of roads maintained by PWD (R&B) as on March 31, 2016 is given in **Appendix 5.2**.

As on March 31, 2016 there were 1806 bridges and 51400 culverts on the PWD roads. Of them, 61 bridges need reconstruction/renovation and 1557 culverts are not in good condition. More details are given in **Appendices 5.3, 5.4, 5.5 and 5.6**. Major

Box 5.1

Major Activities of PWD R&B during 2015-16

- Steps have been taken to strengthen Road Safety Cell, Environment Cell, Geographical Information System and Road Maintenance Management System unit
- PWD Manual has been revised and updated
- Project Preparation Unit formed to take up major project preparation works
- Integrated Financial Management System (IFMS) is being implemented in a phased manner
- Quality control Units set up in all Districts with Laboratories
- Proposals formulated for Infrastructure Development works through Kerala Infrastructure Investment Fund Board (KIIFB)
- Human Resources Development Wing instituted to provide good quality training to Engineers, Technical and Administrative Staff
- An Environment Cell established to ensure environment impact assessment guidelines in high value project

Initiatives of PWD (R&B) during 2015-16 is given in the **Box 5.1**.

The State PWD is responsible for policy, planning, design, construction and maintenance of the State Highways, Major District Roads and the National Highways on behalf of the NHAI. State PWD is performing extremely vital role in provision of road infrastructure on the ground. However, they need to be reoriented to the current needs with emphasis on private sector participation and implementation of large scale projects under the assistance of multilateral funding agencies like JBIC, World Bank, and ADB.

During 2015-16, development and improvement of 1731 Km of State Highways and MDRs has been completed by PWD (R&B). It includes a total length of 695 Km of bitumen macadam & bitumen concrete (BM&BC) surfacing and 1036 Km of normal surfacing. Roads and Bridges wing has completed the works of 77 bridges out of the 100 bridges included in the 400 days programme of Government of Kerala. 'PRICE' software implemented for preparing estimates and speedy submission to other offices online for according Administrative Sanction and Technical Sanction. Various road works under Panchayats/ Municipalities/Corporations, for an amount of ₹557.12 crore, has been taken up and completed under the one time renovation scheme. Three major projects under the District Flagship Infrastructure Projects viz, Valiazheekkal Bridge (₹ 146.5 crore), Nadukani Vazhikkadavu Parappanangadi Road (₹415.00 crore) and Cherupuzha Payyavoor Road (₹ 205 crore) has been started.

Government of Kerala has made it mandatory to follow Indian Road Congress (IRC) standards and Ministry of Road Transport & Highways (MoRTH) specification for road works in Kerala. Kerala Public Works Department Manual has also been revised and the revised Edition (2012) has been made effective from April 1, 2012 onwards. The impact of the change in specifications and revisions in Manuals is to be evaluated in the coming years.

National Highways

The National Highway Wing of State PWD is responsible for the upkeep and development of National Highways in the State mainly with the funds allocated by the GoI. There are Nine National Highways together constituting 1781.57 km length in the State, of which 1,339 km (76.6 per cent) are under various development stages by the National Highways Authority of India (NHAI). Development of the remaining 408 km, which is under the control of the State PWD, is the responsibility of the State Government. The details are presented in **Table 5.4**.

Among the 11 National Highways, the Vallarpadam – Kalamassery NH C (New NH 966 A) is being developed by the National Highway Authority of India (NHAI). Upkeep of the highways, except 176 km is being done by State PWD with fund allocated by Ministry of Road Transport and Highway (MoRTH). Central Road Fund allocation is used for the development of State Roads, that is, State Highways and Major District Roads. 45 works are on-going and 26 new works have been arranged during the period.

Kollam and Alappuzha Bye passes

Kollam and Alappuzha Bye passes in NH 47 is being implemented on cost sharing basis between Central and State Government. The total cost of the project is ₹ 700.48 Crore and an amount of ₹ 350.24 crore as State share is included in the Major Infrastructure Development Project by State Government.

The total length of Alappuzha Bye pass (₹ 348.43 crore) is 6.8 KM, of which 3.2 KM is elevated highway, starting from Kommady Junction to Kalarkode. The work commenced on March 16, 2015 under EPC mode and is progressing. M/s RDS CVOC (JV) is the contractor of this time bound EPC with a contract sum of ₹ 274.34 crore and is targeted to be completed by August 2017. An amount of ₹ 164.64 crore is sanctioned

Table 5.4
National Highways in Kerala

Sl. No	New No.	Existing No.	From	To	Length of New NH No. in Kerala Kms	
1	66	NH 17	Thalappadi	Edappally	420.777	669.437
		NH 47	Edappally	Kaliyikkavila	248.660	
2	544	NH 47	Walayar	Edappally	168.14	
3	85	NH 49	Bodimettu	Kundanoor	167.593	
4	744	NH 208	Kollam	Kazhuthuruthy	81.280	
5	766	NH 212	Kozhikode	Muthanga Kerala– Karnataka Border	117.600	
6	966	NH 213	Kozhikode	Palakkad	125.304	
7	183	NH 220	Kollam	Theni in Tamil Nadu Border	190.300	
8	966 B	NH 47 A	Wellington Island	Kundanoor	5.920	
9	966 A	NH 47 C	Vallarpadam	Kalamassery	17.200	
10	183 A	-		Bharanikkavu	116.800	
11	185	-		Adimaly	96.000	
Total					1781.57	

Source : PWD (NH)

as mobilization advance by the Central and State Governments and 32 per cent of the work completed.

The Kollam Bye pass which starts from Kavanad and ends at Mevaram is 13 km long with aggregate cost of ₹352.05 crore and it includes 3 major bridges and 7 km new road and widening of 4 km existing road. The work commenced on May 27, 2015 under EPC mode and has made considerable progress and is scheduled to be completed by November 2017. An amount of ₹103.00 crore is sanctioned as mobilization advance by the Central and State Governments and 32 per cent of the work is completed.

Kerala State Transport Project (KSTP)

Kerala State Transport Project (KSTP) is a World Bank assisted project and Bank has approved a cost of ₹ 2,403 crore (US\$445 ml). The loan agreement with Bank was signed on June 19, 2013 and the effective date is September 2013. The loan closure date is April 2019. The disbursement ratio

is 56 per cent by World Bank and 44 per cent by GoK for the eligible items (except land acquisition and operation cost). The State Government had accorded sanction for the project for an amount of ₹ 2,500 crore.

The KSTP is implementing the Kerala State Transport Project –Phase II. The objective of the project is to improve the riding quality in 363 km road section with enhanced road safety provisions. The project has three components. (1) Upgradation of 363 km of road, (2) Road Safety Management and (3) Institutional Strengthening. The following works are progressing under the Project. The details are presented in **Table No.5.5**.

Out of the nine road packages (including one bypass) works on seven packages has been arranged and the works are under different stages of execution. The progress of works had been slow due to adverse climate condition, and local problems. The works in Package III (Thalssery – Valavupura – 54 km) has been terminated due to the poor performance of the contractor. One road in Package – 8 for upgradation could not be taken

Table 5.5
Works under Kerala State Transport Project, ₹ in crore

Sl.No	Name	Cost	Date of completion
1	Kasaragod – Kanghai Road	133.05	March 2017
2	Pilathara – Pappinisserry Road	118.29	March 2017
3	Thalassery – Kalarode Road	156.59	June 2018
4	Kalarode – Valavupara Road	209.58	August 2018
5	ChengannurEttumanoor Road	293.58	November 2017
6	Thiruvalla Bye pass	31.80	Work progressing
7	Ettumanoor – Muvattupuzha Road	171.49	September 2017
8	Ponkunnam –Thodupuzha Road	227.13	December 2016
9	Punalur – Ponkunnam Road (under PPP modified annuity)		Bid process has been initiated to pre qualify the investors
10	Perumbilavu – Perintalmanna road		Land acquisition has been initiated.

Source : KSTP

up as the land acquisition is not yet completed. The works on this road will be limited to strengthening of existing road crust. All the arranged works are expected to be completed by the end of 2018.

Kerala Road Fund Board

Kerala Road Fund Board is a statutory body under the State government established by the KRF Act 2001. The main source of revenue of the Board is the 10 per cent share of motor vehicle tax released by the state government as budget allocation under non plan head. The Board is implementing mainly City Road Improvement Projects on PPP mode. The Thiruvananthapuram City Road Improvement Project has been implemented by Kerala Road Fund Board on PPP (Annuity) mode involving development of more than 43 km of roads in the capital city and its maintenance for 15 years after construction. The construction works under the project has been completed and is being maintained on Annuity Payment mode.

Kerala Road Fund Board has initiated the Kozhikode City Road Improvement Project, which involves

development of 22.251 km of road on DBFOT – annuity mode and the work is progressing. Detailed Project Report for implementing the City Road Improvement Project in Alappuzha which is being finalised involves 18 roads for a total length of 48 Km, proposed to be developed under Phase I and four roads for a length of 35.5 km proposed to be developed under Phase II. Proposal for implementing a City Road Improvement Project in Kannur involves development of 47.7 km of road under 12 corridors and the estimated cost of the project is ₹ 350.00 crore.

Road Infrastructure Company Kerala Limited (RICK)

Road Infrastructure Company Kerala Limited is a special purpose vehicle incorporated under Indian Companies Act, 1956 by Kerala Road Fund Board. Government of Kerala had taken initiative for implementing State Road Improvement Project (SRIP) aimed at the development of selected State Highways and Major District Roads. There are

two packages under the State Road Improvement Project (SRIP) - Rehabilitation Package under PPP Annuity mode and the Up gradation Package with funding from multilateral funding agencies. The Rehabilitation package is intended to improve 106.2 km of roads in two Packages A&B in Thiruvananthapuram, Kottayam and Kasaragod Districts at a total cost of ₹209.91 Crore. Upgradation Package is designed to improve 600 km of road by including land acquisition wherever needed for geometrical corrections and junction improvements. Administrative Sanction has been accorded for acquiring land for Karmana – Vellarada road in Thiruvananthapuram at an estimated cost of ₹21.00 Crore under the Upgradation Package.

The existing road network has to undergo a qualitative improvement with the aim to reduce traffic congestion and delay, easy access to destinations and reduction in accident risks. Most of the PWD roads have to undergo massive upgradation with widening and incorporation of road safety features. The major National Highways and State Highways passing through the State are to be widened to four lane divided carriage way, other NHs and SHs are to be widened to two lane roads with adequate shoulders/footpath and other major roads are to be widened to intermediate lane with shoulder. Priority needs to be accorded to non-motorized modes of transport like pedestrians, cyclists and public transport and 10 per cent of the roads in urban areas should be designed to have cycle track and 75 per cent of the urban roads should have footpath of reasonable width on both sides.

Research and Development in Road Sector

Research and Development activities play an anchor role in developing innovative models and techniques to address the challenges in modernizing the road system in general and technology up gradation with cost effective infrastructure measures in particular. Design, Research, Investigations and Quality Control

Board (DRIQ Board), Kerala Highway Research Institute (KHRI) and National Transportation Planning and Research Centre (NATPAC) are the research organizations engaged in Research and Development of the road sector at present.

(a) DRIQ Board

In 2015-16, the design wing of DRIQ Board developed 16 building designs, structural designs of nine bridges, 13 general design and 31 detailed designs. Moreover, the research and project preparation unit of DRIQ Board has prepared 11 projects. .

(b) Kerala Highway Research Institute (KHRI)

Kerala Highway Research Institute, the South Zone Regional Office is the quality control wing mandated with the task of assuring quality in works undertaken by PWD. Quality control sub division of Pathanamthitta, Alappuzha, Kollam districts are under the jurisdiction of KHRI. KHRI conducts training programmes for technical and non technical staff of PWD. The activities of KHRI during 2015-16 is given in **Box 5.2**.

As part of Quality Control of Works and Test, 2100 tests were conducted and the results were forwarded to the respective Chief Engineers for further action. The investigation works on Detailed Project Report (DPR) for KSTP Phase II covering the maintenance component of 14 roads have also been completed by KHRI during 2015-16.

(c) National Transportation Planning and Research Centre (NATPAC)

NATPAC is the Research Centre conducting Research and Development and Extension Activities in the field of transportation and allied areas under the administrative control of Kerala State Council for Science, Technology and Environment (KSCSTE) of Science and Technology department. The broad areas of

Box 5.2
Major Activities of KHRI during 2015-16

- DPR preparation for the development of Muvattupuzha town portion- KSTP II
- DPR preparation for the development of Chamravattom junction in Malappuram district
- Preparation of alignment from Vazhimukku to Kaliyikkavila and modifications based on feasibility report from site are under progress
- Improvements of Junctions for Road Safety Cell (PWD) – Modifications of Kottappuram Junction and Chanthapura Junction in NH 17 at Kodungallur
- Design of traffic junction at Koyilandi town on NH 66 between km 221/500 to 222/000 in Kozhikode district
- Improvements to Kolappuram junction in between km 278/900 and 280/200 of NH 17 in Malappuram District
- Junction designs for Kozhikode City Road Improvement Project Phase I (a) Koor Junction (b) Vellimadukunnu Junction and Bypass Junction

Source: Kerala Highway Research Institute

activities of NATPAC includes transportation, planning and road safety, regional transportation, highway planning and development, traffic management, water transport and providing consultancy services to various user agencies in the domain area.

During the year 2015-16, NATPAC has carried out 22 research projects, 19 externally funded projects, 11 road safety programmes sponsored by Kerala Road Safety Authority (KRSA) and several road safety training materials have also been developed. The plan programmes are mostly R&D projects to address the traffic and transportation issues of the State. The externally funded projects are need based studies entrusted to NATPAC by government agencies like, PWD, Transport, Tourism, Water Resources, Town Planning Department and other Organisations like Kochi Metro Rail Company, National Highway Authority of India (NHAI), Roads and Bridges Development Corporation Kerala (RBDCK), Techno park, Kerala Rapid Transit Corporation Limited (KRTL), Infrastructure Kerala Limited (INKEL), and Inland Water Ways Authority of India (IWAI).

NATPAC has undertaken studies on the use of

industrial waste like jarofix, cement slag and glass fibre in road construction. Studies on the use of Stone Matrix Asphalt (SMA) and Reclaimed Asphalt for Pavements (RAP) with the aim of providing guidelines for its suitability to Kerala conditions are also being done. NATPAC carried out an appraisal of the highways developed under Kerala State Transport Project (KSTP) by conducting the structural and functional evaluation and the study will help in the accurate prediction of pavement performance which is important for efficient management of the transportation infrastructure. The Centre is also developing a perspective plan for development of National Highways sections in Kozhikode division on demonstration mode and a traffic growth rate model for National Highways in Kerala is being developed.

Road Transport

Road Transport is the dominant mode of transport for moving goods and passenger traffic and acts as the feeder service to the rail traffic, air traffic and ports and inland waterways. Transport activities are carried out by Kerala State Road Transport Corporation and Motor Vehicles Department in the State. In Kerala, road transport industry is dominated by private service providers. The road

freight services are wholly owned and operated by the private sector.

Motor Vehicle Department

Motor transport sector is an important and integral part of the state economy. Kerala has 101.71 lakh registered motor vehicles as on March 2016. For the last 2 decades it has experienced annual growth rate of above 10 per cent. The number of vehicles per 1000 population for Kerala in March 2016 is 305. According to World Development Indicators, number of vehicles per 1000 population in India is 18, China 47 and United States 507.

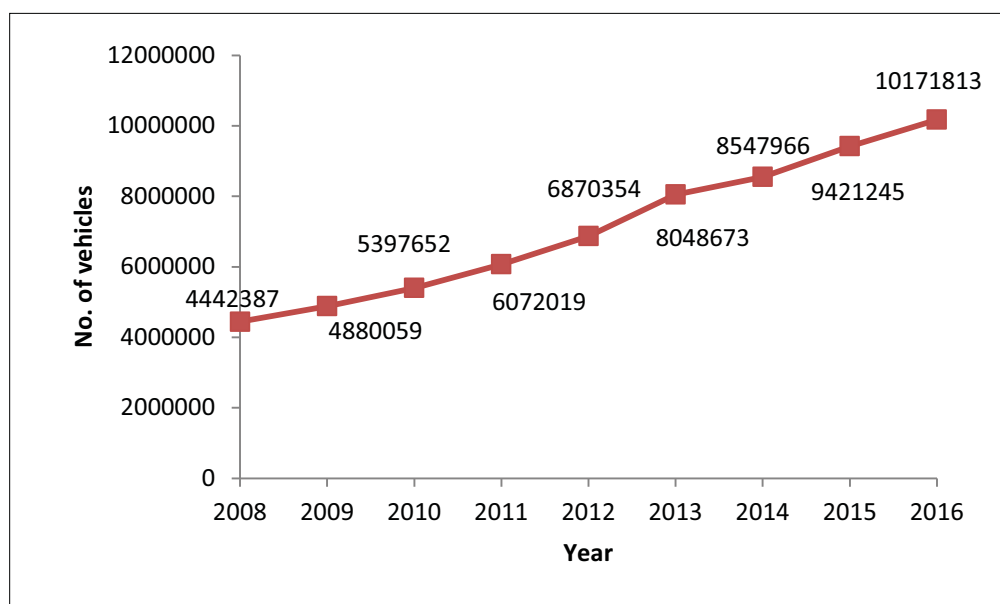
The growth of vehicle population in Kerala is eight per cent over the previous year. The growth of Motor Vehicles during last nine years is shown in **Figure 5.1**.

The number of motor vehicles having valid registrations as on March 31, 2016 is 10,171,813 as against 94, 21,245 in the previous year. The details are in **Appendix 5.7**. The number of newly registered vehicles is 861,323 during 2015

-16 and the details are given in **Appendix 5.8**. In the case of personal vehicles, a faster growth rate has been recorded over the previous year. District wise growth of vehicle numbers in Kerala is given in **Appendix 5.9**. Data on number of vehicles on road needs to be developed by linking Insurance Companies and a concerted effort by Motor Vehicles Department in this regard needs to be developed. The per centage of category wise motor vehicles registered during 2015-16 is shown in **Figure 5.2**.

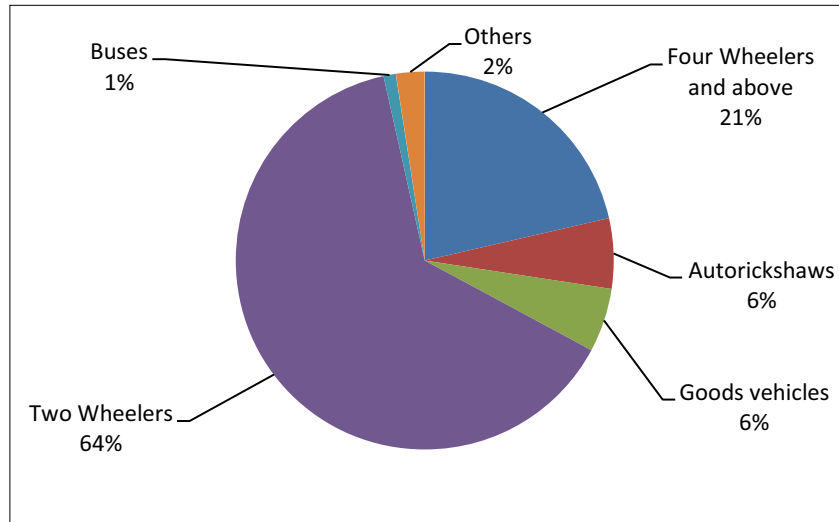
About 2360 vehicles are added to vehicle population every day. Of this 1657 are two wheelers. The details of category wise growth of motor vehicles in Kerala since 2009 are given in **Appendix 5.9**. The highest vehicle population was recorded in Ernakulum district with 15, 59,270 vehicles (15.37 per cent) followed by Thiruvananthapuram with 12, 90,592 (12.69 per cent). Wayanad district has the lowest number of 1, 39,151 (1.37 per cent) vehicles. Category wise growth of Motor Vehicles in Kerala since 2010 to 2016 is in **Appendix 5.10**. The mismatch between growth in motor vehicles

Figure 5.1
Growth of Motor Vehicles since last Nine years



Source: Motor Vehicles Department

Figure 5.2
Distribution of motor vehicles registered by type during 2015-16, in per cent



Source: Motor Vehicles Department

and the capacity augmentation of road has resulted in increasing traffic congestion and road accidents in Kerala.

Road Accidents

Even though several initiatives have been taken by the Police to enforce road discipline and enforcement of rules by Motor Vehicles Department, road accidents are increasing. The increasing trend of traffic accidents is a matter of great concern. The analysis of figures from 1980-81 onwards shows that an increase in the number of accidents was steady from 7064 in 1980-81 to 20,900 in 1990-91 and 34,387 in 2000-01 and 35282 in 2010-11 to 39,137 in 2015-16. Even bigger states like Uttar Pradesh, Gujarat and Rajasthan report far less number of accidents compared to Kerala. The district wise motor vehicle accidents in Kerala and the category wise details of motor vehicles involved in road accident are given in **Appendices 5.11** and **5.12** respectively.

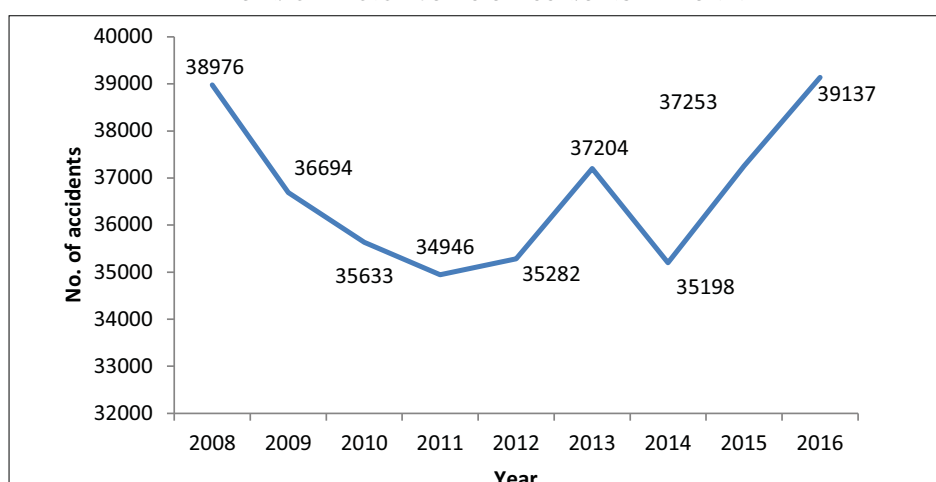
During 2015-16, Kerala registered 39137 accidents (107 per day). Accidents due to KSRTC buses were 1330 (4 per day) against 5686 buses and private buses were 3303 as against 25449 (9 per day). The number of two wheelers has increased

from 58.29 lakh in 2015 to 64.72 lakh in 2016, recording average annual growth rate of 11 per cent. Similarly the number of traffic crashes involving two wheelers has grown from 29,963 (82 per day) in 2015 to 31595 (87 per day) in 2016. Bike accidents account for nearly 52 per cent of the total accidents reported in the State. Trend of Motor Vehicle Accidents in Kerala is presented in **Figure 5.3**.

Kerala recorded a total of 39137 accidents in the year 2016 which is 385 accidents per lakh vehicles registered in the State. Growth of accidents in the State during the last seven years is given in **Table 5.6**. It can be seen that the accident occurrences have exhibited fluctuation during various time periods without showing any definite growth or decline pattern.

Most of the accidents are attributed to fault of drivers as per records available with Traffic Police. However, deficiencies in road design as well as motor vehicles apart from bad road conditions also contribute to the road accidents which are generally overlooked. Road safety training for various categories of road users, rectification of road design, deficiencies and inclusion of road safety aspects in the planning and operation stages

Fig 5.3
Trend of Motor Vehicle Accidents in Kerala



Source: State Crime Records Bureau

Table 5.6
Accident Trend in Kerala during 2010 -2016

Year	No. of Motor Vehicles	No. of Accidents	Accidents/lakh vehicle
2010	53,97,652	35,633	660
2011	60,72,019	34,946	576
2012	68,70,354	35,282	514
2013	80,48,673	37,204	462
2014	85,47,966	35,198	412
2015	94,21,245	37,253	395
2016	1,01,71,813	39,137	385

Source: Motor Vehicles Department and State Crime Record Bureau

of road construction are the primary needs to be taken up in reducing accident occurrences.

The per centage of vehicle category wise accidents in Kerala during 2015-16 is shown in **Figure 5.4**.

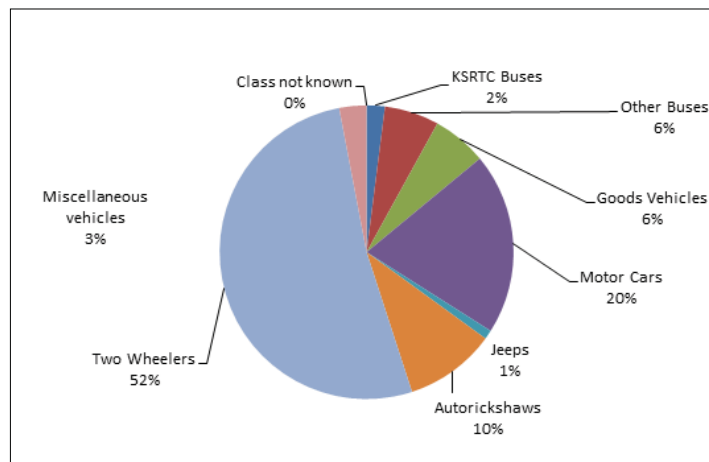
Kerala State Road Transport Corporation (KSRTC)

Kerala State Road Transport Corporation (KSRTC) is the single largest public sector undertaking, which carries out passenger transport operations in the State. The gross revenue earning of KSRTC during 2015-16 is ₹2,165.16 Crore.

The gross revenue expenditure is ₹2,778.30 Crore and operating loss during this period is ₹613.14 Crore.

Out of 5686 buses of KSRTC, 1095 (19 per cent) buses are ten or more years old. The worn out status of KSRTC buses are given in **Appendix 5.13**. The average earning per vehicle on road per day of the Corporation has increased from ₹ 10,928 in 2014-15 to ₹ 11,191 during 2015-16. During the period, 609 new buses were put on road and 579 buses were scrapped. The Corporation operated its bus service to a distance of 5870.11 lakh km and about 10137.76 lakh passengers travelled in KSRTC

Figure 5.4
Distribution of road accident by vehicle type in Kerala during 2015-16



Source: State Crime Records Bureau

buses during this period. The major indicators showing operational efficiency and district wise operational statistics of KSRTC/KURTC are given in **Appendices 5.14** and **5.15** respectively.

The fare structure of KSRTC remained unchanged during 2015-16. The fares of ordinary and city buses are 64 paise per Km, 72 paise per Km for super fast, 90 paise to super deluxe service, 110 paise for A/C Air Bus and 130 paise for High Tech Volvo Buses. The fare structure of KSRTC is given in **Appendix 5.16**.

Inter Unit analysis of KSRTC reveals that about 30 per cent of the units of the State exhibit poor performance. The unit wise details of operational

statistics are given in **Appendix 5.17**. Financial performance of KSRTC is not in tune with its physical achievements due to increase in operating expenditure, hike in pension commitments, increase in interest payments, operation in uneconomic routes and granting concessional travels leading to increasing losses to the Corporation.

Though the occupancy ratio in KSRTC has increased from 67.14 per cent in 2009-10 to 75.09 per cent in 2014-15, it is not appreciable considering the higher occupancy in private carriages and the poor road infrastructure in Kerala which results in lesser use of private modes of transport. Private operators are dominant in passenger transport operation in the State. Fleet utilization of KSRTC

Box 5.3 **Major internal Indicators of KSRTC**

- Average Fleet held 5686
- Average Fleet operated 4522
- Average age of Fleet (Years) 7
- Over aged vehicles 25.9 per cent
- Staff strength 40988
- Staff per bus ratio (fleet held) 7.2
- Staff per bus ratio (fleet operated) 9.1
- Staff productivity (Km/staff/day) 37.01
- Fuel efficiency (Km/litre of HSD) 4.22
- Occupancy Ratio 75.09 per cent

Source: KSRTC

is only 81 per cent. More than 12 per cent of the buses are under repair and 25.9 per cent of the vehicles are over aged. Staff per bus ratio is as high as 7.2. The number of breakdowns per lakh kilometers in KSRTC is around 6 while that of neighboring Karnataka RTC (KnRTC) and Bangalore Metropolitan Transport Corporation (BMTC) are less than one. The number of buses owned by KSRTC is given in **Appendix 5.18**. The major internal Indicators of KSRTC is given in **Box 5.3** and the major physical achievements of KSRTC during 2015-16 are provided in **Box 5.4**.

Heavy losses due to operational inefficiency, high bus/staff ratio, operation in uneconomic routes and unviable depots are some of the issues/challenges faced by KSRTC. A professional techno economic study needs to be done to identify and suggest measures to deal with the critical issues/challenges faced by KSRTC.

Goods Transportation

Inter –state goods movements are handled predominantly by road based good carriers,

followed by rail and waterways. As per a recent study by NATPAC, the share of road is 78 per cent, water transport 14 per cent and movement by rail is 8 per cent. A study by erstwhile Planning Commission (2008) reveals that the Road transport carry almost 88 per cent of total traffic, while Railways handled about 10 per cent of total traffic and Water transport carried less than 2 per cent of cargo movement. Once the National Waterway No.3 (Kottappuram – Kollam) becomes operational, 20 per cent of the road based cargo traffic is expected to shift to water transport.

Way forward

Road crashes can be prevented by better planning and more safety-conscious design of the road network. Road infrastructure including road surface, road signs and roadway design is a significant safety factor. Unsafe road infrastructure is a critical root cause of road crashes in some occasions. Even some low-cost infrastructure improvements can substantially reduce the occurrence of road crashes and their severity.

Box 5.4 **Major achievements of KSRTC**

- KSRTC has started two new operating centers at Anayara and Nedumangad
- Agreements were executed among the Chief Executives of the STUs of Andhra Pradesh, Thelungana, Goa and Puducherry for Interstate service operation
- Rolled out 615 nos of new buses for replacing old buses
- KSRTC has purchased 18 nos of new Scania A/c Multi Axle buses for interstate service operation
- Started new Silver Line Jet buses for long distance services with push back seat and WiFi facility
- Taken over 204 Super class services from private operators
- Installed GPS system in 474 Super class buses attached to Thiruvananthapuram Central, Thiruvananthapuram City and Kottayam Depots
- KURTC, a subsidiary corporation of KSRTC has rolled out 65 nos of A/c Low floor buses and 173 non A/c Semi Low floor buses
- Constructed Bus Terminal Cum Shopping Complexes at different bus stations
- Training was given to 12113 employees at Staff Training Centre, KSRTC, which includes newly recruited drivers, conductors and other staff.

Source: KSRTC

Proper surface water drainage, road signage, road markings, street lighting, and road side appurtenances have vital role in enhancing road safety. The design of each of these elements of road infrastructure has to be based on IRC guidelines and other code of practices available. Usually the road maintenance is limited to fixing potholes and cleaning drainage facilities, without replacing missing traffic signs, guard-rails, road markings and other safety features essential to create a safe road network.

Government is taking several initiatives to reduce the annual frequency of accidents by 50 per cent by 2025. For this purpose, the following key areas are identified to be resolved in a mission mode basis:

- Inter-departmental Coordination and Management
- Crash Data Collection and Management System
- Safer Road Infrastructure
- Legislations and Enforcement of Rules and Regulations
- Emergency Medical Response to Crash Victims
- Ensuring Safer Drivers through continued education including Bus drivers
- Ensuring Safety of Vulnerable Road Users
- Parking Policy

Road safety cannot be the responsibility of government alone. The insurance sector, service organizations and NGOs play an important role in promoting road safety awareness. NGOs have an important role at grass roots level. There are no segregated bus bays in most of the transport corridors, and buses stop in the carriageway itself resulting in traffic hold ups. Concerted efforts are needed to provide sheltered bus stops and passenger amenities to the commuters in all bus transport corridors.

Railways

The Indian Railway system is the second largest network in the World under a single management.

It provides one of the cheapest means of transport in India. The Railway network comprises of 90,803 km of track over a route of 66,030 km and 7,137 stations. It is the fourth largest network in the world (after USA, Russia and China). Kerala occupies a significant position on the Indian Railway map with 1050 route Km and 1588 km of total track that is spread on the 13 railways routes and includes 933 km of broad gauge and 117 km of meter gauge lines. Thiruvananthapuram and Palakkad divisions of the Southern Railway zone are the administrative divisions. Palakkad division operates 76 express and 49 passenger trains and carries 2.16 lakh passengers and Thiruvananthapuram division operates 80 express trains and 60 passenger trains and carries 2.6 lakh passengers daily.

Government of Kerala and Ministry of Railways, Government of India have signed an Agreement for the formation of a Joint Venture Company with an Equity Participation of 51:49 on September 1, 2016. A Joint Venture Company “Kerala Rail Development Corporation (KRDCO)” has been established for the implementation of the upcoming Railway Projects in Kerala. The following projects will be taken during 2017-18 including equity contribution of the Company.

- Rapid Rail Transit System (Suburban Rail Project) between Thiruvananthapuram – Chengannur - 125.56 km
- Angamaly – Erumely – Sabari Rail - 120 km
- Ettumanoor – Sabari Link line – 15 km
- Erumeli – Pathanamthitta – Punalur - 65 km
- Guruvayoor – Thirunavaya Rail – 51 km
- Thalassery – Mysore Rail Project -298 km
- Thiruvananthapuram – Nagarcoil – Kanyakumari Line – Doubling – 35 km
- Rail Over Bridge (ROB) / Rail Under Bridge (RUB)
- Container Rail line to Cochin International Airport

Suburban Rail Project

Government of Kerala has decided to operate Suburban train services in Thiruvananthapuram –

Chengannur /Haripad sector in Phase – I with air conditioned MEMU/EMU rakes.. M/s Mumbai Rail Vikas Corporation (MVRC) has finalized the Detailed Project Report. The total cost of the project is ₹3,300.00 Crore. A Special Purpose Vehicle is formed between Government of Kerala and Indian Railways with 50:50 equity participation for taking up the implementation of the project.

Kochi Metro

Kochi Metro Rail Project (KMRL) is the flagship project of the Government of Kerala designed to address the transportation woes of Kochi City. The project is implemented through the Kochi Metro Rail Ltd (KMRL) which is a Special Purpose Vehicle jointly owned by the Government of Kerala and Government of India with equity participation. The Union Government gave sanction for the project in July 2012 at a total cost of ₹5,181.79 Crore. KMRL has signed an agreement with GoI and Delhi Metro Rail Corporation Ltd (DMRC) for executing the project and as per the tripartite agreement signed between Govt. of India, Govt. of Kerala and KMRL, the project is expected to be completed by June 2017. The details of the project are in **Table 5.7**.

As part of preparatory works for the project, KMRL reconstructed North Railway Over Bridge (ROB) and constructed a new ROB known as A.L. Jacob ROB. KMRL has resurfaced more than 40 roads during the last five years for reducing the traffic congestion and for easy traffic diversion. The consortium of Alstom Transport India and Alstom Transport S.A won the contract for manufacture of rolling stock at ₹630 crore (approx) and the first train arrived in the Muttom yard on January 11, 2016.

On January 23, 2016, the Chief Minister of Kerala flagged off the test run of Kochi Metro in the Muttom Yard. On February 27, 2016, the first trial run on viaduct was started for a stretch of 5 Km. KMRL has installed world class signage conforming to Indian Road Congress (IRC) standards as an initial step towards proper and effective signage within Kochi City. As part of greening the city has planted more than 5000 plants in and around Kochi. 100 per cent of the land required for the project was taken possession by mid 2016. Civil construction of viaduct has been completed for 13 km from Aluva to Palarivattom. Track works has been completed for 6 km from Muttom to Edappally. All system tenders have also has been awarded and work has commenced.

Light Metro Projects at Thiruvananthapuram and Kozhikode

Light Metro Rail Project is a Mass Rapid Transit System (MRTS) proposed to be implemented in the cities of Thiruvananthapuram and Kozhikode by a special purpose vehicle, Kerala Rapid Transit Corporation Limited (KRTL) and the DPR has been prepared by Delhi Metro Rail Corporation (DMRC). A route length of 13.33 Km with 14 stations in Kozhikode is being taken up as the first phase of the project. The estimated completion cost of the project is ₹4,219.00 crore for Thiruvananthapuram and ₹2,509 crore for Kozhikode totalling to ₹6,728.00 crore (including Central taxes & land cost). The estimated completion period of the project is five years for Thiruvananthapuram and four years for Kozhikode.

Table 5.7
Details of Kochi Metro

Sl.No	Connected places	Length (Km)	Project Cost (₹ Crore)
Phase I	Aluva to Petta (22 stations)	25.6	5181.79
Phase I (a)	Pettah to S.N. Junction (Extension)	2.00	359.00
Phase II	JLN Stadium to the IT city Kakkanad	11.00	1682.00

Source : KMRL

The approved Detailed Project Reports (DPR) has been forwarded to the Ministry of Urban Development (MoUD), Government of India for “in principle” approval and for confirmation of Government of India’s participation and equity. The Comprehensive Mobility Plans for the cities of Thiruvananthapuram and Kozhikode has already been submitted to GoI. Government has accorded Administrative Sanction for the construction of flyovers at Pattom, Ulloor and Sreekariyam, the major traffic junctions in the proposed alignment of Thiruvananthapuram Light Metro Project, for an amount of ₹272.84 Crore, which includes the cost of acquiring approximately 2.77 Ha of private land.

Water Metro Project

Kochi Metro Rail Corporation (KMRL) proposes to implement the Kochi Water Metro Project at a cost of ₹741.28 Crore with financial assistance from German Financial Institution (KfW), and state funding of ₹103 Crore. This is being implemented as part of Unified Metropolitan Transport Authority (UMTA) project in Kochi. The project envisages the development of 76 km of inland canals in Kochi city.

Air Transport

Air Transport plays a major role in the development of tourism, both domestic and international. Kerala has three airports at Thiruvananthapuram, Kozhikode and Kochi. During 2015-16, 94,344 flights (37459 domestic and 57485 international) were operated from the three airports together. A total number of 14,128,802 passengers (5,009,456 domestic and 9,119,346 international) were carried during 2015-16. Details of flights operated during 2015-16 by three Airports are shown in **Appendix 5.19 (A), (B) and (C)**.

Kannur International Airport Limited (KIAL) has been set up by Government of Kerala to build and operate Kannur International airport. The airport project is being developed in two phases by KIAL. The first phase is envisaged to span from FY 2016-

17 to FY 2025-26 and second phase would be from FY 2026-27 to FY 2045-46. In Phase I, the airport runway is proposed to be 3050 m in length, which would be sufficient to allow all major aircrafts to operate on key routes viz, Hong Kong, Singapore, and Middle Eastern countries. The second phase is proposed to have increased capacities of passenger terminal, aprons and other facilities including a longer runway of 3400 m to accommodate bigger aircrafts like A380. The Greenfield airport is being set up in 2000 acres, of which 1265 acres have been acquired. Of the required land, land to the extent of 1215 acres (equivalent to ₹315.94 crore) has been brought in by GoK as equity in the project.

The Ministry of Environment & Forest has granted necessary environmental clearance for Kannur International Airport. Agreement for the provision of CNS/ATM facilities has been executed with Airports Authority of India. Construction work on Terminal Buildings and City side facilities are being carried out by Larsen & Toubro Ltd and 80 per cent of city side works has been completed. The Project Management Consultancy work for the Integrated Terminal Building, ATC Tower, Technical Building and associated works has been awarded to M/s KITCO Ltd.

The total debt component required for the project amounting to ₹892.00 crore has been tied up with a Consortium of three Banks namely Canara Bank (₹692.00 crore), South Indian Bank (₹110.00 crore) and Federal Bank (₹90.00 crore). The joint term loan agreement has been signed with the consortium banks on May 20, 2015. As per the DGCA clearance received a trial landing of a Code 2B type aircraft was planned on February 29, 2016 and accordingly the flight was cleared to land from the makeshift ATC established at VOKN (Kannur Airport) by AAI for trial operation and the operation was smooth and incident free.

Bharath Petroleum Corporation Ltd (BPCL) will run the fuel farm business at Kannur airport in joint venture with KIAL. The company has already allotted equity shares worth ₹170 crore to BPCL. Further BPCL has agreed to make an additional investment of ₹46.80 crore in the equity capital

of KIAL. A separate joint venture company is formed with equity participation of both KIAL & BPCL to run the fuel farm business. The works for fuel farm is progressing at site.

Water Transport Sector Ports

Ports play a pivotal role in stimulating economic activity in their surroundings and hinterland through the promotion of seaborne trade. The efficiency of a port is important in international trade since a seaport is the nerve of foreign trade of a country. The globalization of world economy has brought about tremendous increase in exchange of goods across the world. To cope with the ever growing world trade, ports of every country will no doubt continue to play a critical and important role in providing the cheapest mode of transportation.

The world's busiest port tag is contested by several ports around the world, as there is as yet no standardised means of evaluating port performance and traffic. For the past decade the distinction has been claimed by both the Port of Rotterdam and the Port of Singapore. The former based on cargo tonnage handled (total weight of goods loaded and discharged), while the latter ranks in terms of shipping tonnage handled (total volume of ships handled). Since 2005, the Port of Shanghai has exceeded both ports to take the title in terms of total cargo tonnage. The following ports have variously made claims to be being world's largest port: Port of Shanghai, Port of Singapore, Port of Rotterdam, Port of Hong Kong, and Port of New York/New Jersey

Ports in India

India's long coastline of over 7500 km is home to the country's 12 major ports and around 200 minor and medium ports located along the western and eastern corridors of which only 139 are operable that is 69.50 per cent. Indian ports are the gateway to India's international trade by sea and are

handling over 90 per cent of foreign trade. The 12 major ports managed by the Port Trust of India are under Central Government jurisdiction and the 139 minor ports are under the jurisdiction of the respective State Governments. While the minor and medium ports are larger in number only about one- third of them undertake regular commercial operations. These are located mainly in Gujarat, Andhra Pradesh, Goa and Maharashtra.

The major ports include Chennai, Kamarajar (Ennore) and V.O Chidambaranar (in Tamil Nadu), Cochin (in Kerala), Kandla (in Gujarat), Kolkata (in West Bengal), Mumbai and Jawaharlal Nehru Port Trust (JNPT) (in Maharashtra), Mormugao (in Goa), New Mangalore (in Karnataka), Paradip (in Orissa), Vishakapatnam (in Andhra Pradesh).

Cargo traffic in Major Ports of India

The volume of seaborne cargo traffic handled by ports is mainly shaped by the levels and changes in both the global and domestic activity. Cargo traffic at India's 12 major ports during 2015-16 is higher by 4.3 per cent at 6063.7 lakh tonnes compared with 5813.44 lakh tonnes handled during 2014-15. During 2015-16 Mormugao port recorded highest growth of traffic of 41.2 per cent followed by Chidambaranar (13.7 per cent) Kolkata dock system (9.2 per cent), Kandla (8.2 per cent), Haldia dock system (8.1 per cent), Paradip (7.6 per cent), Kamarajar (6.5 per cent), Cochin (2.3 per cent) and JNPT (0.4 per cent). Major ports which recorded negative growth in traffic during 2015-16 are Chennai (4.7 per cent), New Mangalore (2.7 per cent), Vishakapatnam (1.7 per cent) and Mumbai (0.9 per cent). (Source: Port Statistics 2015-16, Ministry of Shipping, GOI)

Among the major ports, Kandla port handled the maximum cargo of 1000.1 lakh tonnes with a share of 16.5 per cent followed by Paradip (12.6 per cent) Jawaharlal Nehru Port Trust (10.6 per cent) Mumbai (10.1 per cent) Vishakapatnam (9.4 per

cent) Chennai (8.3 per cent) Chidambaranar (6.1 per cent) New Mangalore (5.9 per cent) Haldia Dock Complex (5.5 per cent) Kamarajar (5.3 per cent) Cochin (3.6 per cent) Marmugoa (3.4 per cent) Kolkata dock system (2.8 per cent) during 2015-16. Overall cargo volumes at Indian ports subdued in 2015-16 largely on account of slowdown in coal imports. **Figure 5.5** shows the commodity wise break up of cargo handled at major ports in India.

The commodity group with highest per centage share in total cargo handled was POL (Petroleum Oil and lubricants) at 1887.71 lakh tonnes (32.33 per cent) followed by coal (21.45 per cent), other cargo (21.15 per cent), container traffic (20.30 per cent) which includes tea, cashew kernels, rubber and rubber products, spices, coffee, fertilizer (2.64 per cent) and iron ore (2.12 per cent). There has been a decline in iron ore traffic mainly due to restrictions in mining of iron ore.

Figure 5.6. shows the pattern of cargo traffic at major ports in South India for the last 6 years.

Vishakhapatnam, Chennai and New Mangalore hold the first, second and third position in terms of the quantity of cargo handled over the period 2010-16. However, these ports have shown a decline in the growth rates of cargo movement by 1.67 per cent, 4.73 per cent and 2.69 per cent respectively during 2015-16. But the other 3 ports

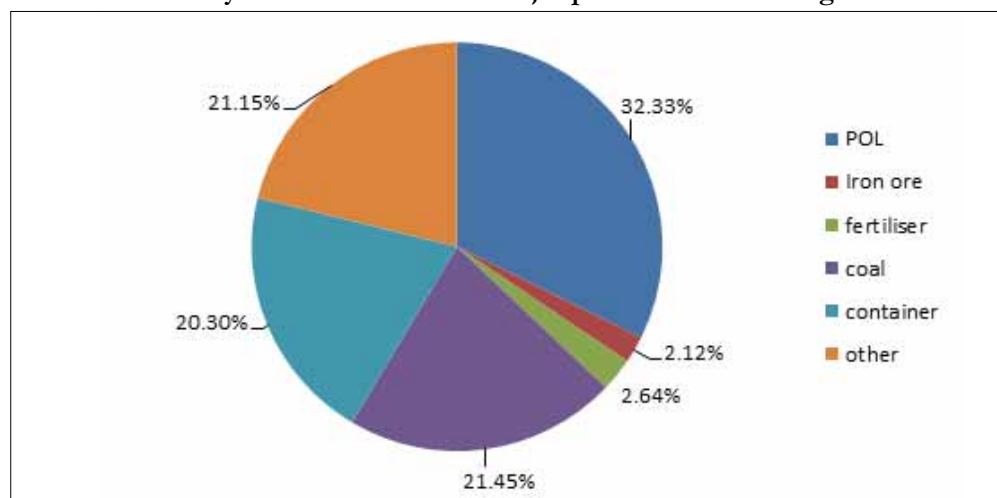
namely Chidambarnar, Cochin and Ennore have exhibited upward trends in 2015-16 with growth rates of 13.68 per cent, 2.33 per cent and 6.46 per cent respectively (**Appendix 5.20**).

In case of Cochin Port, the quantity of cargo handled has shown marginal increase over the years with a decline during 2012-13. The quantity of cargo handled, in lakh tonnes, at Cochin port for the period from 2011-12 to 2015-16 were 200.91 (12.40 per cent), 198.45 (-1.22 per cent), 208.87 (5.09 per cent), 215.95 (3.39 per cent), and 220.99 (2.33 per cent) respectively. The growth rates during the respective periods are shown in brackets.

Cargo traffic in minor and medium ports of India

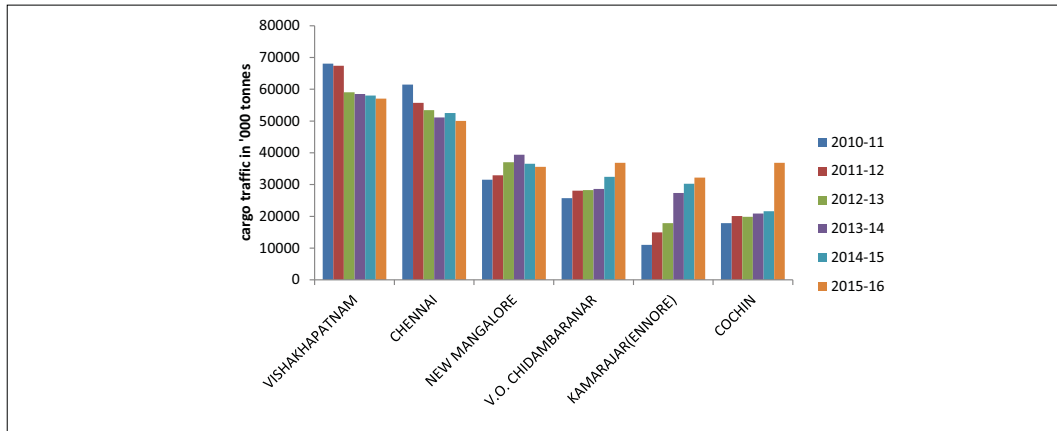
During 2015-16, upto September 2016, among the minor and medium ports, ports of Gujarat handled the maximum cargo of 1664.08 lakh tonnes (73.66 per cent), followed by Andhra Pradesh (15.87 per cent), Maharashtra (5.38 per cent) Tamil Nadu (0.18 per cent), Karnataka (0.15 per cent) and non-major ports of the remaining states handling a total of 107.51 lakh tonnes (4.76 per cent) (*Source: Port Statistics 2015-16, Ministry of Shipping, GOI*)

Figure 5.5
Commodity wise distribution in major ports of India during 2015-16



Source: Ministry of Shipping / Indian Ports Association

Figure 5.6
Cargo traffic in Southern major ports of India



Source: Ministry of Shipping / Indian Ports Association

In terms of composition of cargo traffic handled at non-major ports POL holds the highest share of (39.14 per cent) followed by coal (31.66 per cent), container (10.75 per cent), other cargo (7.98 per cent), fertilizer and fertilizer raw materials (3.55 per cent), iron ore (3.53 per cent) and building materials (3.38 per cent).

Ports in Kerala

The Ports in Kerala lie in the south west corner of the Indian peninsula. Kerala has a coastal length of 585 km and the State has an average width of about 60 km with one major port at Cochin and 17 non-major ports. Out of 17 minor ports in Kerala, four are considered as intermediate ports based on berthing, cargo handling and storage facilities available in them. They are Vizhinjam, Bepore, Azheekal and Kollam ports. The remaining 13 minor ports in the state are Neendakara, Alappuzha, Valiyathura, Kayamkulam, Manakkodam, Munambam, Ponnani, Vadakara, Thalasserry, Manjeswaram, Neeleswaram, Kannur and Kasaragod.

Most of the minor and intermediate ports in the State are seasonal in nature with insufficient infrastructure to handle even medium and small sized vessels throughout the year. Presently cargo operations take place only in four ports, viz., Vizhinjam, Bepore, Kollam and Azheekal. At

Bepore, passenger traffic to Lakshadweep islands is also handled. At Thangassery (Kollam) new cargo port facilities have been created utilizing the calm fishery harbour basin.

The Government of Kerala has already decided to develop five non major ports through PPP mode. These Ports are Azheekal, Bepore, Ponnani, Alappuzha and Kollam. Apart from this, Vizhinjam Deepwater International Container Transhipment Terminal is under construction.

Cargo traffic in Cochin Port

In case of Cochin Port, the total cargo traffic handled by the port during the year 2015-16 recorded an increase of 2.33 per cent to 220.98 lakh tonnes as against 215.95 lakh tonnes handled in the preceding year.

Total import traffic handled during 2015-16 recorded an increase of 3.69 per cent to 181.84 lakh tonnes from 175.36 lakh tonnes in the preceding year. The major component of import include POL (65.61 per cent) followed by container (21.54 per cent) comprising machinery, cashew, and chemicals, other cargo (10.98 per cent), fertilizers and raw materials (1.27 per cent) coal (0.49 per cent) and fertilizer (0.12 per cent).

Total export traffic handled during the year showed a decrease of 3.57 per cent to 39.14 lakh

tonnes from 40.59 lakh tonnes in the preceding year. The major components include POL (47.13 per cent), others (33.92 per cent), other bulk (5.15 per cent), sea foods (3.58 per cent) coir products (3.18 per cent), tea (1.71 per cent), coffee (1.40 per cent), rubber and rubber products (1.39 per cent) cashew kernels (1.28 per cent), spices (1.27 per cent). (Source: Administration Report and Annual Accounts 2015-16, Cochin Port Trust).

Commodity wise break up of cargo handled in Cochin port during the year 2015-16 is shown in **Figure 5.7**.

Among the cargo handled at Cochin Port, POL has the highest share of 62.33 per cent followed by container (26.17 per cent), other cargo (9.95 per cent) fertilizer and raw materials (1.15 per cent) and coal (0.40 per cent).

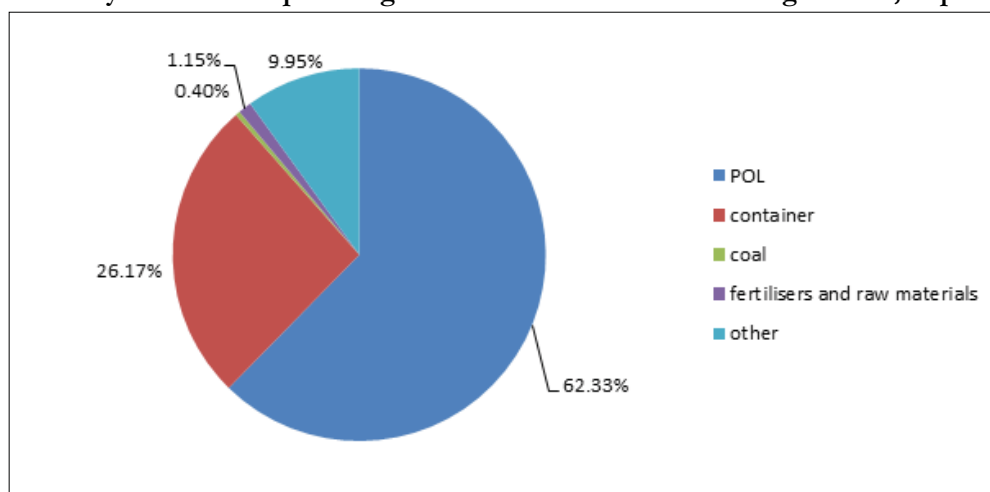
Cargo traffic in minor and medium ports of Kerala

The non-major ports of Kerala, showed a decline of 9.9 per cent at 143,458.58 tonnes in 2015-16 against 159,226 tonnes in 2014-15. Cargo handling during 2015-16 was confined mainly to Kozhikode, Kollam, Vizhinjam and Azhikkal ports. The commodity handled in all ports except

Vizhinjam has declined. The per centage growth of commodity handled in Vizhinjam is only 6.25 per cent. Azheekal, Kollam and Kozhikode ports witnessed negative growth rates of 88.04 per cent, 53.87 per cent and 0.94 per cent respectively. The commodity wise details of cargo handled in minor and intermediate ports of Kerala (both coastal and foreign) are detailed in **Appendix 5.21**. During 2015-16, 356 steamers and sailing vessels with registered tonnage of 237,417.98 called at non- major ports against 558 steamers and sailing vessels with 158,711.51 tonnages in the previous year. This shows decrease in number of vessels and increase in tonnages. The details are shown in **Appendix 5.22(A)**. Statement showing the revenue collection at the non-major ports during 2015-16 is shown in **Appendix 5.22(B)**. The trend of cargo handled at non major ports of Kerala is given in **Figure 5.8**.

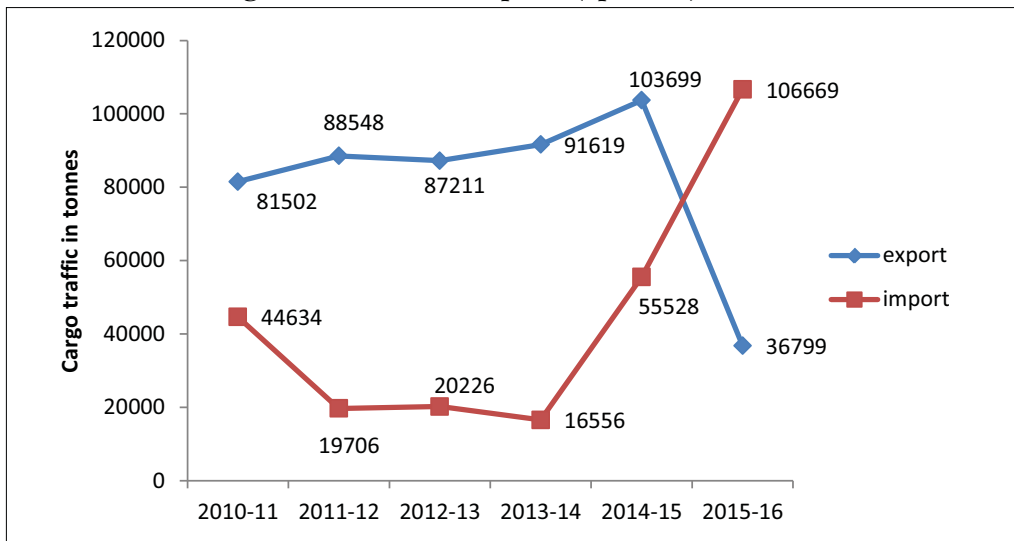
Imports have shown a fluctuating trend with a negative growth in 2011-12 and a positive growth of 2.63 per cent in 2012-13. It again declined by 18.14 per cent in 2013-14. The years 2014-15 and 2015-16 witnessed an increasing trend, with the increase in 2015-16 being 92 per cent over the previous year. The exports showed a decline in 2012-13 by 1.50 per cent then it improved by 5.05 per cent in 2013-14. In 2014-15, it had shown

Figure 5.7
Commodity wise break up of cargo handled in Cochin Port during 2015-16, in per cent



Source: Cochin Port Trust

Figure 5.8
Trend of Cargo handled at minor ports (operable) of Kerala, in tonnes



Source: Directorate of Ports

a substantial improvement by 13.18 per cent. However in 2015-16, there was a steep decline by 64.51 per cent. Such decline in the coastal export was due to the scarcity of cargo. Necessary steps needs to be taken to export the cargo of Public Sector Undertakings like Kerala Minerals and Metals Ltd (KMML), Indian Rare Earth Ltd (IRE) and Food Corporation of India (FCI) through Kollam port to tackle this issue. Non-occurrence of shipping operations at Azheekal port due to siltation has also resulted in the decrease of cargo. Necessary steps for dredging operations have been initiated in Azheekal port.

The Government agencies involved in the development of ports in the State are Port Department, Harbour Engineering Department, and Hydrographic Survey Wing. An amount of ₹27,759 lakh, ₹7,869 lakh, ₹9,869 lakh, ₹11,929 lakh and ₹12,601 lakh were earmarked for this sector during 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17 respectively.

Port Department

Port department is headed by the Director of Ports. The port directorate is situated at

Thiruvananthapuram. There are three regional port offices at Neendakara, Alappuzha and Kozhikode respectively. The Director of Port and port offices administer the port operations at all non-major ports with the powers vested on them by Indian Port Act, 1950. The capital and maintenance dredging needed to maintain the required depth at the non-major ports is another responsibility of the Port department. It is also responsible for search and rescue operation along Kerala Coast at times of distress.

Vizhinjam International Deep Water Multipurpose Seaport

The flagship project of the State, Vizhinjam International Deep-water Multipurpose Seaport is one of the landmark and dream project which took off in 2015. The project initially proposed in 1990s has finally translated into reality. The ground breaking ceremony of the project was held on December 5, 2015.

This port is being developed as the transshipment hub to cater to large mother vessels. Vizhinjam is an all-weather port that will come up 10 – 12

Box 5.5

Major Achievements of the Port sector during 2015-16

- Development of five minor and medium ports through PPP mode viz, Azheekal, Beypore, Pon-nani, Alappuzha and Kollam has been initiated.
- The ports viz, Vizhinjam, Kollam, Azheekal, Beypore and Kodungalloor were made operational for cargo movement
- For the promotion of coastal shipping an incentive of ₹ 1 per ton per Km has been sanctioned.
- Government has accorded Administrative Sanction for the creation of Coastal Shipping promotion fund at a total cost of ₹3 crores.
- Procured container handling crane for ₹15 cr, 600 HP tug for 3.5 crore, and Container fork lift for ₹2.70 Crore and Container handling reach stacker for Rs 2.6 crore in Kollam Port
- The permanent customs facility and Electronic Data Interchange terminal has been established at Kollam port.
- Procured 200m³ Cutter Section Dredger for ₹ 19.85 crore, 750 HP tug for Rs 6 crore, and Container handling reach stacker for ₹2.6 crore for Azheekal port.
- Container handling reach stacker procured for ₹2.6 crore at Vizhinjam port
- Procured and commissioned 40 feet container Handling crane at Beypore Port.
- Construction of Dry Dock at Alappuzha under PPP model at a cost of ₹ 9.42 crores in progress.
- Establishment of the Kerala Maritime Board as the implementation agency for coastal shipping is in the process.
- Construction of Kerala Maritime Institute, Kodungalloor completed at a cost of 9.94 crores and inaugurated on July 11, 2015.
- Development of Kerala Maritime Institute at Neendakara at a total cost of ₹36 cr is under progress.
- Installation and commissioning of channel marking buoys at Vaikom- Thavanakkadavu channel completed.

nautical miles away from the Persian Gulf – Malacca lines. The proposed site has minimal maintenance dredging. The port with a draught of 18.20m can handle new generation mother vessels of size range 18000 to 22000 TEU.

The Port is being developed on DBFOT Model and has been awarded to M/s AdaniVizhinjam Port Pvt Ltd. The Concession Agreement (CA) was signed between the Government of Kerala and the private partner on 17th August, 2015. The concession period of the project is 40 years.

The total cost of the project is ₹6,770 crore. Out

of this the PPP component is ₹4,089 crore, ₹ 1,463 crore is the 'funded works' of the project and ₹1,218 crore is for land, R&R, external infrastructure. The Central Government will provide ₹818 crore as Viability Gap Funding support and balance ₹817 crore will be provided by the State Government out of the total Viability Gap Fund (VGF) of ₹1,635 crore sought for the project. The state would be providing land and developing external infrastructure such as water, power and rail connectivity. It's the first project in the State and first port in the country to receive VGF assistance from Ministry of Finance. The state government would get its portion of

Box 5.6**Latest Status of Vizhinjam International Deep Water Multipurpose Seaport**

- Construction activity of the project commenced on December 5, 2015. Since the signing of CA, the Concessionaire has completed the following pre-construction works:
 - i. Offshore Subsoil investigation
 - ii. Land based survey
- A temporary road connecting breakwater site and existing project road at Vizhinjam has been completed.
- Work on construction of 565 m north rock bund which forms part of the breakwater commenced on April 2016. Till end Nov 2016, the Concessionaire has achieved a progress of 486m core formation for the main breakwater.
- The dredging and reclamation work is on full swing.
- Water supply Scheme for the project is completed and also water is supplied to the locality as part of CSR initiative
- The Construction Power required for the project is ensured by commissioning two 11 kV dedicated feeders starting from Poovar 33 kV Sub Station to the project site (Near Mulloor Mahadeva Temple).
- For providing uninterrupted power for the operational phase, construction of a 220 kV power line (initially charging to 110 kV) starting from Kattakada and passing through Balaramapuram and reaching the project site is progressing, which is expected to complete within 18 months.
- Rail Vikas Nigam Limited (RVNL) after detailed study and iteration has submitted a Detailed Project Report of the Connectivity for approval. The DPR and route alignment once finalised will be submitted with Ministry of Railway for their approval.
- Road Connectivity to the port site from the NH is the responsibility of AVPPL and its land acquisition is with GoK. Land required for the connectivity has already been acquired and handed over to AVPPL

revenue, from non-port operations after 7 years of operation and from port operations after 15 years of operations.

Another novel feature of this project is the Funded Works component. Funded works are those components of the project where the development will be undertaken by the private partner and the State Government will reimburse the cost of the same. The construction of breakwater (3.1 km), fish landing berth and buildings in fishing harbor and side development are the constituents of funded works of this project. The construction of

breakwaters for the project would be an engineering feat in the maritime history of the country.

The project will have a capacity of 10 lakhs TEU in the first phase which will be scaled up to 30 lakhs TEU. The construction period as per the Concession Agreement is 4 years. But it is expected that the project may be operational in a record time of less than 1,000 days. This Port will not only meet the transshipment needs of the country but also boost coastal shipping in the State. As per the EIRR study (2012) conducted by Deloitte, the project would generate an Economic IRR of 12.93 per cent.

Harbour Engineering Department

Harbour Engineering Department was formed in 1982 as a separate specialized service department for Fisheries and Ports. Government of India has empanelled Harbour Engineering Department of Kerala as a consultant in the coastal engineering field for the nation as a whole. It is unique to the State as no other State has a similar Department in India. The major functions of the Department are investigation, planning, design, evaluation, execution, operation, maintenance, management and related maritime engineering and technical works for the development schemes of the Fisheries and Port Department. During 2013-14 an amount of ₹850 lakhs, ₹930 lakhs in 2014-15, ₹1,370 lakh in 2015-16 and ₹1,370 lakh in 2016-17 were allotted to this Department.

Major Achievements for the Harbour Engineering department during 2015-16

- Construction of Eravipuram-Paravoor Coastal road is nearing completion
- Construction of office complex for the Superintending Engineer, Harbour Engineering North Circle and the Executive Engineer Kozhikode at Puthiyappa is completed
- Mobile lab and modern survey equipment for quality control in investigation sub division, Kozhikode has been completed
- Purchase of computers, printers, laptop, and LCD projectors are completed
- Rectification of seaward breakwater at Vizhinjam is completed
- Mathematical model study for tidal hydrodynamics and siltation aspects for existing Fishing Harbours at Neendakara & Thottapally were arranged and progressing.

Hydrographic Survey Wing

The Hydrographic Survey Wing was constituted in 1968 as a component of the Kerala State Port Department, with a view to meet the requirements of hydrographic investigation required for the development of Minor and Intermediate Ports in the State. The Wing conducts Pre & Post dredging Surveys and Pre & Post Monsoon surveys in order to give technical inputs for the Pre and Post dredging works and other port development works. It also undertakes Hydrographic Survey requirement of Harbour Engineering Department, Fisheries Department and other Government Organizations. The wing also furnishes Hydrographic data as required by the National Hydrographic office, Dehradun (Indian Navy) for updating their navigational chart.

The Chief Hydrographer is the head of the wing and is headquartered in Thiruvananthapuram. There are three regional offices; one each at Kollam, (Southern Range) and Beypore (Northern Range) and North Paravoor (Central Range). Kollam and Beypore offices are headed by Marine Surveyors and North Paravoor office is headed by the Assistant Marine Surveyor. There is an Assistant Marine Surveyor's office at Neendakara which assists the Marine Surveyor, Kollam.

Major Achievements of Hydrographic Survey Wing for 2015-16

The main surveys conducted during the year are Post dredging Hydrographic Survey for Thangassery basin, Munambam and Akkulam Veli Kayal, Ashtamudi Sea Plane survey, Tidal Observation at Neendakara, 20 km digitization Bathimetry survey at Kannur, Coastal area digitization survey at Kannur and Kasaragode, Hydrographic Survey related to the feasibility study of water transport in Pamba River, Survey for fixing coast line in Neendakara, Survey for Bouy marking at Vaikkam Thavanakkadavu, and Boat route survey Alappuzha Nedumudi, Alappuzha-Kavalam-Kidangara, Erappuzha-South Paravoor. The Hydrographic Survey Wing has purchased

a Modern Twin Screw Survey Launch, a heave compensator, 4 FRP dinghies, constructed a small mechanised boat, purchased a side scan sonar, a projector, and 5 desk top computers. Construction of office building at Munambam/Paravoor is almost completed, Construction of office building of Marine Surveyor at Kollam is completed, and Construction of Head quarters for Hydrographic Survey wing is in progress (first floor completed). Newly purchased Survey Launch (ML Jalagaveshini) was inaugurated on May 14, 2015. The 3rd batch of Basic Hydrographic Survey Course conducted in Kerala Institute of Hydrography and Advanced Studies was completed.

The Government of India has announced major policy initiatives and programmes for the overall development of ports in the country.

The Twelfth five year plan had focused on the development of port infrastructure facilities so as to handle all type of cargo and passenger transport. The amount earmarked during the 12th plan was higher by 36.07 per cent over the outlay in the 11th plan. Numerous schemes were delayed and many were dropped due to local protest. Delay in procedural formalities like issuance of AS and letter of credit has hindered the timely completion of the projects. In spite of the constraints, there was a substantial development in the port sector during the 12th plan period.. Lack of appropriate/geared vessels and skilled labour, Immigration Plant Quarantine Facilities, Cost Recovery Charges of Customs, high Import duty on equipment, high competition from road transportation, lack of end to end transportation services/ last mile connectivity and scarcity of return cargo are plaguing the sector. Appropriate

Box 5.7

Policy Initiatives- Government of India in 2015-16

- Green Port Initiatives including mitigation of environmental issues like
 - a) Waste/water/sewage/dust suppression plants
 - b) Energy generation, oil spills response facilities, prohibition of garbage disposal at sea
- New model concession agreement drafted for port sector in PPP projects
- The Shipbuilding Financial Assistance policy has been approved which aims to provide assistance to Indian shipyards for shipbuilding contracts signed between April 1, 2016 and March 31, 2026. The financial assistance will be 20 per cent of the contract price or the fair price, whichever is lower, as determined by international valuers, for any vessel built in India subsequent to its delivery. This policy is for a duration of ten years from the date stipulated in the guidelines.
- Policy for award of water front and associated land for port dependent industries in selected ports
- Sagarmala assistance for infrastructure, mechanisation, capital dredging, and breakwaters
- Sagarmala Development Company formed
- To promote Ro-Ro Services..Discount of 80 per cent on vessel related charges & coastal related charges on coastal transportation of vehicles.

government interventions and policy initiatives for the resolution of these issues in the upcoming 13th Five year plan remains critical for the full realisation of the potential of the sector

Inland Water Transport

Inland Water Transport (IWT) is a fuel efficient and environment friendly mode of transportation. IWT for passenger and freight movement involves lower operating costs and environmental pollution than road, rail or air options. It could relieve pressure on the other modes of transport. The global experience offers interesting comparisons. In several countries, IWT accounts for a substantial share of inland transportation as a per centage of the total: 32 per cent in Bangladesh, 20 per cent in Germany, 14 per cent in the U.S. and 9 per cent in China. In China, much of the increase has occurred in recent decades in tandem with its phenomenal industrial-agricultural growth. By contrast, in India only 0.4 per cent of domestic surface transport is accounted for by IWT compared with 68 per cent by road and 30 per cent by rail even though India is richly endowed with navigable waterways.

The Inland water transport in Kerala includes rivers and backwaters. This has played a major role in the transportation, right from the olden days. Inland waterways has got its own natural advantages compared to the railways and roadways. There are 41 rivers in Kerala that flows towards west clubbed with numerous backwaters. All these are part of the inland water transport system having a length of approx. 1895 km. It is the inland canals that connect the rivers from one to another. Important places which are commercially important are situated on the banks of these rivers. The West Coast Canal (WCC) system which has a length of about 560 kms starts from Kovalam in the south and extends up to Hosdurg in the north. Of this, the Kollam- Kottapuram stretch (168 km) is already declared as National Waterway-3 with effect from 1993. (NW-3) along with Champakkara (14 km) and Udyogamandal canals (23 km) is almost made fully functional. Recently Central Government has declared the extension of NW-3 between

Kottapuram and Kozhikode (160 km) as national waterway. Besides, four canals viz. Alappuzha-Changanassery (28 km) , Alappuzha- Kottayam-Athirampuzha (38 km) and Kottayam- Vaikom (42 km) have also been declared as national waterway by Central Government in April, 2016.

Government agencies engaged in the development of Inland Water Transport in the State are Coastal Shipping and Inland Navigation Department (CSIND), State Water Transport Department (SWTD) and Kerala Shipping and Inland Navigation Corporation Ltd. (KSINC). An amount of ₹13,339 lakh, ₹10,925 lakh, ₹14,342 lakh , ₹15,542 lakh and ₹15,734 lakh are earmarked as plan outlay for this sector during 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17 respectively.

State Water Transport Department

The State Water Transport Department caters to the traffic needs of the inhabitants of the waterlogged areas of the Districts of Alappuzha, Kottayam, Kollam, Ernakulam, Kannur and Kasargod. Even though the Department is a commercial Department, the functioning of this Department is like a service Department. Ever since 'Transportation' came under "Essential Service", this Department has taken shape of an Essential Service Department. The Department transports about 150 lakhs of passengers per annum using wooden/steel and fibre Glass Passenger Boats.

The State Water Transport Department was formed in the year 1968, with its Head Quarters (Directorate) in the District of Alappuzha. The Director is the Head of the Department. Initially, the service operation was only in the Districts of Alappuzha, Kottayam & Kollam. Later the functions and activities were extended to the Districts of Ernakulam, Kottayam (Changanacherry) and Kasargod by establishing an office for the Mechanical Engineer and three Regional Offices headed by Senior Superintendents. Now the Department has fourteen Stations Offices. Presently the department operates 51 schedules per day including tourism services. Approximately

40,000 people use their service every day. It operates vehicle carrier (Two-wheeler) boats in ferry services. The operating distance per day is 700 km approximately.

Major Achievements of State Water Transport Department for 2015-16

- Constructed a dry dock with modern equipment for speedy repair and maintenance of all kind of boats.
- Solar powered passenger boat, which is first in India, Catamaran Double hull and single hull vessels are the on-going projects.
- Started Parassini- Mattool, Ernakulam-Varappuzha and Vyttila –Kakkanad services.
- Alappuzha-Kumarakam-Kottayam and Vaikom-Ernakulam A/C tourist services are the new services which are to commence in the nearest future

The details of operational statistics of State Water Transport Department are shown in **Appendix 5.23**

Kerala Shipping and Inland Navigation Corporation Ltd.

The Corporation was formed in 1989 by the statutory amalgamation of Kerala Inland Navigation Corporation Ltd. (KINCO) and Kerala Shipping Corporation Limited (KSC), both Government of Kerala Companies. KSINC is the pioneer in inland navigation, coastal shipping and water based tourism and leisure activities in Kerala. It started mechanized cargo transport in the inland waterways back in 1980's and started oil bunkering in the 1990s. It also operated coastal shipping activities in 1999. Presently KSINC is engaged in cargo transportation, bunker supplies, tourism construction and repair of vessels.

KSINC is also operating a Slipway at Thoppumpady, Cochin, leased from the Cochin Port Trust since 1991. Apart from construction and repair of own vessels, the company is also executing construction and repair of vessels for various government agencies like State Water Transport Department, Port Department, Cochin Port Trust, Central Institute of Fisheries Department, Poompuhar Shipping corporation Ltd and other private agencies.

The Corporation at present has fleet strength of seven barges carrying various cargo, two tourist boats and two Jhankars. KSINC was the pioneer in transporting imported industrial fertilizer, raw materials such as Rock Phosphate, Sulphur and phosphoric acid to FACT, Cochin Division and Udyogmandal Division through waterways.

As the boat services became unviable the company has stopped passenger boats operation. However, as opportunities began to emerge with new developments, they are planning to enter the sector again. For this purpose 4 high speed boats for operation in Cochin is under construction. A 200 passenger capacity mini cruise ship is under construction for tourist operation. A 500MT cargo barge is under construction for bulk raw materials. The operational statistics of KSINC are shown in **Appendix 5.23**.

Coastal Shipping and Inland Navigation Department

The main State Inland Canal schemes in the State are implemented through this department. During 2015-16, under Inland Canal Schemes, deepening and side protection to the Tanoor-Kootayi Canal for ₹ 5.45 crore was completed. Development of TS canal from Eravipuram Kayal to Ashtamudi Kayal (Kollamthodu) is progressing. Development of feeder canal connecting Kannetti Kayal at Karunagapally to National Waterway was completed from the grants received from the 13th Finance Commission. Mechanical works including purchase of water hyacinth harvester, replacement

of locks, rejuvenation of dredgers for ₹ 2.88 crore are completed, formation of Vatakara Mahe canal in reach 2, 3 and 4 are progressing, renovation work of three reaches of PC canal in Malapuram district are completed. Improvements to feeder canals to NW3 and waterways are nearing completion in Kottayam and Kannur Districts and these projects have been undertaken using assistance from NABARD.

Inland Water Transport is one of the most environmental friendly modes of transport because of low fuel usage and ability to carry in bulk thereby reducing pollution and congestion. The main constraint in the development of water transport is the conflict of interest between traditional fisher folks and navigation operation, friction between Road-IWT operators, insufficient navigation lock/bridge clearances, lack of maintenance of

navigation system and bank protection, lack of modern inland craft terminals and cargo handling system, lack of end user incentivisation, delay in project execution and poor fund utilization. Keeping in mind the constraints facing IWT, and recognizing its potential for growth, there is a need for reduction in cost and time of transportation and enhancement of the safety and reliability of cargo. To achieve this, the thrust should be on the creation of infrastructure in the form of fairways, with adequate depth and width, besides the setting up of terminals. There is also a need to augment the IWT fleet, with suitable vessels. Private investment should be attracted for the development of this mode through suitable incentives. In short in order to make the sector more effective, there is a need to create adequate infrastructure facilities, simplify customs procedures and provide necessary fiscal incentives for the development of the sector.

Section 2 **ENERGY**

Energy plays a vital role in the socio-economic development and human welfare of a State. Efficient, reliable and competitively priced energy supply is a prerequisite for accelerating economic growth and human development. Apart from its contribution to economic development, it contributes significantly to revenue generation, employment, enhancing the quality of life and reducing poverty. Making available the required quantity of power of acceptable quality at affordable price is one among the prime responsibilities of Government. For any developing country, therefore the strategy for energy development is an integral part of the overall economic strategy.

More recently, the need to reduce greenhouse gas emissions, especially carbon dioxide has emerged as one of the significant challenges in the power sector. The imperative need for climate change mitigation measures is only set to grow in the years to come. To meet this challenge, the emphasis

on non-fossil fuel sources of energy, especially the renewables, wind and solar, has increased dramatically in the last few years.

Power Sector in India

In India, thermal energy is the predominant source of energy. It constitutes nearly 70 per cent of the total installed capacity of the country. Contribution of energy generation from different sources to the national grid, in per centage as on September 30, 2016 and the changes compared to the previous year is given in **Table 5.8**. The total installed capacity of power in India is 3, 06,358 MW. One major development during this period has been that renewable sources have emerged as the second largest energy source of the country leaving hydro to the third position. In the sector wise breakup of total energy generation, the contribution of State sector is 1,02,089.9 MW (33 per cent), Central sector is 76,312 MW (25 per

Table 5.8
All India Installed Capacity as on September 30, 2016

Fuel	Installed Capacity (MW) (as on 30/9/15)	Per centage of installed capacity	Installed Capacity(MW) (as on 30/9/16)	Per centage of installed capacity	Per cent change compared to previous year
(1)	(2)	(3)	(4)	(5)	(6)
Thermal	194200	69.68	213228.90	69.60	9.79
Hydro	42283	15.17	43112.43	14.07	1.96
Nuclear	5780	2.07	5780	1.89	-
Renewable Sources	36,471	13.08	44236.92	14.44	21.29
Total	278734	100.00	306358.25	100.00	9.91

Source: Figures in Column 2 and 4 are from Ministry of Power, Govt. of India and figures in Column 3, 5, 6 have been calculated.

cent) and Private sector is 1,27,956 MW (42 per cent).

It can be seen from the table that among the energy sources, renewable sources recorded the highest percentage growth (21.29 per cent) compared to its previous year. It may be noted however that in terms of actual energy supply, the increased contribution of renewables will be less since the plant load factors of various renewable sources are much lower than thermal or hydel.

Power Sector in Kerala

Kerala generates power from four sources - hydro power, thermal power, wind power and solar power. Of these, hydel and thermal power

generations account for the considerable majority whereas wind and solar power generations make only marginal additions. Monsoon is essential to sustain the hydropower base in the State and the shortage in rainfall usually creates a power crisis. Yet hydel energy is the most reliable and dependable source of energy in Kerala. In addition to these considerations, hydel is also not a source of greenhouse gas emissions and is effectively a renewable energy source, even if this is not fully reflected in the official classification of what renewables sources are.

The main challenges faced by the energy sector in the State are i) Inadequate capacity addition over the years leading to massive in house demand supply gap ii) Hydel power dominated supply scenario

Box 5.8 **Constitution of 19th Electric Power Survey Committee**

Government of India vide order CEA/PLG/DMLF/PS/2/19EPS/2014 dated June 11, 2015 has constituted the 19th Electric Power Survey Committee to forecast State/Union Territory wise, Region wise & All India Electricity demand on short, Medium and long term as a foremost planning exercise to base subsequent planning activities in the country. Terms of reference of the Committee include (1) To forecast the year wise electricity demand projection for each State, Union Territory, Region and All India in detail up to the end of 13th plan and (2) To project the perspective year wise electricity demand for 14th plan i.e. from 2021-22 to 2026-27 and the terminal years of 15th & 16th Five Year Plans i.e., year 2031-32 & 2036-37. The committee will submit its report in a period of 15 months.

Source: Central Electricity Authority, Ministry of Power, Govt. of India.

iii) Negligible share of renewable energy in the energy mix iv) Gap between energy conservation potential and its realization v) Limited presence of Independent Power Producers (IPP) and Co-Generating Stations (CGS) and vi) Limited penetration of star labeled products.

However on the positive side, the development of the power grid at the regional and national level has allowed States like Kerala to purchase a large proportion of its power from sources and producers outside the State. Thus in house capacity addition does not carry the same significance as before. The new challenge is to be able to find an adequate basket of sources, suitably distributed over time and hours of the day, with advance purchase agreements so that the net cost of purchased power is suitably optimised.

Despite public enthusiasm for renewable energy and the keen interest of government in the matter, renewable energy capacity installation and generation has fallen below the anticipated levels. This points to the need to overcome various constraints in the growth of renewable capacity as well as the need for a shift in emphasis in the development of renewable energy.

Capacity Addition during 2015-16

Total installed capacity of power in the State as on March 2016 is 2880.20 MW. Of which, hydel

contributed the major share of 2104.3 MW (73.06 per cent); while 718.46 MW was contributed by thermal projects, 43.27 MW from wind and 14.15 MW from Solar. **Figure 5.9** highlights the total installed capacity of Kerala from hydel, thermal and renewable sources.

The total additional capacity added from all sources during 2015-16 was 44.5 MW and scheme wise addition details are presented in **Table.5.9**.

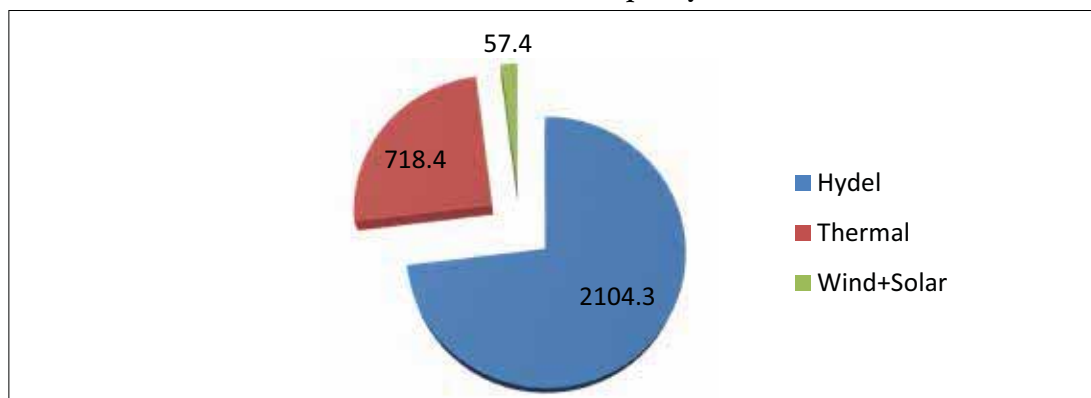
In the reference year 2015-16, 22 MW from Hydel source, 14.16 MW from Solar and 8.4 MW from wind was added to the installed capacity of the State although it is produced by different agencies.

Appendix 5.24 shows the details of energy source and its installed capacity during the last five years while sector wise details are shown in **Appendix 5.25**. Of the total installed capacity of 2880.20 MW during 2015-16, the contribution of State sector is 2209.2 MW (76.7 per cent), Central sector 359.6 MW (12.4 per cent) and Private sector 311.31 MW (10.8 per cent). The details of power availability during the last five years are shown in **Appendix 5.26**.

Kerala's Power Sector Projections

For power sector projections, the energy demand was presumed to be the basis with load factor being

Figure 5.9
Total Installed Capacity



Source: KSEBL

Table 5.9
Capacity Addition, 2015-16

Sl.No	Name of Power stations	Installed Capacity (MW)			Date of commissioning
		Hydel	Solar	Wind	
1	Chimmony HEP	2.5			22.05.2015
2	Adyanpara HEP	3.5			03.09.2015
3	Barapole HEP	15			29.02.2016
4	Peringalkuthu HEP (capacity enhancement)	1			29.5.2015
5	Solar Kanjikkode		1		20.08.2015
6	Solar Power Project at Chalayoor Colony, Agali		0.096		31.8.2015
7	Solar Power Project at Peringalkuthu Power House		0.05		10.9.2015
8	Solar Power Project at Banasurasagar, Wayanad		0.01		21.01.2016
9	Wind Power Project by M/s. Ahali Alternate Energy Pvt Ltd (IPP)			8.4	22.02.2016
10	Solar Power Project by M/s. CIAL (IPP)		13		18.08.2015
	Total	22	14.156	8.4	

Source: KSEBL.

used to convert the projected energy demand to peak MW demand. The projected energy demand was worked out by a combination of end use and time series analysis. This was the methodology used in the Electric Power Surveys (EPS) conducted by Central Electricity Authority (CEA) in conjunction with the State Electricity Boards. **Table 5.10** shows the Peak load and Energy Requirement projected in the 18th EPS and its variations with actuals.

From the **Table 5.10** it can be seen that Maximum Demand and Energy Requirement of the State has not reached to the figures projected in the 18th EPS and there is considerable variations when compared to the realized actual figures.

Performance of Power Sector Agencies

Power development activities in the State are carried out mainly through four agencies viz,

Kerala State Electricity Board Limited (KSEBL), Agency for Non-conventional Energy and Rural Technology (ANERT), Electrical Inspectorate and Energy Management Centre (EMC). The Outlay and Expenditure of these departments for the last two years of the 12th Plan are shown in **Table 5.11**.

Kerala State Electricity Board Limited (KSEBL)

KSEBL is one of the driving forces behind the economic development of the State of Kerala. It has been responsible for the generation, transmission and supply of electricity in the State, with particular mandate to provide electricity at affordable cost to the domestic as well as for agricultural purposes.

In order to comply with the provisions of Electricity Act 2003 and the Government of

Table 5.10
Electric Power Survey (EPS) Projections and realizations

Year	Peak Load (MW) projected as per 18th EPS	Maximum Demand realized (Per cent Variance)	Energy Requirement(MU) projected as per 18th EPS Requirement(MU) projected as per 18th EPS	Energy requirement realized (Per cent Variance)
(1)	(2)	(3)	(4)	(5)
2014-15	4157	3602 (-13.3 per cent)	23554	21914 (-6.9 per cent)
2015-16	4386	3860 (-11.9 per cent)	24975	22583 (-9.5 per cent)
2016-17	4669		26584	

Source: Figures in Col.2&4 are from Economic Review 2014 and Figures in Col. 3 and 5 are from KSEBL

Table 5.11
Outlay and Expenditure, ₹ in lakh

Sl. No	Department	Annual Plan 2015-16			Annual Plan 2016-17		
		Outlay	Expenditure	Per cent of Exp	Outlay	Expenditure*	Per cent of Exp
1	KSEBL	140942	105005.35	74.50	156412	68,378.42	43.72
2	ANERT	4280	2107.71	49.25	4388	2.41	0.05
3	MTSL	560	354.82	63.36	730	1.63	0.22
4	EMC	938	751.21	80.09	740	230.98	31.21
	Total	146720	108219.09	73.76	162270	68,613.44	42.28

Source: Plan space* Expenditure as on December 5, 2016

India directives, the Kerala Government notified a transfer scheme vide GO (M.S) No.37/2008/PD dated, 25.9.2008 through which all assets and liabilities of KSEB were vested with the State Government. The assets and liabilities were re-vested with fully owned government company, KSEB Limited under the Indian Companies Act, 1956 on 14th January 2011.

Generation

The electricity demand of the State is met through generation from KSEBL, Central Generating Stations (CGS), Independent Power Producers (IPPs) and Traders. Generation from KSEBL's own plants provide 30 per cent (6791.8 MU) of the

total energy requirement. Import from CGS, IPPs, UI and Traders provides the rest of the (15791.6 MU) total requirement 19378.55 MU of energy was sold (including sales outside the State) during the year 2015-16. The total additional capacity added from all sources during the year 2015-16 was 44.5 MW.

On-going Hydro Electric Projects in the State

The details of the important on-going Hydro Electric projects in the State with expected date of commissioning are given in **Table 5.12**.

Only one hydro electric project is expected to be

Table 5.12
Important ongoing Hydro Electric Projects in the State

Sl. No.	Name of Scheme	Installed Capacity (MW)	Expected month of commissioning
1	Thottiar HEP	40	December 2018
2	Sengulam Augmentation Scheme	85 MU	June 2018
3	Chathankottunada II SHEP	6	June 2018
4	Kakkayam SHEP	3	December 2017
5	Perumthenaruvi SHEP	6	November 2016
6	Peringalkuthu SHEP	24	March 2018
7	Bhoothathankettu SHEP	24	January 2018
8	Upper Kallar	2	August 2018

Source: KSEBL

completed in the year 2016-17. Apart from this, the following SPV projects (**Table.5.13**) of KSEBL were tendered and the works are in progress. The details of other hydroelectric schemes are given in **Appendix 5.27**.

Pattern of Power Consumption

Kerala's consumption is predominantly domestic, which account for 51 per cent of the total consumption. Revenue from Domestic consumers is only 36 per cent of the total revenue. The domestic category consumers showed a growth rate of 1.52 per cent from 89,87,947 in 2014-15 to 91,24,747 in 2015-16. Per capita consumption has increased by 3.86 per cent, that is, to 565 KWh in 2015-16 against 544kWh in 2014-15. During 2015-16, 19,325 MU of energy valued at ₹10,44,601 lakh

was sold (internally) showing an increase of 899 MU as compared to the previous year's 18,426 MU. Total consumption and per capita consumption of electricity in Kerala show a fluctuating pattern of growth. The details of consumption of electricity in Kerala for the years 2011-12 to 2015-16 is given in **Table 5.14** and the details of the pattern of power consumption and revenue collected during 2015-16 is furnished in **Appendix 5.28**.

Electrical Energy Consumption

In Kerala, electrical energy consumption has increased to 19,325.07 MU in 2015-16 from 18,426.27 MU during 2014-15 with a per cent increase of 4.87 per cent. Electrical Energy consumption in Kerala during 2011-12 to 2015-16 is depicted in **Figure 5.10**.

Box 5.9

13th Five Year Plan - Constitution of Working Group on Energy

In connection with the preparation of 13 th Five year plan for the State, Working Group on Energy was reconstituted with Sri. Paul Antony IAS, Additional Chief Secretary to Government, Department of Power and Sri Prabir Purkayastha, President Centre for Technology and Development, New Delhi/Chairperson Knowledge commons as Co-Chair persons. The committee comprises eminent experts from various areas related to Energy

Table 5.13
Solar projects of KSEBL under construction

Sl.No	Name of the project and Location	Capacity of the Scheme
1	SPV Roof top of Vidyuthi Bhavanam, Thiruvananthapuram.	0.03 MW
2	Ground mounted SPV at Ettuumanoor	1.0 MW
3	Roof top SPV over transmission buildings of KSEBL at 27 locations	0.91 MW
4	Roof top SPV over distribution buildings of KSEBL at 12 locations	0.46 MW
5	SPV project at Kollengode, Palakkad	1.0 MW
6	SPV project at Edayar	1.25 MW
7	SPV plant Thalakkulathur, Kozhikkode	0.65 MW
8	SPV plant at Pothencode	2.0 MW
9	SPV plant at Choolissery, Madakkathara	1.5 MW
10	Padinjarethara Dam top Wayanad	400 KW
11	Off-grid solar PV plant in 15 Hamlets of Palakkad District	131.5 KW

Source: KSEBL

Table 5.14
Consumption of Electricity in Kerala

Year	Total Consumption of Electricity (MU)	Growth Rate (per cent)	Per Capita Consumption of Electricity (kWh)	Growth Rate (per cent)
(1)	(2)	(3)	(4)	(5)
2011-12	15981		478	
2012-13	16838	5.36	501	4.8
2013-14	17454	3.65	516	2.9
2014-15	18426	5.5	544	5.4
2015-16	19325	4.8	565	3.8

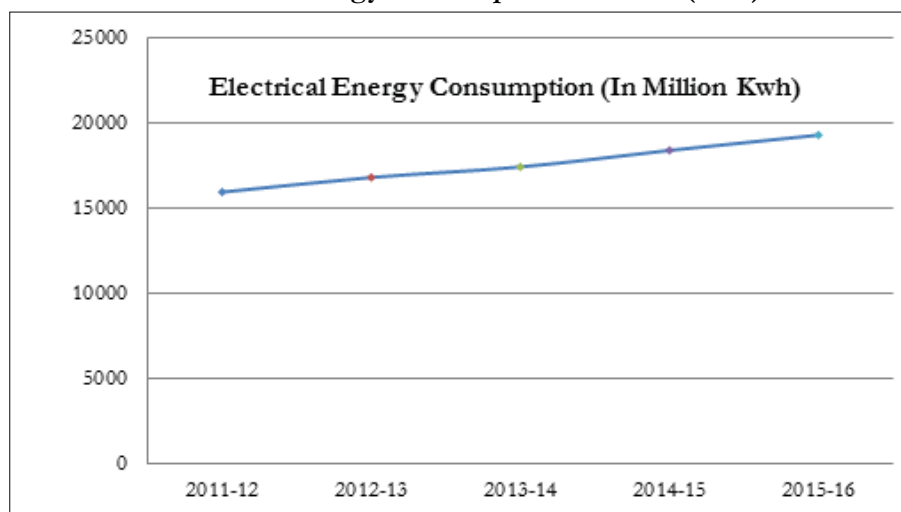
Source: Figures in column 2&4 are compiled from KSEBL.

Power Purchase Agreement (PPA)

As noted earlier, purchase of power is an important means by which Kerala's energy requirements are met. To this end, KSEB has entered into Power Purchase Agreements with various Central Generating Stations like NTPC and Neyveli Lignite Corporation (NLC) envisaged

for Southern Region. This includes purchase of 229 MW of power from nuclear power stations and 1244.6 MW of power from various thermal stations for the year 2015-16. As a measure to encourage non-conventional sources of energy, KSEBL has executed PPAs for purchase of power from Wind Energy Projects Agali (18.60 MW) & Ramakkalmedu (14.25MW) and from small Hydro

Figure 5.10
Electrical Energy Consumption in Kerala (Kwh)



Source: KSEBL

Projects Meenvallam (3MW), Iruttukkanam (3 MW), Karikkayam (10.5 MW), Ullunkal (7 MW) and Iruttukanam (4.5 MW). Power is also being purchased from co-generation plant of MPS steel (10MW) and RGCCPP, Kayamkulam (359MW). The capacity allocated from various stations for which the PPAs have been executed is given in **Appendix 5.29**.

Transmission

Transmission of electricity refers to the bulk transfer of power over a long distance at high voltage, generally of 110 kV and above. A good transmission system is necessary for effective distribution and to procure power from outside the State. In the Transmission sector, many planned works could not be taken up due to land acquisition and right of way related issues. In the year 2015-16 out of the target of 12 numbers of 110 kV substations, 8 substations was completed and in the case of 66 kV substations, 3 substation was completed against the target of 4. In the case of 33kV substation, 3 substation was completed while there is no progress in the case of 220kV sub stations. Kerala's transmission system consisting of substations and its connected lines are given in **Appendix 5.30** and **5.31**.

Strengthening of Interstate Transmission Network

The major achievement in the grid during 2015-16 was the commissioning of 400kV Mysore-Arecode line on October 14, 2015. With the addition of interstate feeder, the import capability has been enhanced from 1800MW to 2400MW. Medium Term Open Access for 297MW from CSPDCL (NVVN) has been scheduled from October 22, 2015 onwards. Long Term Open Access power from Maithon & DVC was operationalized in 2015-16 from December 17, 2015 and March 4, 2016 respectively.

Aggregate Technical and Commercial (AT & C) losses

As the T&D losses was not able to capture all the losses in the network, concept of Aggregate Technical and Commercial losses (AT&C) was introduced. AT&C loss captures Technical as well as commercial losses in the network and is a true indicator of total losses in the system. During 2015-16, AT&C loss has come down to 16.04 per cent while T&D loss has touched 14.37 per cent. The corresponding data of AT&C loss for the country is 23.04 per cent (2013-14).It means that KSEB

has made significant achievement in the field of reducing AT&C loss. From 2003-04 onwards, AT&C loss was considerably reduced by way of replacement of faulty meters, intensification of theft detection, installation of new substations and lines, up gradation and modernization of sub transmission and distribution network through Accelerated Power Development Reforms Programme (APDRP). The impact of AT & C loss reduction during the last five years is shown in **Appendix 5.32**. The decreasing trend of T & D loss during the last 5 years is depicted in **Figure.5.11**. Transmission and Distribution loss has come down marginally by 1.25 per cent from 2011-12 to 2015-16.

Distribution

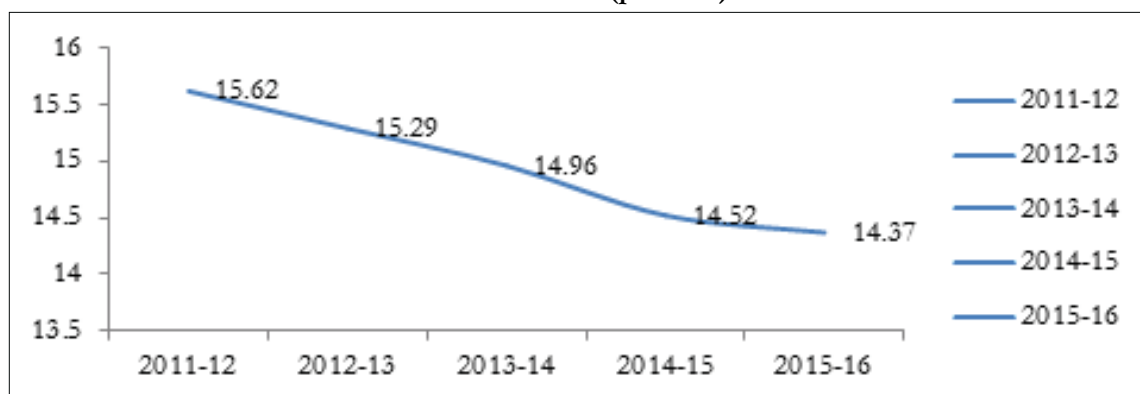
In the distribution segment, there are 57650 Kms of 11 kV lines, 285970 Kms of LT lines, 73460 nos. of distribution transformers. During the financial year 2015-16, 3, 81,247 service connections were given (against the target of 4,59,020), 2,022 kms of 11 kV lines (against the target of 2377kms) and 3312 kms of LT line (against the target of 4826 kms) were commissioned. The target and achievement of the distribution infrastructure during 2015-16 is given in **Appendix 5.33**.

Restructured Accelerated Power Development and Reform Programme (R-APDRP)

The R-APDRP programme is sponsored by Government of India and funded through Power Finance Corporation (PFC). Part-A of the programme is for building up a solid IT infrastructure like Data centre, and Wide Area Network for power utilities. The progress achieved in the implementation of the above project in KSEB is summarized as follows:

- 1. Data Centre:** -A full-fledged Data Centre has been setup in Vidyuthi Bhavanam, Thiruvananthapuram for hosting the software application of KSEB.
- 2. Wide Area Network:** As part of establishment of Wide Area Network, about 680 Electrical Sections were connected to the Data centre through MPLS VPN network. Steps are being taken to connect the remaining Electrical Sections along with Electrical Circles and Divisions to the Data Centre.
- 3. Centralised Customer Care Services (CCC):**

Figure 5.11
T & D Losses (per cent)



Source: KSEBL

Call Centre cum customer care centre has been set up in Vidyuthi Bhavanam, Thiruvananthapuram and is functioning since 2014. Around 28 call centre executives work in the above facility to attend complaints/queries from the consumers under various Electrical Sections all over Kerala. During 2015-16, the incoming calls were 2,95,023 and 2,48,069 complaints were registered and attended through CCC.

4. Web Self Services: This online portal provides facilities like e-payment, bill view, consumption pattern and meter reading history. 680 Electrical Sections are attached to the above website for providing consumer services.

Under R-APDRP Part-B, 43 schemes were sanctioned with an outlay of ₹1,078.3 cr. Works in 40 towns with a total outlay of ₹530.7 cr are being done departmentally. As on March 31, 2016, works amounting to ₹307.45 cr were completed. For the balance three schemes namely Thiruvananthapuram, Kozhikode & Kochi with a total outlay of ₹547.5 cr, work is being done on turnkey basis. As on March 31, 2016 works amounting to ₹258.793 Cr were completed.

Major Projects in the Pipeline

Solar Park

As per the renewable purchase obligation notified by Regulatory Commission, the solar power purchase obligation for distribution licensees is 0.25 per cent of the total energy consumption for the year 2010-11 which will increase every year to reach 3 per cent by 2022. KSEBL proposes to implement solar power plants at vacant lands available at the sites of existing substations, powerhouses and rooftops of Vidyuthi Bhavanams and also in various government buildings.

The KSEBL has executed Memorandum of Understanding with Solar Energy Corporation of India (SECI) to develop different types of Solar Power Projects within / outside the State of Kerala. The proposal for setting up of 200

MW Solar Park at Kasargode District had been approved in-principle by Ministry of New & Renewable Energy (MNRE) on March 19, 2015. Government of Kerala has accorded sanction for the incorporation of the Joint Venture Company namely Solar Power Park Developer (SPPD) between Solar Energy Corporation of India and KSEBL for the implementation of the project in Kerala. Out of the 200MW, implementation of 50MW had been awarded on October 29, 2015. The work has commenced.

Integrated Power Development Scheme (IPDS)

Integrated Power Development Scheme (IPDS) was launched by Ministry of Power, Government of India for improving the distribution infrastructure of urban areas. The scheme include construction of 33kV substations, construction of 11kV overhead lines and underground cables, construction of LT lines, installation of transformers, and replacement of electro mechanical meters with electronic meters. An amount of ₹592.07 crore has been sanctioned for the scheme. Out of this ₹32.82 crore has been received by KSEBL as central share.

Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY)

This is another program launched by Ministry of Power for reducing AT&C loss, providing electricity to all households and for ensuring 24x7 power supply. Government of India has sanctioned an amount of ₹485.37 Crore on January 5, 2016 for implementing DDUGJY in the 14 districts of Kerala. As per the scheme, 1,61,199 rural households are proposed to be electrified. Among these, 41,884 numbers belong to BPL category. Work include construction of 33kV Substations & 33kV lines, 11kV lines & LT lines, installation of distribution transformers, replacement of energy meters and effecting BPL service connections.

The erstwhile Rajiv Gandhi Grameen Vidyutikaran

Yojana (RGGVY) scheme for village electrification and providing electricity distribution infrastructure in the rural areas has been subsumed in the DDUGJY scheme. The details of the financial and physical progress of implementation of RGGVY are shown in the **Appendix 5.34**.

Demand Side Management activities

As part of Demand Side Management (DSM) activities, an Energy Audit Cell has been formed during the year 2007 with an objective of conducting Energy Audit and for taking steps as per provisions of the Energy Conservation Act, 2001. As part of this, workshops have been conducted in thermal and hydro stations for formulating action plan for energy audits and for promoting energy conservation activities. Anti-Power Theft Squad (APTS) was active during the last 5 years. The details of amount realized by means of APTS inspections are detailed in **Table 5.15**

During the year 2015-16, APTS wing conducted 34313 numbers of inspections across the State. 449 cases of power theft were detected from these inspections.

Achievements of KSEBL during 2015-16

- Commissioned three Hydro Electric projects during this period: a) Chimmony HEP (2.5MW) b) Barapole HEP(15MW) and c) Adyanpara HEP(3.5 MW)
- 8 No's of 110 kV, 3 No's of 66 kV and 3 No's of 33 kV substations were commissioned
- 381247 no. of new service connections was given & 2389 No's of new distribution transformers were installed
- 2022 km of new 11 kv lines were installed & 3312 km of new LT lines were commissioned
- 2294 km single phase lines converted to three phase lines
- 660735 No's of faulty meters were replaced
- Another important programme implemented by KSEBL during this period was Labha Prabha (3rd Season). The programme aims to implement Domestic Efficient Lighting Program (DELP) to promote energy conservation by replacing filament lamps and often used CFLs in households with energy efficient LED bulbs. It was targeted to provide two numbers of 9W LED bulb to 75 lakh domestic consumers during the year 2016-17. About 350MW reduction in the peak demand and 400 MU savings in energy consumption is anticipated in the State with the implementation of the scheme. Almost 25 lakhs LED lamps have been distributed among the domestic consumers.
- Under ESCOT (Energy Saving and Co-ordination Team), the project of improving energy efficiency in Drinking Water Scheme (Jaladhara/Jalanidhi) has been started. Energy Conservation activities in Ice plants are progressing.

Table 5.15
Anti-Power Theft Squad (APTS) Inspection

Particulars	2011-12	2015-16	Per cent Change
1	2	3	4
No of inspections	24090	34313	42.43
No. of cases Registered	336	449	33.63
Amount Assessed in (Rs.Crore)	17.39	31.33	80.16
Amount realized in (Rs.Crore)	11.35	18.69	64.66

Source: Figures in Column 2&3 are from KSEBL.

Agency for Non-conventional Energy and Rural Technology (ANERT)

Agency for Non-conventional Energy and Rural Technology (ANERT) is an autonomous body under the Power Department, Government of Kerala. ANERT is the nodal agency for the implementation and propagation of non-conventional sources of energy in the State. The programmes taken up by ANERT includes Solar photovoltaic programmes, Solar thermal programmes, Wind energy programmes, Biogas programmes, Improved Chulha programmes, Publicity and awareness programmes. The assistance from Ministry of New and Renewable Energy (MNRE), Government of India is also available for these schemes based on MNRE guidelines.

Achievements of ANERT during 2015-16

- ANERT has installed 4492 family type bio gas plants under state scheme 2015-16. Further 9 biogas plants above 6m³ were also installed. 4561 improved chulhas have been installed under 2015-16 programme (3676 nos. of improved chulha to SC/ST & Total Housing Scheme beneficiaries and 885 nos. under community models).
- During 2015-16, 5720 evacuated tube collector type solar water heating systems of collector area 8580 m² and 354 flat plate collector based solar water heating systems of solar collector area 708 m² have been installed and subsidy given to 7335 m² ETC (Evacuated Tube Collector) based systems and 490m² FPC (Flat Plate Collector) based systems.
- 4 major deposit works were executed by ANERT during this period. They are 1) 15 m³ bio gas plant at Mental Health Centre, Thiruvananthapuram 2) 10 m³ Bio gas plant

at SAP camp, Thiruvananthapuram 3) 15 m³ Bio gas plant at Govt. Engineering College, Kannur and 4) 6 m³ bio gas plant at Police Training College, Thiruvananthapuram.

- ANERT has conducted 9 training programmes on renewable energy sectors at different levels and 2 training and capacity building programmes for their own staff. 36 exhibitions were also sponsored by ANERT.

Energy Management Centre (EMC)

Energy Management Centre (EMC), Kerala is an autonomous body under the Department of Power, Government of Kerala, devoted to the improvement of energy efficiency in the State, promotion of energy conservation and encouraging development of technologies related to energy through research, training, demonstration programmes and awareness creation.

Achievements of Energy Management Centre during 2015-16

- Energy conservation efforts in the State saved 225.29 MU of electricity, 9610 MT of oil, and 209 MT of LPG. This includes 77 MU total electricity saving by industrial and commercial sector, savings in domestic sector was 147 MU, savings in demonstration projects was 0.124 MU and implementation of energy audit recommendation was 1.17 MU. Similarly, the savings in Oil and LPG by Industrial and commercial consumers were 9610 MT and 209 MT.
- EMC has won three prestigious awards i) Second Best State Designated Agency, by Ministry of Power, Govt. of India ii) For implementation of PICO hydel projects, from MNRE, Govt. of India iii) Certificate of Appreciation from UNDP/GEF/BEE for creating awareness on Energy Conservation Building Code (ECBC).

- As Part of Energy clinic programme, 372 women across 9 districts were given training. 680 Energy Clinics were conducted which covered about 10,200 consumers across the state. Energy Clinic (EC) is a novel programme of EMC for energy conservation activities in the domestic sector through women as agents of change for creating energy conservation awareness among women. Energy Clinic is the first of its kind at state level, promoting the value of contributions that women can make through energy conservation.
- 70 Schools selected in the State for making them energy efficient by providing energy efficient appliances like star rated ceiling fan, LED and T5 Tube.
- 300 awareness classes were taken by trained resource persons (RPs); 124 RPs trained and deputed by Energy Management Centre across the State.
- 31 Pico hydro installations have been completed at various hilly districts of Kerala.
- Inaugurated EMCs green building (~4000 Sq. M) for Office and Institute. 60 kW solar PV for powering the office. Used most modern energy efficient equipment for attaining carbon neutrality.

Department of Electrical Inspectorate

The motto of Meter Testing and Standards Laboratory (MTSL) is to provide testing and calibration of various types of electrical equipment. At present calibration facilities is available for voltage, current, resistance, frequency, power, power factor and energy. The testing facilities include pre-commissioning tests for protection relays and instrument transformers. Also pre-commissioning tests are conducted for power transformers, cables and circuit breakers. All calibrations and tests are conducted as per national and international standards. Enquiry of all electrical accidents occurring in the State and

forwarding the enquiry report to the Government and taking actions against responsible person/ authority are also done by this department.

Achievements of Electrical Inspectorate during 2015-16

The following are the major achievements of the Department for the year 2015-16.

- Up gradation of existing 10 Regional Labs as per NABL Standards: Process was initiated to upgrade the existing 10 Regional labs as per NABL (National Accreditation Board for testing and Calibration Laboratories) Standards.
- Procurement of Solar PV array Tester and Electronic Load Simulator: For the effective implementation of the Kerala Solar Energy Policy 2013, testing facilities are to be set up. As an initial step, Solar PV array Tester has been procured in all districts.
- Effective Implementation of Quality Control Order: For implementation of Quality Control Order, portable appliance testers are procured for all Districts. Inspection and awareness among trader were started. Through these initiatives, manufacture/storage/sale/distribution of the non-standard electrical gadgets is being controlled in the market.
- Strengthening of Electrical Consultancy wing of the Department of Electrical Inspectorate and Electrical Accident Prevention and Monitoring Cell: As part of it, the construction of additional floor in the existing building of MTSL, Thiruvananthapuram is under progress.

Kerala State Electricity Regulatory Commission (KSERC)

The Kerala State Electricity Regulatory Commission (KSERC), a statutory organization of quasi-judicial nature, was established in the year 2002. The Commission has been taking all efforts

to bring in an effective and efficient regulatory process in the Power Sector in the State.

The Commission held 31 hearings for the disposal of the petitions filed before it in 2016-17 (till September 30, 2016). In addition, the Commission held a number of routine internal meetings to transact business relating to administrative matters, framing and finalization of regulations, admission of petitions, Aggregate Revenue Requirement and Expected Revenue from Charges (ARR & ERC) of the licensees and other matter related to the day to day functioning of the Commission.

During the period (up to September 30, 2016), Commission has received 25 petitions including 6

petitions related to the ARR & ERC and truing up of the licensees. The Commission has issued orders on 24 petitions, including pending petitions. The following regulations were published during 2016-17.

- 1) KSERC (Terms and Conditions of Service of Officers and other Employees) amendment regulations 2016(Gazette No.1437 dated 12-08-2016)
- 2) KSERC (Grid Interactive Distributed Solar Energy System) Amendment Regulation 2016(Gazette No.836 dated 21-04-2016).

Box 5.10

Energy for cooking-Results of NFHS-3 and NSSO 68th Round

As nationwide discussion is going on regarding the coverage of Green Energy for house hold use, it is relevant from the Energy sector planning perspective to look at the results of two important nationwide surveys conducted in the country related to the household use of fuel for cooking. The results of survey conducted by National Family Health Survey (NFHS-3) in 2005-06 and the 68th round of National Sample Survey Office (NSSO) in 2011-12 are worth mentioning in this context. **Table 5.16** shows the result of NFHS-3 with respect to the use of cooking fuel for household uses in Rural and Urban areas of Kerala.

Table 5.16
Results of NFHS-3 2005-06 Cooking Fuel use

Cooking Fuel	Urban	Rural	Total	De jure Population
Electricity	0.2	0.1	0.1	0.2
LPG/Natural gas	38.9	20.2	26.4	24.3
Biogas	2.3	0.7	1.3	1.2
Kerosene	0.7	0.3	0.4	0.4
Charcoal	0.2	0.0	0.1	0.1
Wood	40.5	50.3	47.0	49.2
Straw/Shrubs/Grass	0.3	0.7	0.6	0.5
Agricultural crop waste	16.7	27.3	23.8	24.0
Other	0.3	0.3	0.3	0.1
Total	100.00	100.00	100.00	100.00

Source: NFHS-3, Kerala, 2005-06

Table 5.16 shows that majority of the households (72 per cent) use Solid fuels for cooking, mainly wood and agriculture Crop waste. Only 28 per cent of households use clean fuels (LPG, Natural Gas, Bio gas etc.) for cooking (42 per cent in urban areas and 21 per cent in rural areas).

Results of the NSSO 68th round –Energy for cooking.

Table 5.17 shows the results of NSSO 68th round (2011-12) in respect of Kerala regarding the primary source of Energy used for cooking in Rural and Urban areas.

Table 5.17
Rural and Urban Comparison Per 1000 distribution of households by primary source of Energy used for cooking- Kerala State

Region	Coke, Coal	Firewood & Chips	LPG	Dung cake	Kerosene	Other sources	No Cooking Arrangement	All
Rural	1	663	308	0	1	7	20	1000
Urban	0	363	554	0	6	5	72	1000

Source: NSS Report No.567: Energy Sources of Indian Households for cooking and lighting 2011-12.

Table 5.17 indicates that firewood and chips still continues to be the primary source of energy in rural areas in the State and LPG is found to be the primary source in urban areas. But it also important to note that nearly one third of the population in the urban area still uses Firewood and Chips as primary source of energy. It is also worth noting that among the major States, use of LPG for cooking in Rural Households was higher in Tamil Nadu (37.2 per cent) followed by Kerala (30.8 per cent) while in Urban areas dependence on Firewood & chips for cooking was highest in Odisha (36.5 per cent) followed by Kerala (36.3 per cent). The results of the Survey clearly indicate that most of the households in the State rely on Firewood and Chips for their Primary Source of Energy. Penetration of Green energy for household use is therefore relevant and the need of the day.

Notes on NFHS-3: In Kerala, the survey is based on a sample of 3,023 households that is representative at the State level and for Urban and Rural areas in the State. The results were published in December 2008.

Notes on NSSO 68th Round: Number of households surveyed for Type 1 & Type 2 schedule in Kerala under Central Sample for Rural and Urban areas constitutes 8921. The result related to Energy for cooking and Lighting was published in July 2015. Primary Source of Energy for cooking in NSSO data refers to the major source of energy used by the Household for cooking during the 30 days preceding the date of enquiry.

The challenge of meeting Kerala's energy requirements in the future is significant. Overcoming them however requires careful consideration of the shifts that have taken place over the last several years in this sector. The emergence of power trading through exchanges and the strengthening of the grid at national and regional levels has opened up possibilities that allow to overcome Kerala's

capacity addition constraints in new and innovative ways. This applies to both fossil-fuel based as well as non-fossil fuel and renewable energy sources. This new scenario also requires that urgent attention needs to be paid to the transmission and distribution network in terms of ensuring both adequate capacity and efficiency.

Section 3

URBAN INFRASTRUCTURE

Infrastructure development is recognized as an essential factor to sustain economic growth of the country. The quality, efficiency and productivity of the infrastructure affect the quality of life, health and general living conditions in the society. Considering the special features of urbanization and the geographical peculiarities of Kerala, the process of urbanisation in the State requires special attention while moulding various urban infrastructure development programmes. The scattered pattern of urbanisation and high density of population of the State are huge challenges for the creation of urban infrastructure. In the sphere of urban infrastructure there are schemes like waste management system, city sanitation plans, establishment and enhancement of public comfort facilities, implementation and improvement of sewerage schemes, storm water drainage schemes, effective parking policy and modern mechanised parking system, beautification of cities and creation of green cities and non motorized urban conveyance run departmentally through local bodies. Rapid urbanisation and intense commercial development in cities has necessitated the need for improved facilities of transport and housing. As far as transportation system in the State is considered, the daily transport demand is expected to grow from present 135 lakh trips to over 180 lakh passenger trips by 2025. Vizhinjam International Deepwater Multipurpose Seaport, Kochi Metro Rail Project and Monorail Project in Thiruvananthapuram are the ambitious projects of Government of Kerala, being developed in Kerala. Jawaharlal Nehru National Urban Renewal Mission has initiated effecting steps towards improving bus transportation. Housing is one of the fundamental necessities of society along with the provision of basic facilities like water supply, sanitation, transportation and power. Integrated Housing and Slum Development Programme (IHSDP), Basic Services to the Urban Poor

(BSUP), Rajeev Awas Yojana (RAY) and Pradhan Mantri Awas Yojana (PMAY) are the major Centrally Sponsored schemes in this regard. The major urban development programmes being implemented in the State are discussed below.

KERALA SUSTAINABLE URBAN DEVELOPMENT PROJECT (KSUDP)

The externally aided project funded by the Asian Development Bank (ADB) dealt with the improvement, upgradation and expansion of existing urban infrastructure facilities and basic urban environmental services in five Municipal Corporations of the State viz; Thiruvananthapuram, Kollam, Kochi, Thrissur and Kozhikode. The loan period of ADB has ended on June 30, 2016. Altogether 11 sewerage packages and septage treatment plant in Kollam have to be completed. During 2015-16 an amount of ₹140 crore was budgeted and the expenditure incurred was ₹22.94 crore. Status of major projects included under KSUDP are given in **Appendix 5.35**. In addition to the above the other projects being undertaken through KSUDP are establishment of package septage treatment plants, nagarajothi project and Urban 2020 scheme.

CAPITAL REGION DEVELOPMENT PROJECT

The Capital Region Development Project (CRDP) was introduced in 2002 to improve the quality of life of people in the capital city by strengthening and improving the critical infrastructures like roads, water supply, solid waste management, surface water drainage, city beautification and bus terminals. The activities pertaining to CRDP Phase

I have been implemented by Kerala Sustainable Urban Development Project (KSUDP) through various agencies like Kerala Water Authority, TRIDA, Kerala Road Fund Board and KSRTC.

In 2012, second phase of the planning process under CRDP-II was conceived to kick start the integrated development process for entire capital region including the suburbs. The identified projects are classified into two groups viz. improvement of public mobility & road safety and economic development. This includes improvement of city roads, pedestrian safety infrastructure, junction improvement schemes, parking facilities and parking policy. During 2015-16 an amount of ₹7.79 crore was utilised for different activities under CRDP. Details of projects undertaken by Capital Region Development Programme are given in **Appendix.5.36**.

JAWAHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION (JnNURM)

Government of India adopted a mission mode approach for implementation of urban infrastructure improvement programme in a time bound manner in selected cities through the Jawaharlal Nehru National Urban Renewal Mission launched in 2005. The two cities selected as Mission Cities from the State under the 1st phase of JnNURM were Thiruvananthapuram and Kochi. However, only the bus projects of Thiruvananthapuram and Kochi were completed before the end of the mission period on March 31, 2014. Three projects were dropped and one was foreclosed due to public protest. The remaining projects are included in the spillover work.

On expiry of the mission period of the 1st phase of JnNURM on March 31, 2014, the Ministry of Urban Development, Government of India announced sanction of new projects under the Transition Phase for a period of 3 years from April 1, 2014 onwards. Under the transition

phase, sanction was accorded for the procurement of 400 buses for improving urban transportation in the various cities of the State excluding Thiruvananthapuram and Kochi. Under the transition phase, 110 AC Low Floor Buses and 100 Non-AC Low Floor Buses were procured in Kozhikode, Kalpetta, Malappuram, Kottayam, Thodupuzha, Pathanamthitta, Kannur, Kasaragod, Thrissur, Palakkad, Kollam and Alappuzha and the supply of remaining buses is under process. The expenditure incurred for the year 2015-16 was ₹ 73.02 crore. Details of projects approved for implementation under JnNURM are given in **Appendix 5.37**.

The Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) is a sub-scheme of JnNURM launched by Government of India during the year 2005-06 to improve the infrastructure in small and medium towns in the country in a planned manner. At present 5 water supply schemes and 2 solid waste management schemes are progressing as spillover projects. The cumulative expenditure reported as on October 31, 2016 is ₹442.26 crore. In the transition phase of UIDSSMT for a period of 3 years with effect from April 1, 2014, six projects worth ₹184.47 crore were sanctioned and one project for solid waste management scheme having an approved project cost of ₹14.66 crore was released by Government of India. Details of projects approved under UIDSSMT are given in **Appendix 5.38**.

ATAL MISSION FOR REJUVENATION AND URBAN TRANSFORMATION (AMRUT)

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is one of the new initiatives of Ministry of Urban Development launched in June 2015. Project period of AMRUT is five years from the financial year 2015-16 to 2019-20. Nine towns have been identified from the State for funding under AMRUT. The list includes 6 municipal Corporations and Alappuzha,

Palakkad & Guruvayoor Municipalities. The scheme aims at providing basic services to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged. The total number of projects approved is 221.

SMART CITIES MISSION (SCM)

The Smart Cities Mission is a flagship programme of Government of India covering 100 cities for a duration of five years (2015-16 to 2019-20). In the State, Kochi city has been selected and Government of India has released ₹2 crore as additional office expenses for the preparation of smart city plan prepared for Kochi during 2015-16. The Kochi smart city has prioritised projects under urban mobility, tourism, urban transport and smart solutions as priority sectors. Total project cost of ₹ 2076 crore was submitted and has received approval from Government of India. Thiruvananthapuram city has initiated the process to prepare Smart City Proposal (SCP) to participate in the 2nd phase of Smart Cities Challenge.

BASIC SERVICES TO THE URBAN POOR (BSUP)

Basic Services to the Urban Poor (BSUP) is a sub-component of Jawaharlal Nehru National Urban Renewal Mission which is implemented through Kudumbashree. The duration of the mission is seven years beginning from 2005-06. Only two corporations in the state, Thiruvananthapuram and Kochi come under the scheme. Under this scheme, out of 22257 houses sanctioned, construction of 18347 has commenced and 16227 houses have been completed till October 31, 2016. The total expenditure incurred for the project so far is ₹226.13 crore. Details of projects sanctioned under BSUP for the two Corporations are given in **Appendix 5.39**. The physical achievements of the scheme are summarized in **Appendix 5.40**.

RAJIV AWAS YOJANA

Rajiv Awas Yojana (RAY), a flagship project of Ministry of Housing and Urban Poverty Alleviation,

launched by Hon'ble President of India on June, 2010 envisages a "Slum Free India" with inclusive and equitable cities in which every citizen has access to basic civic infrastructure, social amenities and decent shelter. All the 6 corporations in the State were selected under RAY. 811 slums in 6 corporations were covered under the scheme. The project aims at tackling the issues of slums in a definitive manner. Total project cost approved in 5 ULBs is ₹160.75 crore. An amount of ₹3626 lakh has been released (₹2892 lakh as Central Share and ₹ 734 lakh as State Share) to SLNA, out of which ₹3508 lakh has been transferred to the concerned urban local bodies which are the implementing agencies. During 2015-16 out of 2159 dwelling units sanctioned, construction of 143 units was started and 18 completed. Expenditure incurred till date is ₹2223.58 lakh and the expenditure during 2015-16 is ₹ 124 lakh.

As of now, out of total sanctioned 2159 houses, construction of 94 new houses has been completed and 438 are in progress. In June 2015 Government of India has subsumed Rajiv Awas Yojana project with "Housing for All" by 2022 scheme. Projects sanctioned under RAY are given in **Appendix 5.41**.

PRADHAN MANTRI AWAS YOJANA (PMAY)

The scheme was officially launched in the State by Hon'ble Chief Minister on December 8, 2015 and is being implemented in all 93 Urban Local Government institutions. The mission seeks to address the housing requirement of urban poor including slum dwellers with the mandate of providing housing for all by 2022. The mission will support construction of houses upto 30 square meter carpet area. Detailed project reports for beneficiary led construction (New house-14350 and enhancement-917) of 11 Urban Local Bodies, viz Pattananhitta, Thrissur, Palakkad, Malappuram, Kannur, Kasaragod, Alappuzha, Thodupuzha, Kozhikode, Kollam and Kalpetta have been approved by the Central Sanctioning and Monitoring Committee Meeting. DPR preparation activities are ongoing in the other ULBs.

INTEGRATED HOUSING AND SLUM DEVELOPMENT PROGRAMME (IHSDP)

Integrated Housing and Slums Development Programme (IHSDP), launched during 2006-07, aims at the holistic development of slums in urban areas. The basic objective of the scheme is to strive for holistic slum development with a healthy environment by providing adequate shelter and basic infrastructure facilities to the slum dwellers of the identified urban areas. IHSDP is to be implemented in all towns and cities identified as per 2001 Census cities, except cities/towns covered under Jawaharlal Nehru National Urban Renewal Mission (Thiruvananthapuram and Kochi Corporations). Under this scheme, out of 14211 houses sanctioned, construction of 9184 have been started and 7427 completed till October 31, 2016. The total expenditure incurred for the project so far is ₹164.56 crore. During 2015-16, Government of India informed that the project will be discontinued from March 31, 2015 onwards. However, later the project completion period was extended up to March 31, 2017. The achievements of the scheme are summarized in **Appendix 5.42**. Details of projects approved by Government of India and fund released to 53 urban local bodies are given in **Appendix 5.43**.

NATIONAL URBAN LIVELIHOOD MISSION

The Government of India has launched the National Urban Livelihood Mission (NULM) by replacing the previous scheme SJSRY for reducing poverty and vulnerability of the urban poor. The mission aims to reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self employment and skilled wage employment opportunities. So far 2960 SHGs have been funded under this programme. During 2015-16 an amount of ₹459.11 lakh has been expended for the scheme. The physical and financial achievement and the district wise thrift

and credit operation under NULM as on October 31, 2016 are shown in **Appendix 5.44, 5.45** and **5.46** respectively.

AYYANKALI URBAN EMPLOYMENT GUARANTEE SCHEME

Ayyankali Urban Employment Guarantee Scheme was started during 2009-10. It is intended to address the unemployment and under employment problems in the urban society. The objective of the scheme is to enhance livelihood security in urban areas by providing at least 100 days of guaranteed wage employment to every household whose adult members are willing to do unskilled manual labour. The scheme is structured in the pattern of Mahatma Gandhi National Rural Employment Guarantee Scheme. The present wage rate is ₹240. During the year 2015-16, an amount of ₹1500 lakh was provided in the budget and ₹1012.17 lakh has been expended for the scheme and it has created 5.06 lakh work days.

PREPARING MASTER PLANS AND DETAILED TOWN PLANS

The Scheme “Preparing Master Plans and Detailed Town plans” was introduced in the year 2009-10 which aims at preparing development plans and detailed town planning schemes for the planned development of the urban areas in the State. Development Plans for 32 towns were started in the first phase, 31 towns in the second phase and 26 towns in the third phase. In addition, technical works of Master Plan for Kovalam Vizhinjam area and Medical College area have been completed under Phase II programme. Technical works of all master plans included in the first phase and 13 master plans of the second phase have been completed and the remaining is under various stages of preparation. Master plans prepared under three phases is given in **Appendix.5.47**.

DEVELOPMENT AUTHORITIES AND URBAN INFRASTRUCTURE

The objective of the Development Authorities is to achieve sustainable and comprehensive development in the area which comes under these authorities. Major activities undertaken by the Development Authorities are construction of shopping complexes, bus stand and terminals, parking plazas, development of plots for construction of buildings and widening of

important roads in the cities. There are five Development Authorities viz. Thirvananthapuram Development Authority (TRIDA), Greater Cochin Development Authority (GCDA), Thrissur Development Authority, Calicut Development Authority and Kollam Development Authority. During 2015-16 an amount of ₹45 crore was allocated to these authorities and the expenditure incurred was ₹ 15.94 crore. During 2016-17 an amount of ₹55 crore was earmarked to these authorities. Major projects undertaken by TRIDA are given in **Appendix 5.48**.

Section 4 COMMUNICATION INFRASTRUCTURE

Postal Network of Kerala

Indian postal system is the largest in the World with a network of about 1.55 lakh Post Offices, of which 1.39 lakh (89.78 per cent) are in rural areas and 15,826 (10.22 per cent) in urban areas of the country. The postal network consists of four categories of post offices namely, Head Post Offices, Sub Post Offices, Extra Departmental Sub Post Offices and Extra Departmental Branch Post Offices.

Kerala Postal circle includes the entire State of Kerala, the Union Territory of Lakshadweep and Mahe under the Union Territory of Puducherry. Kerala is the only postal circle where every village has at least one post office. As on September 30,

2016, there are 5,066 post offices in the circle, of which 1,457 are Departmental post offices and 3,558 Extra Departmental post offices. On an average each post office in the State serves an area of 7.69 Sq.km and a population of 6,609 as against the national average of 21.21 sq.km and a population of 7,175 people. In total, 83 per

cent of the post offices are located in rural areas. Major Activities of Kerala Postal Circle is given in **Box 5.11**.

As a result of these initiatives from the part of Indian post, Post Offices in Kerala has improved its functioning as the hub for every citizen. Every citizen now has access to this hub which is close to his/her doorstep. Details are shown in **Appendices 5.49, 5.50, 5.51 and 5.52**.

Telecommunications

Telecommunication is one of the prime support services needed for rapid growth and modernisation of the economy. The telecommunication service in India has improved significantly since independence. Kerala Telecom circles serve the whole of Kerala State, the Union Territory of Lakshadweep and part of Union Territory of Puducherry (Mahe). The circle has 11 major Secondary Switching Areas (SSAs) and one minor SSA of Lakshadweep. The status of telecom sector in Kerala is given in **Box 5.12**. Districtwise details of telephone network during 2015-16 are given in **Appendix 5.53**.

Box 5.11**Major Activities of Kerala Postal Circle during 2016-17(up to September 30, 2016)**

- All the 1508 departmental post offices in the Circle are computerised and provided e-MO services
- Introduction of the facility to register the complaints on the web and track the progress till it is finally settled
- New e-based and value added services introduced
- The track and trace facility available for registered, insured, speed post, e-MO and foreign accountable articles continued and is availed through the www.indiapost.gov.in and enables the customers to track their articles right from the time of booking to the time of delivery
- Introduction of International Speed Post or EMS - a facility available from India to 99 countries
- World Net Express Service (WNX) is introduced to connect 220 countries
- Two new parcel products of India “Express Parcel” and “Business Parcel” introduced
- Introduction of Logistics Post Air to the customers for getting end to end services on the logistics value for faster transmission /delivery of their consignments
- 1498 Post Offices (51 HOs and 1447 SOs) in the State have been shifted to the Core Banking System
- Introduction of ‘My Stamp’ – any individual can get their personalized stamps with their photograph on it.
- Implementation of Public Fund Monitoring System (PFMS) or NeFMS platform for effective wage disbursement under MGNREGS
- Tie up with Kerala State Government for Corporate e-post
 - i. Tie up with Commissioner for Entrance Exam for selling Application forms under Retail post
 - ii. Tie up with Director, LBS Centre for Science & Technology
 - iii. Kerala Water Authority under e-payment
 - iv. BSNL under e-payment
 - v. Tie up with Local Self Government for tax collection
 - vi. Tie up with Kerala Books and Publication Society (KBPS), for distribution of text books to schools throughout the State for the academic year 2015-16
 - vii. Sale of Penta Mobile through Post Offices (e-payment)

Box 5.12**Status of Telecom Sector in Kerala as on March 31, 2016**

- No. of Telephone Exchanges : 1321
- Equipped Capacity : 3585324
- Working Connections : 2165925
- Average No. of Telephone per Sq.Km : 66.77
- Telephone Density : 70.235 per '000 population

Section 5

INFORMATION TECHNOLOGY

Information and Communication Technology sector has been playing an important role in the development of the State, since the 9th Five Year Plan. Realising its potential and critical importance, the State Government has made earnest efforts to create a sound and world class infrastructure for the sector and to transform the State into a digital one. This has enabled the State to be at the forefront in implementing Information and Communication Technology projects, e-governance initiatives, e-literacy programmes and in the creation of basic IT infrastructure facilities. Currently the State has nationally the highest mobile penetration of about 32 million connections, the highest internet penetration covering about 20 per cent of households through broad band and another 15 per cent through mobile, and is making significant strides in transforming the State into a knowledge powered economy. Kerala is one of the significant IT destinations in India and ranks 8th in the export by STPI registered IT and ITeS units. Moreover, Kerala is fast emerging as a digital State in India.

Government of Kerala acknowledges the critical importance of ICT in creating and maintaining economic progress and revised the Information Technology Policy for the State in 2012. The vision of the State's policy is to "plan, develop, and market the State as the most preferred IT/ITEs investment/business destination in India". The State Government supports the sector by way of single window clearance, developing Kerala "IT Brand", incentivising investment and making direct investment.

The Indian IT Industry has had an impressive track record in terms of revenue growth and export contribution over the past few decades. It has

also contributed in generating employment. While India continues to be a global leader in IT services, it has not had much success in the IT products segment and with traditional export markets stagnating, the Indian IT Industry is in the look out for new markets. New markets are expected to emerge in lower and lower-middle countries such as India, other countries in South Asia and Asia-Pacific and Africa, which have previously been on the periphery of ICT consumption.

Kerala State Information Technology Mission (KSITM), Indian Institute for Information Technology and Management – Kerala (IIITM-K), Technopark, Infopark, Cyberpark, Kerala State Information Technology Infrastructure Ltd. (KSITIL), International Centre for Free and Open Source Software (ICFOSS) and Kerala Start-up Mission are the major agencies involved in the implementation of Information Technology programmes in the State under the Information Technology Department.

The State Government envisages expansion of IT industry in the State in a manner that benefits all the districts in the State. A hub and spoke model has been planned. Thiruvananthapuram (Techno Park), Kochi (Info Park) and Kozhikode (Cyber Park) will act as hubs and the remaining districts will be the spokes.

Govt of Kerala provided an amount of ₹482.87 crore during 2016-17 for the development of core IT infrastructure, ITeS, e-governance activities and incentivising investment in the sector, which is 28.91 per cent higher than the previous year. The details of Plan Outlay and Expenditure are given in **Table 5.18**.

Table 5.18
Plan Outlay and Expenditure, ₹ in lakh

Sl. No.	Agency	Annual Plan 2014-15		Annual Plan 2015-16		Annual Plan 2016-17
		Outlay	Expenditure	Outlay	Expenditure	Outlay
1	KSITM	9192	3054.00	9706	3237.5	13407
2	IIITM-K & ICFOSS	1800	485	2050	1956.77	2270
3	Technopark,	6845	5707	6900	4901.57	7600
	Infopark	5500	4870	5600	9273.95	6161
	Cyberpark	1100	800	1100	2451.52	2568
4	KSITIL	2600	4320	4000	1273.89	5780
5	Knowledge City	1	0.00	1	0.00	1
6	Technology Innovation Zone	2500	1500.00	5000	4951.83	10000
7	Youth Entrepreneurship	1795	762.63	3000	0.00	
8	Others		112.00	100	0.00	1
9	IIIT-Kerala, PALA					500
	Total	31333	21610.63	37457	28047.03	48287

Source: State Planning Board

Kerala State Information Technology Mission (KSITM)

Kerala State IT Mission is a society registered under the Travancore Cochin Literary Scientific & Charitable Societies Registration Act. It is an autonomous nodal IT implementation agency of the Department of Information Technology, Government of Kerala which provides managerial and technical support to various initiatives of the Department.

The major objectives of KSITM are interfacing between the Government and the industry, interacting with potential investors, strengthening

the IT/ITeS industry base, holding promotional campaigns in the State, ICT dissemination to bridge the digital divide, e-governance, developing human resources for IT and ITeS and advising the Government on policy matters. As a result of these proactive policies and projects, Kerala achieved major progress in the transformational journey towards “Digital State”. Some of the major achievements are shown below.

- Kerala emerged as the first digital State in the country, announced by the Hon’ble President of India in February 2016.
- Govt. of India commissioned India’s first Hi-speed rural Broadband Network in Idukki.

- First State in the country to issue over 2.4 crore e-certificates.
- 100 per cent of the Grama Panchayats are connected through optical fibre network
- Over 2600 Akshaya Centres (CSCs) functioning in the State.
- Over 3.44 crore Aadhaar enrolments.
- Adoption of Aadhaar based identification and Direct Benefit Transfer services
- Established CERT-K in 2010 to improve State's cyber security posture
- 100 per cent compliance to civil registrations on time
- Over 9000 ATMs across the State enabling ease of access to Banking
- High tele-density of 99 per cent, with a rapid increase in the usage of smart phones.
- High internet penetration of 40.18 per cent.
- Over 30,000 km OFC laid across the State.

E-governance Programmes of KSITM

In the present world, e-governance is an important tool for good governance by achieving transparency, reliability, and accountability in rendering services. Kerala has been a forerunner in e-governance and mobile governance by promoting and developing core infrastructure and e-literacy programmes.

Box 5.13 Major Programmes of KSITM

- Construction of Centre for e-Governance
- Computer Emergency Response Team-Kerala(CERT Kerala)
- Citizens Call Centre
- Department WAN
- E-district
- e-Government Procurement (e-GP)
- Establishment of Virtual IT cadre
- E-Office
- Friends
- Information and Data Exchange Advanced System(IDEAS)
- Investment Promotion Management Cell(IPMC)
- IPV4 to IPV6 Migration
- Kerala e-Governance Awards
- Kerala State Spatial Data Infrastructure (KSDI)
- Kerala State Wide Area Network (KSWAN)
- Mobile Governance
- PG Diploma in e-governance projects
- Secretariat Record Digitization
- Secretariat Wide Area Network (SECWAN)
- Service Plus
- SPARK
- State Data Centre- Co Bank Tower
- Video Conferencing
- Digital Literacy Programme
- Public Wi-Fi project
- NeGAP

Source: KSITM

E-governance initiatives under KSITM include e-office, Service plus, FRIENDS, Akshaya, SEMT, Citizen Call Centre, SPARK and e-procurement. E-Office aims to conduct office procedures electronically thereby transforming government offices to paperless offices and bringing out the benefits of digital communication that ultimately leads to faster decision making. So far it has been implemented in 39 out of 42 departments in Secretariat and outside Secretariat 21 departments either fully or partially. The Government has decided to roll out e-Office to Districts and Directorates.

Service Plus is a software designed and developed by NIC, under Ministry of IT, to configure and launch e-services quickly using its flexible workflow and provision for dynamic design of application forms.

Core infrastructure for e-governance in the State consists of Kerala State Wide Area Network (KSWAN), Secretariat Wide Area Network (SECWAN), State Data Centre and State Service Delivery Gate way. KSWAN is the backbone of the State Information Infrastructure (SII), connecting 14 districts and 152 Block Panchayats of the State. The network will also connect 3500 offices of Government Departments through Wireless and a larger number through leased lines and LAN.

Akshaya is an innovative project launched on November 18, 2002 to bridge the digital divide and it works on public private participation mode. In the initial stage the objective of the project was to make at least one person in a family e-literate. Gradually focus of Akshaya shifted to citizen service centric mode. At present, 2628 Akshaya Centres are functioning across the State giving employment to 7476 persons. The total turnover of Akshaya Centres in the State was ₹ 41.74 crore in 2014-15 which increased to ₹ 53.08 crore in 2015-16. Total turnover of Akshaya Centres as on October 31, 2016 was ₹ 39.73 crore. The details of Akshaya Centres in Kerala are furnished in **Appendix 5.54**.

Awards and Accolades

- SKOCH Award 2016:- KSITM won the prestigious SKOCH 2016 National Award
- Platinum Award:- KSITM won Platinum Award for Digital Empowerment Campaign Project
- Order of Merit Award:- KSITM won Order of Merit Award for e-Voter Mobile Application, Akshaya Citizen Services and Kiosk Banking of Akshaya
- IT Innovation Award 2016:-The e-voter mobile application by KSITM has bagged the NASSCOM-Kerala Management Association's best IT Innovation Award 2016
- E-India Award 2016:- For digital literacy through Student Police Cadets

Indian Institute of Information Technology and Management – Kerala (IIITM-K)

The Indian Institute of Information Technology and Management – Kerala was set up in the year 2000 as a premier institution of excellence in Science, Technology and Management. It emphasises quality education to students and develops professionals and leaders of high calibre of entrepreneurship and social responsibility. The institute focuses on education, research, development and training in applied information technology and management. The academic programmes of IITM-K are shown in **Box 5.14**.

The MPhil and MSc degree are awarded by Cochin University of Science and Technology (CUSAT) and post graduate diploma by Directorate of Technical Education, Government of Kerala. The major projects completed are biometric embedded system security and internet of embedded things, software engineering and software project management unit and library and information

Box 5.14**Academic Programs currently offered at IIITM-K**

- M.Phil in Ecological Informatics
- M.Phil in Computational Science
- Master of Science in Information Technology
- Master of Science in Geo-Informatics
- Master of Science in Computational Science
- Master of Science in Computer Science with specialisation in Cyber Security
- Post Graduate Diploma in e-Governance
- Doctoral Research

service. Construction of a full-fledged residential academic campus for IIITM-K as per UGC/AICTE norms is in progress.

Technopark

Electronics Technology Parks – Kerala, popularly known as Techno Park was setup under Government of Kerala as an autonomous body to create global standard infrastructure and to provide total support required for development of high technology industries. It was formally dedicated to the nation on November 18, 1995. Since then Technopark has been growing steadily both in size and employees strength. With the commissioning of Phase III, Technopark will become the largest IT Parks in India with 330 acres of land, 9.3 million sq.ft built up area and 52,000 IT/ITeS professionals. Technopark through its companies, currently provide direct employment to 52,000 IT employees and offers an indirect employment for another 1,50,000 numbers. Technopark has

charted out an ambitious target of creating 56,000 new jobs by 2020. Details of physical achievements and growth of Technopark are given in **Appendix 5.55** and **5.56**.

Growth of Built up Space in Technopark

The built up space in the Technopark has increased from 46.5 lakh sq.ft in 2010-11 to 72 lakh sq feet in 2015-16. The growth of built up space in the Technopark is shown in **Figure 5.12**

Companies in Technopark

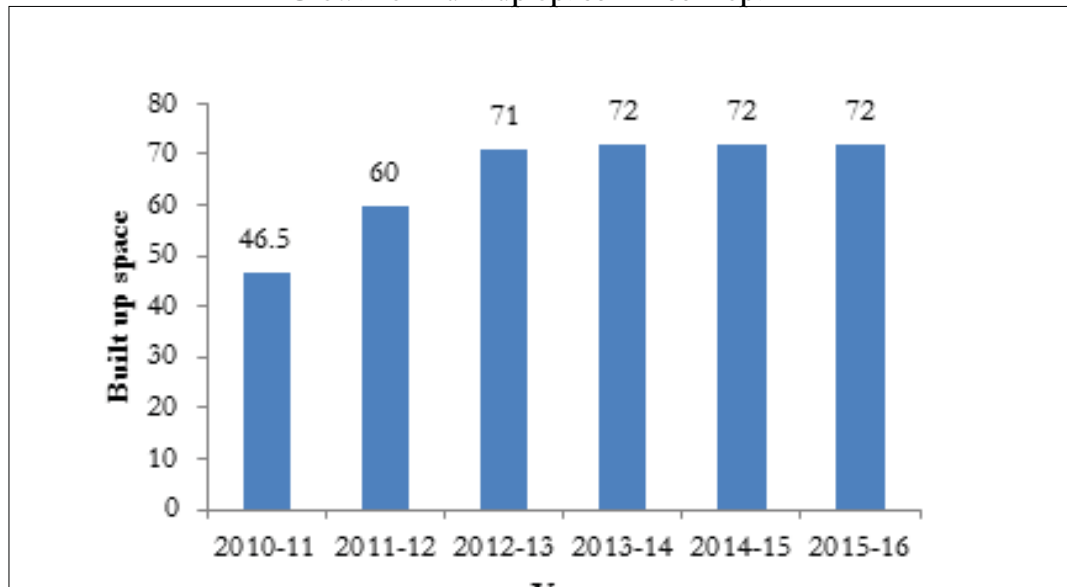
There has been an increase in the number of the companies working in Technopark for the last five years. In 2010-11 there were 200 companies in Technopark. It increased to 390 in 2015-16. Gradual growth of number of companies in Technopark from 2010-11 to 2015-16 is exhibited in **Figure 5.13**.

Box 5.15**Technopark's Contribution to the State Economy**

- Annual production from the Campus – ₹ 12000 Cr.
- Annual export from the Campus – ₹ 6250 Cr.
- 20 per cent growth expected every year
- The largest employment base campus in Kerala.
- Stimulates growth of secondary services like retail, hospitality, transportation and financial services in the city and suburbs.
- With the launch of Technocity projects in 424 acres of land, Kazhakootam – Kovalam (NH 66) will become the first IT corridor in Kerala.
- Will become one of the largest IT Parks in India.

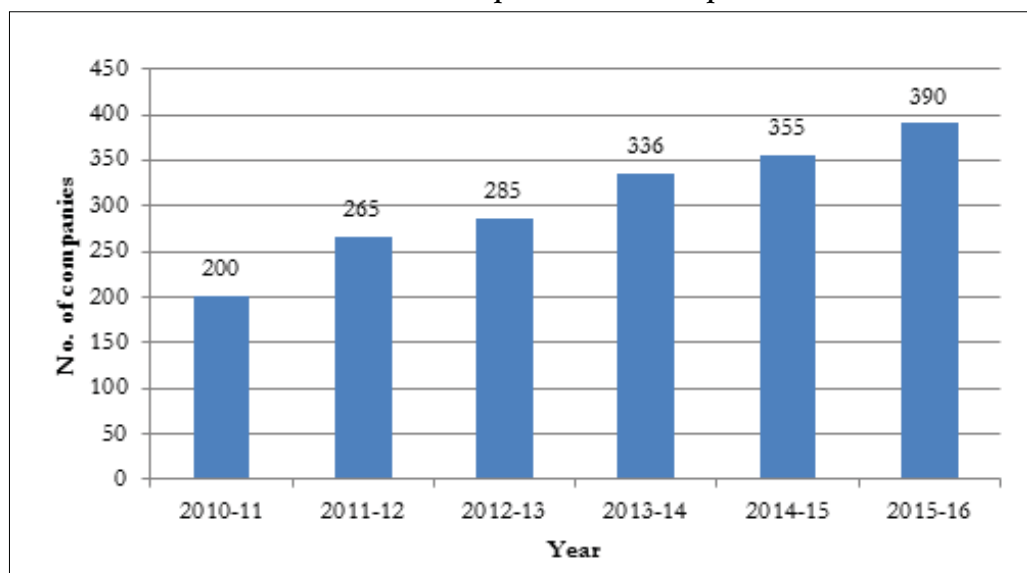
Source: Technopark

Figure 5.12
Growth of Built-up Space in Technopark



Source: Technopark

Figure 5.13
Number of Companies in Technopark



Source: Technopark

Growth of Export from Technopark

The exports from Technopark increased from ₹ 2,171 crore in 2011-12 to ₹ 6,250 crore in 2015-16. It grew by 22.55 per cent in 2015-16 as compared to 2014-15. The trend in export from Technopark during the last six years is depicted in **Figure 5.14**.

Growth of Employment in Technopark

The growth of Technopark can also be analysed in terms of employment generated during the last six years. The employment generated increased from 30,000 in 2010-11 to 38,000 in 2011-12, 40,521 in 2012-13, 45,395 in 2013-14, 47,100 in 2014-15 and to 51,865 in 2015-16 (upto October 31, 2016). The growth of employment generation for the last six years is shown in **Figure 5.15**

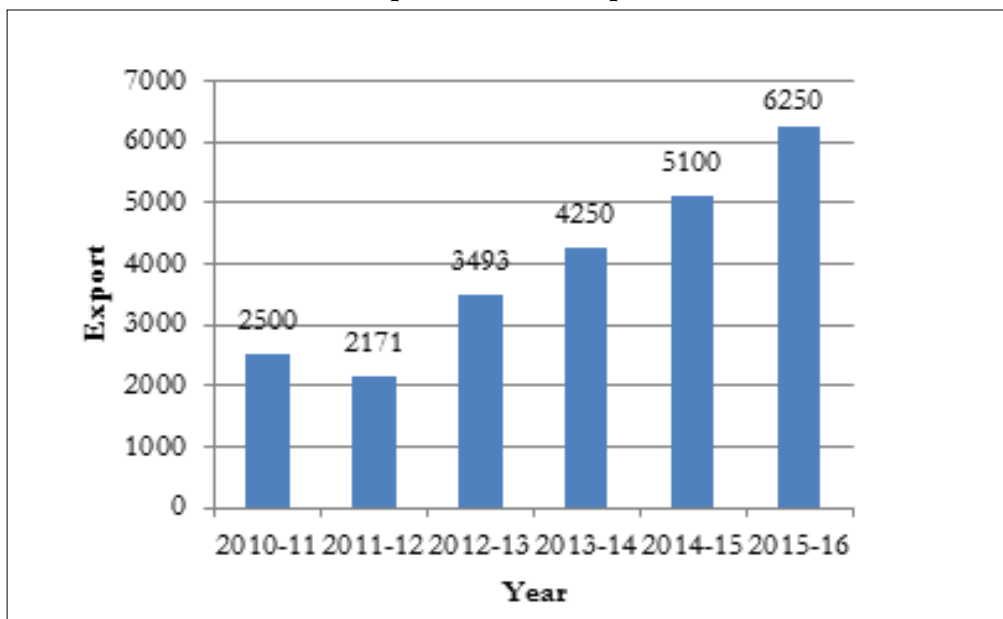
Infopark

Infopark, Kochi is the second largest IT hub in Kerala with spokes at Cherthala and Thrissur and

spread over 321.86 acres of land and 6.96 million sq.ft built up area. At present 282 companies are working in Infopark. It provides direct employment to 32,800 professionals. Export turnover of Infopark for the financial year 2015-16 was ₹ 3,328.80 crore. At present Infopark has the following IT Parks:

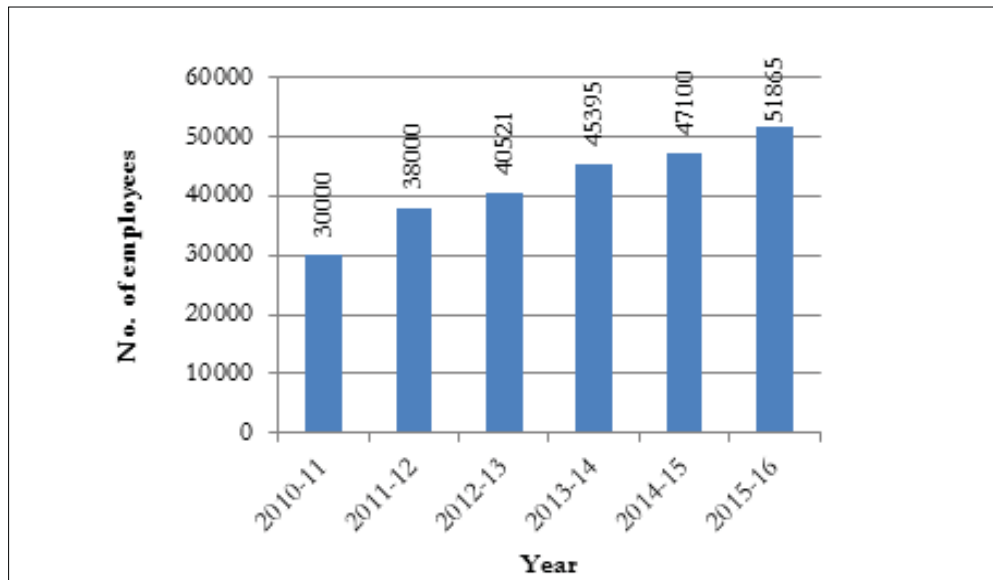
- **Infopark Kochi – Phase I** - Phase I is completed in all respects and around 25,000 employees are working in this campus.
- **Infopark Kochi – Phase II** – An extent of 125 acres has been acquired and is in the possession of Infopark. 102.7 acres of land are in SEZ area.
- **Infopark, Thrissur** - It is located at Koratty in an extent of 30 acres of land. 18 acres are in SEZ area. The first phase of development consisting of renovation of 8 buildings having a built up area of 45,000 sq.ft and modifying them as IT buildings has been completed. Currently, around 700 IT employees are working in this spoke.
- **Infopark, Cherthala** – It is spread over 66 acres of land with 60 acres in SEZ area. Construction of 2.4 lakh sq.ft IT building

Figure 5.14
Export from Technopark



Source: Technopark

Figure 5.15
Growth of Employment in Technopark



Source: Technopark

at Infopark, Cherthala SEZ has been fully completed along with basic infrastructure such as 110 kV substation, internal roads, sewage treatment plant, water storage tanks, and boundary walls. There are 31 IT companies functioning in the park and thereby generating 600 direct employment.

- **Infopark TBC** – A built up partly fitted space of 25,800 sqft was taken over from KSITM by Infopark in the year 2013, at Kaloor international Stadium. Infopark undertook necessary balance fit outs, modifications/rectifications in the fitted out space and now the facility is mainly used for providing office space for startup companies. Around 400 IT employees are working in Infopark TBC.

The physical achievements of Infopark are furnished in **Appendix 5.57**

Cyberpark

Cyberpark was established on a hub and spoke

model to bridge the IT infrastructure gap starting from Kochi to Kasargod along the west coast in the lines of Technopark in Trivandrum and Infopark in Kochi. The Cyber Park, Kozhikode acts as the hub and the parks in Kannur and Kasargod are the spokes for the IT and infrastructure development of the northern region in the State of Kerala. The objective of Cyberpark is to provide a friendly, cost effective and top of the line infrastructure to the IT/ITeS investors and thereby encouraging, promoting and boosting the export of software/software services and create employment opportunities in Malabar region.

Cyberpark is the largest IT park in the northern region of Kerala with 41.88 acres of land in Kozhikode, 25 acres in Kannur and 100 acres in Kasargod. Out of this 115 acres of land is in SEZ area and 14.38 acres is in non SEZ area. Now 4 companies are working in the SEZ area which provides direct employment to 55 IT professionals. The physical achievements of Cyberpark are given in **Appendix 5.58**.

*Kerala State
Information Technology
Infrastructure Ltd (KSITIL)*

Kerala State Information Technology Infrastructure Limited (KSITIL) is a public limited company formed under the Companies Act 1956. The company leverages the valuable land assets owned by the Government and through viable financial models, generates enough funds and utilizes the same for building up of IT Infrastructure in the State in a Private Public Participation model. The business model for the company is to acquire land, create value addition to it, providing basic infrastructure like electricity, water, road and compound wall, obtain SEZ status and such other Government approvals that may be required and then allot land to private developers for development of either IT SEZ or IT parks.

Major ongoing projects of KSITIL are Kozhikode IT Park, Kannur IT Park, Kasaragod IT Park, Kollam IT Park, Koratty IT Park, Cherthala IT Park, Ambalapuzha IT Park, Infocity Pala, IIIT-Kerala, Malappuram IT Park, Technodges and Ritel Park. There are 77 companies working in these IT parks and gives direct employment to 1588 professionals.

*International Centre
for Free and Open Source Software
(ICFOSS)*

Government of Kerala established International Centre for Free and Open Source Software (ICFOSS) as an international centre in collaboration with Free Software Organisations in India and abroad to promote development and application of free software and free knowledge. It is a nodal agency in all matters relating to free and open source software including consultancy, research and development, academics, studies and service, training, publishing, certification, international co-operation and collaboration.

Kerala Startup Mission (KSUM)

Kerala Start up Mission (KSUM) is the nodal agency of Government of Kerala for implementing the entrepreneurship development and incubation activities in the State. Kerala Start up Mission, formerly known as 'Technopark Technology Business Incubator' is India's first successful Non Academic Business Incubator. It started operations in 2007.

**Box 5.16
Major Programmes of ICFOSS**

- Start-up acceleration for FOSS enterprises.
- E-Governance and other FOSS studies.
- Localisation of accounting and other utility software.
- ICT support to Micro, Small and Medium Enterprises
- Technical workshops and training programmes
- FOSS certification
- Capacity building and skill up gradation for engineering / technology students.
- Malayalam computing.
- Research programme

Source: ICFOSS

The objective of the Mission is to identify and develop entrepreneurial talents among youth and students in Kerala, address the technology based entrepreneurship development requirements in the traditional sectors of Kerala, build appropriate training programmes suitable for Kerala's socio-economic culture, identify market niche for technology products and services, interfacing and networking among academic, R&D institutions, industries and financial institutions, establishing a platform for speedy commercialization of the technologies developed in the institutes to reach the end-users.

Government of Kerala has introduced Youth Entrepreneurship Development Programme targeted to foster entrepreneurship skills among the youth in Kerala which includes key initiatives like Raspberry Pi Programme, Startup Box Campaign, Startup Boot camp, Start up Leadership Academy and Training programme, International Entrepreneurial Exchange Programme, FABLAB Programme, Entrepreneurship Driving Programme, Performance Linked Scheme and Patent Support Scheme. In addition to the above Government is creating a Technology Innovation Zone at KINFRA Hi Tech Park, Kalamassery with multiple sectors of incubators under a single umbrella.

Concerns for IT Sector

Post 2009-10 recession, the industry is yet to pick

up momentum and IT majors are reluctant in making capital investments. The global IT growth is facing a slowdown in turn affecting the Indian IT industry. Export revenue figures from SEZ shows a decline from last fiscal and the growth projection of 15 per cent in the sector as per NASSCOM were also not achieved. The profit declared by IT majors declined. In addition to this, the following uncertainties can considerably impact the IT sector.

- US election: Though India is still the world's favorite IT outsourcing destination, enjoying over 65 per cent of market share, US is still the single major client (56 per cent). With the elections and subsequent policy change, it can affect India's software exports to the country to a big extend.
- Brexit:- After USA, India does maximum business with UK. With the decision of Britain to exit European Union, the impact can be substantial, which is yet to be fathomed.

The 2030 Agenda for Sustainable Development which was adopted by the United Nations in September 2015 acknowledges individual nations and local communities as critical in implementation and design of their respective development policies and programmes. With a relative advantage and rich experience of decentralization leading to positive development outcomes, Kerala can look towards leadership position in ICT and Development (ICTD), products and emerging ICT markets.

Section 6

SPORTS INFRASTRUCTURE

Sports plays a great role in our life as it keeps us healthy, strong, energetic and active. We can have a healthy mind only when we have a healthy body. It helps everyone to improve and maintain physical ability and skills. The role of Government is to create infrastructure and promote capacity building for broad-basing sports as well as for achieving excellence in various competitive events at the national and international

levels. The schemes of the Department are geared towards achieving these objectives. Major institutions coming under the sector are Kerala State Sports Council, Kerala State Youth Welfare Board, Kerala State Bharat Scouts & Guides, Directorate of Sports and Youth Affairs, Directorate of Public Instruction and Directorate of Collegiate Education.

Box 5.17

Altitude Simulation Training For Athletes

The scheme aims to establish a modern low oxygen training system for enhancing the endurance and performance of Kerala athletes to lift them to international level. One 'modern low oxygen altitude simulation training centre' has been established in Jimmy George Indoor Stadium, Thiruvananthapuram at a total cost of ₹2 crore. It is the first in the history and the best investment for future of Kerala Sports. It facilitates to increase aerobic power and endurance of athletes, faster recovery from high intensity training, faster healing and recovery from injuries, better stress tolerance and concentration, improve athletic performance of Kerala athletes.

Kerala State Sports Council is currently running 24 Centralized Sports Hostels, 51 College Hostels and 24 School hostels. Centralized Sports Hostels are directly maintained by Kerala State Sports Council where college and school sports hostels are maintained by respective managements. There is approximately 2610 number of students in the hostels at present. Sports hostel students are given Boarding/ Lodging charges at the rate of ₹ 200 per day and washing allowance at the rate of ₹100 per month.

The track suits and playing kit, for the inmates of the hostels are supplied by the Kerala State Sports Council. Apart from these sports equipment, playing kits are also given to the athletes of 108 Day boarding Centres and Training Centres. There are 41 recognized Sports Associations under Kerala State Sports Council. As per grant in aid regulations, Kerala State Sports Council issues grant to State Associations for conducting State Championship, Coaching Camp, Participation in National South Zone competitions, conduct of national/ south zone competitions in the state.

Department of Sports & Youth Affairs covers all areas pertaining to promotion and development of sports and games in the state through development of proper and quality infrastructure of sports and games, imparting awareness among public regarding importance of sports and games, providing facilities for proper training and grooming of sports persons to attain international standard programmes related to youth welfare.

Rajiv Gandhi Sports Medicine Centre was established in 1992 as a pioneering venture of Government of Kerala and is the only one of its kind in the State to promote excellence in sports by lending scientific and prompt medical assistance and rehabilitation therapy to sports persons. In the financial year 2016-17, All Kerala Cycle Rally was conducted in association with IMA and NISS. "Health, Exercise and Active living through Sports (HEALS)" programme has been conducted in 26 locations of the State. Administrative Sanction was accorded for establishing "Health and Physical activity centres for women" in four locations.

Multi-sport play spaces aims to develop available grounds as play spaces ideally for multi- sport usage including Volleyball, Basketball, Tennis and other minor games using modern synthetic surfaces. Ten institutions were selected for the implementation of the scheme during 2015-16.

The Kerala State Youth Welfare Board provides assistance to youth clubs/organizations for organizing training programmes and self-employment initiatives to the jobless youths.

Awareness Programmes

Awareness is an important area where the Youth can contribute. There are several on-going programmes initiated by the UN Agencies, International Organizations and Government Departments. The Youth Clubs will have to play a vital role in organizing and implementing various

awareness programmes, environmental awareness, social forestry programmes and formation of Nature Clubs at local levels.

Substance Abuse Prevention is a new area, which needs greater focus and attention. The board has decided to further launch a state-wide intensive “Campaign against Substance Abuse” with the co-operation of UN Agencies, Government departments and other voluntary organizations.

As Youth Welfare Board envisages a network of action through the State/District Youth Centres, besides Youth Clubs at grass root levels, it can function effectively in combating HIV/AIDS Prevention Programme. The Activities will be done in collaboration with National AIDS Control Organization (NACO), UNAIDS, State AIDS Cell and other Voluntary Organizations.

Keralotsavam, 2015

Keralotsavam, a rare and unique youth festival, is conducted mainly for the youth who have no proper platform to present their cultural and physical talents. In this festival, youth in the age group of 15-35 can participate in Cultural, Arts and Sports competitions in block, district and State level.

Keralotsavam is now a widely accepted festival for the youth of Kerala. As a result every youth in this State is getting a chance to project him/her to the forefront in every sphere of life. Kerala has created a model for the nation by initiating a colorful youth festival “Keralotsavam”, which is conducted with gaiety and fanfare every year.

Keralotsavam 2015 was conducted from

Box 5.18 Youth Empowerment Programmes

- Yuvasakthi, a project initiated by the Kerala Youth Welfare Board aims to tap the potential of the youth. The project, being implemented in association with local self-governments will institute coordination committees at the panchayat and municipality level. 100 village panchayats and five municipalities of the district would benefit from the scheme. This project would help strengthen government aided youth activities under various local self-government bodies. The State Youth Welfare Board has drawn up an action plan for all districts.
- The main objective of Yuva Karma Sena scheme is to channelize ‘Youth resources for Rural Development’. There are thousands of Rural Youth who are willing to do any service on a voluntary basis. The 152 blocks in the State can be chosen for mobilizing these invaluable youth resources and the Block Youth Co-coordinator will be entrusted with the responsibility of each block Youth Community. 50 dedicated Youth Volunteers will be selected at each block and they will be provided with a two-day intensive training on disaster management, first aid, and community work. These volunteers will be provided with a resource kit and an identity Card. Thus the service of 7,600 trained youth volunteers can be ensured throughout the State. The service of these rural social volunteers will be a great blessing in time of natural calamities, unexpected accidents, and riots. In Kerala the ratio of unemployed youth is going up. The Kerala State Youth Welfare Board’s youth employment training scheme aims at providing training to un-employed youths of the State. It is for promoting self-employment. A large number of youth have been given training in the fields like Carpentry, Masonry, Bee-keeping, Electrical and Electronics equipment maintenance which will help them to find jobs in their villages itself.

GramaPanchayat level to State level. Keralotsavamis organized by Kerala State Youth Welfare Board in association with Local Self Government. The art competition was held at six venues during December 26th to 28th, 2015 in Payyoli at Kozhikkode and sports competitions was held during December 28 to 30, 2015 at Kozhikkode city.

In Keralotsavam 2015, Kannur district secured the first place with 112 points, Kozhikkode district

secured the second place with 102 points and Malappuram district secured the third with 71 points.

The winners of State Keralotsavam in 18 National Youth Festival items participated in the National Youth festival conducted at Raipur in Chattisgarh during January 12th to 16th, 2016. The participants from Kerala won first place in Mridhangam and Bharatanatyam, second place in flute and third place in folk dance.

Section 7

PROJECT STRUCTURING AND FINANCING

Project Structuring is very essential to plan a successful and viable project. Often projects fail to take off due to faulty structuring and lack of adequate financial planning regarding the modes of financing for the project. Project financing implies the financing of long-term infrastructure, industrial projects and public services based on either a non-recourse or limited recourse financial structure. The debt and equity used to finance the project are paid back from the cash flow generated by the project. Traditionally, most of the projects have been financed through budgetary provisions and generating revenue from projects has not been a focus area. But over the years, the State has been severely constrained in terms of finding adequate resources for financing infrastructure projects from budgetary sources.

Capital expenditure in the State has been very low which is reflected in the poor quality of infrastructure in the State. Compared to other States where the capital expenditure is around 5 to 7 per cent, in Kerala it hovers around less than 2 per cent. (Table 5.19)

Capital expenditure in the State as a per centage of GSDP has been less than two per cent. Capital expenditure as a per cent of GSDP from 2007-08 is shown in Table 5.20.

Capital spending by the State as a proportion of State income is one of the lowest among the states. For many other States the proportion is over five times of Kerala. Further, there is a widening gap between the trends in the State vis-à-vis all states capital outlay affecting adversely the GSDP growth of the State and in turn affecting infrastructure development.

Table 5.21 points out to the huge deficit in capital expenditure that the State has had year after year.

It is to be noted that around 40-50 per cent of the grants to local self-governments is spent on capital works, even though it is booked under revenue expenditure in State accounts. Even if this is accounted for, the infrastructure deficit in the state is very high. Even if the state tries to target a rate at the average of the CAPEX/GSDP ratios of the neighbouring states, Kerala would have to invest about 4 per cent of its GSDP in capital works which amounts to a CAPEX outlay of ₹24,000 crore in 2016 itself. As there are budgetary constraints, there will be a limit to the quantum of capital expenditure that can be made from the budget. Mobilizing off budgetary resources through the various financial and infrastructure institutions in the State is required for taking up and completing the major infrastructure projects.

Table 5.19
CAPEX/GSDP ratios for 2013-14

Sl.No	State	CAPEX/GSDP (in per cent)
1.	Uttar Pradesh	7.05
2.	Andhra Pradesh	5.74
3.	Rajasthan	5.58
4.	Karnataka	5.39
5.	Odisha	5.23
6.	Gujarat	4.91
7.	Madhya Pradesh	4.53
8.	Tamilnadu	3.57
9.	Maharashtra	2.23
10.	Haryana	1.98
11.	West Bengal	1.85
12.	Kerala	1.79
13.	Punjab	1.27

Source: White Paper on State Finances, June 2016

Table 5.20
Capital expenditure as a percentage of GSDP from 2007-08 to 2016-17

2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	RE	RBE
0.89	0.89	1.26	1.49	1.58	1.64	1.24	0.96	1.22	1.56

Source: Budget Documents, Finance Department, Government of Kerala

Bridging the infrastructure deficit and finding innovative means of financing is one of the foremost critical priorities of the Government.

Kerala Infrastructure Investment Fund Board

Revamping of Kerala Infrastructure Investment Fund board (KIIFB) is a major step taken by the Government in facilitating investment for infrastructure projects. KIIFB was constituted under Finance Department of Kerala for raising funds both in the medium and long term to

finance critical and large infrastructure projects in the state. It came into existence on 11.11.1999 under the Kerala Infrastructure Investment Fund Act 1999 (Act 4 of 2000) to manage the Kerala Infrastructure Investment Fund. The main intention of the Fund was to provide investment for critical and large infrastructure projects in the State of Kerala. The Board had mobilized funds to the tune of ₹1023.71 crore through issue of three series of Redeemable and Non-convertible Non statutory Lending Rate (Non SLR) bonds by private placement fully backed by State Government Guarantee.

Table 5.21
Capital expenditure in the State from 2001 to 2016

Period	Year	CAPEX (Rs.cr)	Growth Rate (in per cent)	Average GR (per cent)
2001-06	2001-02	558.36	-3.26	7.97
	2002-03	698.66	25.13	
	2003-04	639.71	-8.44	
	2004-05	681.75	6.57	
	2005-06	816.95	19.83	
2006-11	2006-07	902.58	10.48	34.73
	2007-08	1474.58	63.37	
	2008-09	1695.60	14.99	
	2009-10	2059.39	21.45	
	2010-11	3363.69	63.33	
2011-16	2011-12	3852.92	14.54	18.31
	2012-13	4603.29	19.48	
	2013-14	4294.33	-6.71	
	2014-15	4254.59	-0.93	
	2015-16	7027.34	65.17	

Source: White Paper on State Finances, June 2016

KIIFB has been reconstituted by Government, through an amendment Ordinance in August 2016, as a Body Corporate having perpetual succession consisting of the Chief Minister as Chairman and Minister for Finance as Vice-Chairman. The Members of the Board include Chief Secretary to Government, Vice-Chairman State Planning Board, Secretary (Law), Secretary (Finance), Secretary (Finance Resources) and seven independent members who are experts, who have worked in an institution of national repute in one or more of the areas of Finance, Banking, Economics. Additional Chief Secretary (Finance) is the CEO and Member Secretary of the Board.

It is envisaged to execute the major infrastructure projects planned under the anti-recession package announced in the budget and to raise funds to the tune of ₹ 50,000 crore outside the budget for taking up infrastructure projects. KIIFB is expected to leverage the financial resources for infrastructure development. 10 per cent of the motor vehicle tax

and 1 per cent of the petrol cess will go to KIIFB. Also the Fund Trustee and Advisory Commission will ensure that all investment of the fund serves the purpose and intent of the legislation and that there is no diversion of funds of the Board.

KIIFB will assist the Government and its agencies in the various aspects pertaining to infrastructure development and will act as the nodal agency for scrutinizing, approving and funding major infrastructure projects including PPP projects, with the main objective of providing investment for projects in the State of Kerala in sectors like Transport, Water Sanitation, Energy, Social and Commercial Infrastructure, and IT and Telecommunication. Detailed guidelines for availing financial resources from KIIFB have been issued by the Government.

KIIFB has approved a plan to issue General Obligation Bonds against unconditional Government guarantee and Revenue Bonds with

structured payment mechanism for medium term requirement and has initiated steps to raise funds to meet long term requirements through Alternative Investment Funds (AIF), Infrastructure Investment Trust (InVIT), Infrastructure Debt Fund (IDF) and build the institutional framework needed for this. It also decided to set up an Infrastructure Fund Management Corporation (IFMC) to mobilize resources through advanced financial instruments approved by the Securities and Exchange Board of India (SEBI) and the Reserve Bank of India (RBI). In the first board meeting held on November 7, 2016, 48 projects costing ₹4,004.86 crore have been approved.

Project Financing Cell, Kerala State Planning Board

In order to address the resource constraint in the infrastructure sector, the Project Financing Cell (PFC) was constituted in the State Planning Board in 2012 to help in structuring the projects for attracting financial resources from private sector. The objective of PFC includes examining the possibility of extra budgetary resources, including Public Private Partnership for all projects of the State. PFC is also mandated to examine the technical as well as financial feasibility of all projects above an outlay of ₹5 crore. Since its inception, PFC has been appraising project proposals and providing the structuring framework for investment mobilization from extra budgetary resources. PFC also provides information to Government regarding the new policy announcements and schemes to enable the departments to avail the assistance offered under various Central Government programmes and policies.

Development of Model Projects

Project Financing Cell has been undertaking development of model projects which can be

taken up on PPP mode and replicated in various parts of the State. PFC has undertaken two feasibility studies through M/s INKEL Ltd during 2016 -17- Development of Model Ladies Short Stay Hostel through PPP mode and Development of Multilevel Car Parking Facility in PPP mode in Thiruvananthapuram Medical College.

Development of Model Ladies Short Stay Hostel envisages creation of safe and secure stay facility for ladies for short period with all modern facilities such as pick and drop, gym and Wi-Fi. The feasibility report explores the possibility of setting up Ladies Short Stay Hostel in the six municipal corporations of the State focusing on Thrissur Municipal Corporation. It suggests two modes of the implementation (i) Land plus Annuity or (ii) Land plus Viability Gap Funding (VGF) model. Development of Multilevel Car Parking Facility in PPP mode in Thiruvananthapuram Medical College examines the possibility of setting up parking facility in the premises of Medical College. The feasibility report suggests two locations in the campus for setting up parking facilities on BOT (Build, Operate and Transfer) Model.

Public Private Partnership Projects

Development of roads, ports and urban infrastructure projects are now increasingly being taken up on Public Private Partnership (PPP) mode. Some of the important PPP projects in the State include the Thiruvananthapuram City Road Improvement project on PPP (Annuity) mode, Vizhinjam project on DBFOT mode and Kariavattom Green Field Stadium on DBOT mode. However, the number of PPP projects in the State compared to other States is very less and concerted efforts are required to attract private investment to the State.

Section 8

HOUSING

Housing is one of the basic necessities of life and the right to housing and adequate shelter is guaranteed in the Directive Principles of the Constitution of India. Kerala has historically been a front runner in social innovations including housing. As early as by 1970's, Kerala had launched a massive housing scheme for 100,000 houseless families and it was hailed as a pioneering effort in the housing sector. Since then governments in Kerala have been following housing policies to ensure that every family has a shelter. While the housing situation in Kerala is far better than the rest of the country, a significant proportion of the population continues to face the problem of lack of adequate housing. At present the homelessness, in particular of those without land, and poor quality, dilapidated houses of the vulnerable sections of society are the problems confronting the housing sector in Kerala.

According to 2011 housing census, there were 336 houses for every 1000 persons in Kerala (all-India 273 houses per 1000 persons). The average size and quality of housing units are far better than in the rest of the country. More than two-third households reside in good quality houses where 53.1 per cent is the all-India average. However, average cost per unit of a house in Kerala is more than four times the costs at the all-India level. The latest housing Census also shows that 10.6 per cent of the total census houses in Kerala remain vacant. But at the same time a large number of households among underprivileged and poor sections of society still did not have a reasonable shelter and the State stood top in terms of housing inequality among the disadvantaged social groups.

During 12th Plan period, Kerala had formulated a policy of 'Adequate and Affordable Housing for All' by providing standardized housing services

to Economically Weaker Sections(EWS), Low Income Group(LIG) and Middle Income Group (MIG) categories by coordinating various activities to ensure high living standard, healthy environment and basic infrastructure development. One of the strategies of 12th Plan was the improvement of effectiveness and reach of Kerala State Housing Board and Nirmithi Kendra. The key initiatives of the KSHB in the housing sector were Grihasree and Working Women's hostel.

The Government of Kerala in 2016 has announced an ambitious housing cum livelihood project 'LIFE' (Livelihood Inclusion and Financial Empowerment) which will be the major focus during the 13th Plan. A complete rehabilitation package for the houseless and landless in the next 5 years is envisaged through a comprehensive housing scheme providing all basic facilities. This together with training and employment creation activities is expected to directly benefit about 4.32 lakh families. As per the draft 13th Plan Working Group Report on Housing, out of the total, 1.58 lakh are landless and houseless, 2.3 lakh have land but are houseless and 44,000 houses are incomplete. With the help of LSGs, and Kudumbasree a comprehensive list of houseless, landless people and incomplete houses will be prepared to resolve the housing problems in the State. Existing housing schemes of other Departments will be brought under this umbrella scheme. LIFE is one of the four Missions announced by the Government of Kerala for the state's comprehensive development in the next five years.

Agencies in Housing Sector

Several agencies which are implementing housing schemes in the State which include Local self-Government Department including

Kudumbasree, Kerala State Housing Board, Kerala State Nirmithi Kendra, Kerala State Development Corporation for SC/ST, SC/ST Development Departments. Non-governmental agencies such as COSTFORD and Habitat Technology group, Co-operative societies and Corporations such as Kerala State Co-operative Housing Federation, and Kerala Police Housing & Construction Corporation, have helped in constructing houses. Several NGOs too, have contributed significantly. Other Departments like Labour, Fisheries, Sainik Welfare, Urban Affairs, and Minority Welfare are also implementing various affordable housing schemes for the poor labourers and economically weaker sections. These agencies/departments have provided assistance to construct around 476,490 houses during the period from 2011-12 to 2016-17. Data upto 2015-16 show that 90 per cent of these houses were for people with land. It is in this context that LIFE attempts to focus on landless people first in the years to come. Achievements under major housing schemes by different housing agencies in Kerala are given in **Appendix 5.59**

Housing Finance

Finance for house construction comes as loans from banks and other financial institutions, grants from government and own sources. People from Economically Weaker Sections (EWS) cannot get loan facilities easily because loan is available only to those who have assets and income to repay it on time. The public sector banks and other financial institutions in Kerala have sanctioned 1655 housing loans and disbursed an amount of ₹ 21,644.58 lakh during 2015-16 and to the period upto September 2016. Details of housing loans from 2010-11 to 2016-17 is given in **Appendix 5.60** and interest rates of housing loans of major financial institutions is given in **Appendix 5.61**

Housing schemes and implementing agencies

Kerala State Housing Board

Innovative Housing Scheme aims to provide

flats on rental basis to the poor urban workers who are increasingly displaced from the city limits or from their work places. 24 flats have been constructed during 2015-16 and a total of 160 flats were constructed under the scheme in various urban centres like Thiruvananthapuram, Thrissur, Ernakulam, and Kozhikode.

Grihasree Housing Scheme. In this scheme financial assistance is given as Government subsidy at the rate of ₹ 2 lakh/house for the construction of houses in EWS/LIG category in their own land with the support of Voluntary Organizations. 709 houses have been assisted during 2015-16 and total 1081 houses were constructed under the scheme.

Saphalyam Housing Scheme (flats for BPL category). The scheme envisages setting up of support services and infrastructure facilities for the construction of flats for BPL category. Unit cost of 280 sq.ft will be ₹3.50 lakh (₹2 lakh Government subsidy, ₹1 lakh loan from HUDCO, ₹0.25 lakh voluntary contribution from NGO and ₹0.25 lakh beneficiary contribution). About 48 flats during 2015-16 and 24 flats during 2016-17 (up to September 30) have been completed under the scheme.

Kerala State Nirmithi Kendra

A margin free market, 'Kalavara' for the building materials at reasonable rate has been started at Ernakulam, Kozhikode, Thiruvananthapuram and Thrissur and steps have been taken to extend it to all districts. The International School of Habitat Studies (LaBISHaS) was established in memory of late Padmasree Dr. Laurie Baker. It has completed 50 artisan training courses across the state to provide self-employment opportunities to 750 persons and completed a Pre Fab structure of about 400 sq.ft to popularize Pre Fab construction that is a new technology of constructing houses which ensures less damage to environment as well as cost effective, safe, eco-friendly, disaster proof, time saving with minimum skilled labour and building materials.

Kerala State Co-operative Housing Federation

This agency provides financing facilities to the affiliated primary co-operative housing societies (PCHS) for the construction of houses, repair/extension. During 2015-16 an amount of ₹ 8,149.4 lakh and during 2016-17 (up to September 30, 2016) an amount of ₹2,314.11 lakh have been disbursed among EWS, LIG, MIG and others for constructing 2344 and 665 housing units respectively. Houses assisted and amount disbursed by Kerala State Co-Operative Housing Federation is also given in **Appendix 5.61**

Other agencies involved in construction of houses

a. Fisheries Department

During 2015-16, 1612 houses were constructed in Marine and Inland Fishing sector of Kerala at the cost ₹ 2 lakh per house under the scheme Integrated Development of Fishing Villages (IDFV). During 2015-16, 3660 houses were constructed to provide safe homes for fishing families in the Fishing Housing Scheme and House Repair Scheme 2015-16 under Basic Infrastructure Facilities (BIF) and Human Development of Fisher Folk (HDF).

b. Scheduled Tribes Development Department

General Housing Scheme- This scheme aims to provide financial support to houseless Scheduled Tribes for construction/repair of houses. The amount provided in this scheme is ₹3.50 lakh / house for new houses. Total Number of houses assisted so far under the scheme was 2498. (See chapter 4 Section 6 for details)

c. Scheduled Caste Development Department

Houses to Houseless Scheme- The Scheme aims to provide an amount of ₹ 3 lakh to houseless families for constructing houses. During 2015-16 the number of houses constructed for Scheduled Caste families was 5197. Another programme called the Development programme for Vulnerable Communities aims at providing financial assistance for purchase of land, construction / repair of houses and allied amenities for vulnerable communities whose annual income does not exceed ₹0.5 lakh. During 2015-16 102 houses were assisted under the scheme. (See chapter 4 Section 7 for details).

Box 5.19

Working Group on Housing for 13th Five Year plan

Working Group on Housing has been constituted by the State Planning Board as part of the formulation of the Thirteenth Five Year Plan (2017-22) with Co-chairpersons as Sri PH Kurian, IAS, Principal Secretary to Government, Housing Department and Padmashree G. Shankar, Chief Architect, Habitat Technology Group. The Working Group was asked, inter alia, to evaluate the achievements with regard to the plan projects launched in housing sector, both by the State and the Central Governments in the State during 11th and 12th plan periods; to outline special problems of achieving the new housing cum livelihood strategy announced by the Government of Kerala (LIFE); to provide rental housing to the migrant population in Kerala; to suggest projects which can be undertaken during the 13th Plan period in housing sector and to explore the possibilities of a cost effective environment friendly housing/flat design which is need based and liveable.

d. Sainik Welfare Housing Department

The Department provides house building grant to disabled servicemen before completion of terms of engagement, recruits, war widows and widows of Jawans who died in harness. The beneficiaries' annual income limit is ₹ 1.5 lakh and the present rate of grant is ₹ 1 lakh. The income limit is not applicable to the war widows and war disabled Ex-servicemen. 4 households in 2015-16 and one household in 2016-17 upto September 30, 2016 were assisted under the scheme.

e. Directorate of Minority Welfare

Housing Schemes for divorced women and widows-The scheme aims to construct houses for divorced /abandoned women and widows who belong to minority communities. The beneficiaries should have at least 2 cents of land in her name for construction of houses. The departmental assistance is ₹ 2.5 lakh. During 2015-16 798 houses have been constructed under the scheme.

National Housing Policy

Central Government formulated a Policy on Housing in 2015 for addressing the shortage of adequate and affordable housing with special emphasis on EWS and LIG and other vulnerable sections of society such as Scheduled Castes/ Scheduled Tribes, Backward Classes, Minorities, Senior Citizens, and Physically Challenged

Persons. In the same year the Ministry of Housing and Urban Poverty Alleviation came up with the National Urban Rental Housing Policy (NURHP) 'to create a vibrant, sustainable and inclusive rental housing market in India'. 2 million non-slum urban poor households are proposed to be covered under the Mission. Hence, total housing shortage envisaged to be addressed through the new mission is 20 million. The Mission is being implemented during 2015-2022 and provides central assistance to Urban Local Bodies (ULBs) and other implementing agencies.

The Scheme Pradhan Mantri Awas Yojana (PMAY) (Housing for all (Urban) by 2022) is the mega housing scheme of the Government under which the government aims to create about 2 crore affordable homes for the urban poor, especially for Economically Weaker Sections (EWS) and Lower Income Group (LIG) of the society by the year 2022. The scheme has been launched by the Government and will provide a credit linked subsidy of ₹ 1.00 lakh to ₹ 2.30 lakh to the beneficiaries.

The national Government has created an enabling framework for participatory action from public, private, community and individual sectors and encouraging rental housing for the poorest of the poor. In the Union Budget 2016, a significant announcement was that the exemption from service tax on construction of affordable houses up to 60 square metres (almost double what was prescribed in earlier public housing policies) under any scheme of the Central or State Government including PPP Schemes would be given.

Section 9

INFORMATION AND PUBLICITY

In Kerala, the Department of Information and Public Relations is the nodal agency of the government to disseminate information to the public through various media on government policies, programmes, schemes, initiatives and achievements. The department facilitates feedback from the public and thereby maintains a communication flow between the government and its public.

Two autonomous institutions namely, Kerala Media Academy and Centre for Development of Imaging Technology (C-DIT), working under this department undertake the administrative, technical and promotional affairs of the public and private sector with the help of advanced technologies in the field of visual communication, and journalism.

The department desires to initiate new strategies for popularizing government policies and activities with the support of latest media and public relation technologies, launching government-media tie-ups, enhancing public relation personnel efficiency and providing better working environment. The details of the activities and programmes undertaken by the department during 2015-16 are summarized below.

Sutharyakeralam

This flagship programme is a live weekly complaint redressal forum where the Chief Minister addresses the grievances of common people especially the poor. During 2015-16 and up to September 2016, 11 episodes were telecasted. Around 45 petitions/complaints had been taken for Sutharyakeralam video programme of Chief Minister. The programme is remodeled to address the issues of common people more easily with help of technology as well as the intervention of the Chief Minister.

Modernization of Tagore Theatre

The modernization of Tagore Theatre in Thiruvananthapuram has been completed and opened to the public in September, 2015. It has become the most sought after theatre with its state of the art technology serene surroundings and parking space. Over fifty programmes were conducted and had generated over ₹ 40 lakhs as income till September, 2016.

Photo Publicity and Video Publicity

The department releases video news clippings to various television and web channels from different offices. During 2015-16 and upto September 2016, 879 news video clippings were uploaded in the clip mail website. The photography division of the department covers almost all government functions in the state capital and the districts. During the period, more than 5000 photographs were released to the media from headquarters and around 4000 from district offices.

Production of Video Documentaries

This involves production and broadcasting of various video magazine programmes through electronic media. “Janapatham” the weekly radio documentary on development initiatives of the government has been on the air in All India Radio since September 10, 2011. All stations of All India Radio in Kerala carry the programme on Saturdays. Till October, 2015 and upto September, 2016 a total number of 11 episodes have been broadcasted. “Priyakeralam” a weekly developmental programme in Doordarshan is being broadcasting on Saturday 7 PM and Sunday 9 AM. During the period, 27 episodes were produced and transmitted. “Nottam” video competition

programme for popularizing government schemes was a major initiative during this period.

Government Web Portal

The Web and New Media Division of Information and Publicity department maintains the web portal of Government of Kerala (www.kerala.gov.in) and web sites of other departments. The portal provides general information about the State including the structure of the Government, functions of various Government departments and agencies, details of Ministers, Members of the Legislative Assembly and other elected representatives and provides entry to other departmental websites. Currently, the division manages the content of 18 websites of Ministers. More than 30,000 GOs/Circulars/Notifications were added in the sites during this period. All publications of the department are made available online. The division has completed the Malayalam translation of the department website and the translation work of government portal has commenced. The division also undertakes periodic content updates of the following websites- Personnel Assets (pa.kerala.gov.in), GAD Special A&C (gadsplais.kerala.gov.in), RTI (rti.kerala.gov.in), First Ministry (firstministry.kerala.gov.in), Achievements of Government (achievements.kerala.gov.in) and Sabarimala (sabarimala.kerala.gov.in). Annually, the results of SSLC, higher secondary and entrance examination results are being published through the web portal and had registered visits from 20 lakh people a year.

Interstate Public Relations

Conducting special press conferences of Chief Ministers and other media related public relations activities in metro cities to highlight the developmental activities of states comes under interstate public relations activities of the department. The Kerala pavilion set by the department won gold medal in the India International Trade Fair in New Delhi in 2015 and 2016.

Video Wall Network

LED display boards (video walls) have already been erected in Thiruvananthapuram, Kottayam, Thrissur, Malappuram, Kozhikkode, Kannur, Idukki and Ernakulam for streaming information on various development and welfare schemes of the government.

Kerala Art and Cultural Centre at New Delhi

Kerala Art and Cultural Centre at New Delhi was set up to propagate the rich tradition of the art, culture and literature of the State. As part of this, Delhi Keralalotsavam, a fiesta of different arts from Kerala was conducted at Kerala House premises in New Delhi in March 2016.

Integrated Development News Grid

For the timely dissemination of local level development news, a separate news portal was set up under the News Grid project. This portal has been redesigned by adding new tools of communication. The project helped timely reporting of development news from government institutions at grass root level.

Press Information Services

Convening press meets, and providing better facilities to reporters for easy reporting are the major activities of press information services. Around thousand press releases were made every month. Every District Information offices are also giving press releases regularly. These releases are e-mailed to the media and the same is published in the department website also. The scrutiny wing of the department is now scrutinizing the print and visual media on various government policies, programmes and other important issues related to government. Automation of Journalist and non-Journalist pension, accreditation and release of advertisement are progressing. 512

persons including dependents are availing working journalist pension. Eminent journalist pension (42 Nos.), distress journalist pension (183 Nos.) and non-journalist pension (749 Nos.) are also being given.

Publication and Advertisement

Publications of reference books, magazines, newsletters, pamphlets, and display advertisement are the major activities. “Janapadham” and “Kerala Calling” are the two important newsletters. During 2015-16, the department gave 185 total display advertisements, 4 electronic media advertisement and 5 advertisements in publication. During 2015-16, ₹17crores had been released from tenders, ₹3.44 crores from electronic media and ₹10.08 crores from display advertisement.

Media Academy

Kerala Media Academy is an institution under Government of Kerala to conduct media related courses. Documentary shooting of Victers channel of the Department of Education started in Kozhikkode, Malappuram and Kannur districts was the major achievement.

Centre for Development of Imaging Technology (C-DIT)

C-DIT established in 1988 is an autonomous

research and training institute in the area of imaging technology. Following are the achievements of C-DIT in 2015-16.

- Digitalized around 64 lakhs property documents in 9 Sub Registrar Offices in Thiruvananthapuram district and made it available online for public access and digitalized 60 lakhs pages of old documents in palm leaves and paper medium for State Archives Department.
- Conducted State wide roll out of spot issuance of Identity Cards to the differently abled persons
- Designed and implemented solar power plants to 15 LSGD institutions.
- Developed and facilitated ‘Nottam’, the online reality show and documentary competition for Information and Public Relations Department.
- Technical Support and facilitation was given for ‘Karuthal 2015’ and Jana Samparkka Paripadi (JSP) of Chief Minister.
- Developed software for the Grand Kerala Shopping Festival and designed high security hologram tax labels for Excise department.

The importance of a focussed infrastructure development has been well recognised in the State. Recent policy measures have been aimed at establishing a sound infrastructure in the State in terms of roads, ports, IT infrastructure and communication networks. The State needs to now address the infrastructural gaps and outline a vision for comprehensive development in this sector. Measures need to be taken to promote inland water transportation where the State has immense potential but is not being used to its capacity. Energy security is another area which needs vital attention, especially generation of electricity through non-renewable sources and improvement of the transmission networks. The IT sector, in general, is braving major challenges due to changes on the global front. Enough opportunities have to be created within the State so that this potential is tapped fully.

06 CHAPTER

EXTERNAL SECTOR



EXTERNAL SECTOR

India's exports have started showing signs of slow revival after prolonged duration of a downward spiral. One of the reasons for the subdued export performance has been the global recession and absence of a diversified export basket. The national and international trend had its impact on the State's export scenario as well and the export performance of Kerala has also not been that promising during 2015-16. The State gets affected considerably by the international developments as it has a significant number of expatriate population. Non- Resident Keralites have been a strong pillar of growth for the State. The political and economic developments in the world, the indigenization drive in the Gulf countries, oil crisis and changing labour market trends have affected the non-resident keralites. From the policy perspective, the State has clear limitations in dealing with the national and international developments affecting the external sector.

Section 1 EXTERNAL TRADE

EXTERNAL TRADE IN INDIA

India's share in global exports and imports increased between 2004 and 2015. During this period, India's share in global exports increased from 0.8 per cent to 1.6 per cent and India's share in global imports increased from 1 per cent to 2.3 per cent. India's ranking among countries, in terms of value of exports and imports, improved from 30 and 23 respectively in 2004 to 19 and 13 respectively in 2015. However, the growth of India's exports is on a decline after 2013-14.

Petroleum products, pearl and precious stones, cotton goods, gold and precious metal jewellery, drug formulations and biologicals, marine products and spices are the principal commodities exported from India. India's total exports of Goods and Services, as a proportion of Gross Domestic Product (GDP), decreased from 23.8 per cent in 2014-15 to 20.7 per cent in 2015-16. In nominal terms, the value of India's exports declined from ₹ 1,905,011 crore in 2013-14 to ₹1,896,348 crore in 2014-15 and further to ₹1,602,414 crore in 2015-16. In other words, the value of India's exports recorded a negative growth of 15.5 per cent

between 2014-15 and 2015-16. The major reasons were subdued global and domestic economic conditions as well as a downward trend in crude oil prices.

Petroleum, oil and lubricants, gold, silver and machinery are the major items of imports in India. India's imports decreased from ₹2,737,087 crore in 2014-15 to ₹2,323,786 crore in 2015-16, recording a negative growth of 15.1 per cent. India's total imports of Goods and Services, as a proportion of Gross Domestic Product (GDP), also decreased from 25.2 per cent in 2014-15 to 22 per cent in 2015-16.

In order to address the declining trend in exports, the Government of India launched a new Foreign Trade Policy (FTP) for the period 2015-20 with a focus on supporting both manufacturing and services exports and improving the 'Ease of Doing Business'. The FTP also provides a road map to align itself with the 'Make in India' and 'Digital India' programmes of the Central Government.

EXTERNAL TRADE IN KERALA

The external trade in Kerala is mainly operational through the Cochin Port. Kerala plays an important role in the export prospects of the nation by contributing to the export of spices and marine products. Major items of trade are cashew, coir and coir products, tea, coffee, pepper, cardamom, ginger, other spices and spices oil, marine products, machinery, chemicals, coal, fertilizers and raw materials. The total traffic handled by the Cochin

Port increased from 215.95 lakh MT in 2014-15 to 220.98 lakh MT in 2015-16, or an increase by 2.33 per cent. Within this traffic, exports accounted for 39.14 lakh MT and imports accounted for 181.84 lakh MT (**Table 6.1**).

Tea, cashew, coir and coir products, coffee, pepper, cardamom, ginger, other spices and spices oil and marine products are the major items exported through the Cochin Port. Considered together, coastal and foreign exports through the Cochin Port decreased by 3.55 per cent – from 40.58 lakh MT to 39.14 lakh MT – between 2014-15 and 2015-16. However, in value terms, coastal and foreign exports grew by 14.5 per cent between 2014-15 and 2015-16 (**Appendix 6.1**). Coastal exports decreased from 16.48 lakh MT in 2014-15 to 12.86 lakh MT in 2015-16. Foreign exports, on the other hand, increased from 24.10 lakh MT in 2014-15 to 26.28 lakh MT in 2015-16.

For specific commodities, there were sharp falls in the exports through the Cochin Port. Between 2014-15 and 2015-16, the export of spices declined by 41 per cent, of tea declined by 25.73 per cent, of cashew kernels declined by 25.60 per cent, of sea foods declined by 24.71 per cent, and of coffee declined by 16.09 per cent. In the export of coir products and miscellaneous products including POL, the decline was marginal to the extent of 0.97 per cent and 0.34 per cent respectively.

Fertilizers and raw materials, iron and steel and machinery, newsprint, raw cashew nut, food grains and POL are the main items of import through the Cochin Port. Imports through the Cochin

Table 6.1
Cargo Handled at Cochin Port during 2011-12 to 2015-16, in lakh MT

Traffic	Export					Import				
	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8	9	10	11
Coastal	14.86	14.05	17.18	16.48	12.86	51.74	52.12	60.63	52.15	60.40
Foreign	28.25	24.29	25.32	24.10	26.28	106.06	107.99	105.73	123.22	121.44
Total	43.11	38.34	42.50	40.58	39.14	157.80	160.11	166.36	175.37	181.84

Source: Annual Report 2015, Cochin Port Trust.

Port increased from 175.37 lakh MT in 2014-15 to 181.84 lakh MT in 2015-16, which amounted to a growth by 3.6 per cent. Between 2014-15 and 2015-16, coastal imports grew by 15.82 per cent, while foreign imports shrank by 1.44 per cent.

Between 2014-15 and 2015-16, the import of fertilizers and raw materials decreased by 43 per cent and the import of raw cashew nuts decreased by 22.48 per cent. In the case of iron, steel and machinery, imports grew by 44.47 per cent between 2014-15 and 2015-16, which was higher than the preceding years. In 2015-16, about 95,475 MT of food grains were also imported through the Cochin Port. There was no import of newsprint reported in 2015-16. The import of all items, except fertilizers and raw materials, miscellaneous items and raw cashewnut, marked an increasing trend between 2014-15 and 2015-16 (**Appendix 6.2**).

Exports of Marine Products

The major items of export within marine products are frozen shrimp, frozen fish, frozen cuttle fish, frozen squid, dried items, live items and chilled items. Item-wise details of marine products export from India and Kerala in 2015-16 are given in **Appendix 6.3**.

In 2015-16, India exported 945,892 MT of marine products, which was valued at ₹30,420.83 crore.

This was lower in quantity and in value compared to 2014-15, when 1,051,243 MT were exported valued at ₹33,441.61 crore. Marine products exports from Kerala, both in quantity and value, declined between 2014-15 and 2015-16; the quantity decreased from 166,754 MT in 2014-15 to 149,138 MT in 2015-16 and the value decreased from ₹5,166.08 crore in 2014-15 to ₹4,644.42 crore in 2015-16. The share of Kerala in Indian exports declined from 15.86 per cent to 15.77 per cent (in quantity) and from 15.45 per cent to 15.27 per cent (in value) during the period under review (**Table 6.2**).

The USA is the largest market for Indian marine products with a share of 28 per cent followed by South East Asia (24 per cent), European Union (21 per cent), Japan (9 per cent), Middle-East (6 per cent) and China (5 per cent). Major importers of marine products from India and their share in 2015-16 are shown in **Figure 6.1**.

Exports of Cashew

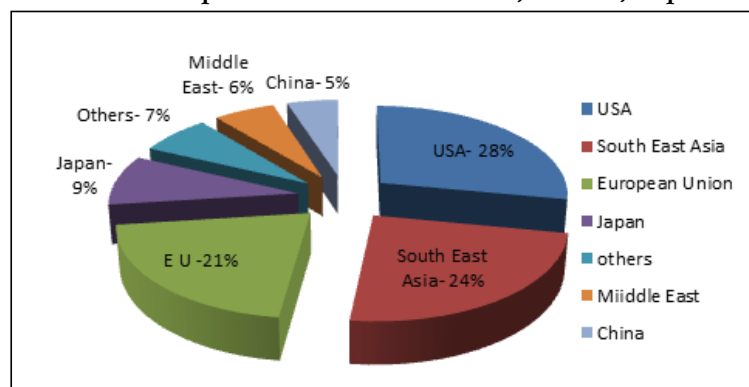
In 2015-16, the share of agricultural products in the total export earnings of India was 6.84 per cent; cashew kernels ranked 6th among agricultural products, contributing 4.28 per cent of the total agricultural product exports. The total export of cashew kernels from India in 2015-16 was 96,346 MT valued at ₹4,952.12 crore as against 118,952 MT valued at ₹5,432.85 crore in 2014-15. This

Table 6.2
Export Trend of Marine Products, India and Kerala, 2010-11 to 2015-16,
Quantity in Tonnes and Value ₹ in lakh

Year	India		Kerala		Kerala's share Per cent	
	Quantity (Tonnes)	Value (₹ Lakh)	Quantity (Tonnes)	Value (₹ Lakh)	Quantity	Value
2010-11	813091	1290147	124615	200210	15.33	15.52
2011-12	862021	1659723	155714	298833	18.06	18.00
2012-13	928215	1885626	166399	343585	17.93	18.22
2013-14	983756	3021326	165698	470636	16.84	15.58
2014-15	1051243	3344161	166754	516608	15.86	15.45
2015-16	945892	3042083	149138	464442	15.77	15.27

Source: The Marine Products Export Development Agency (MPEDA).

Figure 6.1
Market-wise Exports of Marine Products, 2015-16, in per cent



Source: Cochin Port Trust

represented a decline between 2014-15 and 2015-16 of 19 per cent in quantity and 9 per cent in value. The major markets for Indian cashew kernels are USA, UAE, Japan, Saudi Arabia, Netherlands, UK, France, Spain, Germany, Korea, Iran, and Malaysia. Exports of cashew kernels from Kerala showed a sharp decline in quantity by 25.68 per cent and in value by 16.76 per cent between 2014-15 and 2015-16. The exports of cashew kernels stood at 50,652 MT valued at ₹2579.49 crore in 2015-16, while the corresponding figures were 68150 MT and ₹3098.75 crore respectively in 2014-15. Kerala's share in the total export of cashew kernels from India, in quantity terms, was 57.29 per cent in 2014-15, which declined to 52.57 per cent in 2015-16. In value terms, the share was 57.04 per cent in 2014-15, which fell to 52.09 per cent in 2015-16 (Table 6.3).

The export of cashew nut shell liquid/cardanol from India in 2014-15 was 10,938 MT valued at ₹ 55.81 crore, which increased to 11,677 MT valued at ₹57.59 crore in 2015-16. The quantity of exports increased by 6.76 per cent and the value of exports increased by 3.19 per cent. But the export of cardanol through the Cochin Port, which was 818 MT with a value of ₹2.7 crore in 2014-15, declined to 111 MT valued at ₹0.27 crore in 2015-16 (Appendix 6.4).

India continued to be the largest producer of raw cashewnuts in the world. Production of raw nuts in India in 2015-16 was 670,300 MT as against the estimated production of 725,420 MT in 2014-15. Vietnam, Brazil, Tanzania, Ivory Coast, Guinea, Mozambique and Indonesia are the other main raw nut producing countries in the world. The

Table 6.3
Exports of Cashew Kernels, Kerala and India, 2010-11 to 2015-16,
Quantity in MT and Value ₹ in crore

Year	Kerala		India		Share of Kerala (Per cent)	
	Quantity	Value	Quantity	Value	Quantit	Value
2010-11	56578	1478.67	105755	2819.39	53.50	52.45
2011-12	68655	2295.84	130869	4383.82	52.46	52.37
2012-13	53624	2138.47	100105	4046.23	53.57	52.85
2013-14	65679	2861.75	114791	5058.73	57.22	56.57
2014-15	68150	3098.75	118952	5432.85	57.29	57.04
2015-16	50652	2579.49	96346	4952.12	52.57	52.09

*Export through Cochin Port.

Source: The Cashew Export Promotion Council of India

total raw cashew nuts imported into India in 2015-16 was 958,339 MT valued at ₹8561.01 crore; the corresponding figures were 939912 MT and ₹6570.93 crore in 2014-15. The substantial increase in the value of imported raw cashew nuts was due to the rise in the unit price of raw cashew nuts from ₹69.91 per kg to ₹89.33 per kg. Import of raw cashew nuts through the Cochin Port, which was 213,106 MT in 2014-15, declined by 25.9 per cent to reach 157,905 MT in 2015-16.

Exports of Coffee

Export of coffee from India in 2015-16 was reported as 318,100 MT (provisional) valued at ₹5175.56 crore. This represented an increase of 16.89 per cent in quantity and 7.72 per cent in value over 2014-15, when the quantity exported was 272,139 MT and value of exports was ₹4804.48 crore.

Export of coffee from Kerala through the Cochin Port in 2015-16 was 62,883 MT valued at ₹986.18 crore, as against 58,601 MT valued at ₹1007.33 crore in 2014-15. The decrease in the value was due to the fall in unit price of coffee

Exports of Tea

Export of tea from India in 2015-16 was reported as 232,920 MT valued at ₹4493.10 crore; this represented an increase over 2014-15 when exports

were 199,077 MT in quantity and ₹3823.64 crore in value.

Export of tea from Kerala ports stood at 69706 MT valued at ₹1025.34 crore in 2015-16 as against 69343 MT valued at ₹948.78 crore in 2014-15. The exports slightly increased by 0.52 per cent in volume and 8.07 per cent in terms of value (Table 6.4).

Exports of Coir and Coir Products

Main coir products exported from India are coir mat, coir yarn and other coir products. The exports of coir and coir products through the Cochin Port recorded a marginal decline by 0.97 per cent between 2014-15 and 2015-16. The quantity of exports, which stood at 125,523 MT with a value of Rs. 389.12 crore in 2014-15, slightly fell to 124,305 MT with a value of Rs. 374.03 crore in 2015-16. The export trend of coir and coir products through the Cochin Port for the period between 2010-11 and 2015-16 is shown in Figure. 6.2.

Exports of Spices

In 2015-16, Indian spices exports showed an increasing trend in value. A total of 843,255 MT of spices and spice products valued at ₹16,238.23 crore was exported from India in 2015-16, as against 893,920 MT with a value of ₹14,899.68

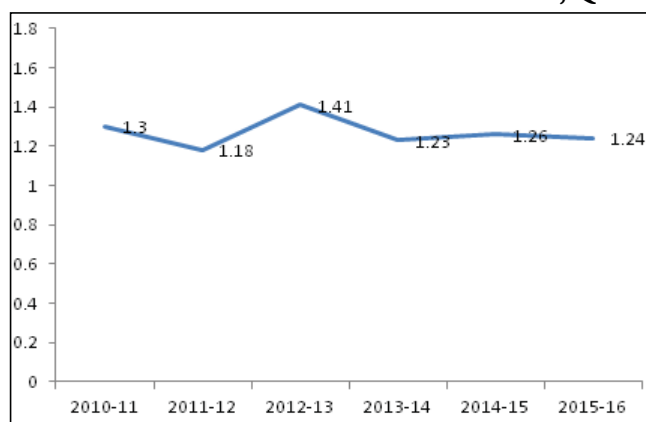
Table 6.4
Exports of Tea from Kerala Ports and India, 2010-11 to 2016-17,
Quantity in MT and Value ₹ in crore

Year	Kerala		India	
	Quantity	Value	Quantity	Value
2010-11	48104	552.12	222019	3058.31
2011-12	71784	742.87	214355	3304.83
2012-13	69017	904.62	216231	4005.93
2013-14	75036	1064.67	225764	4509.09
2014-15	69343	948.79	199077	3823.64
2015-16	69706	1025.34	232920	4493.10
2016-17*	32248	545.97	101042	2084.06

*April-September.

Source: Tea Board, India.

Figure 6.2
Export Trends of Coir and Coir Products from Cochin Port, Quantity in Lakh MT



Source: Cochin Port Trust.

crore in 2014-15. This represented an increase of 9 per cent in value and decline of 5.67 per cent in volume, which was mainly due to a decline in the export of cumin.

Pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, other seed spices, garlic, tamarind, nutmeg & maize, other miscellaneous spices, curry powder/paste, spice

oils and mint products are the main spices exports through Kerala ports. Export of spices from Kerala (through Cochin and Thiruvananthapuram Ports) increased from 81555.27 MT with a value of ₹3285.34 crore in 2014-15 to 100,076 MT valued at ₹3905.18 crore in 2015-16. This represented an increase of 18.87 per cent in value and 22.71 per cent in volume.

Section 2

NON RESIDENT KERALITES

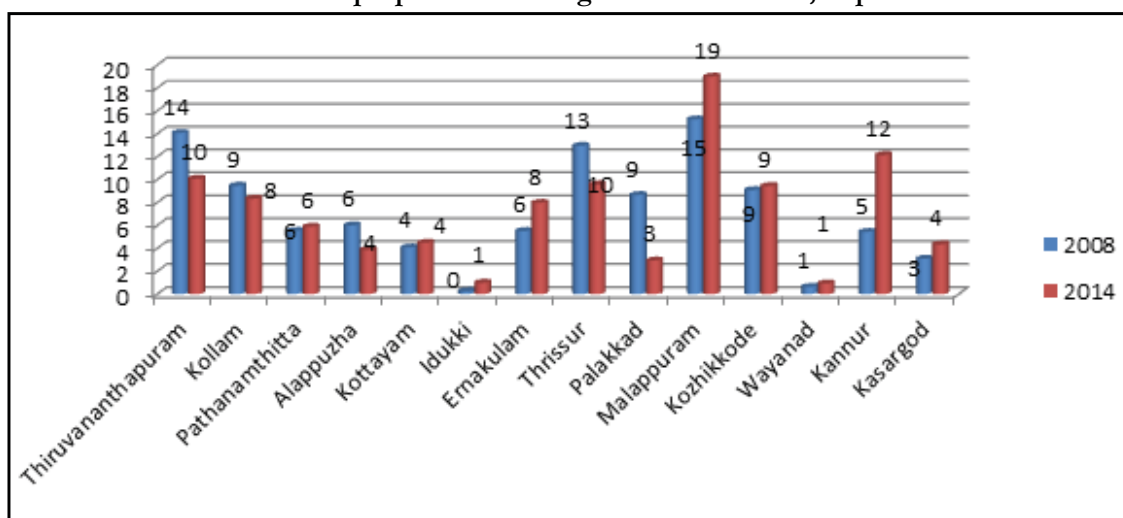
Non-Resident Keralites play a significant role in the progress of the state. Their contribution to the development can be seen at the household-level, community-level and state/country-level. There have been improvements in household earnings, food, consumption, health care, housing and educational attainments. For over three decades, remittances have also been meeting the current account deficit of the Indian economy.

The destinations of emigrants from Kerala are spread across the world. The Kerala Migration Survey 2014 (draft), conducted by the Centre for Development Studies, estimated that there were more than 24 lakh Keralites living in various countries and their remittances to the state net

domestic product was nearly 36.5 per cent. The average age of emigrants was 24.74 years. Educational profiles of the emigrants were better than of the general population; 75.1 per cent had passed Class 10, and 35.4 per cent had received diploma or a degree or higher levels of education. **Figure 6.3** shows the district wise proportion of emigrants from Kerala.

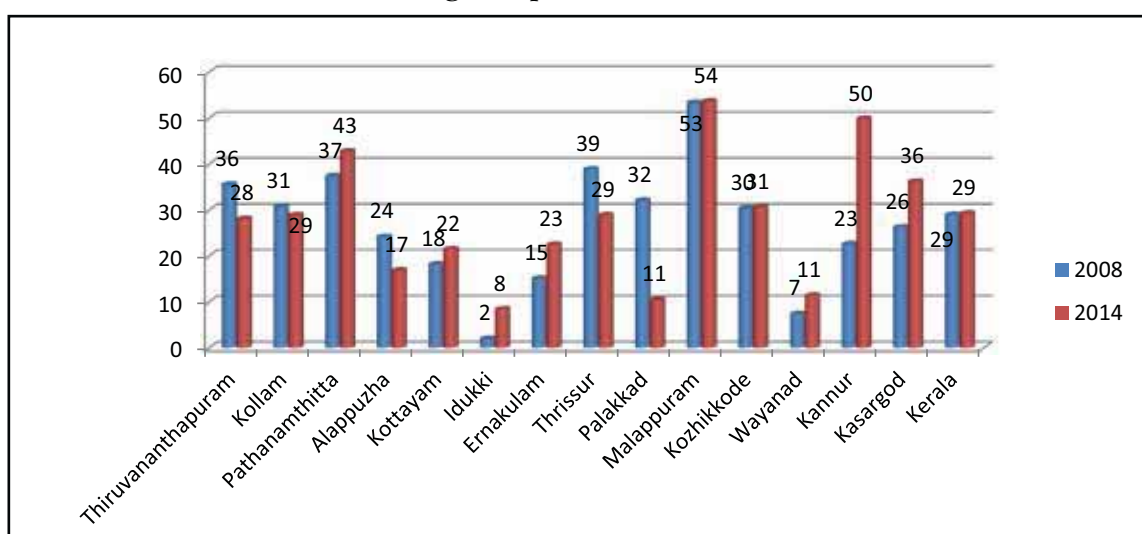
Between 2008 and 2014, the number of emigrants declined drastically in some districts, while in others, including hilly regions, the number of emigrants significantly increased. In the Southern districts, such as Thiruvananthapuram, Kollam and Alappuzha, the rate of growth of emigrants declined by 21.6 per cent, 3.7 per cent and 29.3

Figure 6.3
District wise proportion of emigrants from Kerala, in per cent



Source: Kerala Migration Survey, 2014 (Draft), State Planning Board, GoK.

Figure 6.4
Emigrants per 100 Households



Source: Kerala Migration Survey, 2014 (Draft), State Planning Board, GoK.

per cent respectively between 2008 and 2014. In absolute terms, the number of emigrants declined by 66,754 in Thiruvananthapuram, 7,583 in Kollam and 38,623 in Alappuzha. Districts registering significant increase were Pathanamthitta, Ernakulam, Idukki and Kannur. Details are in **Appendix 6.5**.

If we consider the number of migrants per 100 households, the figure was highest for Malappuram

district. In 2014, per 100 households, there were 54 emigrants in Malappuram and 50 emigrants in Kannur. The lowest number of emigrants per 100 households was reported in Idukki, Wayanad and Palakkad (**Figure.6.4**).

Return Emigrants

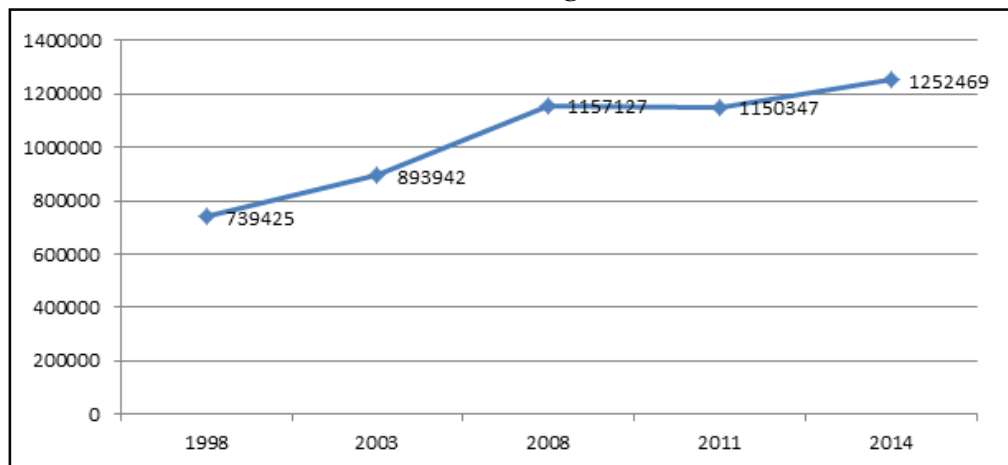
Due to the nationalisation policy in the Middle East countries and economic destabilisation all

over the world, the number of return emigrants is increasing in Kerala. The total number of return emigrants increased from 7.3 lakh in 1998 to 12.5 lakh in 2014. **Figure 6.5** shows the increasing trend of return migrants in Kerala..

A district-wise analysis shows that Malappuram accounted for 24 per cent of the total

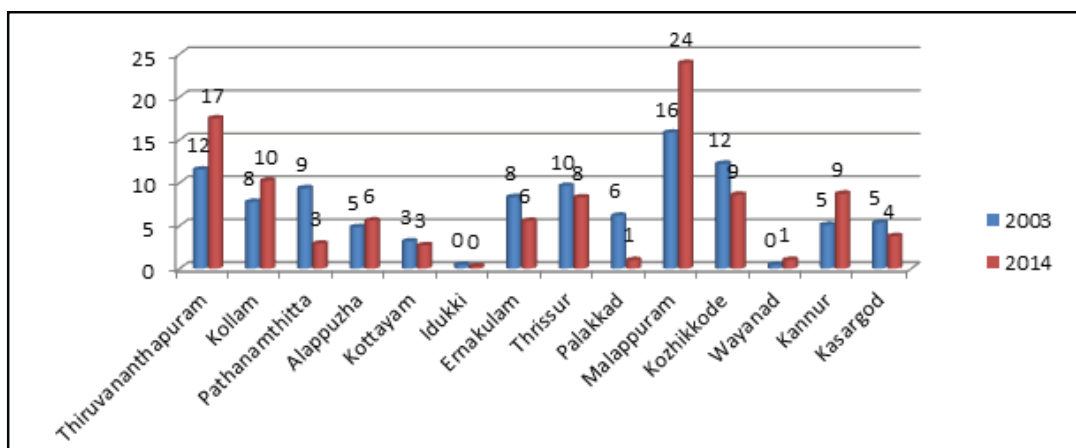
return emigrants in Kerala followed by Thiruvananthapuram and Kollam with 17 per cent and 10 per cent shares respectively. **Figure 6.6** shows the district-wise proportion of return emigrants in Kerala for 2008 and 2014. Detailed data on district-wise number of return emigrants is given in the **Appendix 6.6**.

Figure 6.5
Number of Return Emigrants in Kerala



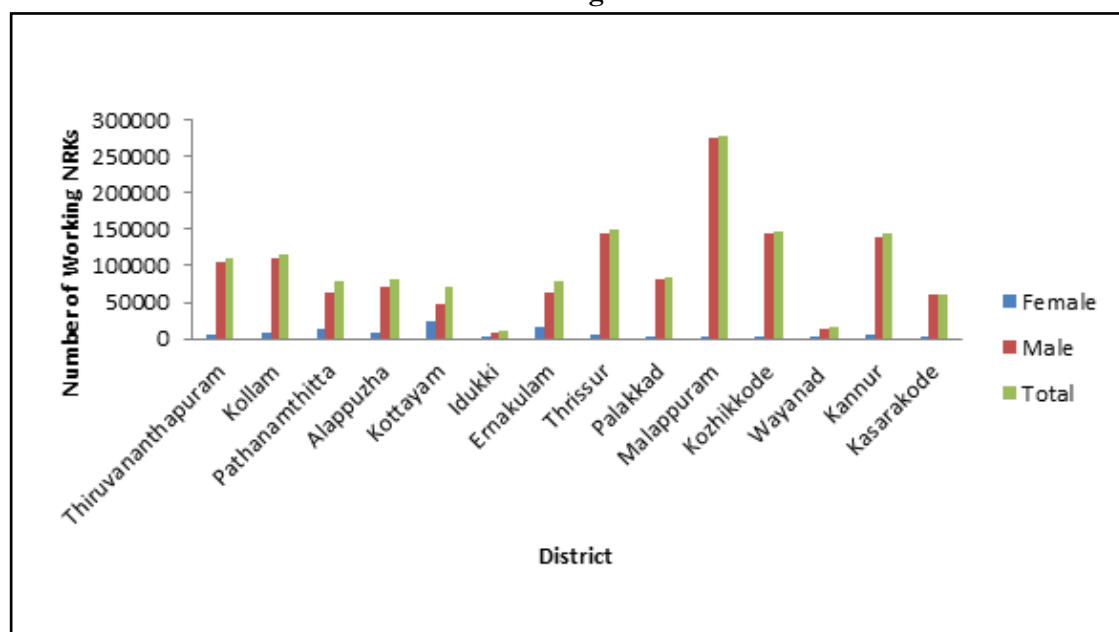
Source: Kerala Migration Survey, 2014 (Draft), State Planning Board, GoK.

Figure 6.6
District wise proportion of Return Migrants to Kerala, in per cent



Source: Kerala Migration Survey, 2014 (Draft), State Planning Board, GoK.

Figure 6.7
District-wise working NRKs in Kerala



Source: Economics and Statistics Department, GoK.

Number Of Working NRKs

Out of the total Non-Resident Keralites, 87.77 per cent are engaged in economic activities. Among those employed, 93.04 per cent are men and 6.96 per cent are women. Among all districts, Malappuram has the highest proportion of NRK's employed at 19.51 per cent, followed by Thrissur and Kozhikkode at 10.50 per cent and 10.37 per cent respectively. The district- and sex-wise ratio of working NRKs are given in **Appendix 6.7**.

Destination Of Emigrants from Kerala

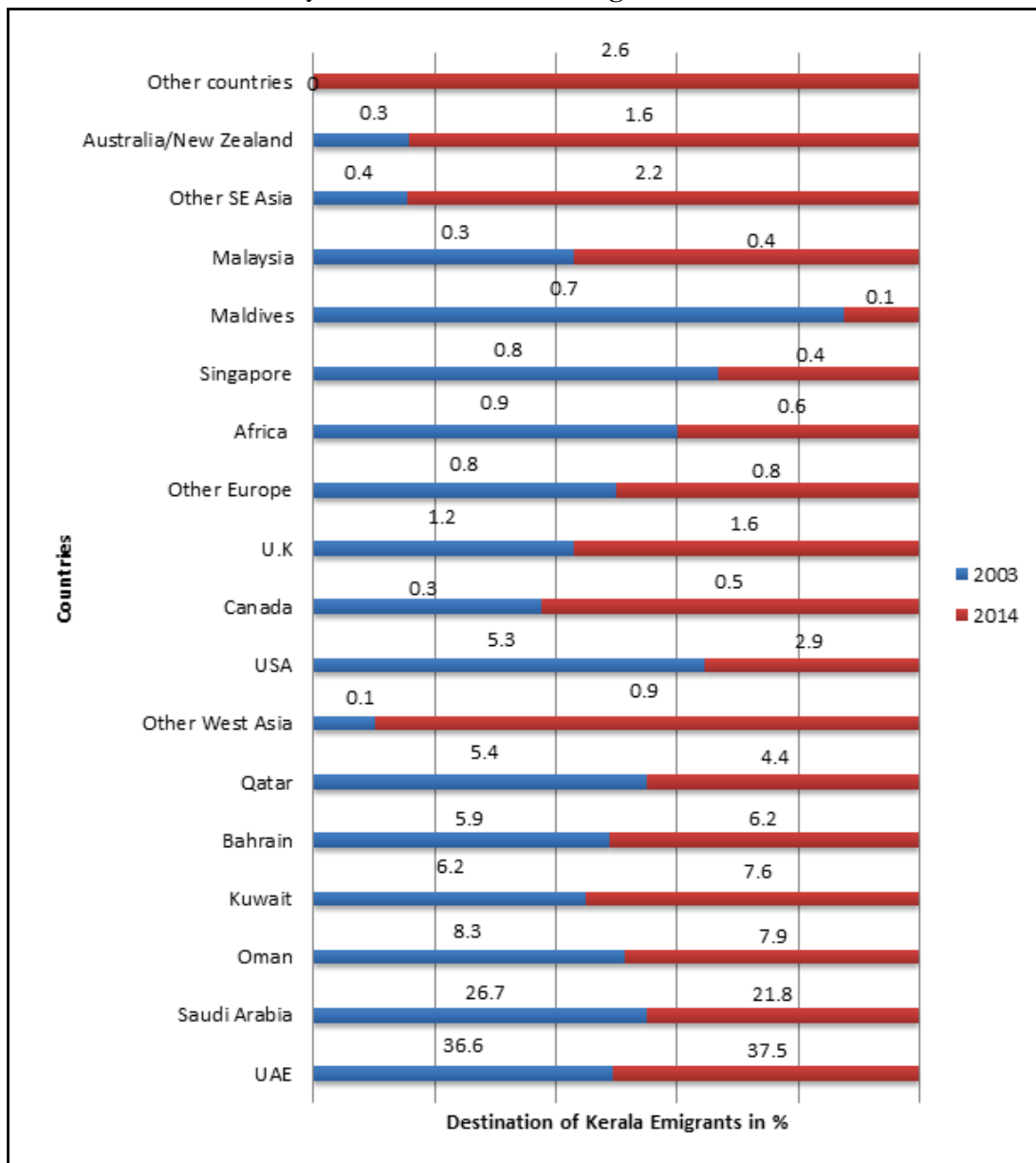
A country-wise destination analysis of emigrants from Kerala shows that 37.5 per cent of the emigrants are in the UAE and 21.8 per cent are in Saudi Arabia. Out of the total emigrants, 86.3 per cent reside in West Asia. Emigrants residing in the U.K, Canada and South-East Asian countries are increasing over the years. **Figure 6.8** shows the country-wise destination of total emigrants from Kerala for the period 2008 and 2014.

Profession-Wise NRKs

In recent years, the pattern of emigration has changed in respect of job seeking. In the 1970s, the proportion of skilled workforce in the total emigrants was very small. Over the years, the share of skilled workforce within total emigrants, such as from professions like doctors, nurses, engineers, IT professionals, and teachers has increased. Distribution of NRK's by profession showed that 11.85 per cent worked as drivers, 10.99 per cent worked as salesmen, 6.37 per cent worked as nurses, 3.78 per cent worked as engineers, 2.23 per cent worked as IT professionals and 0.53 per cent worked as doctors. The remaining 64.25 per cent worked as businessman, teachers, bank professional and other workers.

Among the doctors, the highest share is reported from Thiruvananthapuram at 14.39 per cent followed by Kottayam and Ernakulam at 14.38 per cent and 14.34 per cent respectively. The lowest share is from Wayanad. In the case of nurses, the highest proportion is from Kottayam at 23.73

Figure 6.8
Country wise destination of Emigrants from Kerala

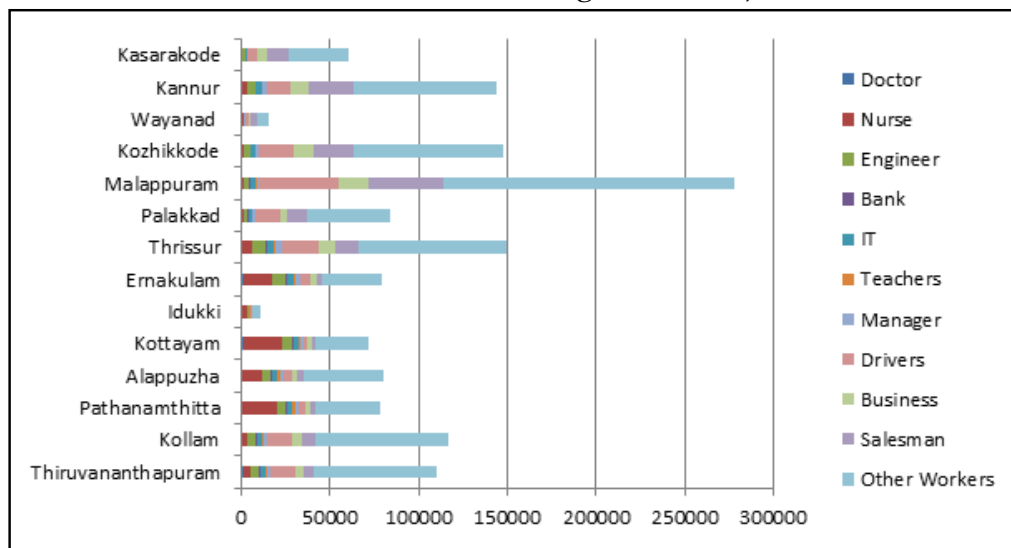


Source: Kerala Migration Survey, 2014 (Draft), State Planning Board, GoK

per cent followed by Pathanamthitta at 20.75 per cent and Ernakulam at 18.16 per cent. Among engineers, Ernakulam has the highest proportion of 13.47 per cent, followed by Thrissur at 13.23 per cent and Kottayam at 10.11 per cent. Among

teachers, Pathanamthitta has the highest share of 16.69 per cent followed by Alappuzha at 15.99 per cent and Kottayam at 9.74 per cent. **Figure 6.9** shows the district wise number of NRKs working in different jobs abroad.

Figure 6.9
District-wise NRKs working in different jobs



Source: Economic and Statistics Department, GoK.

Box 6.1 Working Group on NORKA

As part of the formulation of the 13th Five Year Plan, a Working Group on NORKA was constituted under the Co-Chairpersonship of Dr. Usha Titus IAS, former Secretary to NORKA Department, Government of Kerala and Prof. S. Irudaya Rajan, Professor, Centre for Development Studies, Thiruvananthapuram. Terms of reference of the Working Group was to i) critically assess the existing data base on migration and review the available estimates on the number and composition of Non- Resident Keralites (NRKs) and to propose a comprehensive methodology for collection and constant renewal of the information base on NRKs; ii) to analyse the impact of out migration on various dimensions of life in Kerala with special focus on economic and social implications; iii) to assess the implications of de-territorialisation of the Kerala economy and to suggest ways of promoting integrated development of Keralites within and outside the borders of the state; iv) to examine the evolution of emigration policy of India in a comparative perspective and propose changes that are required; v) to critically review all government programmes/schemes, especially those initiated by the state government during 11th and 12th plan periods and suggest a comprehensive approach towards migration and migrants that would maximize the welfare of the migrants as well as the home state; vi) to identify leading issues, such as rehabilitation and NRK investment in Kerala, that call for immediate government intervention and help formulate innovative programmes to be taken up during the 13th plan; and vii) to identify and formulate a set of output and outcome indicators (preferably measurable) for the sector and base the analysis of the previous plans on these indicators. Members of the Working Group comprised of administrators, academics, experts and representatives of Non-Resident Keralites from abroad. The report will be published shortly.

Box 6.2

A glimpse of Plan Schemes, Services and Projects offered by Norka Roots

Rehabilitation of Return Migrants: The aim of the scheme is to reintegrate returned emigrants by helping them find suitable employment/self-employment as a step towards the rehabilitation of return migrants. The government has established NORKA Department Project for Return Emigrants (NDPREM) to develop a sustainable business model. The project envisages providing a capital subsidy of 10 per cent of the total project cost as a backend subsidy to eligible entrepreneurs among return emigrants who wish to start their own ventures in the field of agri-business, training, services and manufacturing.

Santhwana: This scheme provides financial assistance to NRKs (returnees) whose minimum period of service abroad is two years. The period after return should not exceed 10 years. For medical assistance Rs. 50,000 is provided. The ceiling for death assistance is Rs. 100,000, for marriage assistance is Rs. 15,000 and for wheel chair crèches and artificial limbs is Rs. 10,000.

SwapnaSaphalyam: The lower segments of Non –Resident Keralites working abroad, especially in Gulf countries, are subjected to various miseries due to lack of labour protection rules. It is estimated that 1400 Indians are jailed in Saudi Arabia alone, of which 80 per cent are NRKs. The scheme proposes to address NRKs jailed abroad for no wilful default on their part and aims to provide free air tickets when they are released from jails, in case they are not able to afford the tickets.

Pravasi Legal Assistance (Pravasi Legal Aid Cell): One of the major problems faced by the migrant workers from Kerala to the Middle East is the court cases and other legal problems they get embroiled in. In the absence of any legal help, the poor workers end up in the jail. This happens even in cases of minor offence or sometimes without any offence. The government proposes to extend legal assistance, including appearance in courts abroad, through the Indian Diplomatic Missions or through advocates empanelled by the Indian Mission.

24 Hours Help Line/Call Centres: The scheme intends to disseminate information on various schemes/projects implemented by the government and NORKA ROOTS, redress grievances of NRKs, conduct counselling to NRKs who are in distress, create awareness among emigrants and prospective emigrants against illegal exploitation, migration and act as a frontline service facilitator/one point client interaction point for NRKs. It is also envisaged to provide need-based information and assistance to emigrants through the proposed helpline.

Pre-Departure Orientation Programme: The general public lacks awareness in matters connected with emigration in general and overseas jobs in particular. The scheme intends to impart orientation and training to these prospective emigrants before departing to their destination countries so as to ensure legal migration. The widespread rural penetration of this scheme will limit prevailing illegal migration and exploitation by unscrupulous recruiting agents.

The green shoots of revival in exports have provided an optimism for boosting up trade in the economy. The country needs to formulate policies and strategies to boost exports which are the only sustainable way in India's international trade environment. The State also needs to take proactive steps and address the impediments and gaps affecting the sector. Diversification of markets, certification, packing and labeling needs to be focused. An export strategy needs to be formulated. The State's development frontiers extend much beyond its geographical boundaries as a major share of its population resides outside the state. The State needs to come up with innovative solutions to improve the efficacy of existing programs, devise appropriate and clear recruitment strategy and involve the NRKs in spearheading states' economic development through harnessing their capabilities.

7 CHAPTER

CAPACITY BUILDING



CAPACITY BUILDING

Capacity building is core to achieving developmental objectives of the economy. The State through its myriad institutions in the field of science and research is spearheading innovations, new techniques, and capabilities. It is one of the few states in India which has given emphasis on promoting science and research. With its robust labour force, the state also has the potential to enhance its capabilities by focusing on skill development. Skill development has been recognized as vital to provide the relevant skills required for the industry and enhancing the productivity of the labour force.

Section 1

SCIENTIFIC SERVICES AND RESEARCH

Science and technology are key drivers to development, because technological and scientific revolutions underpin economic advances, improvements in health systems, education and infrastructure. The Department of Science and Technology plays a pivotal role in promotion of science and technology in the country. The Government of India, through the Science, Technology and Innovation (STI) Policy 2013, aspires to position India among the world's top five scientific powers.

Kerala is one among the few States in India that has been giving top priority for the development of science and technology sector. The State has been providing 0.7% of its budgetary allocation to the sector. Concerted efforts have been taken by the State to benefit the society through science and technology interventions with the in-

volvement of user agencies and beneficiaries for the improvement of infrastructure, livelihood, amenities and environment, thereby realizing sustainable development and better quality of life.

Kerala State Council For Science, Technology And Environment (KSCSTE)

Kerala State Council for Science, Technology and Environment (KSCSTE) is an autonomous body under the Department of Science & Technology, Government of Kerala, constituted in November 2002 to act as an agency for change and development through science and technology. Established in 1972 as Science, Technology and Environment Committee (STEC), in accordance with the Science Policy of Government of Kerala,

the STEC was reconstituted as KSCSTE in 2002 and is governed by the State Council (SC) with the Chief Minister of Kerala as the President and an Executive Council (EC), chaired by the Executive Vice President (EVP) of KSCSTE. Presently, there are seven full-fledged R&D centres, two emerging research centres and two Grant-in-aid institutions under the umbrella of KSCSTE.

Major objectives of KSCSTE

The objectives behind the setting up of the council include the following;

- to identify thrust areas in science and technology for speeding up the socio-economic development and enhancing the quality of life and environment in Kerala
- to advise the Government on the formulation of policies and strategies and suggest measures for implementation, which will promote the application of science and technology to meet the perceived needs of the society, and manage natural resources
- to assist in the preparation of the Science and Technology Development Plan of the State and its implementation
- to promote effective coordination between Centres of Scientific and Technological research, Government agencies, farms and industries including the private sector so that know-how generated by scientific research is fruitfully deployed by transfer of technology
- to support and coordinate research programmes in the universities and institutes of the Government, research and development laboratories of the private sector with a view to optimizing the scientific output
- to consider and advise the Government on all such matters as are relevant to the application of science and technology to the economic, industrial, educational and social development of Kerala
- to advise local self-governments on the use of Science & Technology for local application and local development
- to network the Science and Technology agencies within and outside the country

- to make the Science, Technology and Environment plans responsive to the development needs of Kerala and to detail them with the programmes of the economic, scientific and service departments of the Government such as agriculture, industries, power, water, energy, education and IT

The main objective of KSCSTE, therefore, is to plan and formulate science, technology and innovation policy pertaining to the development of the State. The schemes and programmes of the Council are also aimed at development of high quality science education system in the State through infrastructure strengthening for basic research and promotion of science pedagogy.

Kerala State Council for Science Technology and Environment drives Research and Development efforts of the R&D Centres through offering assistance for creation of physical infrastructure and procurement of scientific infrastructure under Development and Selective Augmentation of R&D activities. The other initiatives include the following:

- Science Popularisation Programmes
- Research Development Programmes
- Ecology and Environment Programmes
- Awards and Recognition for science promotion
- Technology development and transfer
- School level promotions

The KSCSTE takes deliberate efforts to popularize science including basic science, applied science, technology, environmental science, medical science and related areas among people with the assistance of Governmental and Non Governmental organizations, colleges and approved institutions. National Science Day and National Technology Day are observed to spread the message of importance of science and its application among the people. Seminar-Symposia-Workshops, Technology Festival, Rural Innovators Meet and Kerala Science Congress were conducted to facilitate interaction among academics, researchers, professionals, industry and decision makers.

Technology development and transfer is promoted through Patent Information Centre, Engineering and Technology Programmes, Technology Development and Adaptation Programme, and Rural Technology Programmes.

The Council extends awards and recognition to promote science and technology and promote scientific attitude among youngsters. Kerala Sasthra Puraskaram is for life time contribution of a Scientist of Kerala, working anywhere in the world. In addition to this, the Council extends Young Scientist Award, Science Literature Awards, Environment Early Career Research Award and Outstanding Environment Award to promote science and technology.

Major Arms of KSCSTE for Scientific Research

There are seven R&D centres under the umbrella of the Council which conducts Research and Development activities in specific mandated domains.

Kerala Forest Research Institute (KFRI)

Founded in 1975, the institute has contributed significantly to the research in tropical forestry and biodiversity conservation over the past four decades of its existence. KFRI started functioning under STEC and became a part of KSCSTE in 2002. The institute is envisioned as a Centre of Excellence in Tropical Forestry to provide scientific support for decision making on matters related to forestry, with particular emphasis on conservation, sustainable utilization and scientific management of natural resources.

Sustainable management of forests requires a strong science and technology base. It requires a shift in thrust for forest management assigning greater importance to the environmental functions of forests. Working in collaboration with the Forest department and other stakeholders, the Kerala Forest Research Institute

continues to play a key role in improving the science foundation of forest management.

Major achievements

- The Institute is considered as an International Centre of Excellence in Tropical Forestry.
- Two major international research initiatives are based in the Institute. One is 'Teaknet' (International network of institutions and individuals interested in teak), and the secretariat of the network is located in KFRI and second is 'APFISN' (Asia – Pacific Forest Invasive Species Network). The office of the 'APFISN' functions at KFRI. The Network is a cooperative alliance of the 33 member countries in the Asia-Pacific Forestry Commission (APFC) - a statutory body of the Food and Agriculture Organization of the United Nations (FAO). The network focuses on inter-country cooperation that helps to detect, prevent, monitor, eradicate and/or control forest invasive species in the Asia-Pacific region.
- Government of India had identified KFRI as one of the organization for imparting training to the officers of the Indian Forest Service (IFS) from the various States.
- Developed HpNPV Technology; Hyblaea Puera (National Patent) for Bio control & Teak Defoliator; Developed a technology for converting weeds to good quality organic manure using 'Jeevamrutham' and another to convert urban organic waste to good organic manure using 'Jeevamrutham'.

National Transportation Planning and Research Centre (NATPAC)

National Transportation Planning and Research Centre (NATPAC) was established in 1976 as a Division of Kerala State Electronics Development Corporation (KELTRON), a Public Sector Enterprise under the Government of Kerala. In 1982, NATPAC was reconstituted as an R&D

institution under the Department of Science, Technology and Environment, Government of Kerala. NATPAC became a part of KSCSTE in 2002. The Centre is undertaking research and consultancy works in the fields of traffic engineering and transportation planning, highway engineering, public transport system, alternate options for transport system, transport energy, inland water transport, tourism planning and rural roads. The activities of NATPAC range from surveying to preparation of technoeconomic studies, feasibility analysis, detailed project reports for infrastructure development projects involving multi-modal system of transportation covering road, rail, water, ports/harbours and airports. Currently, NATPAC has 7 scientific divisions.

Major Achievements

- Developed a scientific formula for fixation of fare for bus operations
- Developed a trip generation model for identified towns in Kerala using “quick response” concept
- The influence of platoon movement of buses from Signalized Junctions to down-stream bus bays
- Studied the impact of proposed Vizhinjam seaport on the Traffic and Transportation systems of hinterland areas
- Identified possible road map for initial implementation of greener transport in Technopark campus at Thiruvananthapuram leading to large scale use of greener transport modes in the State
- Studied the existing pedestrian facilities and infrastructure in selected road corridors of Thiruvananthapuram and Kochi cities in Kerala and formulated strategies to enhance better accessibility, convenient and safe walking environment
- Carried out an appraisal of the highways developed under Kerala State Transport Project (KSTP) by conducting the structural and functional evaluation
- Developed a traffic growth rate model for the National Highways in Kerala
- Assessed the feasibility of connecting NW-3 with Thrissur town through waterways
- Formulated accident prediction models
- Prepared Road Safety Training Materials which includes Books, Booklets, Calendars, Leaflets, Stickers and display boards
- Developed 18 films related to different aspects on road safety targeting different road users and also developed a mobile application on android platform on road Safety named “Safesavari”

Centre for Water Resources Development and Management (CWRDM)

CWRDM is a premier R & D institution in the water sector under KSCSTE. Recognising the need for catering to the R & D needs in the field of water management, the Centre for Water Resources Development and Management (CWRDM) was established as an autonomous research organisation by the Government of Kerala, under its Science and Technology Policy in February 1978. The Centre was amalgamated with the Kerala State Council for Science, Technology and Environment (KSCSTE) in its Silver Jubilee Year (2003). CWRDM has substantially contributed to the scientific hydrologic studies and water management in the region. The Centre provides research inputs for water resources development and management, especially in the humid tropics and has expertise in tackling different problems pertaining to watershed development, wetland management, water management for agriculture, forest and urban hydrology, estuarine management, groundwater development, water quality management, water related environmental issues and irrigation and drainage issues. The Centre is proud to have many ongoing and completed programmes funded by national and international agencies including Government of India, United Nations Development Programme, United Nations Environment Programme, UNICEF, World Bank and National Academy of Sciences (USA). Presently, CWRDM has 10 scientific divisions and 3 extension centres.

*Jawaharlal Nehru Tropical Botanic
Garden and Research Institute
(JNTBGRI)*

Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) formerly known as Tropical Botanic Garden and Research Institute (TBGRI) was founded as an autonomous institution in 1979 with the objective of establishing a Conservatory Botanic Garden of tropical plant resources in general and of the country and the Kerala State in particular. It also undertakes research programmes for the sustainable utilization of these resources. The institute is located in 300 acres of natural forestland, right in the lap of the Western Ghats of Palode, 40 km northeast to Thiruvananthapuram city.

The institute is currently conserving more than 4000 species of flowering plants and about 300 species of non-flowering angiosperms, which is the highest number of plant species conserved among the botanic gardens in Asia. The institute has an extension centre viz., Saraswathy Thangavelu Centre at Puthenthope, Thiruvananthapuram where the Bioinformatics Centre is established. The Government of India has recognized the JNTBGRI as a National Centre of Excellence.

Presently, the institute has 9 scientific divisions involved in research activities including ex-situ conservation and management of plant wealth of the country, biodiversity documentation, systematic studies, conservation and management, bio prospecting (biotechnological, phytochemical and pharmacological) of plants for sustainable utilisation, documentation of indigenous knowledge, education, extension and training on conservation and sustainable utilization of plants with financial assistance from different State and national funding agencies.

*Kerala School of Mathematics
(KSOM)*

Kerala School of Mathematics (KSOM) was established in 2009 as a joint venture between

KSCSTE, Government of Kerala and Department of Atomic Energy (DAE), Government of India for carrying out advanced learning and research in Mathematics. It is situated at Kunnamangalam near Kozhikode. KSOM aims to play a catalytic role in reviving the great mathematical tradition of Kerala in the modern paradigm. The school which aims to run as a national facility, envisages promotion of mathematical research in the country and Kerala in particular through activities such as research at doctoral and post-doctoral level, workshops in frontier areas of mathematical science, national and international conferences, instructional conferences, structured courses and lectures for young mathematicians, training for post-graduate students, research scholars and teachers.

*Srinivasa Ramanujan Institute for
Basic Sciences (SRIBS)*

Srinivasa Ramanujan Institute for Basic Sciences (SRIBS) is a capacity building Institute envisaged for Research, Teaching and Learning in Basic Sciences. SRIBS was established by the Government of Kerala in 2013 at Kottayam. The main objective of the institute is to formulate and implement programmes for capacity building for young faculty members, researchers and post graduate students in contemporary areas of sciences.

The institute has organized several colloquia, seminars, workshops and symposia with the support of over 200 internationally acclaimed scientists from about 100 premier institutions around the world, benefiting over 1500 students, teachers and researchers in various areas of science.

*Malabar Botanical Garden
and Institute for Plant Sciences
(MBGIPS)*

The Malabar Botanical Garden & Institute for Plant Sciences (MBGIPS) is an institution of KSCSTE dedicated to the conservation and research on aquatic plant diversity, lower group plants, endangered plants of the erstwhile Malabar

Region, as well as disseminating knowledge on various facets of plant sciences. MBGIPS is situated adjacent to Pokkunnu at Olavanna village in Kozhikode District.

The Garden is spread over an area of about 40 acres of which about 15 acres is marshy land and the remaining part is a hilly terrain providing diverse habitats for varieties of plants. The Malabar Botanical Garden and Institute for Plant Sciences is unique for ex situ conservation of aquatic/wetland plants and for undertaking research on them. A Systematics Garden, Aqua-conservatory, Hortus Malabaricus Garden, Rare, Endangered and Threatened (RET) species conservation, lower group conservatory are the highlights of the Garden. The Garden is open to students for eco-education and to general public as part of promoting scientific tourism in the region. The educational value of the Garden lies with the descriptive labels displayed for the different sections and plants. This institute is also a Research Centre in Plant Sciences (Botany) recognized by the University of Calicut.

Major Achievements

- Fellowship Titles of
 - a. National Academy of Biological Sciences (FNABS)
 - b. Gregor Mendel Foundation 2016 (FGMF)

c. National Academy of Sciences, India 2016 (FNASc)

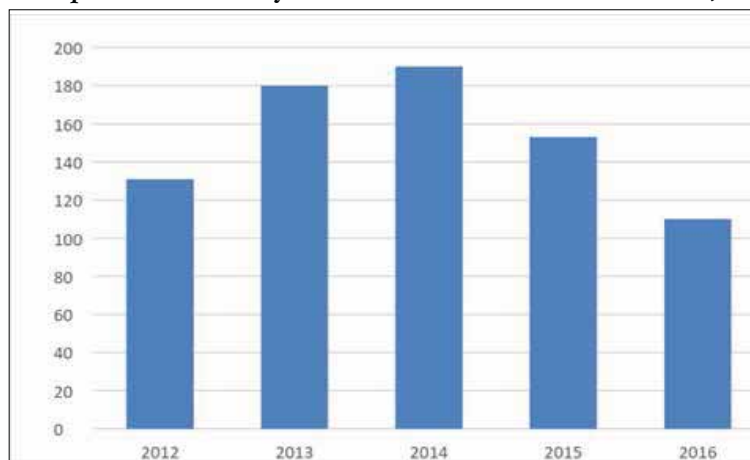
- Leadership Award of National Academy of Biological Sciences 2015
- Eminent Scientist of the Year Award of the International Foundation for Ecology & Environment in 2016
- Certificate of Appreciation 2015 for service (GMF)
- Best Microbiologist Award 2015 (SESR)
- Best Informative Pavillion Award, Global Ayurveda Festival 2016
- Best Science Expo Award in the 26th Kerala Science Congress

Academic Achievements of R and D Institutions

Research Publications

The Research and Development Institutions of KSCSTE have been creating the wealth of knowledge in diverse fields. The institutes have produced a good number of publications in refereed journals, published books and chapters in books and research papers in national and international conferences. The number of research papers produced by R&D Institutions from 2012 onwards is given in the **Figure 7.1**.

Figure 7.1
Research Papers Produced by R&D Institutions from 2012 -2016, in number



Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

The number of research papers produced in 2016 is a quick estimate as on November 2016. Among the seven R&D institutions under the Council, JNTBGRI, CWRDM and KFRI rank at the top with respect to the publication of papers.

With respect to the publication of books during 2016-17, JNTBGRI has published 3 books and 1 chapter in an edited work. CWRDM has also published 1 book and 11 technical reports during the same period. KFRI has also published 2 books in the year 2016.

Other Schemes and programmes of KSCSTE

7.25 Science Research Scheme (SRS): It is one of the flagship activities of the Council operating under the Science and Technology Promotion Division (STDP) of the Council. SRS aims towards the promotion of R&D activities in the State both in fundamental and applied research. Under the scheme, research projects in emerging areas of science and engineering are supported by providing financial assistance for implementation. Research projects are supported in University departments, colleges and R&D institutions. The projects sanctioned under the scheme from 2012-13 to 2015-16 is given in **Figure 7.2**.

Figure 7.3 portrays the publications by the

University Departments, Colleges and R&D Institutions under SRS during the 12th plan period.

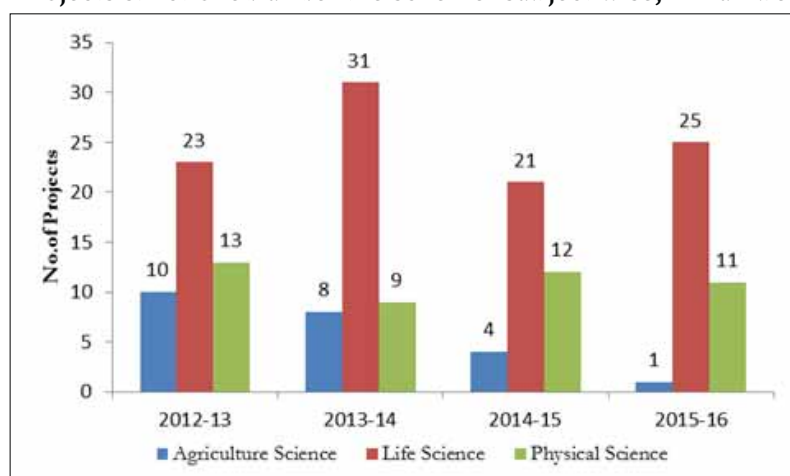
Achievements of KSCSTE Research Fellows

As per the data from KSCSTE, about 343 students have been facilitated to carry out Ph.D in Science since 2002. Several research fellows are placed in academic/ R&D institutions in India and abroad. Many of them bagged State level young scientist awards and best paper awards. **Figure 7.4** shows the achievements of KSCSTE research fellows from 2013-15.

Programmes For Infrastructure Development in S and T

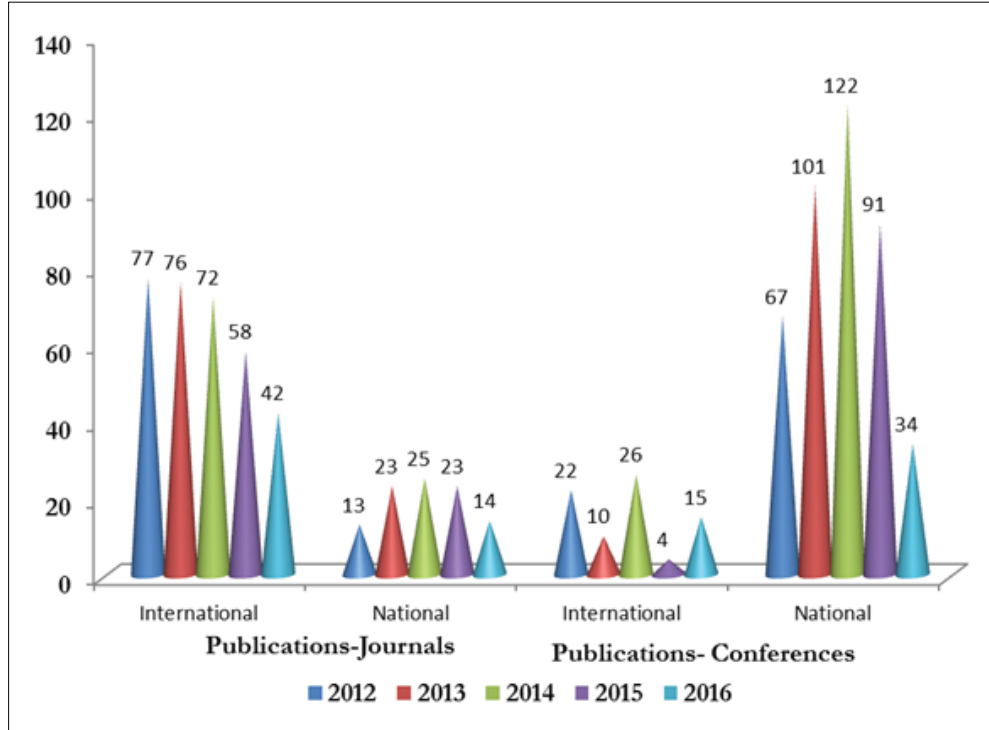
In order to provide sufficient infrastructure facilities in universities, colleges and schools for the promotion of scientific activities and augmenting research, the Council has been providing financial assistance for the creation of lab and related facilities over there. Selective Augmentation of Research and Development (SARD) and Sastraposhini are the two schemes implemented by the Council for this purpose. SARD is envisaged to create facilities in colleges and universities for augmenting research in specified areas. Under this programme, grants will be paid for strengthening

Figure 7.2
Projects sanctioned under the scheme- subject wise, in number



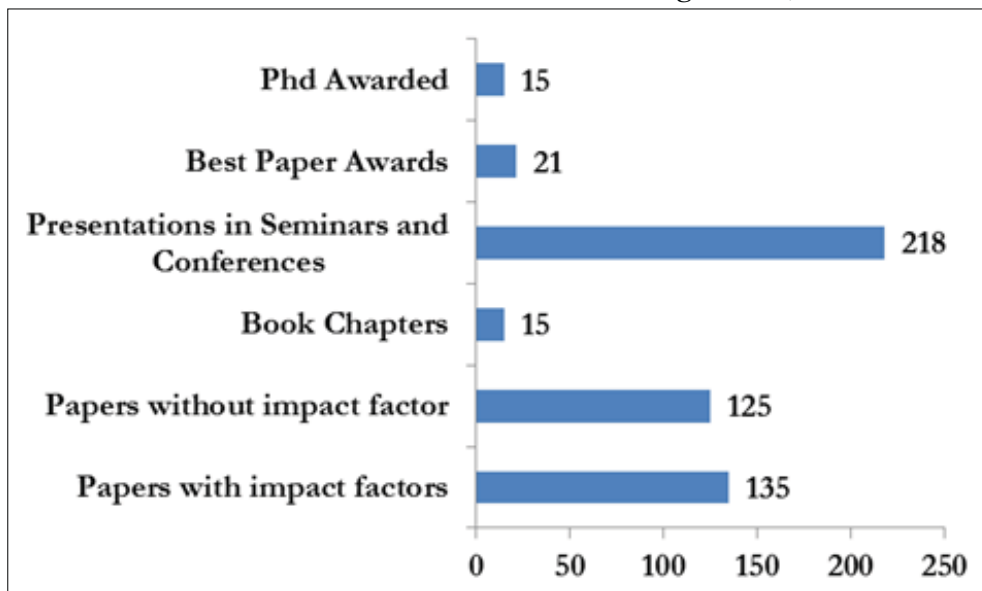
Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

Figure 7.3
Publications during 12th five year plan period under Science Research Scheme, in number



Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

Figure 7.4
Achievements of KSCSTE research fellows during 2013-15, in number



Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

the laboratory infrastructure by procuring equipment and also for its maintenance. So far, 57 science Post Graduate laboratories and research institutions in Kerala have been augmented.

Sastraposhini scheme aims to establish model science laboratories in Physics, Chemistry and Biology to create a better ambience in high schools. Since the very inception of the scheme 179 schools in Government and aided sector in the State have been supported to establish good science laboratories.

Engineering and Technology Programmes (ETP)

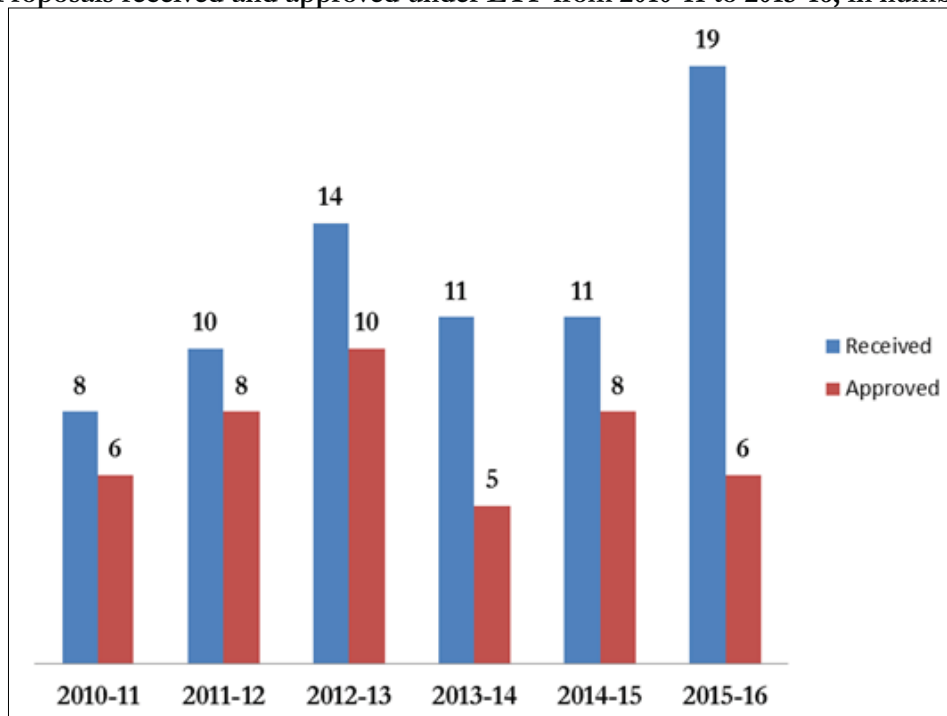
The Engineering and Technology Programme (ETP) intends to encourage and promote research talents for the implementation of high quality research projects in the emerging areas of Engineering and Technology. The scheme is instituted for the faculty of engineering colleges

and Scientists of R&D institutions in the State. **Figure 7.5** represents the number of proposals received and approved under ETP from 2010-11 to 2015-16.

Technology Development and Adaptation Programme (TDAP)

The very objective of the programme is to provide catalytic support for the development and demonstration of innovative and need-based technologies and to raise such technologies to the level of commercialisation. Individual innovators who possess a professional degree (Diploma or Degree in Engineering or equivalent), students of professional technical courses, Scientists/ Researchers from Research Organizations/ Academic Institutions/Non- Governmental Organizations can apply under this scheme. During the year 2015-16, 14 proposals were received of which 5 were sanctioned.

Figure 7.5
Proposals received and approved under ETP from 2010-11 to 2015-16, in number



Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

Rural Technology Programme (RTP)

Rural Technology Programme (RTP) scheme is instituted for the purpose of providing assistance in the form of grants to promote and support the traditional rural technology and upgrade them, so that it could be perfected for wider applications and employment generation and to reduce the drudgery of the rural households. The main objectives of this scheme are to encourage and promote grassroot innovators and individuals to support them so as to perfect their innovative ideas in rural technology sector and provide technical support to raise their innovations to an enterprise level. **Figure 7.6** portrays the type of institutions involved under the Rural Technology Programme.

Patent Information Centre – Kerala (PIC-Kerala)

KSCSTE with the support of Dept. of Science & Technology, Government of India established Patent Information Centre – Kerala (PIC-Kerala) in the year 2003 to provide Intellectual Property Rights (IPR) related services to the people in the

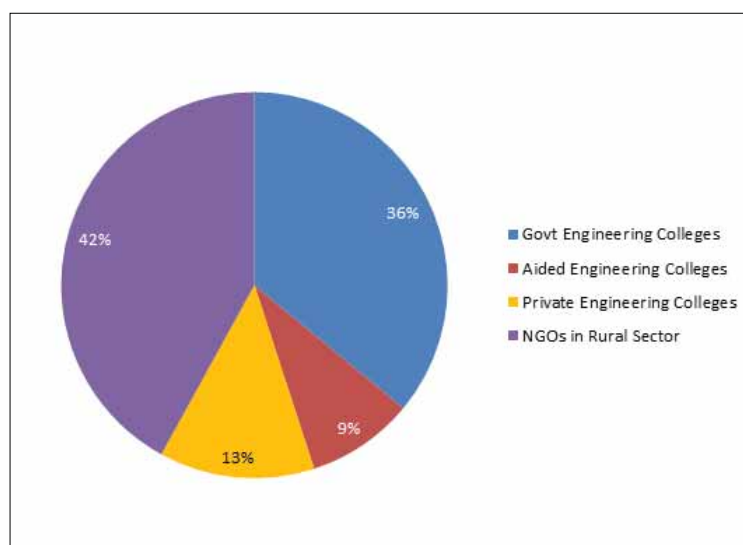
State of Kerala. PIC-Kerala has been implementing many programmes to promote and propagate IPR in the State through awareness campaigns and publications. The Centre has been guiding the inventors in protecting their intellectual properties and facilitates access to patent related documents. The ultimate objective of PIC-Kerala is to increase the IP output of the State. **Table 7.1** gives the number of filed patent applications.

Programmes for Women in Science

Though the State has the highest share of women literates, their representation in science research is very low. In order to provide a support system to attract and retain women and girls in science and take up science as a career, the Women Scientists Division at KSCSTE initiated several schemes and programmes to increase their participation in Science, Technology, Engineering, Agriculture and Medicine (STEAM). The important programmes carried out by the Council in this area are

- Women in Science
 - I. Back to Lab Research Fellowship Programme
 - II. Awareness Programme on “Technological advances in transforming women’s lives”

Figure 7.6
Types of tie-up institutions involved, in per cent



Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

Table 7.1
Number of Patent Applications Processed

Year	No. of Patent Applications
2010	56
2011	74
2012	87
2013	89
2014	59
2015	60
2016	45

Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram

- III. Project on Preparation of database of 'Women in Science in Kerala'.
- IV. VSORT – Vocational Skill Oriented Reinstatement Training
- STARS (Students with Talent and Aptitude for Research in Science)
 - I. Pratibha Scholarship Scheme
 - II. SPEED (Student Programme for Excellence in Experimental Design)

Government Spending on Scientific Services and Research

Recognising the growing need of investments and related expenditure for expansion of the scientific services and research in the State, the government have been allocating certain portion of its budgetary allocation from the fifth plan period onwards. During the fifth plan period (1974-78) the allocation was Rs. 7.98 crore and the figure rose

to 436.44 crore by the 12th plan period (2012-17). **Table 7.2** details the plan outlay and expenditure during the period 2012-13 to 2016-17.

Manpower Training

Ensuring sustainable pipeline of talented youth for science is a challenge. The role of R & D institutions in rearing up research aptitude and talent has foremost importance in orienting the youth to science, technology, innovations and S&T-based solutions that successfully lead an economy or a State. The R&D institutions of KSCSTE have produced 7 PhDs in 2016 (as on October 2016 estimates). The institutes have trained 1174 manpower in Research capacities and 170 in technical capacities. **Table 7.3** provides the performance of the R & D institutions collectively in providing quality manpower, and producing output in terms of patents and technology transferred.

Table 7.2
Plan outlay and Expenditure from 2012 to 2017, ₹ in lakh

Year	Outlay	Expenditure
2012-13	6620	6396.15
2013-14	7895	5136.93
2014-15	9171	5464.65
2015-16	9979	6362.20
2016-17	9979	2323.24*

Source: Annual Plan Documents,

State Planning Board, Thiruvananthapuram.* Expenditure up to November 30, 2016

Table 7.3
Performance of R & D Institutions, in number

R & D Centre	2012	2013	2014	2015	2016
Ph D Produced	12	10	11	12	7
Research Manpower Trained (other than Ph D)	171	1017	703	534	1174
Technical Manpower Trained	146	283	473	243	170
Patent Filed	1	1	Nil	1	Nil
Technology Transferred	Use of waste plastic for road construction by NATPAC				3

Source: KSCSTE, Sasthrabhavan, Thiruvananthapuram.

The Council has been taking serious efforts to promote excellence in science and technology through learning, research and development with the participation of academia, industry and research organizations. It is also receiving a substantial allocation from the government to boost up these activities. The advancements in the S&T sector will bring forth modernised development to all other sectors of the economy. This can be realised only by ensuring quality research, manpower, provision of equipment and necessary infrastructure and also through the involvement of practicing scientists and the university faculty in the R&D activities relevant to the State.

Regional Cancer Centre, Thiruvananthapuram

Regional Cancer Centre (RCC), Thiruvananthapuram was sponsored and established jointly by Government of India and Government of Kerala in 1981 as a grant-in-aid research institution for promoting cancer research and generating manpower in oncology as well as providing comprehensive cancer care. Its main objective is to undertake basic, applied and statistical research in various specialities of oncology.

Today, RCC is the premier, comprehensive, dedicated centre for diagnosis, treatment and

control of cancer in Kerala. It is rated amongst the top three of the 28 Regional Cancer Centres in the country and maintains a working relationship with international bodies such as the WHO, International Agency for Research on Cancer (France), International Atomic Energy Agency (Vienna), National Cancer Institute (USA), Institute for Cancer Research (UK), University of Leeds (UK), Health Research Foundation (Japan) and a host of other respected organizations.

Over the past thirty five years, RCC has been able to contribute significantly to the increasing needs of cancer care of the people of the State of Kerala and adjoining areas of Tamil Nadu and Karnataka providing State-of-the-art diagnostic and treatment facilities at the lowest possible cost. In addition, RCC is committed to cancer control activities among the public, human resource generation in various specialities of oncology as well as cancer research expected to result in new treatments for cancer. **Box 7.1** provides the profile of the RCC in 2015-16 at a glance.

Enhancement of Patient Care Facilities

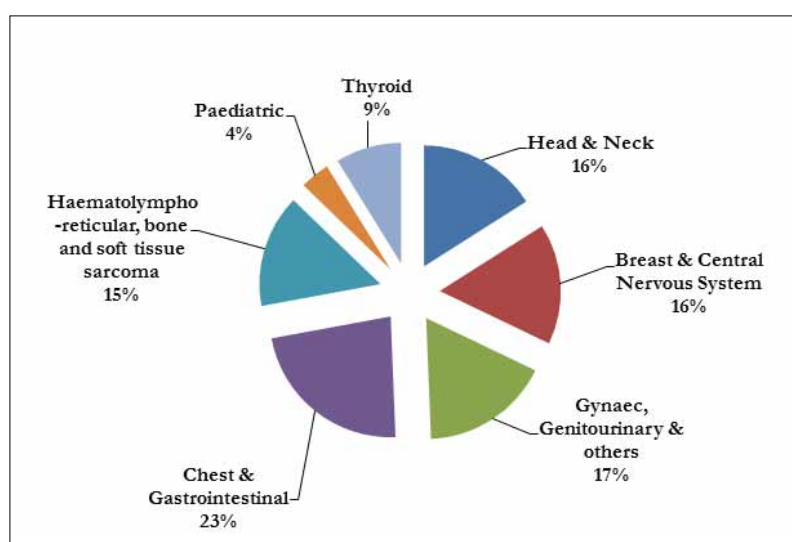
Early detection is the key to cancer cure. Modern diagnostics facilities are needed to detect cancers in very early stages. During the past six years, RCC could make phenomenal strides in procurement of advanced equipment for prompt diagnosis and timely treatments thus helping patient's survival

Box 7.1
Profile of RCC in 2015-16 at a glance

New Cases Registered	-	16042
Review Cases Registered	-	216156
In-patient Admissions	-	11237
Radiotherapy	-	6886
Brachytherapy	-	1646
Surgical Procedures	-	5547
Endoscopic Procedures	-	1830
Chemotherapy Administered	-	10089
Bone Marrow Transplantations	-	30
Cancer Detection Programmes	-	444
Cancer Education Programmes	-	184
Ongoing Research Projects	-	155

Source: Regional Cancer Centre, Thiruvananthapuram

Figure 7.7
Speciality clinic-wise number of new patients registered in 2015-16



Source: Regional Cancer Centre, Thiruvananthapuram

and quality of life. RCC has all the departments and treatment facilities required for comprehensive cancer care.

Figure 7.7 gives the incidence of cancer to human body parts detailed as percentage of new patients registered in speciality clinics in 2015-16.

The highest percentage of new cancer cases registered were related to Chest & Gastrointestinal cancers during the mean period and followed

by Gynaec, Genitourinary and Breast & Central Nervous System cancers.

The data on the speciality clinic wise number of patients (new & review) who had undergone treatment during the year shows an increase in the number of new cases registered with respect to Chest & Gastrointestinal and Breast & Central Nervous System. **Table 7.4** provides number of new and review Patients undergone treatment in speciality clinics in the year 2015-16.

Table 7.4
Speciality clinic wise number of patients (new & review) undergone treatment 2015-16

Clinic	New	Review	Total
Chest & Gastrointestinal	3702	33002	36704
Gynaec, Genitourinary	2708	31262	33970
Breast & Central Nervous System	2628	44502	47130
Head & Neck	2575	32147	34722
Haematolymphoreticular, bone and soft tissue sarcoma	2375	40666	43041
Paediatric	645	14728	15373
Thyroid	1409	19849	21258
Total	16042	216156	232198

Source: Regional Cancer Centre, Thiruvananthapuram

The details of the age and sex wise number of new cases registered reveals that people in the middle-ages are more prone to cancer diseases. About 29.19 per cent of male in the age group 55-64 are affected by cancer whereas the age group in the case of women is slightly lower than this, that is, 25.4 per cent female are affected by cancer during the years 45-54. **Figure 7.8** illustrates age and sex wise new cancer patients registered for treatment in RCC in 2015-16.

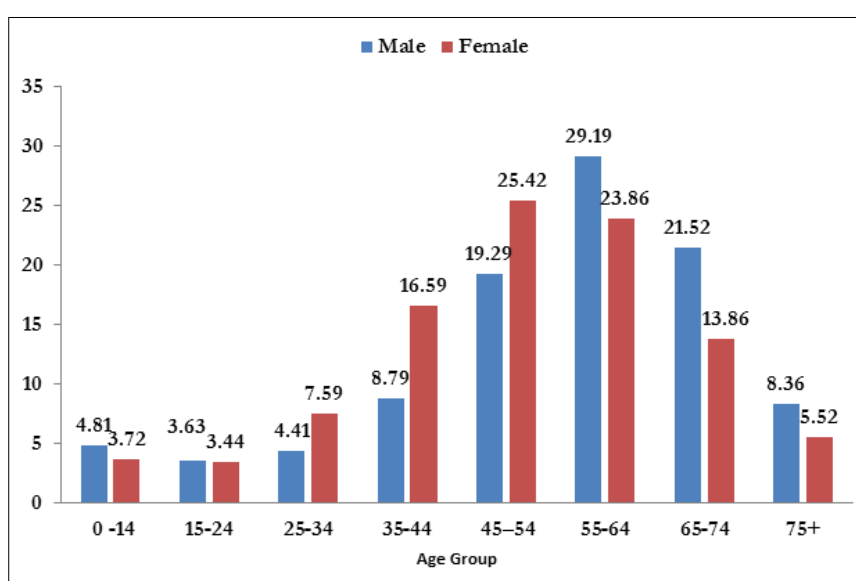
System-wise (per cent) distribution of cancer patients by Gender

Table 7.5 depicts the system wise percentage distribution of cancer patients by gender. It is seen that incidence of oral cavity & pharynx cancer and cancers to respiratory system are mostly prevalent in men rather their female counterparts.

Referral System

RCC is a tertiary level referral hospital and patients

Figure 7.8
Age and Sex wise new cases registered in 2015-16, in number



Source: Regional Cancer Centre, Thiruvananthapuram

Table 7.5
System-wise percentage distribution of cancer patients by gender: HBCR,
Regional Cancer Centre, Thiruvananthapuram, 2015-2016

Male	Style	Female
185 (2.6)	Brain & Nervous System	116 (1.6)
1315 (18.9)	Oral Cavity & Pharynx	537 (7.4)
315 (4.5)	Thyroid	1059 (14.8)
1305 (18.5)	Respiratory System	228 (3.2)
25 (0.4)	Breast	2054 (28.7)
602 (8.6)	Oesophagus & Stomach	217 (3.0)
848 (12.0)	Other Digestive Organs	510 (7.1)
290 (4.2)	Urinary Tract	63 (0.9)
390 (5.6)	Reproductive System	1214 (16.9)
300 (4.4)	Bone, Conn. tissue & Skin	243 (3.4)
711 (10.1)	Leukaemia & Myeloma	520 (7.2)
481 (6.9)	Lymphoma	274 (3.8)
258 (3.7)	All Others	128 (1.9)

Source: Regional Cancer Centre, Thiruvananthapuram

Notr: Figures in paranthesis denotes percentage

were referred from other government and private hospitals. Most of the cases were referred from Thiruvananthapuram district, followed by Kollam, Malappuram, Palakkad, and Alappuzha. In addition to this, 1740 cases were referred from Tamil Nadu, 12 from Karnataka, 13 from Lakshadweep and 193 from other Indian States. 225 persons from Maldives were also referred during the year 2015-16.

Patient Welfare Schemes

The RCC charges only minimum or subsidised rate from low income patients. Patients are grouped into categories according to their socio-economic status and payment capacities. **Table 7.6** gives category wise number of New Patients registered in RCC in 2015-16.

The RCC has implemented several schemes for providing economic assistance, free food, free drugs and various rehabilitation facilities for patients and their families through governmental and non-governmental support programmes. State Government Supported Schemes: Cancer Suraksha Scheme, Chis Plus, Karunya Benevolent

Fund, Sukrutham, Thalolam, Scheduled Tribe Patient Fund, and Snehasanthwanam for Endosulfan Victims are some of the State Government supported schemes.

Central Government Supported Schemes: Prime Minister's Relief Fund, Health Minister's Rashtriya Arogya Nidhi (RAN), and Health Minister's Discretionary Fund are some of the Central Government supported schemes.

Major initiatives of RCC

In addition to the Government supported schemes RCC provides support to patients and families through various other schemes as detailed below:

- 1. Cancer Care for Life (CCL) Scheme** – This is a health insurance scheme for cancer treatment. Considering the large response from the public, the RCC has been modifying the scheme. During the year 2015-16, 163 patients reported for treatment under the scheme.
- 2. Free Drug Bank** - The Free Drug Bank functions according to specific guidelines and is monitored by a committee con-

Table 7.6
Categories of new patients registered based on socio-economic status in 2015-16, in number and per cent

Category	No. of Patients	Percentage
Minimum payment	8513	53
Subsidised payment	4284	27
Normal rate	3246	20
Total	15,939	100

Source: Regional Cancer Centre, Thiruvananthapuram

stituted by the Director, RCC. The drug bank provided full or partial help to 4,630 patients during the reporting period.

3. **Free Food ('Akshayapathram')** - Free food was provided to 8400 patients belonging to low socio-economic status during the report period with the support of many philanthropic organizations.
4. **Support for Paediatric patients** - 'Prathyasa', a voluntary group working in collaboration with Paediatric Oncology division gave financial and psychosocial support to children and their families.
5. **Indian Cancer Society Support Scheme** - RCC was selected as one of the five cancer centres across India for receiving financial support from the Indian Cancer Society for treatment of cancer. During the report period, 175 patients including 12 new patients received support worth ₹196.66 lakhs.

Research and Development Activities

The RCC as a pioneer research institution in cancer research has produced several PhDs in Cancer Research. During the year 2015-16, around 25 scholars were pursuing PhD, 33 residents undertook specialisation in Medical, Paediatric and Surgical Oncology super speciality courses and 46 residents undertook postgraduate courses in Anaesthesia, Pathology, Radio diagnosis and Radiotherapy in the centre. The centre is also undertaking 155 research projects.

Cancer Control Activities

- **Cancer awareness programmes:** As part of cancer awareness programmes in the community, 58 cancer awareness programmes were conducted, which was attended by 6,000 people. These programmes were arranged mainly for high school/higher secondary school students and teachers, office staffs, lay public and vulnerable groups like the tribal population, fishermen community, and rural population.
- **International School of Colposcopy:** 16 doctors were given one-week hands on training and 30 BSc (MLT) students were given one day orientation programme on VIA, VILI and Colposcopy.
- **Trainer-Trainee Programmes:** 21 trainer-trainee programmes were conducted for health care providers which included doctors, post graduate medical students and paramedical staff from governmental and non-governmental institutions. 22 programmes were conducted for community volunteers from organisations/schemes such as the Kudumbashree and ICDS, public health training students, teachers and school students from various districts of the State.

Early cancer detection, 2015

During the period under report, 5940 persons attended the Early Cancer Detection Clinic of the Division. Oral biopsy was done for 61 patients (53 punch and 8 excision biopsies).

Cancer Outreach Programmes, 2015

102 cancer detection camps were conducted in various parts of the State in which 9478 people underwent screening. This included 24 cancer detection camps conducted among women residing in the Mangalapuram Breast Cancer Screening project area and seven camps in Idukki district.

The Swasthyam project

The RCC took the leadership role to train women volunteers of the Kudumbashree Mission in cancer prevention project initiated in Pathanamthitta district with the objective to sensitise households of Pathanamthitta district through the 'Swasthyam project'. As part of this, two general sensitization cum motivation programmes and five trainer-trainee programmes were conducted by RCC to train 164 resource persons in cancer prevention activities. One of the main objectives was to motivate eligible subjects to undergo screening for common cancers or advise them to undergo

diagnostic evaluation at hospitals if any warning signals of cancer were present.

Other Initiatives

Realising the increasing prevalence of tobacco and related substance abuse among adolescent school students in Kerala, the Centre has initiated several antitobacco education programmes at the high school and higher secondary school levels. World No Tobacco Day was observed on May 31st in collaboration with Sree Chitra Tirunal Institute for Medical Sciences and Technology, Directorate of Health Services, Tobacco Free Kerala, Kerala Voluntary Health Services, ADIC-India and the Regional Cancer Association. The Centre has also initiated school based intervention programme against tobacco and alcohol consumption in high school/higher secondary schools of rural Kerala. The objective of this programme was to understand the patterns of tobacco and alcohol use among students in the rural areas of Thiruvananthapuram district. It would provide an estimate on the prevalence and patterns of tobacco and alcohol use among adolescent school students.

Section 2 *SKILL DEVELOPMENT*

Skill development is crucial for the State to take advantage of the demographic dividend of our population in the coming years. Technological advancement in the existing areas and emergence of new areas in various sectors necessitates the imparting of more skills. Currently, there is a severe mismatch between the talents and skills, required by the industry and skill-sets possessed by workforce. This results in majority of the people remaining unemployed. The aim of the government is to create a skilled and technically qualified workforce which would contribute to the growth and development of the nation and to provide quality training to its people so as to achieve the national goal of 500 million skilled

persons by 2022. Based on the population of the State and the number of matriculates passing out in Kerala, around 1.5 lakh to 2 lakh skilled manpower has to be trained annually to reach the national target.

The State has taken several measures to encourage skill development. But much needs to be done to equip its workforce to international standards. In order to address this, the Additional Skill Acquisition Programme (ASAP) was introduced in the State. ASAP is meant for those studying in various colleges in the State. The physical details of ASAP is given in the Education section in Chapter 4. ASAP strives to transform the State of Kerala to

a human resource hub of the region, which is well positioned to capture growth opportunities. ASAP aims to impart industry-specific skills to the needy students in the selected schools and colleges along with their regular studies through modular courses with the active participation of industry partners. Students enrolled with ASAP will get opportunity to learn sector specific skills of their choice. Communicative English and Basic IT modules are integral component of ASAP Programmes. The Additional Skill Enhancement Programme (ASEP) has been developed for the students of ITIs and

Registrants of Employment Exchanges. Along with this, a Modular Employable Skill Programme is also being run with the support of vocational training providers in the State.

Craftsman Training

Industrial Training Department implements Craftsman Training Scheme to ensure a steady flow of skilled workers in different trades for the domestic industry. There are 82 Government ITIs, one Basic Training Centre, one Staff Training

Box 7.2 Innovative Steps Virtual Class System

The Industrial Training Department is one of the pioneers in the state in implementing e-learning programmes in training methodology by implementing virtual class system. This was recognized by the state government and the department was awarded third prize for the e-governance programme. Virtual class system has been provided in 34 ITIs all over the state with three systems in each ITIs: Two in theory class and one in practical hall.

3Dimension (3D) Interactive Teaching Aid

- 3D Interactive Teaching Aid has been developed in “Automobile Mechanic”, “Engineering Drawing”, “Draughtsman Civil” and “Electrician” trades.
- The entire programmes are interactive and visually rich to enable the instructor to actively involve the class and increase the attention of the student in the learning program.
- 3D interactive Teaching Aid facilitate in depth understanding of theory and practical

ISO Certification

Quality has been the hallmark of our Industrial Training Institutes. Various innovative techniques are introduced in trainings. The target is to ensure result oriented performance by our institutes. These initiatives of the department have been recognized by awarding ISO certification to 24 “ITI”s.

The ISO Certified ITIs are listed below:

ITI(w) Kozhikode, ITI Ettumanoor, ITI Mala, ITI(w) Kalamassery, ITI Kozhikode, ITI Kalpetta, ITI Kannur, ITI(w) Kazhakuttom, ITI Attingal, ITI Chenneerkkara, ITI Kalamassery, ITI(w) Chalakudy, ITI Areacode, ITI Chengannur, Dhanuvachapuram, Chackai, Kollam, Kollam (w), Pallickathode, Kattappana, Chalakudy, Malampuzha, Kannur (w), Kasaragode

Development of Websites for “ITI”s

Industrial Training Department has developed separate websites for all the Government ITIs in the state according to the Guide lines of DGE&T. It provides information about the institutes, courses, admission details, faculty, services, Specialties, consultancy and future plans.

Box 7.3 Milestones During 2015-16

- The initiatives of the department were recognized with the award of ISO certification to 10 ITIs: Dhanuvachapuram, Chackai, Kollam, Kollam (W), Pallickathode, Kattappana, Chalakudy, Malampuzha, Kannur (W), Kasaragode.
- Department has implemented digital file management system for creating a paperless office with timely action and better service.
- Nutrition Programme by supplying egg & milk to the trainees of all Government ITIs for all training days was started.
- Noon meal programme was started in the ITI Attappady and Aryanadu.
- Nypunnyam international skill summit and skill fiesta 2016 was conducted.
- An amount of ₹ 80.83 crore has been expended for the implementation of various plan schemes.

Institute, Two AVTS, 486 private ITIs and 44 ITIs under Scheduled Caste Development Department (SCDD) exclusively for SC and 2 ITIs under Scheduled Tribe Development Department (STDD) exclusively for ST students functioning in the state. There are about 85 trades in which seats are allocated for Craftsman Training with a total seating capacity of 96,702. The details of ITIs and its trade and enrolment are given in the **Appendix**. The strength and enrolment of Government ITIs are given in **Appendix 7.1**. The trade/duration wise intake and out turn of Government ITIs are given in **Appendix 7.2** to **7.6**. Details of new trade introduced during 2014-16 is given in **Appendix 7.7**.

Apprenticeship Training

The Apprenticeship Training scheme is being conducted as per Apprentices Act, 1961, which was enacted with the objective to regulate the programme of training of apprentices in the industry so as to conform to a standard syllabi, period of training, and skill sets and to utilize the facilities available in industries for imparting practical training with a view to meeting the requirements of skilled manpower for the industry. Apprenticeship is a contract between an apprentice and an employer to provide training in a particular

skill in the establishment for a particular period and provide a stipend fixed as per the Apprentices Act. The Central/State government acts as the third party in contract regulating and monitoring the process. It was enacted with the purpose of utilizing the facilities available in industries for skill training and certification by the National Council for Vocational Training (NCVT). Trade Apprenticeship training in Kerala is both a Central and State Initiative. Apprenticeship schemes in the state are implemented through Related Instruction centres in nine districts and ITIs in the remaining five districts.

There are 84 trades in which 10404 seats have been allocated for Apprenticeship Training, of which around 5000 seats are utilized. Around 2000 trainees are certified every year under this scheme. Government sector accounts for more than 50 per cent of apprenticeship placements in the State. Institution wise details of apprentices is given in **Appendix 7.8**.

Skill Development Initiative Scheme

Skill Development Initiative Scheme aims to give free training in Modular Employable Skill courses (MES) to early school leavers and existing

workers especially in unorganized sectors for employable skills. Existing skills of person can also be tested and certified under this scheme. The successful trainees will be issued certificates by the National Council for Vocational Training. The Department of Industrial Training is the authority for implementing & monitoring training in the Skill Development Initiative Scheme in the state of Kerala.

Skill Updating Institute For Staff Training (SUIIT)

Skill Updating Institute for Staff Training, Kerala was started in 1999 at Kazhakkuttom, Thiruvananthapuram to update the technical knowledge of Instructional Staff and others in pace with technical developments. The activities of this institute are preparation of course design, research in new methods of teaching, Skill updating programs of technical staff, soft skill training, training programmes under State training policy at IMG, off campus training programmes, monitoring of virtual class training, and coordinating DLP training of DGE&T.

Kerala Academy For Skills Excellence (KASE)

KASE is a Section 25 company fully owned by Government of Kerala. The objective of this company is to facilitate mass human resource development through specialized skill development courses across the state. The participation of leading public and private industries is envisaged in the domains of construction, retail, finance, IT & ITES, tourism, and hospitality. The main purpose of the academy is to spearhead the creation of highly skilled and safe professional workers, for all the levels of work in the industry, through scientifically designed specialized courses for various categories of workers. Training will be imparted to sharpen the technical skills as well as soft skills. To be at par with international standards, the workers need to be trained in soft skills like communication skills, language skills, safety and environment awareness, which is currently lacking in our work force as well as professional course students, who graduate from various colleges. It aims at imparting theoretical as well practical training of skill sets needed for each category -from supervisory level to working class.

Capacity building is required to improve efficiency, enhance productivity and promote innovation. The State needs to focus on this vital aspect to improve the outcomes of its policies and programmes. The labour force, though educated and literate, lacks in skill quotient. Steps taken to promote skill development needs to be revamped and be more focused. Sector wise gaps needs to be identified and courses suited to meet the skill requirements of the emerging needs of the industry have to be undertaken. The State is well placed to convert its labour force into its greatest asset through multilevel skill development efforts.

LOCAL GOVERNMENTS AND DECENTRALISED PLANNING



LOCAL GOVERNMENTS AND DECENTRALISED PLANNING

In response to the 73d and 74th Constitutional Amendments, the state had undertaken several pioneering initiatives to establish institutions of local self governance with the task to promote economic development and social justice. The democratic decentralization in Kerala ushered a new development culture of genuine grass root level democracy and people's participation in economic development. Despite certain weakness such as dual control over the functionaries and lack of role clarity for the different tiers, the local governments in the state have succeeded in creating a new model of equitable economic growth. The two decades of decentralized planning and the implementation of local governance in Kerala shows a 'learning by doing' exercise. The Thirteenth Five Year plan will be making an effort to improve the methodology of participatory planning by incorporating the lessons learnt from the last twenty years.

Major Thrust in Different Plan Periods

The process of decentralization in Kerala was launched during IX plan period as 'People's Plan Campaign' with a view to emphasize the concept of participatory planning that was new to the people, people's representatives and officials in local governments. Under the X Plan, decentralization programme in Kerala was restructured and named as 'Kerala Development Plan' (KDP). During the XI Plan, the entire process was revamped by giving stress to the concept 'people's Planning', focusing on the completion of the process of institutionalization of decentralization. The XII plan approach envisaged some concrete steps to strengthen the planning process with the use of information technology. The XIII Five Year Plan emphasizes debureaucratization of the planning process so that there is enough room for greater

and more meaningful participation of the people at grass root level. During the XIII plan there will be efforts to improve the quality of local government projects by ensuring participation of experts, research institutions, educational institutions etc. in the planning process

Plan Allocation to Local Governments

A considerable extent of fiscal decentralisation is the most important element of Kerala's decentralization process, which has enabled the Local Governments to receive resources from the State's Plan allocation for implementing own schemes as well as transferred schemes. From 1996 through 2016, roughly 25 per cent of the state's investible resources have been devolved to local governments. The fund provided from the State plan to Local Governments is in the form of untied

plan grant for planning and implementing projects for local development. Local Governments have the freedom in formulating and implementing projects after deciding their priority subject to detailed plan guidelines.

At present, there are 1200 local governments in Kerala, which includes 941 Grama Panchayats, 152 Block Panchayats, 14 District Panchayats, 87 Municipalities and 6 Municipal Corporations. The allocation of development fund to LGs is being done under three categories - General Sector, Scheduled Caste Sub Plan (SCSP) and Tribal Sub Plan (TSP). The outlay for each category during 2015-16 plan period was fixed on the basis of the recommendations of the IV State Finance Commission (SFC). The Commission recommended that at least 25 per cent of the likely plan size of the state should be devolved to LGs for development purpose. The fund would be inclusive of the devolution from the XIIIth Central Finance Commission and the amount flowing to LGs from the proposed World Bank supported project namely, 'Kerala Local Government Service Delivery Project'. The plan outlay for local self governments during 2016-17 is based on incremental criteria of IV SFC as the approval of V SFC is under consideration of government. The allocation to Local Governments during the last five years is given in **Table 8.1**

Unique features of LSGI plan during the XII Five Year Plan

During the beginning of twelfth five year plan period some conscious efforts have been made to give more flexibility and freedom to the local governments in plan formulation. Accordingly, some changes have been made in the plan guidelines, mainly in sectoral ceilings and project appraisal. Up to 2015-16 there was no mandatory minimum or maximum ceiling in productive or service sector. However, in infrastructure sector the mandatory ceiling fixed is not more than 45 per cent to Grama Panchayats and Block Panchayats, 55 per cent to Municipalities and Corporations and 50 per cent to District Panchayats in general sector plan outlay. In addition to this, 10 per cent of the development fund must be earmarked for Women Component Plan and 5 per cent to children, old age, differently abled, palliative care and other vulnerable groups. From 2016-17 onwards 20 per cent allocation for productive sector and 10 per cent allocation for solid waste management is made mandatory .

Technical Advisory Groups (TAG) for clearances of projects were dispensed with. Instead of vetting the projects by the TAG concerned, it is verified and certified by the implementing

Table 8.1
Award of Development Fund for LGs (2012-17), ₹ in crore

Year	Budget allocation	Percentage to Total Plan Outlay*
2012-13	3228.00	23
2013-14	4000.00	24
2014-15	4700 .00	24
2015-16	4800 .00	24
2016-17	5500.00	23

**Inclusive of KSEB's contribution*

Source: Appendix IV/ 2015-16 & 2016-17

officer and then furnished to the officer of the same department at the higher level for getting it appraised and approved. A Project Formulation Committee (PFC) can be constituted, if required, for providing technical expertise to prepare and approve the projects.

It is also important to note that now under SCSP/TSP the construction of roads is allowed only within SC/ST habitat and width of the road in tribal colonies has been enhanced to a maximum of 3 meters. Introduction of financial support for SCs/STs in getting employment abroad, assistance to meritorious students seeking admission in national and international institutions are some of the landmarks in the utilization of SCSP/TSP funds. Introduction of online approval of projects through Sulekha software by IKM is considered as a major shift from the traditional approach adopted by the earlier system. The application of Sulekha software includes plan formulation, appraisal, approval, monitoring, revision processes and expenditure tracking of the plan projects of local governments.

Special grama sabhas, Ayal sabhas and Seva grama-kendrams are another important change occurred during the review period. In order to strengthen grama/ward sabha, ayal sabhas are constituted in each ward with 50- 100 families. Special grama sabha are convened for the families of

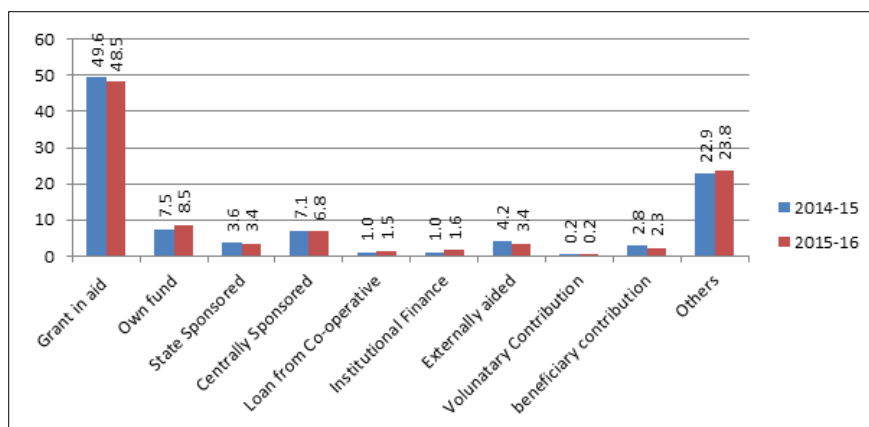
differently abled and mentally challenged persons. Ayal Sabhas and Seva Gram-Gramakendram thus aim at getting improved people's participation in planning and implementation.

Financing of Local Government plans

The plan allocation to LGs during 2015-16 was ₹ 4800 crore and total source wise outlay was ₹ 12523.37 crore. The total grants in aid including opening balance constitutes ₹ 6069.18 crore that is 48.46 per cent. The own contribution of LGs constitutes 8.52 per cent of the total plan size and the balance fund from other sources. The expenditure recorded in 2015-16 was 54.88 per cent, which showed a marginal increase by 3.4 per cent compared to last year's expenditure of 51.49 per cent. Out of the total expenditure, the plan grant share is 65.01 per cent, own fund share 6.29 per cent, sponsored schemes together with externally aided source constitutes 3.29 per cent and the balance is from other sources. It may be noted that during 2015-16 considerable improvement was seen in plan grant utilization, that is 10.75 per cent over the previous year.

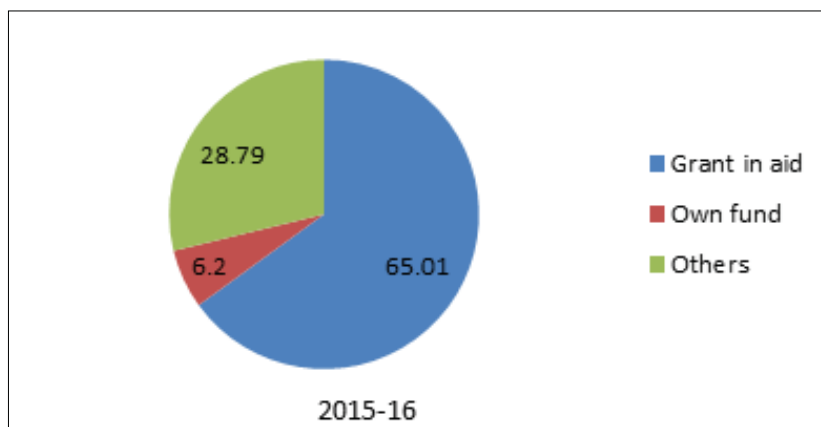
Source wise funding details and the respective percentage to total fund for 2014-15 and 2015-16 are given in **Figure 8.1**. Source/Sub-sector wise details of 2014-15 and 2015-16 are given in **Appendix 8.1 (a & b)**.

Figure 8.1
Sources of Financing LGs Plan 2015-16, in per cent



Source: Information Kerala Mission, 2015

Figure 8.2
Expenditure share of different sources of funds in 2015 -16, in per cent



**Others include state sponsored, centrally sponsored, loan from co-operatives, externally aided, voluntary contribution, beneficiary contribution and others (items excluding grant in aid and own fund).*

Performance of Local Governments

The local governments allocate their plan funds mainly to productive, service and infrastructure sectors. The productive sector includes agriculture and allied sectors, soil and water conservation, irrigation and industries. The service sector consists of education and allied sectors, health and allied services, development of women and children, labour and labour welfare etc. The infrastructure sector includes energy, transportation and buildings. The total plan grants in aid available including opening balance with LGs for allocating funds to various development sectors during 2015-16 was ₹6069.18 crore, an increase of ₹154.38 crores (that is 2.61 per cent) from the previous year.

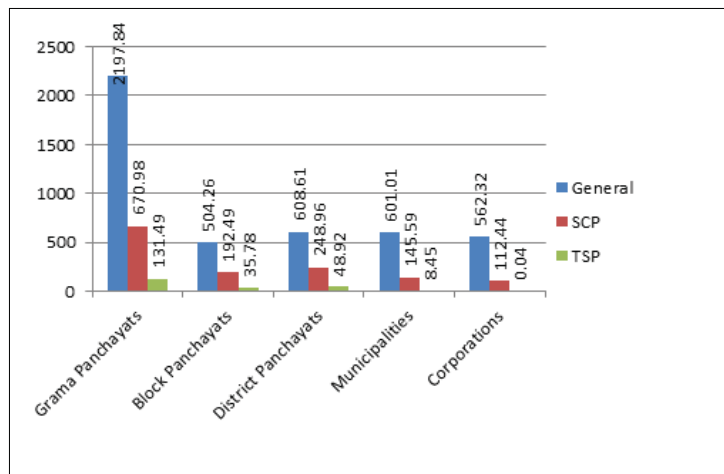
Out of the total fund available, only ₹4467.76 crore was utilized for different sectors. Thus, the plan fund utilization percentage in 2015-16 was 73.61 per cent which was marginally higher compared to the previous year. The expenditure pattern shows wide variations among local bodies. Among the three tiers, the performance of Block Panchayat was better with 85.28 per cent expenditure followed by Grama Panchayats with 79.53 per cent and District Panchayat with 65.47 per cent during 2015-16. The per cent of expenditure among

urban local governments was the lowest, in the Corporations (51.14 per cent) and Municipalities (68.64 per cent) during 2015-16. The tier wise details of outlay, fund available and expenditure of grant-in-aid during 2014-15 and 2015-16 are given in **Figure 8.3** and **Appendix 8.2 a & Appendix 8.2 b**.

Category - wise performance

As mentioned earlier, the allocation of grant-in-aid to Local Governments falls in three categories- General Sector, Special Component Plan and Tribal Sub Plan. The outlay for each category is fixed on the basis of recommendations of the State Finance Commission. During 2015-16, an amount of ₹6069.18 crore was allocated to different categories of which general category, SCSP & TSP constituted 74 per cent, 23 per cent, and 3 per cent respectively. There is a marginal increase in general sector but allocation in SCSP & TSP fund increased by 9.3 percentage and 21 percentage respectively compared to 2014-15. An analysis of category wise utilization during 2015-16 reveals that the percentage of expenditure under General Sector was 77 per cent of the plan outlay and in the case of SCSP and TSP, it was 63 per cent and 67 per cent respectively. Shortfall in expenditure of SCSP/TSP is a common phenomenon for

Figure 8.3
Tier Wise fund available to LGs



Source: Information Kerala Mission 2016

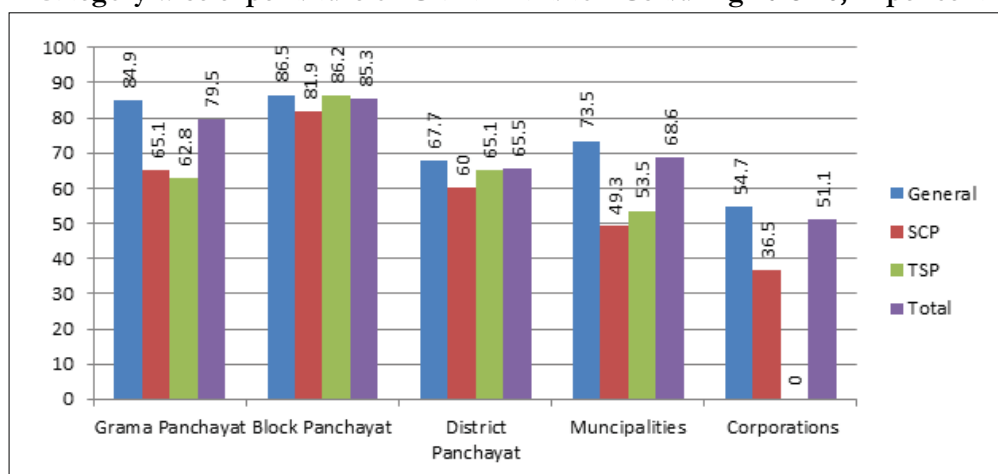
all tiers of Local Governments except for Block Panchayats, but the least utilization of SCSP and TSP funds is in urban local bodies. The category wise and local body wise allocation during 2015-16 is given in appendix 8.2(a) and 8.2(b). The category wise expenditure is given in **Figure 8.4**.

The annual budget allocation of plan grants in aid to local self governments during Annual plan 2015-16 & 2016-17 is given in **Table 8.2**.

The LGs allocate their funds mainly in three

sectors viz. productive, service and infrastructure. The total fund including opening balance for these sectors for the year 2015-16 was ₹6069.18 crore. Out of this, the allocation to productive, service and infrastructure sectors was 8 per cent, 54 per cent and 38 per cent respectively. It may be noted that the total expenditure under productive sector is less than 10 percentage during the last two annual plans. The expenditure by urban local bodies poor in productive and service sector compared to their rural counterparts. The sector wise allocation and expenditure details of 2015-16 are given in

Figure 8.4
Category wise expenditure of Grant-in-aid to LGs during 2015-16, in per cent



Source: Information Kerala Mission 2016

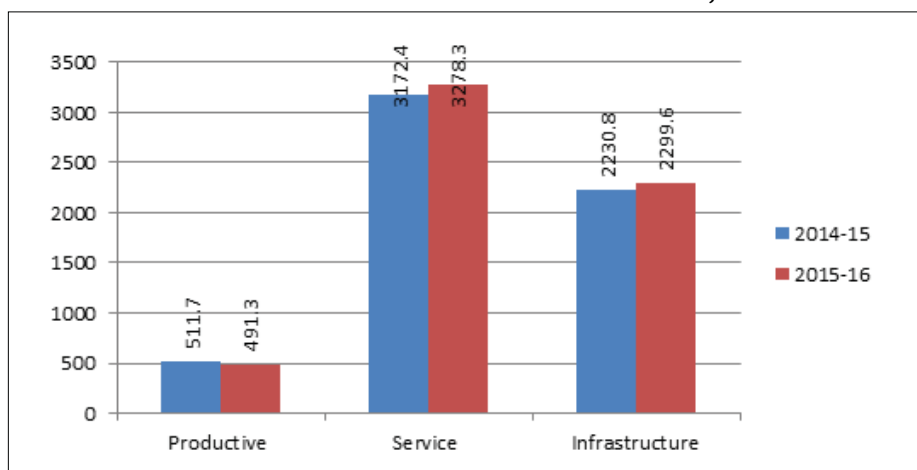
Table 8.2
Category wise Budget allocation of Grant-in-aid to LGs during 2015-16 & 2016-17 (₹ in Crore)

Type of LGs	2015-16				2016-17			
	General	SCP	TSP	Total	General	SCP	TSP	Total
Grama Panchayats	2124.59	478.63	82.37	2685.59	1968.25	516.46	88.62	2573.34
Block Panchayats	435.98	159.54	27.46	622.98	361.66	178.69	30.76	571.11
District Panchayats	435.98	159.54	27.46	622.98	361.66	178.69	30.76	571.11
Municipalities	418.02	71.42	1.93	491.38	642.33	95.82	5.82	743.98
Corporations	318.61	58.44	0.00	377.05	471.19	69.22	0.01	540.43
Total	3733.20	927.58	139.21	4800.00	3805.10	1038.90	156.00	5000.00 #

excluding ₹500 Crore which is earmarked as additional plan assistance to local bodies

Source: Appendix IV 2015-16 & 2016-17

Figure 8.5
Sub Sector wise Allocation to Local Governments, ₹ in crore



Source: Information Kerala Mission 2016

Figure 8.5 and the sector wise and local government wise percentage of expenditure to total expenditure is given in **Table 8.3**. The sector wise allocation and expenditure details in 2014-15 & 2015-16 are given in **Appendix 8.3 a & Appendix 8.3 b**.

Productive Sector

Out of the total plan funds earmarked to productive sector by Local Governments, 83 per cent of fund was allocated for the implementation of various schemes under agriculture and allied sectors in 2015-16 while it was 79 per cent in the previous year. The LGs have given more weightage

to agriculture and allied sectors compared to industries and other productive sectors. The rural local bodies, especially Grama Panchayats have given major attention to the implementation of agriculture and allied programmes in productive sectors by allocating 84 per cent of the total to this sector. The productive sector includes sub sectors such as agriculture, irrigation, industry, energy conservation, fisheries etc. The details of allocation and expenditure during 2015-16 are given in **Table 8.4** and the percentage of allocation to different tiers is shown in **Figure 8.6**. The details of productive sector achievements during 2014-15 and 2015-16 are given in **Appendix 8.4 a & Appendix 8.4b**

Table 8.3

Local Government wise and sector wise percentage of expenditure to total expenditure during 2014-15 and 2015-16, in per cent

Type of LGs	2014-15			2015-16		
	Productive	Service	Infrastructure	Productive	Service	Infrastructure
Grama Panchayat	10.07	59.05	30.88	8.80	53.20	38.00
Block Panchayat	7.91	60.07	32.02	7.90	59.5	32.60
District Panchayat	9.55	57.78	32.67	7.00	60.5	32.50
Municipalities	5.13	53.84	41.03	5.20	51.40	43.4
Corporation	4.03	48.21	47.76	4.30	48.70	47.0
Total	8.7	57.7	33.6	7.7	54.4	37.9

Source: Information Kerala Mission 2016

Table 8.4

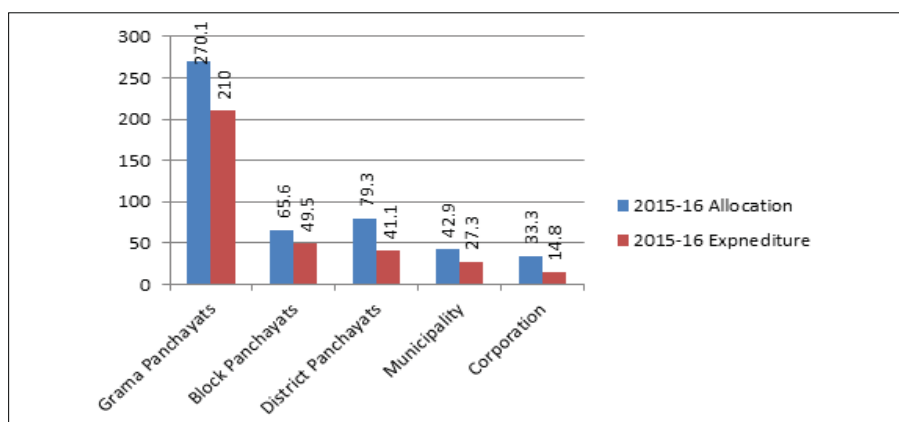
Productive Sector - Allocation & Expenditure during 2015-16, ₹ in Crore

Type of LGs	2015-16		
	Allocation	Expenditure	Percentage
Grama Panchayat	270.2	210.1	78
Block Panchayat	65.6	49.5	76
District Panchayat	79.3	41.1	52
Municipality	42.9	27.3	64
Corporation	33.3	14.8	45
Total	491.3	342.9	70

Source: Information Kerala Mission 2016

Figure 8.6

Productive Sector - allocation and expenditure of different Tiers of LGs during 2015-16, ₹ in crore



Source: Information Kerala Mission 2016

Service Sector

Local governance makes service delivery decisions more responsive to local needs and to involve local populace in public governance. The service sector priorities of local governments enhance the quality of basic services provided to the public through welfare oriented programmes with special emphasis on education, housing, health, drinking water, nutrition and social welfare, etc. Service sector fund utilization during 2015-16 is comparatively better than the productive and infrastructure sectors. Block Panchayats performed well in the service sector activities by achieving about 89 per cent of expenditure during 2014-15 and 2015-16. The allocation and expenditure under service sector is shown in **Table 8.5** and **Figure 8.7**. The sub sector wise details for 2014-15 & 2015-16 are shown in **Appendix 8.5 a & Appendix 8.5 b**.

Infrastructure Sector

During 2015-16, the Local Governments set apart 38 per cent of the total allocation to infrastructure sector activities such as street lighting, transportation, construction activities etc. Among the three tiers of local governments, the Grama Panchayats effectively utilized the allocation for infrastructure development, ie 82 per cent utilization. The expenditure during 2015-16 shows a considerable improvement, the overall infrastructure expenditure is 74 per cent. In the utilization of plan fund in this sector, Block Panchayats and Municipalities achieved 81 per cent and 70 per cent of expenditure respectively during 2015-16 which is better off compared to 2014-15.. Against the total allotment made in the infrastructure sector, 78 per cent of fund was earmarked for transportation facilities and the corresponding expenditure was 77 per cent. Tier

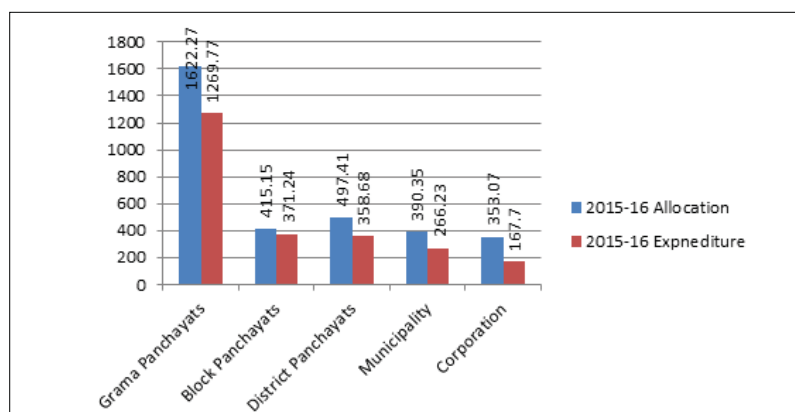
Table 8.5
Service Sector - Allocation & Expenditure during 2015-16, ₹ in crore

Type of LGs	2015-16		
	Allocation	Expenditure	Percentage
Grama Panchayat	1622.27	1269.77	78
Block Panchayat	415.15	371.24	89
District Panchayat	497.41	358.68	72
Municipality	390.35	266.23	68
Corporation	353.07	167.70	48
Total	3278.25	2433.63	74

Source: Information Kerala Mission 2016

Figure 8.7

Service Sector - allocation and expenditure of different Tiers of LGs during 2015-16, ₹ in crore



Source: Information Kerala Mission 2016

wise, sub sector wise allocation and expenditure details in 2015-16 are given in **Table 8.6** and percentage share of allocation to different tiers is shown in **Figure 8.8** and sub-sector wise details of 2014-15 & 2015-16 in **Appendix 8.6 a & Appendix 8.6 b**.

Scheduled Caste Sub Plan and Tribal Sub Plan under Decentralization

The Scheduled Caste Sub Plan and Tribal Sub Plan are based on Article 46 of Constitution of India for providing special protective measures to safeguard the interest of Scheduled Caste(SCs) and Scheduled Tribe(STs). This constitutional mandate on the State requires it 'to create a regime of equality including social equality through comprehensive measures of social justice.'

Social equality means ensuring equity between marginalized sections on the one hand, and socially advanced castes on the other, in all parameters of life- economic, occupational, educational, residential facilities, health, nutrition etc.' As one of the major objectives of decentralized planning is to empower social equity and to improve the socio-economic status of Scheduled Castes and Scheduled Tribes and enhancing their quality of life, the devolution under Special Component plans has prime importance. .

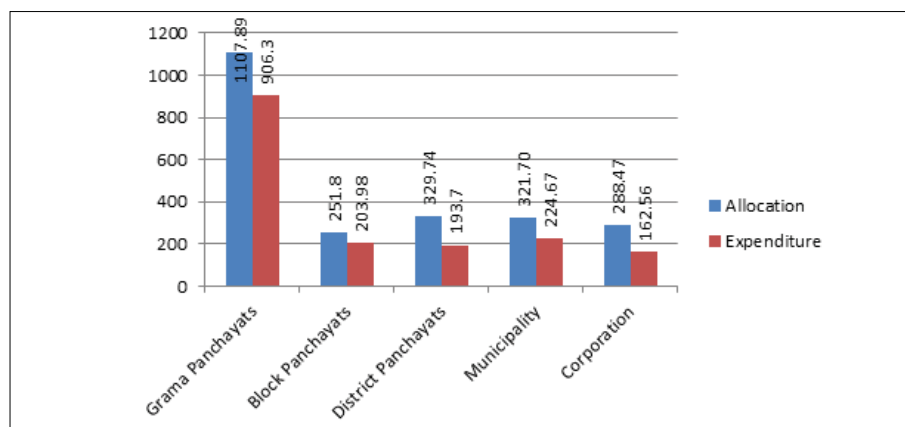
The allocation of Plan funds to SCSP and TSP from State Plan outlay is done according to the ratio of population of SCs and STs to total population of the State. Out of the total SCSP/ TSP Plan outlay, a certain percentage of funds are earmarked to LGs for implementation of schemes

Table 8.6
Infrastructure Sector - Allocation & Expenditure during 2015-16, ₹ in crore

Type of LGs	2015-16		
	Allocation	Expenditure	Percentage
Grama Panchayat	1107.89	906.30	82
Block Panchayat	251.80	203.98	81
District Panchayat	329.74	193.70	59
Municipality	321.70	224.67	70
Corporation	288.47	162.56	56
Total	2299.61	1691.22	74

Source: Information Kerala Mission 2016

Figure 8.8
Infrastructure Sector -allocation & expenditure to different Tiers of LGs during 2015-16, ₹ in crore



Source: Information Kerala Mission 2016

under decentralized planning. The projects under the SCSP/TSP can be categorized into two viz, the beneficiary oriented schemes and infrastructural development schemes. The outlay and expenditure for each category is shown in **Table 8.7**.

Performance under Special Sector Plans

Women Component Plan and plan for disadvantaged groups (aged, children, differently abled, palliative and other vulnerability) in the plan of local governments is one of the salient features in Kerala's decentralisation. The expenditure on WCP is slightly lower than the overall LSGI plan expenditure and the urban local bodies lagging behind their rural counterparts. Out of the total plan size, local governments have to set apart the mandatory provision of 10 per cent for women development and 5 per cent for disadvantaged groups. In the case of special programme for

Women Component Plan and children the expenditure was 72 per cent and 86 per cent respectively. During 2015-16 review period an amount of ₹42.79 crore and ₹168.13 crore were set apart for palliative care and other vulnerability groups. The percentage of expenditure in palliative care is 91 per cent during 2015-16, which is slightly higher than that of 2014-15. Details of allocation and expenditure during 2015-16 are given in **Table 8.8** and the figures in 2014-15 & 2015-16 are given in **Appendix 8.7 a & Appendix 8.7 b**.

Strengthening of District Planning Machinery

The 74th Constitutional Amendment Act mandated the establishment of the District Planning Committee (DPC) for consolidating plans prepared by panchayats and municipalities in the district into the form of a Draft District

Table 8.7
Award of Development Fund for LGs (2012-17), ₹ in crore

Year	SCSP		TSP		Total	
	Budget Allocation	Expenditure*	Budget Allocation	Expenditure*	Budget Allocation	Expenditure*
2012-13	739.46	661.58	110.98	99.65	850.44	761.23
2013-14	828.2	882.49	124.3	136.89	952.5	1019.38
2014-15	927.58	811.56	139.21	121.61	1066.80	933.17
2015-16	927.58	857.03	139.21	149.77	1066.79	1006.8

*includes opening balance

Source: Appendix IV of the Budget & Information Kerala Mission, 2016

Table 8.8
Allocation and expenditure of Special Sector Plan for 2015-16, ₹ in crore

Special sectors	2015-16		
	Allocation	Expenditure	Percentage
Women Component Plan	604.57	433.43	72
Special Programme for children	177.64	150.04	85
Special Programme for elderly	28.39	19.29	68
Differently abled	111.96	90.20	81
Other Vulnerability	168.14	102.10	61
Palliative Care	42.79	39.23	91
Youth Welfare Programmes	164.29	84.15	51

Source: Information Kerala Mission, 2016

Plan. District Planning Committee, has been created as per article 243ZD of the Constitution of India at the district level for planning at district and below. The district planning in the practice of decentralised planning for a balanced, integrated and meaningful development of district has been an accepted concept since the beginning of the planning era. Accordingly, District Planning Committees were constituted in all the fourteen districts in accordance with the spirit of the 74th amendment of the constitution so that they can play the nodal role in plan preparation by LGs, approval of local plans, providing suggestions to LGs, monitoring of plan implementation etc. and their integration at district level as also their linkages with the state plan. The DPC consists of 15 members headed by the District Panchayat President and District Collector is the Member Secretary. All MPs and MLAs are permanent

invitees of DPC and all the district level officers are ex-officio Joint Secretaries. The DPCs are fully functional in the State. The District Planning Officer, Joint Secretary (Co-ordination) assist the Member Secretary in convening meetings, preparation of agenda, minutes and all other secretarial duties. The constitution of DPC has been done every five years without fail in the State along with the election to the Local Governments.

The construction of DPC buildings have been completed at Ernakulam, Thrissur, Kasaragod, Wayanad, Kannur and Alappuzha . In the other districts the work is at various stages of completion. The construction of the DPC secretariat building will be a landmark in the history of decentralized planning in Kerala, as it will help to formulate a comprehensive and holistic district development plan for each district.

Decentralised planning process has been the core strength of the state. The two decades of Kerala's decentralization experience is unique and recognized world over. It may be observed that decentralization has made its impact on local level planning , economic development and social justice. Transparency, accountability and participation are the most important guiding and defining principles of democratic governance. Of the three, 'participation' is central to real democracy and the innovative initiatives to organize people's participation in the state through different organizational set ups have been appreciated widely. During the 13th FYP State Government envisages revitalisation of the system of democratic planning from below. The 13th FYP aims at reorganisation of local self government institutions by giving more emphasis on debureaucratization of planning process, local economic development, improved institutional service delivery, preparation of District Plan by integrating local plans and ensuring the involvement of people, professionals and research educational institutions .

9 CHAPTER
TOURISM



TOURISM

Tourism is a social, cultural and economic phenomenon related to the movement of people to places outside their usual place of residence, pleasure being the usual motivation. With increasing globalization and disposable income, tourism has over the last few decades become one of the largest and fastest growing industries. International and regional tourism contributes to economic growth, job creation and development in nations all around the world. Today, tourism accounts for 10 per cent of global GDP, 7 per cent of total exports and one in 11 jobs across the world. In 2015, international tourist arrivals reached nearly 1.2 billion. By 2030, 1.8 billion travellers are expected to cross international borders.

Tourism and Economic Development

Tourism is a potent engine for economic growth due to its forward and backward linkages in the economy. A study in India, Brazil and Indonesia found that tourism-related linkages (both forward and backward) were particularly strong compared to linkages from other sectors. Such strong linkages create a multiplier effect that generates broad-based economic benefits including generation of employment and poverty reduction. The International Labour Organisation (ILO) estimates that one job in the core tourism industry creates about 1.5 additional or indirect jobs in tourism-related economic activities.

Tourism has also been recognised for its contribution to sustainable development. Among the 17 SDGs and 169 associated targets, tourism is explicitly featured in Goals 8, 12 and 14 for its capacity to foster economic growth and decent work for all, promote sustainable consumption and production, and advance conservation and sustainable development of aquatic resources. The “Report on Comparative Economic Impact

of Travel and Tourism” by the World Travel and Tourism Council in 2012 lists the impact of travel and tourism on the following sectors of the economy:

- Travel and Tourism ranks high among sectors in terms of its contribution to GDP, employment, and exports;
- Travel and Tourism growth trends and prospects exceed that of other key sectors;
- Travel and Tourism generates substantial indirect benefits through its linkages to other sectors;
- Travel and Tourism is highly dispersed within national economies and its benefits are widely distributed;
- Travel and Tourism drives infrastructure investment that benefits other industries;
- Investments in well-designed destination and marketing consistently produce strong economic returns.

The economic development potential of the tourism sector is also associated with international

tourism because of its capacity to generate foreign exchange and provide opportunities for the transfer of capital and knowledge. International tourism is a key contributor to the balance of payments and to macroeconomic stability in developing countries.

Tourism and State Economy

Tourism is the hallmark of Kerala's economic development and a principal contributor to the State's economy. The sector has been pivotal in spearheading economic growth in the State and contributed to generation of large scale employment. The sector earns foreign exchange to the State and promotes traditional industries.

Famously called the "God's Own Country", Kerala has been successful in creating a place of its own in this sector. This is evident from the achievements made by the industry both at the national and international levels. A blend of experiences of various tourism products in the State has made the State one of the most acclaimed destinations in the world. Recently, a tiny island namely "Kakkathuruthu" has been listed in the National Geographic's 'Around the World in 24 Hours,' a photographic tour of travel-worthy spots in the world. Kerala has also achieved a series of achievements from much reputed national and international organizations associated with the tourism industry.

THE GROWTH OF TOURISM

The growth of tourism is generally assessed using trends in tourist arrivals and foreign exchange earnings.

Concepts

The World Tourism Organisations (WTO) defines visitors as "any person travelling to a place other than that of his/her usual environment for less than 12 months and whose main purpose of the trip is other than the exercise of an activity remunerated from within the place visited". Visitors are further sub-divided into two categories: tourists, who must stay one or more night in the place visited,

and same-day visitors, comprising visitors who visit a place for less than one night. The WTO recommends following categories as characterising the main purpose of visit for tourists:

- a. leisure, recreation and holidays
- b. visiting friends and relatives
- c. business and professional (including for study)
- d. health treatment
- e. religion, pilgrimage, and,
- f. other (e.g., airline or ship crews, transit travellers, etc).

The definitions followed by the Government of India conform to these global definitions. The major exception is the treatment of those visiting friends and relatives whose trips and activities are not considered as part of tourism.

Definitions followed in India

International Visitor

An international visitor is any person visiting the country on a foreign passport with main purpose of visit other than the exercise of an activity remunerated from within the country or for establishment of residence in the country. International visitors may be tourists or excursionist.

Foreign Tourist

A foreign tourist is a person visiting India on a foreign passport, staying at least 24 hours in the country, and the purpose of whose visit can be classified as one of the following:

- (i) Leisure (recreation, holiday, health, study, religion and sport);
- (ii) Business, family, mission, meeting.

The following persons are not regarded as foreign tourists.

- (i) Persons arriving with or without a contract to take up an occupation or to engage in activities remunerated within the country;

- (ii) Persons coming to establish residence in the country;
- (iii) “Same-day visitors” (including travellers on cruise ships).

Excursionist

An excursionist is a foreign visitor who stays less than 24 hours.

Cruise Passenger

Cruise passengers are persons arriving on cruise ships who do stay a night in an accommodation establishment in the country.

Domestic Tourist

A domestic tourist is a person who travels within the country to a place other than his usual place of residence and stays at hotels or other accommodation establishments run on commercial basis or in dharamshalas/sarais/musafir khanas/agra-shalas/choultries etc for a duration of not less than 24 hours or one night and for not more than 12 months at a time for any of the following purposes:

- (i) Business and Trading
- (ii) Leisure and Holiday
- (iii) Religious and Pilgrimage
- (iv) Social purposes

The following are not treated as domestic tourists:

- (i) Persons travelling with or without a contract to take up an occupation or engage in activities remunerated from within the State/Centre
- (ii) Foreigners residing in India

World Scenario

International tourist arrivals across the globe grew by 4.4 per cent in 2015 to reach a total of 1,184 million in 2015; this was the sixth consecutive year of above-average growth with international

arrivals increasing by 4 per cent or more every year since the post-crisis year of 2010. Some 50 million more tourists (overnight visitors) travelled to international destinations around the world in 2015 than in 2014. Demand remained strong overall, though with mixed results across individual destinations due to strong exchange rate fluctuations, increased safety and security concerns, and the drop in oil prices and other commodities, which increased disposable income in importing countries. Growth in advanced economy destinations (+5 per cent) exceeded that of emerging economies (+4 per cent), boosted by the solid results of Europe (+5 per cent).

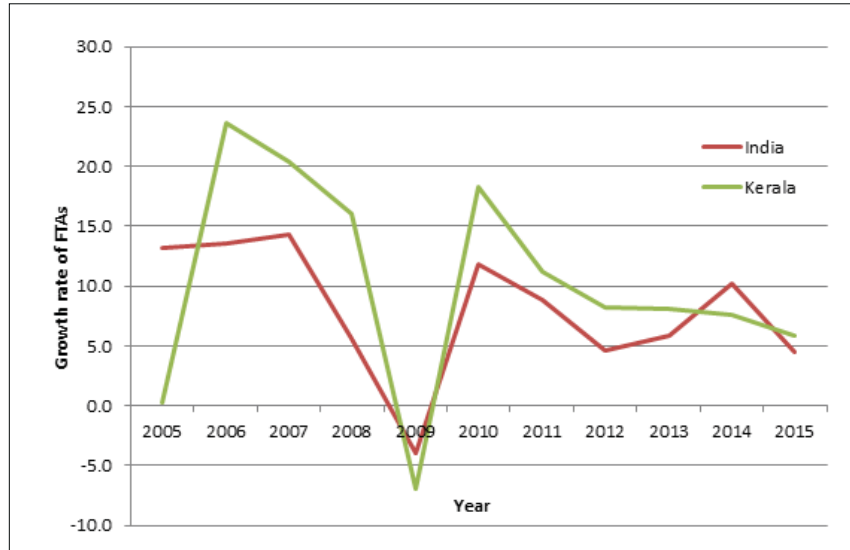
RECENT TRENDS IN FOREIGN TOURIST ARRIVALS

The inflow of tourists to a country is affected by many factors. Political stability, economic crises and climatic conditions have a major influence on the travel plans of the people across countries. The policy shifts of governments also affect the arrivals of both foreign and domestic tourists to a region. Cost effective tour packages, branding, modernised marketing techniques and so on will also provide more impetus to the growth of the industry. The growth of Sri Lanka, Thailand, Singapore, and other East Asian and Pacific countries with increasing market share reveals this fact. **Figure 9.1** portrays the trends in the arrival of foreign tourists in India and Kerala.

In 2015, the number of foreign tourist arrivals in India was 8.03 million as compared to 7.68 million in 2014, thus registering a growth of 4.5 per cent over 2014. India’s share in international tourist arrivals is about 0.68 per cent and the country ranked 40th with respect to the same in 2015. The corresponding share and rank of India in the Asia and the Pacific region is 2.88 per cent and 11th.

The growth trends in foreign tourist arrivals into India have had a chequered history. The September 2001 terrorist attacks in the United

Figure 9.1
Annual growth rates in the arrival of foreign tourists in India and Kerala, in per cent



Source: Department of Tourism, Government of Kerala

States had affected the tourism industry across the world. This had repercussions in India too, with the sector witnessing negative growth rate in 2001 and 2002. But the industry gradually gathered momentum, and in 2003 the growth rate increased to 16 per cent, which further increased to 25 per cent by 2004 (one of the largest hikes during the last two decades). The trend continued up to 2007. During 2008-09, the growth rate began to decelerate again and dropped to a negative figure of -4.8 per cent by 2009. This recession in tourism was due to global slowdown, terrorist activities and the H1N1 influenza pandemic (Annual Report, 2010, Ministry of Tourism). The industry slowly recovered from the crisis by 2010 and since then the number of foreign tourist arrivals has shown a consistent growth.

In the case of foreign tourist traffic, the State has recorded a consistent growth in the number of tourist arrivals during the past two decades except during the crisis periods i.e., 2001 and 2009. The policies and marketing strategies adopted by the State government have succeeded to a great extent

in attracting foreign tourists. The growth rate in Kerala with respect to foreign tourist arrivals is higher than that of India. But the national average surpassed the State annual growth rate of foreign tourist arrivals in 2014 for the first time in a decade. Further, the state has been witnessing a declining growth rate especially after 2010, which is matter of concern. In 2010, the growth rate was 18.31 per cent, which dropped to 8.12 per cent by 2013 and further to 5.86 per cent in 2015. **Appendix 9.1** shows the national and State foreign tourist arrivals and annual growth rates from 2005 onwards.

Compared to the previous year, Kerala has maintained 7th position in the share with respect to foreign tourist arrivals among top ten states in the country in 2015. The share of the State in the national pie of foreign tourist arrivals accounts for 12.2 per cent in 2015; for the past four years, the share has remained more or less the same. Tamil Nadu, the neighbouring state ranks first in foreign tourist arrivals and accounts for 21.9 per cent of the national pie.

Seasonality in Foreign Tourist Arrivals

The month-wise analysis of foreign tourist arrivals in Kerala indicates that the tourist season starts from November and lasts up to March. The season is at its peak during the months December, January and February. A similar trend is visible in the national case also. During 2015, the maximum number of foreign tourists arrived in the month of February followed by January. Around 13.6 per cent of the total tourists visited the State during February. The lowest foreign traffic was registered for the month of June. **Figure 9.2** depicts the month-wise comparison of foreign tourists from 2010 to 2015.

The seasonality in foreign tourist arrivals in Kerala has remained almost the same over these years. The period from April to September is considered off-season. The number of tourist arrivals during the off-season has shown a marginal increase for the last five years. In between the off seasons, a hike in the flow of tourists is noticed during August for the past two decades.

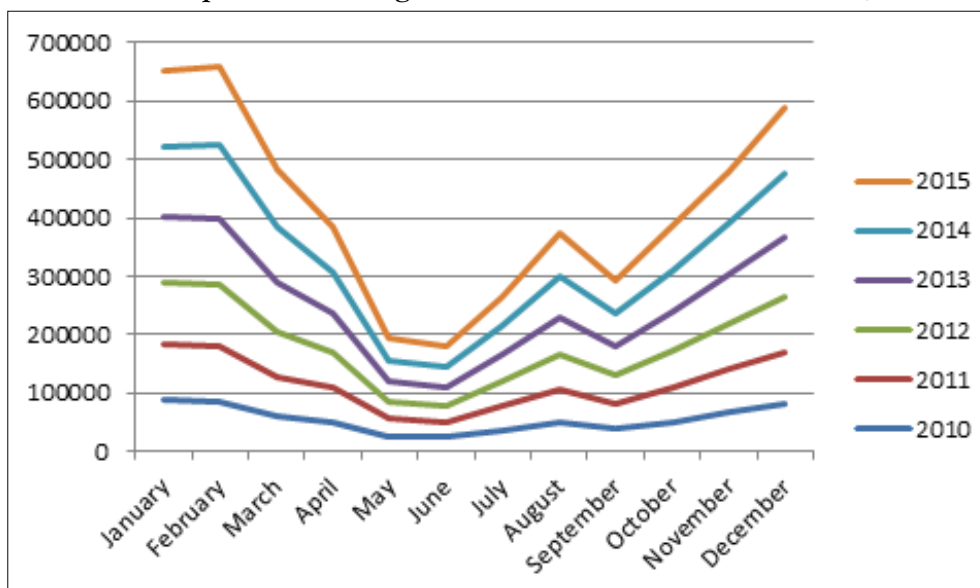
Even though Kerala's tourism sector is aiming to change the State into a 365 days destination,

the month-wise figures of foreign tourist arrivals shows the need to identify, diversify and develop new destinations and products, where the state has a comparative advantage, to overcome the aspect of seasonality. The Department of Tourism has taken many measures to make Kerala an all-time destination and promoted products like monsoon tourism, Meetings, Incentives, Conferences and Exhibition (MICE) tourism and customised packages for off-season months. The marginal increase in the number of foreign tourist arrivals during the off-season for the past five years is a clear indicator of the efforts taken by the tourism industry of the State. These initiatives need to be continued and products that fit all seasons should be introduced to convert tourism to a regular activity generating sustainable income and full-time employment. Besides, market-specific, multi-pronged marketing strategies based on market analysis should be put in place to attract quality foreign tourists throughout the year.

Source Market of Tourist Arrivals

The country-wise details of foreign tourist arrivals (FTA) into India in 2015 reveals that about 15.1 per cent of the FTAs were coming from United

Figure 9.2
Month-wise comparison of foreign tourists in Kerala from 2010 to 2015, in number



Source: Department of Tourism, Government of Kerala

States followed by Bangladesh (14.13 per cent), United Kingdom (10.81 per cent) and Sri Lanka (3.73 per cent). The trend was same for the years 2012, 2013 and 2014.

In Kerala, United Kingdom, with an arrival percentage share of 17.1 per cent, remains on the top of the countries that generate foreign tourists. France occupied the second position with a 9.4 per cent share. Germany (7.9 per cent) and USA (7.8 per cent) contribute the next major shares of foreign tourist arrivals. **Appendix 9.2** gives the share of major international source markets of Kerala Tourism in the year 2015.

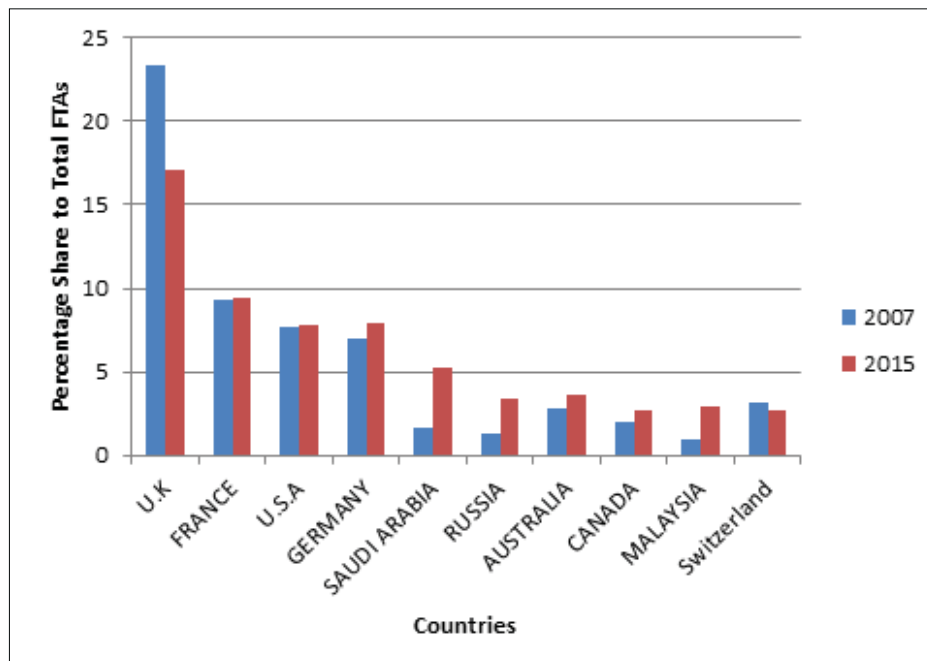
Even though UK occupied the top share in the source market of foreign tourist arrivals in the State, its share had declined from 23.36 per cent in 2007 to 17.1 per cent by 2015. The share of France and USA remained stable while that of Germany showed a marginal decline from 7.9 per cent in 2007 to 6.9 per cent by 2015. But the share of Saudi Arabia substantially increased from 1.66 per cent to

5.2 per cent between 2007 and 2015. The shares of Russia and Malaysia have also increased over these years. During 2007, Maldives contributed a share of 4.9 per cent in the total foreign tourist arrivals in the State but the percentage share came down to 1.29 per cent by 2015. **Figure 9.3** portrays the trend in the share of foreign tourist arrival from top ten countries of the world during 2007 and 2015.

District-wise data on Foreign Tourist Arrivals

While analysing the data on the district-wise foreign tourist arrivals, it is noticed that the preference of various districts for the foreign tourists were almost same during the last two years. Foreign travellers are highly concentrated on the central and southern districts of the State. Ernakulam ranks at the top in attracting foreign tourists, accounting for a share of 39.2 per cent during 2015. Thiruvananthapuram (31.7 per cent), Idukki (8.6 per cent), Alappuzha (6.5 per cent) and Kottayam (5.1 per cent) were the

Figure 9.3
Trend in the share of foreign tourist arrival from top ten countries of the world to Kerala between 2007 and 2015, in per cent



Source: Department of Tourism, Government of Kerala

other districts in the ranking of top five districts in the State. The northern part of the State is still lagging in attracting foreign tourists. The share of all the districts in the northern region of the State with respect to foreign tourist arrivals is negligible and less than 3 per cent. **Appendix 9.3** gives the details of district-wise foreign tourist arrivals and **Figure 9.4** depicts the region-wise share of foreign tourist arrivals in Kerala.

The northern region of Kerala has the advantages of long coast line, backwaters, high range tourism and vast scope for the development of cultural and heritage tourism. The government should find measures to develop tourism in this region to avoid regional disparities existing in the industry.

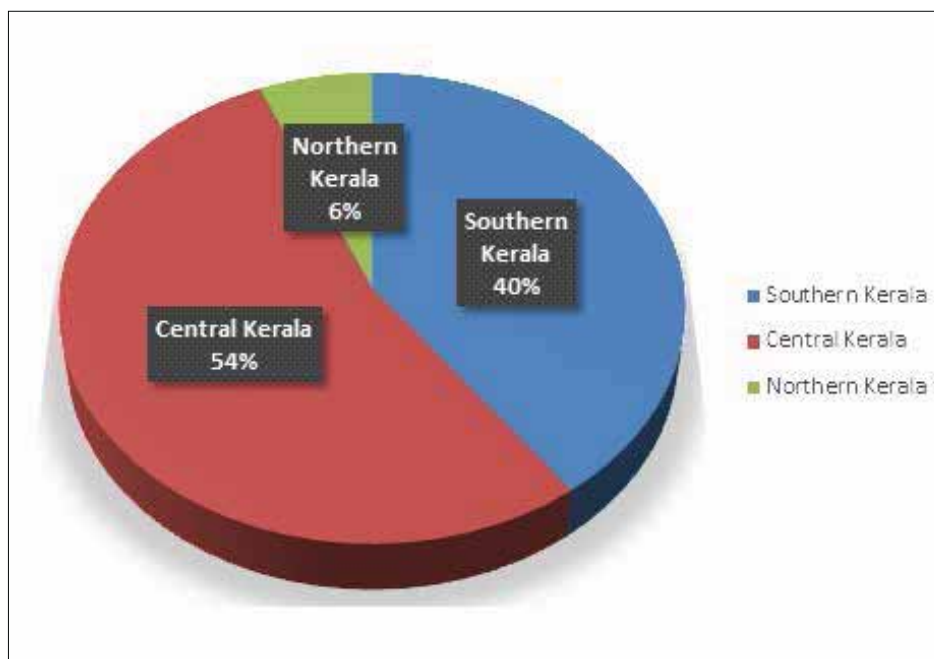
RECENT TRENDS IN DOMESTIC TOURIST ARRIVALS

The analysis of the domestic tourist arrivals data is also important as foreign tourist arrivals. Unlike international tourism, the domestic tourism in

a country is characterised by three factors. They include knowledge, proximity of destinations and lower cost of transport. Certain categories like families, children, teenagers, senior citizens, disabled persons and households with modest incomes are much more represented in domestic tourism than in international tourism. This social diversity gives rise to a large diversity in the demand, in terms of accommodation and tourism products as well as activities and destinations.

In 2015, the number of domestic tourist visits (DTV) to the States/UTs was 1432 million as compared to 1282.8 million in 2014 registering a growth of 11.63 per cent over 2014. The top ten States in terms of number of domestic tourist visits, during 2015, were Tamil Nadu (333.5 million), Uttar Pradesh (204.9 million), Andhra Pradesh (121.6 million), Karnataka (119.9 million), Maharashtra (103.4 million), Telangana (94.5 million), Madhya Pradesh (78 million), West Bengal (70.2 million), Gujarat (36.3 million) and Rajasthan (35.2 million). The contribution of the top 10 States was about 83.62 per cent to the total number of domestic tourist visits during 2015.

Figure 9.4
Region-wise shares of Foreign Tourist Arrivals in Kerala, in per cent



Source: Department of Tourism, Government of Kerala

Tamil Nadu and Uttar Pradesh have maintained the first and second ranks respectively in terms of DTVs in 2015. Andhra Pradesh has gained the third position leaving Karnataka and Maharashtra at the succeeding fourth and fifth positions respectively. **Appendix 9.4** gives the details of Domestic Tourist Arrivals during 2015.

The domestic tourist visits in the state marked an annual growth rate of 6.59 per cent with 11.69 million tourists in 2014 to 12.46 million during the year 2015. A marginal decline in the growth rate is noticed when compared with the previous year of 2014. The past ten years data of the growth rate on the domestic tourist arrivals for the state shows that the state has achieved a double digit growth during the year 2008. By 2009, it dropped to 4.25 per cent and then gathered momentum in the succeeding two years. During the years 2012, 2013 and 2014 the rate was stable with an annual rate of 7.41 per cent, 7.75 per cent and 7.71 per cent respectively. **Figure 9.5** portrays the growth rate of Domestic Tourists Visits in India and Kerala.

A comparison with the national data shows that the growth in Kerala's domestic tourist flow was consistently lower than the national average growth during the last ten years. As per the national tourism

statistics of 2014, Kerala occupied 19th rank with respect to Domestic Tourist Visits among the Indian States. On the other hand, the position of the state with respect to Foreign Tourist Arrivals is much better at 7th position among the top ten states in the country.

Month-wise arrival of Domestic Tourists in Kerala

The month-wise data on the arrival of domestic tourists in Kerala shows that the highest inflow of tourists was for the month of December and the lowest was for the month of June. A similar trend is visible for the past five years in the domestic tourist arrival statistics of the State. Here, destinations like Sabarimala and other temple/pilgrimage tourism points (Guruvayoor, Thiruvananthapuram, etc.) are not included. The common practice is to combine pilgrimage with pleasure. **Figure 9.6** exhibits the month-wise arrival of domestic tourist traffic from 2010 to 2015.

Source of Domestic Tourists

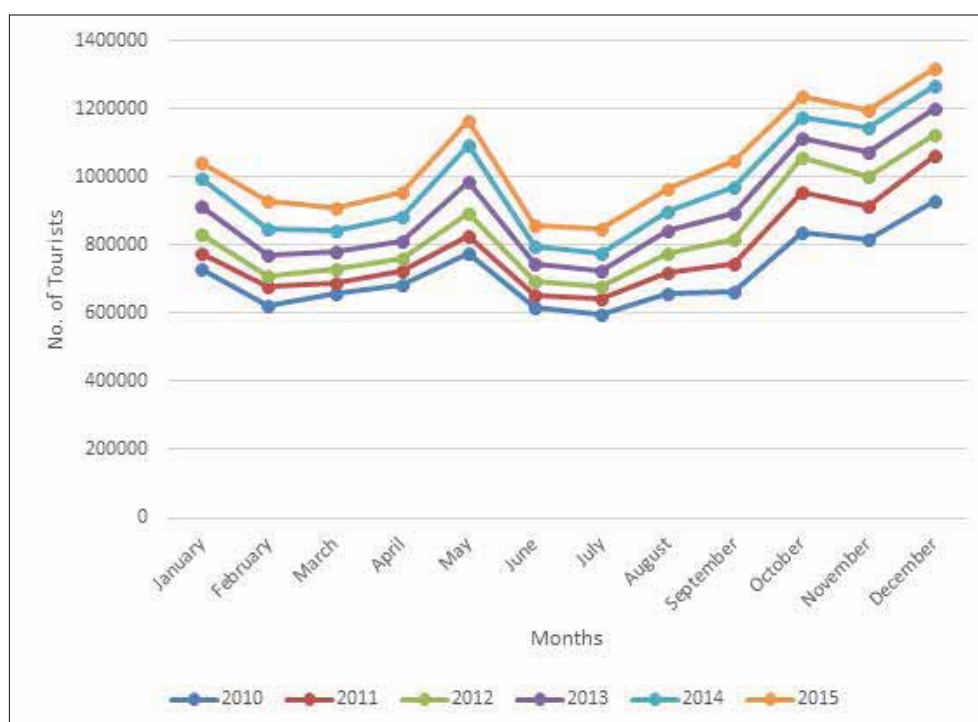
The statistics on the distribution of domestic tourist visits in Kerala by state of origin during 2015 reveals that about 75.7 per cent originates

Figure 9.5
Growth rate of Domestic Tourists Visits in India and Kerala, in per cent



Source: Department of Tourism, Government of Kerala

Figure 9.6
Month-wise arrival of Domestic Tourist in Kerala from 2010 to 2015, in number



Source: Department of Tourism, Government of Kerala

within the state. With respect to the distribution of other states, Tamil Nadu ranks 1st with a share of 8.02 per cent of domestic tourist visits. Karnataka (4.61 per cent), Maharashtra (2.8 per cent) and Andhra Pradesh (1.83 per cent) were the other important States. The share of northern States was negligible. **Appendix 9.5** gives the details of top fifteen state-wise share of Domestic Tourist Arrival in Kerala.

District-wise arrival of domestic tourists in Kerala

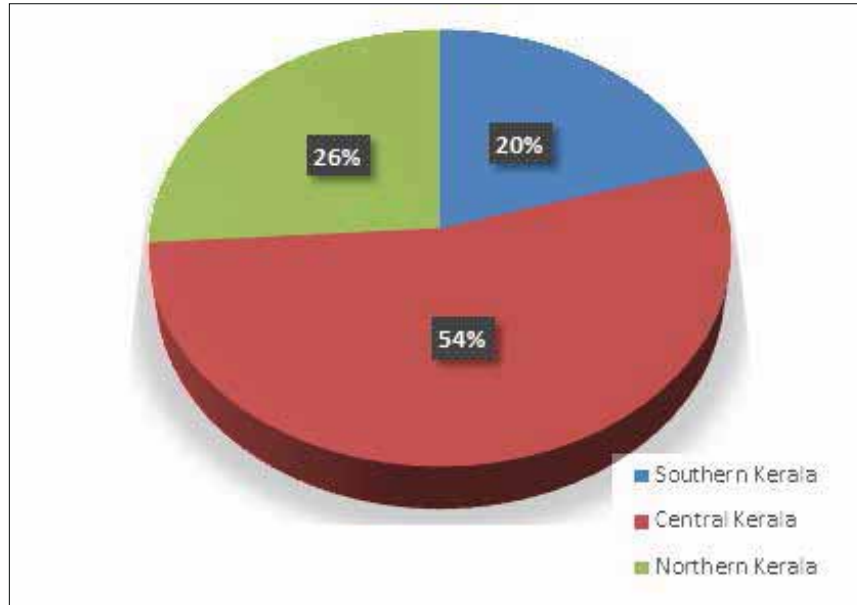
The status of the domestic tourist visits in various districts in the State is slightly different from that of the foreign tourist arrivals. Ernakulam records the top share (23.2 per cent) in receiving domestic tourists followed by Thrissur (21.3 per cent). Thiruvananthapuram occupied the third position (14.9 per cent) and Kozhikode (6.5 per cent) was positioned in the fifth place. Pathanamthitta and Kasaragod were the least-preferred districts

among domestic travellers. Since most of the domestic visitors originate from within the State, regional disparity as in the case of foreign tourist arrivals is not visible. The region-wise data during 2015 reveals that domestic tourist visits were high in central Kerala with a share of about 54 per cent followed by northern Kerala (26 per cent) and southern Kerala (20 per cent). **Appendix 9.6** shows the district-wise share of domestic tourist arrivals and **Figure 9.7** depicts the region-wise share of domestic tourists in the State.

Status of Accommodation Facilities in Kerala

The data on the availability of accommodation facilities in classified hotels in Kerala during the year 2015 showed a decline in the number of hotels and rooms. The number of hotels declined from 409 in 2014 to 334 by 2015. Consequently, the number of rooms available also declined from 11,387 in 2014 to 9,224 by 2015. The details on

Figure 9.7
Region-wise share of domestic tourists in Kerala, in per cent



Source: Department of Tourism, Government of Kerala

the availability of accommodation in classified hotels in Kerala are provided in **Appendix 9.7**. Considering the increasing tourists traffic, both in foreign and domestic arrivals over the years, the declining accommodation availability is a major concern.

THE ECONOMIC IMPACT OF TOURISM

According to the 2016 “Report on the Economic Impact of Travel and Tourism Industry” at the global level by the World Travel and Tourism Council, the total contribution of the sector to the global economy in 2015 was US\$7.2 trillion (at 2015 prices) and 9.8 per cent of the world GDP. In GDP growth terms, the Travel and Tourism sector outperformed several other major economic sectors, including manufacturing and retail with annual growth rate of 3.1 per cent in 2015. In terms of employment, in 2015, the Travel and Tourism sector supported 284 million jobs, or 1 in 11 of all jobs in the world. In employment growth

terms, the Travel and Tourism sector surpassed various other select industries in 2015, including the financial services, education and health care sectors. The total contribution of Travel and Tourism to employment grew by 2.6 per cent in 2015 registering the creation of 7.2 million new jobs through direct, indirect and induced activities.

All global sub-regions experienced growth in total Travel and Tourism GDP in 2015, with Southeast Asia experiencing the strongest growth at 7.9 per cent, ahead of South Asia (7.4 per cent). They were followed by the Middle East (5.9 per cent), Caribbean (5.1 per cent), Sub-Saharan Africa (3.3 per cent), North America (3.1 per cent), Europe (2.5 per cent), Northeast Asia (2.1 per cent), Latin America (1.5 per cent) and North Africa (1.4 per cent).

According to the World Travel and Tourism Council (WTTC) report, the contribution of travel and tourism sector to the GDP of India was Rs. 8309.4 billion in 2015 (6.3 per cent of GDP). The total contribution of Travel and Tourism to

employment was 37,315,000 jobs in 2015 (8.7 per cent of total employment). About 83.2 per cent of the direct contribution to the GDP in the sector was generated by leisure travel spending whereas business spending constituted the balance share of 16.8 per cent. The share of domestic travel spending to the GDP was about 82.5 per cent and the corresponding figure for foreign visitor spending was 17.5 per cent. India occupied the 12th position in the world ranking of travel and tourism's total contribution to GDP and with respect to employment contribution to the sector, the country was positioned next to China holding 2nd rank at the global level. The report envisages that India's strong forecast growth will propel it into the top ten Travel and Tourism economies by 2026, moving from 12th in 2015 up to 7th by 2026 in terms of total Travel and Tourism GDP.

Kerala Economy and Tourism

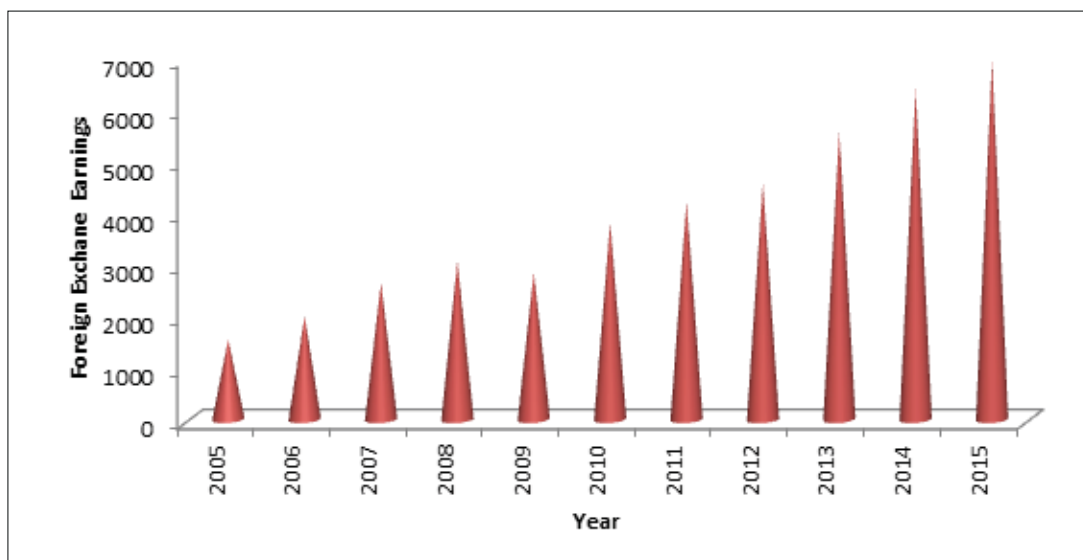
Tourism is an important contributor to the growth of service sector in Kerala. The total revenue (including direct and indirect means) generated

from tourism during the year 2015 comes to ₹26,689.63 crores showing an increase of 7.25 per cent over the last year. During the last decade, the total revenue from tourism registered a compound annual growth rate (CAGR) of 11.33 per cent. It grew from ₹7,738 crores in 2005 to ₹26,689.63 crores by 2015. The annual growth rate of income from tourism reveals a fluctuating trend between 2005 and 2015. Between 2013 and 2015, a declining tendency of the growth rate was noticed: from 12.22 per cent in 2013 to 7.25 per cent by 2015.

Foreign Exchange Earnings

The foreign exchange earnings from tourism increased from ₹1552.31 crores in 2005 to 6949.88 crores by 2015 registering a CAGR of 14.6 per cent. The earnings from foreign tourism showed a steady increase over the years, except for the year 2009 when the global financial crisis affected the flow of foreign tourist Arrivals and led to a decline in foreign exchange earnings. **Figure 9.8** captures the data on foreign exchange earnings of Kerala over the last ten years.

Figure 9.8
Trends in foreign exchange earnings of Kerala from 2005 to 2015, ₹ in crore



Source: Department of Tourism, Government of Kerala

While analysing the data on the annual growth of foreign exchange earnings, a declining trend in the growth rate has been noticed over the last three years. **Figure 9.9** shows the annual growth rate of foreign tourist earnings from 2005 to 2015.

Domestic Tourism Earnings

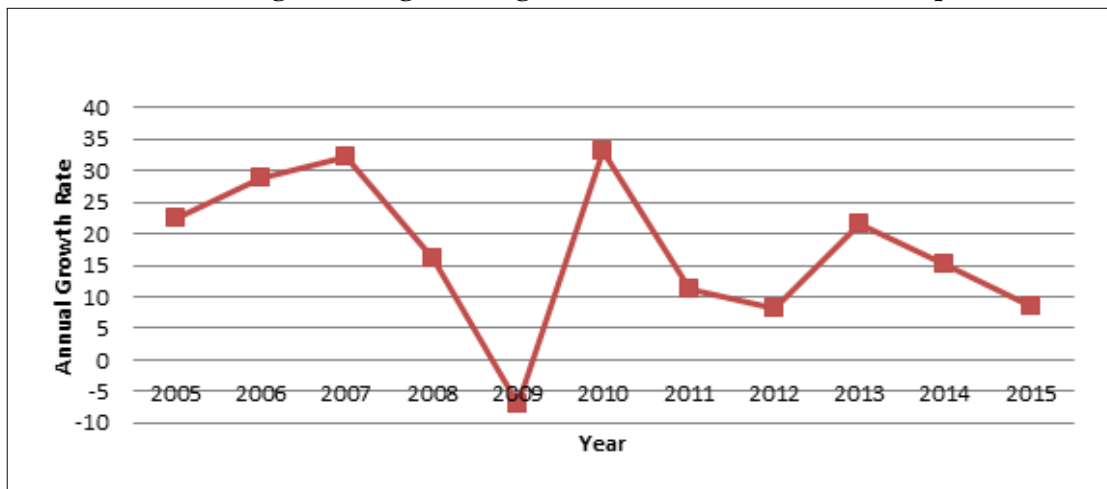
The domestic tourist earnings increased from ₹ 12981.91 crore in 2014 to ₹13836.78 crore by 2015. The CAGR of domestic tourist earnings over the last ten years was 11.25 per cent. The domestic earnings from tourism during the year 2005 was ₹4281.42 crores which rose to ₹13836.78 crores by 2015. **Appendix 9.8** shows the foreign exchange earnings and domestic tourist earnings including revenues from indirect sources from 2005 to 2015.

Tourism and Employment

The contribution of tourism to total employment has direct, indirect and induced impacts. Jobs generated by tourism are spread across the economy directly in tourism sectors like travel agencies, accommodation sector, and airlines and indirectly to retail, construction, manufacturing and telecommunications.

According to a study “Regional Tourism Satellite Account for Kerala and Madhya Pradesh 2009-10”, commissioned by the Ministry of Tourism, Government of India, the tourism sector has generated over 14 lakh jobs in Kerala. The total number of jobs created directly and indirectly by the sector between 2009 and 2012 turned out to be 23.52 per cent of the total employment in Kerala. (**Table 9.1**)

Figure 9.9
Trends in foreign exchange earnings of Kerala from 2005 to 2015, in per cent



Source: Department of Tourism, Government of Kerala

Table 9.1
Contribution of Tourism Sector to Total Employment between 2009 and 2012, in per cent

Share in Employment (in per cent)			
Country/ State	Direct Impact	Indirect + Induced Impact	Total Impact
India	4.4	5.8	10.2
Kerala	9.9	13.6	23.5

Source: Ministry of Tourism, Government of India

STATE GOVERNMENT SPENDING ON TOURISM SECTOR

Tourism Under Five Year Plans

Tourism sector was brought under the purview of Five Year Plans since the second Five Year Plan onwards. Till the end of the Fifth Plan, the sector had not received much attention. The Sixth Five Year Plan (1980-85) gave due emphasis for increasing the State's share of international tourist traffic to India while at the same time providing convenient packages of facilities for domestic tourists visiting Kerala from all over the country. The Plan envisaged the pooling of resources not only of the central and state governments, but also from the private sector in achieving the plan

objectives. The Government of Kerala declared tourism as an industry in July 1986.

The overall plan outlay to the sector has been increasing over the years but the share of tourism sector in the total state plan outlay is negligible. The allocation to the tourism sector has not been above one per cent except during the ninth plan period. **Table 9.2** illustrates the outlay to tourism sector and the share of tourism in total outlay over various plan periods.

A significant increase in allocation is noticed during the Ninth Plan as the outlay was raised to ₹192.66 crores from ₹53.01 crores during the 8th plan period. However, during the 10th plan period, the outlay to the sector fell to ₹27.7 crore, which was subsequently increased during 11th and 12th Plan periods.

Table 9. 2

Allocation and Expenditure on Tourism in the State Plan over Various Plan Periods, ₹ in lakh

Period	Total Plan Outlay	Outlay for Tourism	Percentage share of Tourism	Actual Expenditure
I Plan	3003	--	--	--
II Plan	8701	13.00	0.15	8.00
III Plan	17000	50.00	0.29	22.00
Annual Plan	14254	31.00	0.22	19.00
IV Plan	25840	50.00	0.19	55.00
V Plan	56896	71.00	0.12	79.00
Annual Plan	39296	130.00	0.33	132.27
VI Plan	148755	672.00	0.45	556.80
VII Plan	221100	850.00	0.38	833.69
Annual Plan	144200	650.00	0.45	816.95
VIII Plan	687648	5301.00	0.77	5707.85
IX Plan	1575500	19266.00	1.22	17397.81
X Plan	2522643	2777.00	0.11	2487.68
XI Plan	4560547	48873.00	0.15	61774
XII Plan	10200000	110140.00	0.29	67506.24*

**Expenditure status upto October 31, 2016*

Source: Plan Outlay and Expenditure, Kerala Vol 1 and 2, Kerala State Planning Board.

Box 9.1 Swadesh Darshan Scheme

This Scheme is proposed to be implemented in a Mission Mode. The main Mission objectives and strategy are as under:-

Mission Objectives

- Develop circuits having tourist potential in a planned and prioritized manner
- Integrated development of infrastructure in theme based circuits;
- Promote cultural and heritage value of the country;
- Provide complete tourism experience with varied thematic circuits;
- Enhancing the tourist attractiveness in a sustainable manner by developing world class infrastructure in the circuit destination
- Follow community based development and pro-poor tourism approach
- Creating awareness among the local communities about the importance of tourism for them in terms of increase in source of income, improved living standards and overall development of the area;
- Promote local arts, cultural, handicrafts, cuisine etc to generate livelihoods in the identified regions
- Harness tourism potential for its direct and multiplier effects in employment generation and economic development;
- Leverage public capital and expertise;

Mission Strategy

- To identify themes based circuits that have potential to be showcased as world class tourism products in consultation with the stakeholders;
- To ensure that the development of theme based circuits adhere to the sustainability and carrying capacities of the destinations;
- To create a framework for classifying infrastructural gaps in the identified circuits that have been major roadblocks in unlocking the potential of these circuits;
- To plan in an integrated manner the development of these circuits in a specific time-frame ensuring full convergence of state and central government schemes as well as private sector investments
- To follow a comprehensive area development approach for ensuring all the facilities required by the tourists in the identified circuits.

In terms of the percentage share of allocation of tourism sector in the total plan outlay, the share marginally to 0.15 per cent by 11th plan and to 0.29 per cent by the 12th Five Year Plan.

of the sector increased from 0.77 per cent in 8th plan to 1.22 per cent by the 9th plan period. But the momentum gathered by the sector during the 9th plan period did not last for long and the share of the tourism sector in the total plan outlay declined to 0.11 per cent in 10th Plan. It increased

State and Central Government Plan Allocation

In addition to the State Plan Allocation, the Ministry of Tourism, Government of India has

also been earmarking funds for tourism projects in the State. **Table 9.3** shows the funding of State and Union Governments to Kerala Tourism since 2011-12. State funds include supplementary allocation over and above the budgetary allocation. During 2015-16, the State has received an amount of ₹99.34 crores from the Central Government under the scheme Swadesh Darshan for integrated infrastructure development of theme based tourist circuits. Under the 13 identified tourism circuits all over India, the state has received the above grant for the development of Pathanamthitta- Gavi-Vagamon-Thekkady as Eco-Tourism Circuit in Idduki and Pahanamthitta Districts.

Out of the allotted amount (including SDG) of ₹. 230.45 crores, the State has sanctioned programmes and projects for an amount of ₹158.68 crores during 2015-16. The important programmes/projects sanctioned by the state include:

- Science Park at Wandoor – ₹5.00 crores
- Hop on-Hop off bus services – ₹1.35 crores
- Take a break way side amenities (18 nos)- ₹8.68 crores
- Setting up of light and sound show and dynamic illumination at Bakel – ₹4.00 crores.
- Farm tourism development- Priyadarshini Tea Environs, Priyadrshini Estates, Pancharakolli, Wayanad- ₹1.00 crore.
- Development of Neyyar dam as a tourist destination – ₹4.65 crores.
- Development of Perumathura Beach in

Trivandrum- ₹. 3.00 crores

- Master plan for Modernisation and Tourism Development of Vilagankunnu – ₹2.00 crores.
- Construction of Yathri Nivas at Athirappalli- ₹5.00 crores
- Development of break water tourism at Thangasserry, Kollam- ₹2.5 crores
- Nilambur Tourist Hub- ₹2.00 crores
- Punyadarshana Complex at Sannidhanam- ₹7.5 crores
- Development of Tourism infrastructure at Kumarakom- ₹9.77 crores
- Folklore park at Thiruveappuram, Palakkad district- ₹1.00 crores
- Clean Destination campaign- ₹3.69 crores

The major chunk of government spending has been on infrastructural projects like development of basic amenities in tourism destinations, beautifications, quality wayside and waterside amenities, state of the art information centres, visitor lounges, infrastructure for land and water based adventure tourism, erecting international quality tourism signage at destinations and en-route, tourism transportations and safety and security aspects of tourists.

The second focus area in government spending has been marketing. The government has succeeded in branding Kerala Tourism in international market with the title “God’s Own Country”. Quality human capital with labour standards is fundamental to tourism development in any region. Shortage of

Table 9.3

Allocation and Expenditure on Tourism in the State Plan over Various Plan Periods, ₹ in lakhs

Year	State Fund- ing*	Union Funding	Total
2011-12	182.49	23.75	206.24
2012-13	180.53	78.26	258.79
2013-14	214.89	34.67	249.56
2014-15	245.36	0.00	245.36
2015-16	230.45	99.34	329.79

*Source: Department of Tourism, Government of Kerala

* Plan outlay including SDG

Box 9.2

Kerala Island finds mention in Nat Geo's best destinations list



Beginning with hunting the aurora borealis in the northern lights zone in Norway at 12 am, the list includes photos of Hawaii at 5 am, Paris at 6 am, San Francisco at 7 am, Abu Dhabi at 8 am, Melbourne at 9 am, New York at 8 pm, Budapest (Hungary) at 10 pm and Kerala at 6 pm, among others, offering a peek into how different places in the world look like.

Source: <http://www.nationalgeographic.com/travel/features/around-the-world-in-24-hours/>

skilled manpower is a challenge to Indian Tourism. The State Government institutions like Kerala Institute of Tourism and Travel Studies (KITTS), State Institute of Hospitality Management (SIHM) and Food Craft Institutes (FCIs) have been creating quality manpower in travel, tourism and

hospitality sectors. **Figure 9.10** shows the pattern of government spending in 2016-17.

ACCLAIMS AND AWARDS RECEIVED DURING 2015

In 2015, Kerala's tourism sector has received several awards and citations for tourism related activities. These awards are a direct result of the concerted efforts of both the public and private sector working together to take Kerala's tourism industry to a world class level.

1. PATA Award

- PATA CEO Challenge Top Destination Award for Thekkady, 2015

- PATA GOLD AWARD for Heritage and Culture – MuZris Heritage Project, 2015

2. Conde Naste Traveller Award

- Favourite Indian leisure Destination Kerala (Runner-up)

3. NATIONAL TOURISM AWARDS

- Most Innovative use of Technology/ Best Website
- Best Tourism Film
- Best Responsible Tourism Project
- Best Tourism Brochure

4. Golden City Gate Award – ITB Berlin

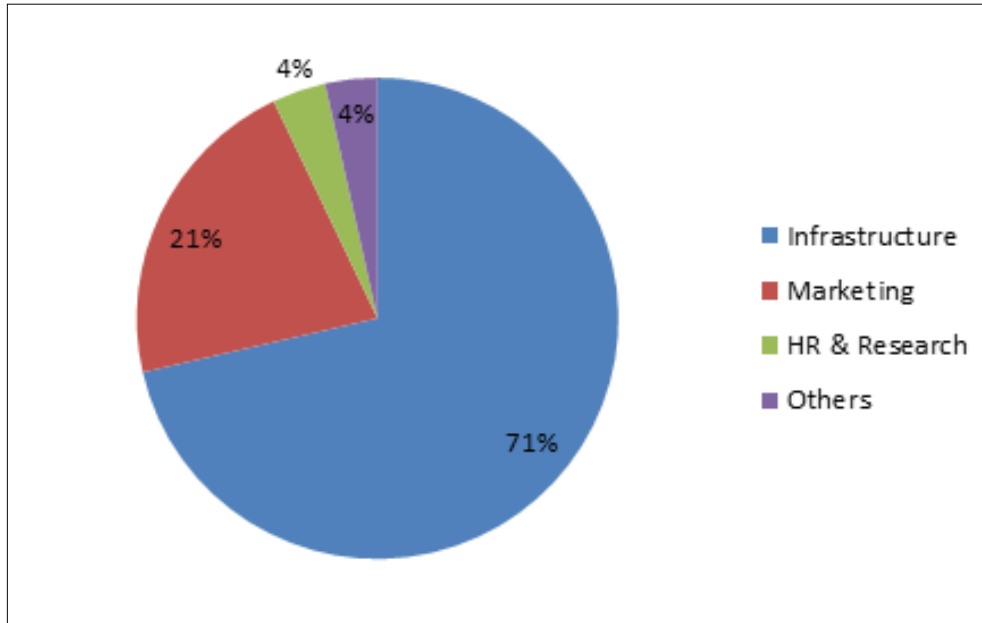
- Gold – Film – Responsible Tourism Film

5. FITUR

- Best Stand Award for Kerala Tourism Pavilion

The important cultural initiatives undertaken by the Department of Tourism during 2015-16 are as follows:

Figure 9.10
Distribution of Government Spending in Tourism in 2016-17, in per cent



Source: Department of Tourism, Government of India

- ‘Onam’: Onam Celebration 2015 was celebrated from August 25 to August 31
- Joint Initiative with Cultural Department to promote traditional arts and festivals
- Nishagandhi festival: The only event of its kind that captures the spirit of the season. It is held at the sprawling Kanakakkunnu palace grounds during January every year. In last year the festival include a food festival, National level seminar on music, dance festival and Kathakali fest for 7 days.
- UTSAVAM- the Kerala Arts festival for the promotion of local cultural programmes conducted in December for a period of 14 days in selected major four tourist destinations

SOCIAL AND ENVIRONMENTAL IMPACTS OF TOURISM

Tourism is a double-edged sword. It is true that tourism provides considerable economic benefits

to a country. The multiplier effects of tourism both with respect to income and employment has always enriched the economic development of a region. But its rapid expansion can also be responsible for adverse environmental, as well as socio-cultural, impacts. The two main areas of environmental impact of tourism are pressure on natural resources and damage to ecosystems. Likewise, traditional cultural and art forms – dance, music, festival celebrations, and handicrafts – that are promoted for tourism development would necessarily have to undergo some changes so as to be interpretable and presentable to a different audience. Only a very niche and discerning target group could accept traditional art and culture in their pure and esoteric forms. Hence, the initiatives to transform these kinds of cultural and traditional forms to equip them to meet the present requirements of the industry will sometimes influence the originality of these performances. The development activities and investment patterns associated with the tourism industry will also have both positive and negative social impacts on the society. Tourism is both a contributor to climate change and victim

Box 9.3 Tourism as a Driver of Peace

Travel and Tourism is now being increasingly recognised for its ability to drive peace, security, and understanding. Though it is widely argued that travel promotes cultural interchange and understanding, which brings people together and in turn creates more peaceful societies, there is little empirical evidence to support these views. The World Travel and Tourism Council (WTTC), for the first time, has partnered with the Institute of Economics and Peace (IEP) to explore the links between tourism and peace. The research shows that countries with a stronger tourism sector tend to be more peaceful.

- An open and sustainable tourism sector means a higher level of positive peace: namely the attitudes, institutions, and structures that create and sustain peaceful societies.
- Countries with an open and sustainable tourism sector are more likely to enjoy higher levels of positive peace in the future.
- The more sustainable a country's tourism sector the lower the country's level of violence and conflict is likely to be.
- In non-conflict-affected countries, tourism is resilient to increases in violence and conflict.
- Tourism is resilient to increases in terrorism, even when terrorism is targeted at tourists.

The Institute for Economics and Peace considers three measures of peacefulness: Global Peace Index which measures the negative peace in a country (the absence of violence); Positive Peace Index denotes the positive peace, or the levels of institutions and attitudes in place to foster and promote peace; and Global Terrorism Index measures the negative impact of terrorism on lives lost, injuries and property damage.

Increases in tourism sustainability can lead to improvements of the functioning of governments as they respond to demand and aim to create a welcoming environment for further tourism expansion. In Nepal, the government response to increased influxes of tourists to Pokhara led to the implementation of Codes of Conduct for Peace Responsive Tourism to guide the behaviours of all stakeholders. The Election Period Tourism Operating procedures in Kenya, set up in response to tourist fluctuations around election time, provides a platform for stakeholders to work together to promote and maintain peace during periods of heightened political tensions.

It is seen that as tourism grows and the tourist sector develops, a whole host of skills become necessary for local populations including languages and business skills, driving human capital development. In Namibia, the development of the tourism sector has led to local communities developing skills such as languages and trades such as cooking, leading to increased human capital development. 'Township tourism' in South Africa has led to both informal and formal skills acquisition by community members in Alexandra township, Johannesburg. Increased tourism may lead to increases in the flow of information, both within a country and across borders, as people share experiences and ideas. In Northern Ireland, political tourism has seen an increase in people travelling to the region to learn more about the conflict and history, which has in turn enabled understanding and information sharing.

Changes in relations with neighbours may also be affected by tourism. At an individual level, travelling to neighbouring countries may promote understanding and tolerance of the other. At the state level, travelling to neighbouring countries may promote mutually beneficial economic gain. For example, Israeli eco-tourists visiting Jordan had positively altered their perceptions of Jordanian institutions and culture, when compared to a control group that did not travel. Similarly, visits to Mt. Gumnang by South Koreans positively influence their views of North Korea, both at the individual level, and at the national level.

Source: Tourism as a Driver of Peace, Research by World Tourism and Travel Council (WTTC), May 2016.

of it. Warmer temperature, rising sea levels, coastal erosion and biodiversity loss threaten tourism's very future in many locations.

Since most of our tourism oriented activities in the State are centred around natural products like beaches, backwaters and hill stations, the scope for increasing pressure on these resources is high. Tourism affects environment in following ways:

- Tourism is a land-intensive activity. Rapid growth of tourism activities ultimately increase pressure on the land which further leads to speculation of land prices, reclamation of wet land on a vast scale, and pressure to flout building rules.
- Increasing demand for infrastructural facilities like roads, electricity, and water disturbs the natural eco system.
- Generation and accumulation of wastes in tourist destinations leads to unhygienic environment.
- Deforestation and increased carrying capacity on the most fragile eco-tourism destinations in the State harms the environment.
- Ecological damage, including land and water areas, wetlands, and plant and animal habitats in general, is caused due to over exploitation of natural resources.

Provision of a clean, safe and secure environment is a prerequisite to attract tourist inflow into the State. The state has to maintain a balance between development of tourism and environmental protection to minimise the adverse impact of tourism related activities on environment.

Sustainable Tourism

Sustainable tourism is the key to future development in this sector. 2017 has been declared by the United Nations as the International Year of Sustainable Tourism for Development. The important initiatives undertaken by the State Government towards sustainable tourism development are as follows:

- Responsible Tourism. Responsible Tourism

(RT) is a pro-poor tourism approach initiated by the Tourism Department. In RT, tourism is planned and implemented with the involvement of all stakeholders including the local people and takes care of economic, social and environmental aspects of tourism. The government has earmarked an amount of ₹ 1.00 crore for this programme in the Financial Year 2015-16.

- Kerala Waste Free Destination Scheme. The campaign "Kerala Waste Free Destination (KWFD)" is an initiative of the Department of Tourism involving the participation of local bodies, NGOs, Self Help Groups, educational institutions and tourism industry to provide a clean environment. The total plan outlay for the scheme during the 12th plan period was ₹18.00 crores.
- Conservation, preservation and promotion of Heritage, Environment and Culture. This scheme is envisaged for promoting traditional fairs, festivals and local cultural programmes. The government had allotted ₹6.5 crores for this scheme during the financial year 2015-16 which increased to ₹ 14.65 crores by 2016-17.

FOCUS AREAS FOR SUSTAINING TOURISM AS A GROWTH DRIVER

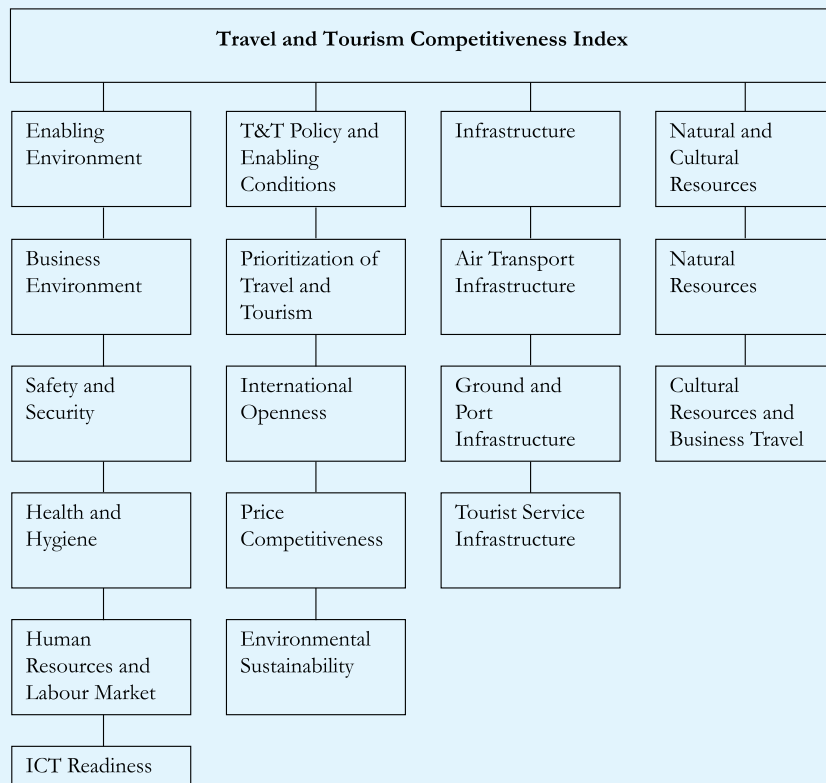
Tourism has been one of the successful pillars of economic development in the State. To sustain the growth in the sector as well as to address the challenges confronting the sector, the State needs to focus on certain thrust areas and formulate plan and policies accordingly. The strategies need to be oriented to widen the market of the State and spread the popularity to cover a wider spectrum of people and regions.

Marketing/ Publicity

In order to retain the market supremacy, Kerala Tourism launched number of new and innovative

Box 9.4 Travel and Tourism Competitiveness Index

The Travel and Tourism Competitiveness Report 2015 gives a comprehensive view of the travel and tourism sector. It features the Travel and Tourism Competitiveness Index (TTCI) measures “the set of factors and policies that enable the sustainable development of the Travel and Tourism (T&T) sector, which in turn, contributes to the development and competitiveness of a country.” Published biennially, the TTCI benchmarks the T&T competitiveness of 141 economies. It comprises four sub indexes, 14 pillars, and 90 individual indicators, distributed among the different pillars.



Spain leads the 2015 TTCI ranking and Europe—with a total of six countries in the top 10—is confirmed as the region with the most T&T-competitive economies. India rank 52nd among the 141 economies. The country’s natural resources (17th) are vast and diverse and its cultural resources (10th) include a unique intangible heritage (8th), sports events and a large entertainment offer. India’s relevance as business travel destination is increasing along with its economic growth, and it remains a price-competitive destination (8th) and recent changes in its visa regime (not yet reflected in the data rankings) have the potential to boost international arrivals. However, longstanding infrastructure gaps remain, especially in tourism-specific infrastructure (109th) and the quality of roads. Despite some uneven progress, India also lags on health and hygiene (106th) and ICT readiness (114th). The safety and security situation is unsettling, with a perceived increase in the impact of crime and violence (97th), and India ranks only 139th for environmental sustainability.

marketing campaigns in both international and domestic markets. The Great Backwater of Kerala, Kerala – Home of Ayurveda, Your Moment is Waiting and Dream Season are the major multimedia campaigns carried out by Kerala Tourism in the major markets. Market-specific campaigns were also carried out to attract tourists from strategic markets including Middle East, Australia and Japan. Innovative campaigns like train branding, airport displays and social media campaigns were taken up to attract more number of tourists.

The analysis of source markets shows that there has been not much significant change in the source market over the years. It is highly concentrated in regions such as Europe and U.S. Hence, it is important to market the tourism potential of the State in newer and unexplored regions of the world so as to increase tourist inflow. Innovations in marketing techniques need to be explored and new strategies must be evolved. The brand image of Kerala tourism needs to be marketed in a more professional and organized manner. The share of marketing in government spending towards this sector needs to be enhanced.

Box 9.5

Details of Participation of the Department of Tourism, Kerala in International and National festivals Road shows and fairs during 2015

International Festivals

- ATM Dubai (4-7 May 2015) in U.A.E
- BITE China (26-28 June 2015) in China
- OTDYKH Leisure (15-18 September 2015) in Russia
- ITB Asia (21-23 October 2015) in Singapore
- WTM London 2015 (2-5 November 2015) in England
- Travel Fair in New York
- FITUR 2016 Madrid in Spain
- ITB, Berlin 2016 in Germany

International Road shows

- Colombo, Sri Lanka (24th April 2015)
- Shanghai, China (30th June 2015)
- St. Petersburg, Russia (21st September 2015)
- Warsaw, Poland (6th October 2015)
- Tokyo, Japan (19th October 2015)
- Brussels, Norway (10th November 2015)
- Frankfurt, Germany (12th 2015)
- Mascot, Oman (23rd November 2015)
- Manama, Bahrain (25th November 2015)

National Festivals and Road shows

- Mysore (23rd July 2015)
- Gurgaon (4th August 2015)
- Chandigarh (6th August 2015)
- Jalandhar (7th August 2015)
- Udaipur (11th August 2015)
- Varanasi (13 th August 2015)
- Goa (3rd September 2015)
- Surat (8th September 2015)
- Ahmadabad (10th September 2015)

Source: Department of Tourism, Government of Kerala

Development of Infrastructure

A major portion of the government spending in the State is set apart for the creation and upgradation of infrastructure facilities at the destinations. However, given the constraints on budgetary resources, it is essential that private sector investment is encouraged towards the development of infrastructure with respect to accommodation and supporting facilities. Development of small and medium enterprises in tourism will enhance the situation in this regard. As per the recent statistics, there is considerable demand for heritage resorts, home stays and house boats by the foreign tourists visiting Kerala. The government can offer certain subsidies to encourage private investments in this area. Therefore, support of the Central and State government should be in the form of a facilitator by providing investor-friendly atmosphere.

Niche Tourism Products

Kerala tourism sector is heavily dependent on nature-based tourism. Over the years, thrust has been given to nature-based tourism with emphasis on beaches, back waters and hill stations. However, it is felt that the State cannot survive with nature-based tourism activities alone in the long run. This is also attributed to be one of the reasons for the declining growth rate of the sector in recent years. The situation demands for identification of new and diverse tourism products. This will also help to reduce the pressure on nature especially on the most fragile eco spots.

Kerala has enough scope for the development of new products in tourism. The rich cultural and heritage potentials, medical tourism, MICE, eco-tourism, film tourism, and cruise tourism are some of the important areas that can be given greater thrust.

Identification of thrust areas and pillars of development

For the comprehensive and sustainable development of tourism sector, the State needs to

identify a set of activities and prioritize them in a more efficient manner. The identified thrust areas in the sector include:

- **Economic Dimension:** it includes product differentiation, market diversification, innovations, extension of market and infrastructure development.
- **Environment:** enhance the role of District Tourism Promotion Councils and District Management Councils for the better management of destinations. These councils with statutory authority undertake and maintain tourism projects completed in the destinations and evaluate the basic infrastructure, security, protection and encroachment at the destinations concerned.
- **Social Issues:** intensive efforts are required from the state government to increase the participation of local communities in the tourism activities by creating environmental awareness and educational opportunities. Programs like Responsible Tourism must be encouraged. It generates greater economic benefits to local people and enhances the benefits to local communities.
- **Skill Development:** The hospitality sector is the most important area that requires quality manpower on a large scale. In Kerala, institutions like Kerala Institute for Travel and Tourism Studies (KITTS), State Institute of Hospitality and Management (SIHM) and Institute of Hotel Management and Catering Technology (IHMCT) are the important institutions functioning in this front. Improvement of skills among the service providers associated with the industry and the life guards working at the water based destinations is also important.
- **Local Government Ownership:** Efforts by the local self governments to preserve and manage the tourism potentials is negligible. Most of the tourist destinations are concentrated in the rural areas. But the concerned grama panchayats are not directly participating in tourism development activities. In this context, the government

should elaborate the guidelines of decentralized planning including provisions for the preservation and management of destinations coming under their purview. Thus, better co-ordination between different departments and more effective management of tourism projects can be ensured.

- **Regional Priorities in Tourism Planning:** The northern part of Kerala is yet to be tapped in terms of tourism potential. More thrust needs to be given for the development of northern region by providing attractive tour packages, diversified products and special offers at the initial stages. Kozhikode and Kannur can be promoted as important tourism nodes to divert part of the growth away from Kochi and Thiruvananthapuram. The economically disadvantaged districts like Malappuram, Palakkad, Kannur and Pathanamthitta also deserve a better share of tourism activities.

Responsible Tourism

Community Participation in Tourism development is successfully implemented in Kerala through Kerala Responsible Tourism (RT) initiative launched in 2008. The initiative, implemented on a pilot basis, has succeeded in mobilizing local community and channelizing the resources for strengthening the tourism activity in various destinations. The Tourism Policy 2012 of the State is based on the RT principles. The State now requires to mainstream the RT activities by

taking the principles of RT to the whole spectrum of tourism activities and encouraging the tourism service providers to adopt the RT principles in their business. The learning from the pilot phases since 2008 has to be now applied to the whole state. RT activities in the state will now have 2 distinct streams of activities;

- i) The field level activities to work with the community, LSGs, Government agencies, NGOs, tourism trade etc.
- ii) The supporting academic and research activities to be taken up continuously to support the field level activities and give proper guidance based on the studies.

The field level activities will be undertaken by the proposed RT Mission with the State and field level staff. The academic and research activities related to RT will be taken up by KITTS under RT School. Both RT Mission and RT School will work together complementing each other to ultimately bring the benefits of tourism to the local community. This plan envisages to undertake RT classification of tourism units like hotels/Homestays/Houseboat/Ayurveda centres/Tour operators/Tourist Transport operators etc; encourage and facilitate community level tourism activities; facilitate establishing tourism linkages to community level activities; encourage and facilitate tourism units and tourists taking up socially relevant activities; encourage and facilitate tourism units and tourists on environmental friendly practices; documentation of the field level activities, studies, researches etc; and build capacity of community at various level to get benefited from tourism.

Kerala needs to frame the right strategies to address its challenges in tourism. To frame and formulate appropriate strategies, the State needs accurate and updated data on tourism related activities. The focus should be on addressing the infrastructure gaps; promoting new products and destinations; harnessing the potential of eco-tourism, cultural tourism, heritage tourism; and providing clear and secure environment to attract more tourists. It needs to build on its strength, identify the challenges and prepare a strategy to propel tourism as a promising sector of future.

GLOSSARY

Basic Price

Basic price, the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.

Comprehensive Health Insurance Scheme (CHIS)

It extends to all families other than the BPL families (absolute poor) as per the Guidelines of Planning Commission who come under the RSBY.

Consumer Price Index (CPI)

Consumer Price Index (CPI) is designed to measure the changes overtime in the level of retail prices of a fixed set of goods and services (consumption basket) consumed by an average family of a defined population group at a particular place. The index number of industrial and agricultural workers is referred.

CDS

Current Daily Status. In the employment and unemployment survey, there are four concepts - CDS, CWS, UPS and UPSS - used to measure the activity status like employed or unemployed or outside labour force of those covered by the survey. In the CDS approach the activity status is determined for each day of the reference week (i.e 7 days preceding the date of survey). A person who worked at least for one hour but less than four hours was considered having worked for half a day. If worked for four hours or more during a day, he was considered as employed for the whole day.

CWS

Current Weekly Status: Here the activity status is determined with reference to a period of seven days preceding the date of survey. A person who reports having worked at least for one hour on any day during the reference period of one week while

pursuing a gainful occupation was deemed to be employed. A person who did not work even for one hour during the reference period of one week but was seeking or available for work was deemed to be unemployed.

Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY)

This is a new program launched by Ministry of Power for improving the distribution infrastructure of rural areas and for ensuring 24x7 power supply to all rural households.

Density of Population

Density of population is one of the important indices of population concentrations. It is defined as the number of persons per sq. kilometer. The geographical unit is ward, town, district and state

E- procurement

It is the business to business purchasing of goods and services through the internet.

Gross national income (GNI)

It is GDP less net taxes on production and imports, less compensation of employees less property income payable to the rest of the world plus the corresponding items receivable from the rest of the world (in other words, GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units); an alternative approach to measuring GNI at market prices is as the aggregate value of the balances of gross primary incomes for all sectors; (note that gross national income is identical to gross national product (GNP) as previously used in national accounts generally).

Gross National Product (GNP)

Gross National Product is the total market value of all final goods and services produced in a year. GNP includes net factor income from abroad whereas GDP does not.

Gross value added (GVA)

GVA is the measure of the value of goods and services produced in an area, industry or sector of an economy, in economics. In national accounts GVA is output minus intermediate consumption; it is a balancing item of the national accounts' production account.

GVA at Basic prices

Gross value added at basic prices is defined as output valued at basic prices less intermediate consumption valued at purchasers' prices. Here the GVA is known by the price with which the output is valued. From the point of view of the producer, purchasers' prices for inputs and basic prices for outputs represent the prices actually paid and received. Their use leads to a measure of gross value added that is particularly relevant for the producer.

Infant Mortality

Death of a baby before his or her first birthday is called infant mortality. The infant mortality rate is an estimate of the number of infant deaths for every 1,000 live births.

Janasree Bima Yojana (JBY)

Exclusively for the Spouses of SHG members who are not covered under AABY and who are under the age group 18 to 58 years.

JJ Act 2000

The Juvenile Justice (Care and Protection of Children) Act, 2000 is the primary legal framework for juvenile justice in India. The Act provides for a special approach towards the prevention and treatment of juvenile delinquency and provides a framework for the protection, treatment and rehabilitation of children in the purview of the juvenile justice system.

Labour Force Participation Rate (LFPR)

Labour force participation rate is the ratio between the labour force and the overall size of their cohort (national population of the same age range).

Literacy Rate

Literacy rate is defined as the percentage of population aged 6 years and over who can both read and write with understanding a short simple statement on his/her everyday life.

National Family Health Survey

The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India.

Net National Product (NNP)

Net National Product at factor cost or National Income is the sum of wages, rent, interest and profits paid to factors for their contribution to the production of goods and services in a year.

Old age dependency ratio

The no. of persons in age group 60 years and more ÷ No. of persons in age group 15-59 years.

Parity Index

Parity Index is a relative measure as to the gains or loss to farmers as a consequence of the price fluctuations in the economy. The index is a function of cost of farm cultivation, domestic expenditure and market rate of farm products.

Persons with Disability Act 1995

The Act has been enacted under Article 253 of the Constitution read with item No. 13 of the Union List (WORD - -1) It effect to the proclamation on the full participation and equality of the persons with disabilities in the Asian & Pacific Region and provides for their education, employment, creation of barrier free environment, social security, etc.

Preraks

Preraks are the authoritative of the continuing education centres for giving leadership to the informal education and local development activities.

Proxy Indicator

Indirect measure or sign that approximates or represents a phenomenon in the absence of a direct measure or sign. Number of female members of a chamber of commerce, for example, is a proxy indicator of the percentage of female business owners or executives.

Protection of Children from Sexual Offences Act, 2012

An Act to protect children from offences of sexual assault, sexual harassment and pornography and provide for establishment of Special Courts for trial of such offences and for matters connected therewith or incidental thereto.

Rashtriya Swasthya Bima Yojana (RSBY)

It is a Health Insurance Scheme launched by Union Government for BPL workers as defined by the Planning Commission and their families in the unorganized sector.

Retail Price

Retail Price of a commodity is defined as the price which the ultimate consumer pays for relatively small transactions of the commodity.

School Management Committees (SMC)

It comprises of local officials, parents, guardians and teachers. The SMCs will monitor utilization of govt grants and the school environment.

Sex Ratio

The Sex ratio is one of the basic demographic characteristics of the population. It is defined as the number of females per 1000 males. The sex ratio of the population is affected by the differentials in the mortality conditions of males and females, sex selective migration and the sex ratio at birth.

UDAY (Ujwal DISCOM Assurance Yojana)

UDAY aims at the financial turnaround and operational revival of debt ridden Power Distribution Companies (DISCOMs) and ensures a sustainable permanent solution to the problem

UPS

Usual Principal Status: Here the activity status is determined with reference to a relatively longer period during a reference period of 365 days. Unemployment Rate as per this method indicates the numerical magnitude of the persons unemployed for a relatively longer period. Thus it is an indicator of chronically unemployed.

UPSS

Usual Principal and Subsidiary Status: Unemployment Rate as per this method also indicates the numerical magnitude of the persons unemployed for a relatively longer period during a reference period of 365 days. However, here the number of unemployed is arrived at excluding those employed in a subsidiary capacity during the reference period. The number arrived as per this method will be lower than the UPS approach as some persons categorized as unemployed according to the UPS approach might be working in a subsidiary capacity and this persons are excluded in the UPSS method.

Wholesale Price Index (WPI)

Wholesale Price Index measures the average change overtime in the wholesale prices of 17 important agricultural commodities produced and transacted in the state (Kerala) with the agricultural year 1952-53 as the base. These indices are computed every month. Weights are assigned to the commodities in proportion to the value of production to make the index fully representative.

ABBREVIATIONS

AABY: <i>Aam Admi Bima Yojana</i>	C-DIT: <i>Centre for Development of Imaging Technology</i>
AAV : <i>Anthyodaya Anna Yojana</i>	CDS: <i>Centre for Development Studies</i>
AHT : <i>Anti Human Trafficking</i>	CDSs: <i>Community Development Societies</i>
AIBP : <i>Accelerated Irrigation Benefit Programme</i>	CEOBE: <i>Credit Equivalent of Off-Balance Sheet Exposure</i>
ALP: <i>Agriculture Labour Pension</i>	CEPCI: <i>Cashew Export Promotion Council of India</i>
AMRUT: <i>Atal Mission for Rejuvenation and Urban Transformation</i>	CFPI: <i>Consumer Food Price Index</i>
ANBC : <i>Adjusted Net Bank credit</i>	CHIAK: <i>Comprehensive Health Insurance Agency</i>
ANP : <i>Annaoorna Scheme</i>	CHIS: <i>Comprehensive Health Insurance Scheme</i>
AOD : <i>Amount of Debt</i>	CM: <i>Chief Minister</i>
APL: <i>Above Poverty Line</i>	CMRI: <i>Critical Mineral Research Institute</i>
APMCMRL: <i>Agricultural Produce Marketing Committee Maximum Residue Level</i>	Coirfed: <i>The Kerala State Co-operative Coir Marketing Federation Ltd.</i>
ASAP: <i>Additional Skill Acquisition Programme</i>	CPI: <i>Consumer Price Index</i>
ASEP: <i>Additional Skill Enhancement Programme</i>	CPIS: <i>Coconut Palm Insurance Scheme</i>
ATMA : <i>Agriculture Technology Management Agency</i>	CPSEs: <i>Central Public Sector Enterprises</i>
AVTS: <i>Advanced Vocational Training System</i>	CRDP: <i>Capital Regional Development Project</i>
AWC: <i>Anganwadi Centre</i>	CSIND: <i>Coastal Shipping and Inland Navigation Department</i>
BCRLIP : <i>Biodiversity Conservation and Rural Livelihood Improvement Project</i>	CSS: <i>Centrally Sponsored Scheme</i>
BE: <i>Budget Estimate</i>	CWRDM: <i>Centre for Water Resources Development and Management</i>
BPC: <i>Bharat Petroleum Corporation</i>	CWS: <i>Current Weekly Status</i>
BPL: <i>Below Poverty Line</i>	DAR : <i>Debt Asset Ratio</i>
BRDC: <i>Bekal Resorts Development Corporation</i>	DCCBS: <i>District Central Co-operative Banks</i>
BSNL: <i>Bharat Sanchar Nigam Limited</i>	DCRCs: <i>District Disability Rehabilitation Centres</i>
BSUP: <i>Basic Services to the Urban Poor</i>	DDRS: <i>Deen Dayal Disabled Rehabilitation Scheme</i>
CBSE: <i>Central Board of Secondary Education</i>	

DDU GKY : <i>Deen Dayal Upadhyaya Grameen Kaushalya Yojana</i>	HDI : <i>Human Development Index</i>
DES: <i>Directorate of Economics and Statistics</i>	HPC: <i>Hindustan Petroleum Corporation</i>
DGE&T: <i>Director General of Employment and Training</i>	HS: <i>High School</i>
DIC: <i>Directorate of Industries and Commerce</i>	HSC: <i>Higher Secondary Course</i>
DMRC: <i>Delhi Metro Rail Corporation</i>	HUDCO: <i>Housing and Urban Development Corporation</i>
DRDO: <i>Defence Research and Development Organisation</i>	IAY : <i>Indira Awas Yojana</i>
DRIG Board: <i>Design Research, Investigation and Quality Control Board</i>	ICDP : <i>Integrated Co-operative Development Project</i>
ECD: <i>Early Childhood Development</i>	ICDS: <i>Integrated Child Development Services</i>
ED: <i>Entrepreneurship Development</i>	ICPS: <i>Integrated Child Protection Scheme</i>
EDCs: <i>Eco Development Committees</i>	ICSE: <i>Indian Certificate of Secondary Education</i>
ENVIS: <i>Environmental Information System:</i>	ICT: <i>Information and Communications Technology</i>
EPC: <i>Engineering Procurement and Construction</i>	ICTP: <i>Information and Communication Technology Persons</i>
ESI: <i>Employees' State Insurance</i>	IGMSY: <i>Indira Gandhi Matritva Sabyog Yojana</i>
FCIs: <i>Food Craft Institutes</i>	IGNOAPS: <i>Indira Gandhi National Rural Employment Guarantee Scheme</i>
FDAs: <i>Forest Development Agencies</i>	IHSDP: <i>Integrated Housing and Slum Development Programme</i>
FMCG : <i>Fast Moving Consumer Goods</i>	IIITM-K : <i>Indian Institute of Information Technology and Management Kerala</i>
FMD : <i>Foot and Mouth Disease</i>	IISc: <i>Indian Institute of Science</i>
FOMIL: <i>Foam Matting's India Ltd</i>	IIT: <i>Indian Institute of Technology</i>
FSI : <i>Forest Survey of India</i>	ILC: <i>Indian Labour Conference</i>
FSSAI : <i>Food Safety and Standards Authority of India</i>	ILCS : <i>Integrated Low cost Sanitation Scheme</i>
GAP : <i>Good Agriculture Practices</i>	ILO: <i>International Labour Organisation</i>
GATE: <i>Graduate Aptitude Test in Engineering</i>	INDC : <i>India's intended Nationally Determined Contribution</i>
GB: <i>Gender Budgeting</i>	IOC: <i>Indian Oil Corporation</i>
GCDA: <i>Greater Cochin Development Authority</i>	IOI : <i>Incidence of Indebtedness</i>
GDI: <i>Gender Equality Index</i>	IPC: <i>Indian Penal Code</i>
GEC: <i>Government Engineering College</i>	IPOP: <i>Integrated Programme for Older</i>
GEM: <i>Gender Empowerment Measurement Generation Programme</i>	ISFR : <i>India State of Forest Report</i>
GHG : <i>Green House Gas</i>	ISM: <i>Interstate Migrant</i>
GOI: <i>Government of India</i>	ISRO: <i>Indian Space Research Organisation</i>
GPPP: <i>Good Plant Protection Practices</i>	IT: <i>Information Technology</i>
GRB: <i>Gender Responsive Budgeting</i>	ITI: <i>Industrial Training Institutes</i>
GST: <i>Goods And Service Tax</i>	IWG : <i>Internal Working Group</i>
GSVA: <i>Gross State Value Added</i>	IWMP : <i>Integrated Watershed Management Programme</i>
GVA: <i>Gross Value Added</i>	
HDCK: <i>Handicraft Development Corporation of Kerala</i>	
HDFC: <i>Housing Development Finance Corporation</i>	

- JJ:** *Juvenile Justice*
- JBY:** *Janasree Bima Yojana*
- JFMC :** *Joint Forest Management Committee*
- JNNURM:** *Jawaharlal Nebru National Urban Renewal Mission*
- JNTBGRI:** *Jawaharlal Nebru Tropical Botanic Garden and Research Institute*
- KASE:** *Kerala Academy for Skills Excellence*
- KAU:** *Kerala Agricultural University*
- KCC :** *Kissan Credit Card*
- KCHR:** *Kerala Council for Historical Research*
- KCMMF :** *Kerala Co-operative Milk Marketing Federation*
- Kerafed:** *Kerala State Kera Karshaka Sabakarana Federation*
- KFC:** *Kerala Financial Corporation*
- KFRI:** *Kerala Forest Research Institute*
- KFWFB :** *Kerala Fisberman's Welfare Fund Board*
- KHRI:** *Kerala Highway Research Institute*
- KIED:** *Kerala Institute of Entrepreneurship Development*
- KILE:** *Kerala Institute of Labour and Employment*
- KINFRA:** *Kerala Industrial Infrastructure Development Corporation*
- KITTS:** *Kerala Institute of Tourism and Travel Studies*
- KLDB :** *Kerala Livestock Development Board*
- KSACC:** *Kerala State Agency for the Expansion of Cashew Cultivation*
- KSBM:** *Kerala State Baboo Mission*
- KSCARDB:** *Kerala State Cooperative Agricultural and Rural Development Bank Ltd*
- KSCC:** *Kerala State Coir Corporation*
- KSCSTE:** *Kerala State Council for Science, Technology and Environment*
- KSCWWFB:** *Kerala State Coir Workers Welfare Fund Board*
- KSERC:** *Kerala State Electricity Regulatory Commission*
- KSIDC:** *Kerala State Industrial Development Corporation*
- KSINC:** *Kerala Shipping and Inland Navigation Corporation Ltd*
- KSOM:** *Kerala School of Mathematics*
- KSRRDA :** *Kerala State Rural Roads Development Agency*
- KSRTC:** *Kerala State Road Transport Corporation*
- KSS EDM:** *Kerala State Entrepreneur Self Development Mission*
- KSSM:** *Kerala Social Security Mission*
- KSUDP:** *Kerala Sustainable Urban Development Project*
- KSUM:** *Kerala Startup Mission*
- KTDC:** *Kerala Tourism Development Corporation*
- KTIL:** *Kerala Tourism Infrastructure Limited*
- LBI:** *Livelihood Business Incubators*
- LEADS :** *Lead Farmer Centered Extension and Advisory Delivery Services*
- LED:** *Light Emission Diode*
- LFPR:** *Labour Force Participation Rate*
- LPG:** *Liquefied Petroleum Gas*
- LSGs:** *Local Self Governments*
- MAH:** *Major Accident Hazard*
- Marketfed :** *Kerala State Co-operative Marketing Federation Ltd.*
- MBGIPS:** *Malabar Botanical Garden and Institute of Plant Studies*
- MCC:** *Malabar Cancer Centre*
- MDF :** *Moderate Dense Forest*
- MDG:** *Millennium Development Goal*
- MEP:** *Minimum Export Price*
- MES:** *Modular Employable Skill*
- MFI:** *Micro Finance Institutions*
- MGNREGS:** *Mahatma Gandhi National Rural Employment Guarantee Scheme*
- MICE:** *Meeting Incentive Conference and Events*
- MLA:** *Member of Legislative Assembly*
- MNAIS :** *Modified National Agricultural Insurance Scheme*
- MoFPI:** *Ministry of Food Processing Industries*
- MSME:** *Micro, Small and Medium Enterprises*
- MT:** *Metric Tonne*
- MUDRA:** *Micro Units Development and Refinance Agency Ltd.*
- MVIP:** *Muvattupuzha Valley Irrigation Project*
- MVRC:** *Mumbai Rail Vikas Corporation*

- NABARD** : *National Bank for Agriculture and Rural Development*
- NAC**: *National Accreditation Council*
- NATPAC**: *National Transportation Planning and Research Centre*
- NBSS & LUP**: *National Bureau of Soil Survey and Land Use Planning*
- NCEUS**: *National Commission for Enterprises in the Unorganized Sector*
- NCIP** : *National Crop Insurance Scheme*
- NCRB**: *National Crime Records Bureau*
- NCRMI**: *National Coir Research and Management Institute*
- NCVT**: *National Council for Vocational Training*
- NFHS**: *National Family Health Survey*
- NFSA**: *National Food Security Act*
- NGOs**: *Non-government Organizations*
- NMFP**: *National Mission on Food Processing*
- NORKA**: *Non Resident Keralite Affairs*
- NPRPD**: *National Programme for Persons with Disabilities*
- NRDWP**: *National Rural Drinking Water Programme*
- NRIs**: *Non Resident Indians*
- NRKs**: *Non Resident Keralites*
- NRLM** : *National Rural Livelihood Mission*
- NSSO**: *National Sample Survey Office*
- NTFP** : *Non-Timber Forest Product*
- NUALS**: *National University of Advanced Legal Studies*
- NUEPA**: *National University of Educational Planning and Administration*
- OF** : *Open Forest*
- OSCC**: *One Stop Crisis Cell*
- PACS** : *Primary Agricultural Credit Societies*
- PAIS**: *Personal Accident Insurance Scheme Partnership in Technologies*
- PBD**: *Pravasi Bharathiya Divas*
- PF** : *Protected Forests*
- PIS**: *Passanger Information System*
- PMAY** : *Pradhan Mantri Awaas Yojana*
- PMEGP**: *Prime Ministers Employment Generation Programme*
- PMGSY** : *Pradhan Mantri Gram Sadak Yojana*
- PMJDY**: *Pradhan Mantri Jan Dhan Yojana*
- PMKVY**: *Pradhan Mantri Kaushal Vikas Yojana*
- PMKSY**: *Pradhan Mantri Krishi Sinchai Yojana*
- POCSO Act**: *Protection of Children from Sexual Offences Act*
- POL**: *Petroleum, Oil and Lubricants*
- PPP**: *Public Private Partnership*
- PRD**: *Public Relations Department*
- PS**: *Lower Primary School*
- PTA**: *Parent Teachers Association*
- PWD**: *Public Works Department*
- PwDs**: *Persons with Disabilities*
- RAY**: *Rajiv Awaas Yojna*
- RCC**: *Regional Cancer Centre*
- REACH**: *Resource Enhancement Academy Refinances Agency Ltd.*
- RET**: *Endangered and Threatened plants*
- RF** : *Reserved Forests*
- RFA**: *Recorded Forest Area*
- RIAB**: *Restructuring and Internal Audit Board*
- RIDF** : *Rural Infrastructure Development Fund*
- RISC** : *Rainfall Insurance Scheme for Coffee*
- RIT**: *Rajiv Gandhi Institute of Technology*
- RKVY** : *Rashtriya Krishi Vikas Yojana*
- RPI** : *Rubber Plantation Insurance*
- RRB** : *Regional Rural Bank*
- RSBY**: *Rashtriya Swasthya Bima Yojana:*
- RSETI**: *Rural Self Employment Training Institutes*
- RTE**: *Right to Education*
- Rubbermark** : *Kerala State Co-operative Rubber Marketing Federation Ltd.*
- SASH**: *Single family Affordable Solar Housing*
- SBM**: *Swachh Bharat Mission*
- SCBs**: *Scheduled Commercial Banks*
- SC/ST**: *Scheduled Caste/ Scheduled Tribes*
- SCM**: *Smart City Mission*
- SCDD**: *Scheduled Caste Development Department*
- SCRIPT**: *State Centre Resources Institute*
- SCTIMST**: *Sree Chithira Thirunal Institute of Medical Sciences and Technology*

- SCVT:** *State Council for Vocational Training*
- SDI:** *Skill Development Initiative*
- SECC:** *Socio Economic and Caste Census*
- SEGP:** *Special Employment Generation Programme*
- SFDA :** *State Forest Development Agency*
- SHGs:** *Self Help Groups*
- SIHM:** *State Institute of Hospitality Management*
- SJD:** *Social Justice Department*
- SLBC :** *State Level Bankers Committee*
- SLBP :** *Special Livestock Breeding Programme*
- SLL:** *Special and Local Laws*
- SLPEs:** *State Level Public Entreprises*
- SMC:** *School Management System*
- SONTR:** *State's Own Non Tax Revenue*
- SOTR:** *State's Own Tax Revenue*
- SREP :** *Strategic Research and Extension Plan*
- SRIBS:** *Srinivasa Ramanujan Institute for Basic Sciences*
- SSLC:** *Secondary School Leaving Certificate*
- STD:** *Subscriber Trunk Dialling*
- STDD:** *Scheduled Tribe Development Department*
- STEC:** *Science Technology and Environment Committee*
- Supplyco:** *Kerala State Civil Supplies Corporation*
- TBI:** *Technology Business Incubators*
- TCPC** *Training, Councelling and Placement Cells*
- TISS:** *Tata Institute of Social Sciences*
- TRIDA:** *Thiruvananthapuram Development Authority*
- TTI:** *Teacher Training Institute*
- UA:** *Urban Agglomeration*
- UDISSMT:** *Urban Infrastructure Development Scheme for Small and Medium Towns*
- UNCTAD:** *United Nations Conference on Trade and Development*
- UNESCO:** *United Nations Educational, Scientific and Cultural Organization*
- UNICEF:** *United Nations International Children's Emergency Fund*
- UNWTO:** *United Nations World Tourism Organisation*
- UPS:** *Upper Primary School*
- UPSS:** *Usual Principal Subsidiary Status*
- UR:** *Unemployment Rate: The percentage of the total labour force that is unemployed but actively seeking employment and willing to work.*
- UT:** *Union Territory*
- VAMBAY:** *Valmiki Ambedkar Awas Yojana*
- VAT:** *Value Added Tax*
- VDF :** *Very Dense Forest*
- VDPIMP:** *Vegetable Development Project Integrated Pest Management*
- VFPC:** *Vegetable and Fruit Promotion Council*
- VGF:** *Viability Gap Fund*
- VHSE:** *Vocational Higher Secondary Education*
- VoA:** *Visa on Arrival*
- VoTV:** *Voice of Tobacco Victims*
- VSSS:** *Vana Samrakshana Samithies*
- VTP:** *Vocational Training Providers*
- WFB:** *Welfare Fund Board*
- WPR:** *Worker Population Ratio*
- WPI:** *Wholesale Price Index*

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Appendix 1.1											
Adult Sex Ratio and Child sex ratio- Kerala 2001-2011											
District/ State	Adult Sex ratio			Child Sex Ratio			Child population		% of child population		Decadal change of %
	2001	2011	Decadal Change	2001	2011	Decadal Change	2001	2011	2001	2011	
Kerala	1058	1084	26	960	964	4	3793146	3472955	12	10	-2
Kasaragod	1047	1080	33	959	961	2	159002	155807	13	12	-1
Kannur	1090	1136	46	962	971	9	279803	274318	12	11	-1
Wayanad	995	1035	40	959	965	6	104058	92324	13	11	-2
Kozhikkode	1057	1098	41	959	969	10	347146	335645	12	11	-1
Malappuram	1066	1098	32	960	965	5	551525	574041	15	14	-1
Palakkadu	1066	1067	1	963	967	4	318884	302297	12	11	-1
Thrissur	1092	1108	16	958	950	-8	332459	303950	11	10	-1
Eranakulam	1019	1027	8	954	961	7	338924	304242	11	9	-2
Idukki	993	1006	13	969	964	-5	134177	105641	12	10	-2
Kottayam	1025	1039	14	962	964	2	212622	174486	11	9	-2
Alappuzha	1079	1100	21	956	951	-5	226408	192046	11	9	-2
Pathanamthitta	1094	1132	38	967	976	9	127024	96837	10	8	-2
Kollam	1069	1113	44	960	973	13	292599	254260	11	10	-1
Thiruvananthapuram	1060	1087	27	962	964	2	368515	307061	11	9	-2

Source: Census of India 2001, 2011

Appendix 1.2											
Details of Population Kerala.											
District/State	Population			Literacy Rate		Density of Population		District wise % of Population from 1981 to 2011			
	2001	2011	Decadal Growth rate	2001	2011	2001	2011	1981	1991	2001	2011
Kerala	31841374	33406061	4.9	90.9	94	819	860	100	100	100	100
Kasaragod	1,204,078	1307375	8.6	84.6	90.1	604	657	3.4	3.7	3.8	3.9
Kannur	2,408,956	2523003	4.7	92.6	95.1	812	852	7.6	7.7	7.6	7.6
Wayanad	780,619	817420	4.7	85.2	89	366	384	2.2	2.3	2.5	2.4
Kozhikkode	2,879,131	3086293	7.2	92.2	95.1	1228	1316	8.8	9.0	9.0	9.2
Malappuram	3,625,471	4112920	13.4	89.4	93.6	1021	1157	9.4	10.6	11.4	12.3
Palakkadu	2,617,482	2809934	7.4	84.3	89.3	584	627	8.0	8.2	8.2	8.4
Thrissur	2,974,232	3121200	4.9	92.3	95.1	981	1031	9.6	9.4	9.3	9.3
Eranakulam	3,105,798	3282388	5.7	93.2	95.9	1012	1072	10.0	9.7	9.8	9.8
Idukki	1,129,221	1108974	-1.8	88.7	92	259	255	3.8	3.7	3.5	3.3
Kottayam	1,953,646	1974551	1.1	95.8	97.2	885	895	6.7	6.3	6.1	5.9
Alappuzha	2,109,160	2127789	0.9	93.4	95.7	1492	1504	7.3	6.9	6.6	6.4
Pathanamthitta	1,234,016	1197412	-3	94.8	96.5	468	452	4.4	4.1	3.9	3.6
Kollam	2,585,208	2635375	1.9	91.2	94.1	1038	1061	8.5	8.3	8.1	7.9
Thiruvananthapuram	3,234,356	3301427	2.1	89.3	93	1476	1508	10.2	10.1	10.2	9.9

Source: Census of India 1981, 1991, 2001, 2011

Appendix 1.3							
District wise Rural - Urban Distribution of Population, Kerala, 2011							
State/District	Population			% Decadal Growth Rate	Rank in 2001	Rank in 2011	
	Total Population	Male	Female				
Kerala	Total	33406061	16027412	17378649	4.91		
	Rural	17471135	8408054	9063081	-25.89		
	Urban	15934926	7619358	8315568	92.76		
Kasaragod	Total	1307375	628613	678762	8.58	7	9
	Rural	798328	387716	410612	-17.73		
	Urban	509047	240897	268150	117.82		
Kannur	Total	2523003	1181446	1341557	4.73	1	4
	Rural	882017	425682	456335	-26.26		
	Urban	1640986	755764	885222	35.29		
Wayanad	Total	817420	401684	415736	4.71	14	14
	Rural	785840	386283	399557	4.64		
	Urban	31580	15401	16179	6.65		
Kozhikode	Total	3086293	1470942	1615351	7.20	3	3
	Rural	1013721	484784	528937	-42.98		
	Urban	2072572	986158	1086414	88.22		
Malappuram	Total	4112920	1960328	2152592	13.45	12	8
	Rural	2295709	1095308	1200401	-29.78		
	Urban	1817211	865020	952191	410.21		
Palakkad	Total	2809934	1359478	1450456	7.35	10	11
	Rural	2133124	1031466	1101658	-5.65		
	Urban	676810	328012	348798	89.81		
Thrissur	Total	3121200	1480763	1640437	4.94	6	2
	Rural	1024794	488303	536491	-52.00		
	Urban	2096406	992460	1103946	149.74		
Ernakulam	Total	3282388	1619557	1662831	5.69	2	1
	Rural	1048025	518510	529515	-35.65		
	Urban	2234363	1101047	1133316	51.27		
Idukki	Total	1108974	552808	556166	-1.79	13	13
	Rural	1056929	527245	529684	-1.37		
	Urban	52045	25563	26482	-9.63		
Kottayam	Total	1974551	968289	1006262	1.07	9	10
	Rural	1409158	692673	716485	-14.79		
	Urban	565393	275616	289777	88.59		
Alappuzha	Total	2127789	1013142	1114647	0.88	5	5
	Rural	979643	464713	514930	-34.15		
	Urban	1148146	548429	599717	84.75		
Pathanamthitta	Total	1197412	561716	635696	-2.97	11	12
	Rural	1065799	499820	565979	-4.00		
	Urban	131613	61896	69717	6.31		
Kollam	Total	2635375	1246968	1388407	1.94	8	7
	Rural	1448217	680687	767530	-31.66		
	Urban	1187158	566281	620877	154.77		
Thiruvananthapuram	Total	3301427	1581678	1719749	2.07	4	6
	Rural	1529831	724864	804967	-28.60		
	Urban	1771596	856814	914782	62.28		

Source: Census 2011

Appendix 1. 4						
Gross Domestic Product (GDP) - All India						
Year	At Current Prices			At Constant (2011-12) Prices		
	GDP (₹ crore)	Per cent change	Per Capita GDP (₹)	GDP (₹ crore)	Per cent Change	Per Capita GDP (₹)
2012-13	9988540		80879	9280803		75148
2013-14 (NS)	11272764	12.86	90110	9839434	6.02	78653
2014-15(RE)	12488205	10.78	98565	10552151	7.24	83285
2015-16(PE)	13576086	8.71	105815	11350249	7.56	88466

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimate
Source: Central Statistical Organisation, 2015

Appendix 1. 5						
Net Domestic Product (NDP) - All India						
Year	At Current Prices			At Constant (2011-12) Prices		
	NDP (₹ crore)	Per cent change	Per Capita NDP (₹)	NDP (₹ crore)	Per cent Change	Per Capita NDP(₹)
2012-13	8958496		72538	8301305		67217
2013-14 (NS)	9934405	10.89	80530	8737681	5.26	69846
2014-15(RE)	11007592	10.80	88043	9359476	7.12	73871
2015-16(PE)	11969428	8.74	94519	10071784	7.61	78502

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimate
Source: Central Statistical Organisation, 2015

Appendix 1. 6						
Gross National Income (GNI) - All India						
Year	At Current Prices			At Constant (2011-12) Prices		
	GNI (₹crore)	Per cent change	Per Capita GNI (₹)	GNI (₹crore)	Per cent Change	Per Capita GNI (₹)
2012-13	98,71,777		79933	9172925		74275
2013-14 (NS)	11132877	12.77	88992	9717062	5.93	77674
2014-15(RE)	12340772	10.85	97402	10427701	7.31	82302
2015-16(PE)	13418745	8.74	104589	11213328	7.53	87399

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimates
Source: Central Statistical Organisation, 2015

Appendix 1. 7						
Net National Income (NNI) - All India						
Year	At Current Prices			At Constant (2011-12) Prices		
	NNI (₹crore)	Per cent change	Per Capita NNI (₹)	NNI (₹crore)	Per cent Change	Per Capita NNI (₹)
2012-13	8841733		71593	8193427		66344
2013-14 (NS)	9934405	12.36	79412	8615309	5.15	68867
2014-15(RE)	11007592	10.80	86879	9235026	7.19	72889
2015-16(PE)	11969428	8.74	93293	9934863	7.58	77435

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimates
Source: Central Statistical Organisation, 2015

Appendix 1. 8						
Provisional Estimates of GVA at Basic Price by Economic Activity- All India (At 2011-12 prices)						
(At 2011-12 prices)						
(₹ crore)						
Sl. No.	Industry of Origin	2013-14 (NS)	2014-15 (RE)	2015-16 (PE)	Percentage change over previous year	
					2014-15	2015-16
1	Agriculture, forestry & fishing	15,88,237	15,84,293	16,04,044	-0.2	1.2
2	Mining & quarrying	2,67,378	2,96,328	3,18,377	10.8	7.4
3	Manufacturing	15,79,721	16,67,069	18,21,926	5.5	9.3
4	Electricity, gas, water supply & other utility services	2,00,861	2,16,970	2,31,228	8	6.6
5	Construction	8,18,494	8,54,636	8,87,957	4.4	3.9
6	Trade, hotels transport, communication and services related to broadcasting	16,69,844	18,33,997	19,98,292	9.8	9
7	Financial, real estate & professional services	18,44,070	20,39,460	22,48,845	10.6	10.3
8	Public Administration, defence and other services	11,15,765	12,34,737	13,16,522	10.7	6.6
GVA at Basic Price		90,84,369	97,27,490	104,27,191	7.1	7.2

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimates

Source: Central Statistical Organisation, 2015

Appendix 1. 9						
Provisional Estimates of GVA at Basic Price by Economic Activity - All India						
(At Current prices)						
(₹ crore)						
Sl. No.	Industry of Origin	2013-14 (NS)	2014-15 (RE)	2015-16 (PE)	Percentage change over previous year	
					2014-15	2015-16
1	Agriculture, forestry & fishing	19,02,452	19,95,251	20,93,081	4.9	4.9
2	Mining & quarrying	2,95,978	3,04,300	3,18,672	2.8	4.7
3	Manufacturing	17,14,730	18,45,541	19,94,330	7.6	8.1
4	Electricity, gas, water supply & other utility services	2,55,812	2,88,935	3,20,186	12.9	10.8
5	Construction	9,31,680	10,03,903	10,16,659	7.8	1.3
6	Trade, hotels, transport, communication and services related to broadcasting	18,88,835	21,40,370	22,81,533	13.3	6.6
7	Financial, real estate & professional services	20,82,765	23,59,279	25,34,422	13.3	7.4
8	Public Administration, defence and other services	13,08,562	15,34,831	17,20,527	17.3	12.1
GVA at Basic Price		103,80,813	114,72,409	122,79,410	10.5	7

NS-New Series Estimates, RE- revised Estimates, PE- Provisional Estimates

Source: Central Statistical Organisation, 2015

Appendix 1. 10							
Sectoral Distribution of Gross State Value Added (GSVA)							
2013-14 to 2015-16 at Current Prices							
₹ in lakh							
Sl. No.	Industry of Origin	At Current Price					
		2013-14		2014-15(P)		2015-16 (Q)	
		GSDP	% Share	GSDP	% Share	GSDP	% Share
1.	Agriculture, forestry and fishing	5501261	12.82	5930617	12.30	5871958	10.96
1.10	Crops	2837347	6.61	3070386	6.37	2685772	5.01
1.20	Livestock	1548294	3.61	1656104	3.43	1890417	3.53
1.30	Forestry and logging	492782	1.15	499808	1.04	559582	1.04
1.40	Fishing and aquaculture	622837	1.45	704319	1.46	736188	1.37
2.	Mining and quarrying	401836	0.94	558824	1.16	593520	1.11
	Primary	5903097	13.76	6489442	13.45	6465479	12.07
3.	Manufacturing	4069129	9.48	4273567	8.86	4670069	8.72
4.	Electricity, gas, water supply & other utility services	570824	1.33	482470	1.00	611019	1.14
5.	Construction	6436556	15.00	7314003	15.16	7722140	14.41
	Secondary	11076510	25.81	12070040	25.02	13003229	24.27
6.	Trade, repair, hotels and restaurants	7368355	17.17	8557345	17.74	9916986	18.51
6.10	Trade & repair services	6657209	15.51	7763847	16.10	9031847	16.86
6.20	Hotels & restaurants	711146	1.66	793498	1.65	885139	1.65
7.	Transport, storage, communication & services related to broadcasting	3608615	8.41	4020934	8.34	4613037	8.61
7.10	Railways	126962	0.30	147897	0.31	172284	0.32
7.20	Road transport	2591554	6.04	2761427	5.73	2963818	5.53
7.30	Water transport	20105	0.05	26956	0.06	29934	0.06
7.40	Air transport	42831	0.10	125029	0.26	326208	0.61
7.50	Services incidental to transport	69440	0.16	71567	0.15	75275	0.14
7.60	Storage	2877	0.01	3290	0.01	3822	0.01
7.70	Communication & services related to broadcasting	754846	1.76	884767	1.83	1041695	1.94
8.	Financial services	1853055	4.32	2010306	4.17	2180902	4.07
9.	Real estate, ownership of dwelling & professional services	6190742	14.43	7287633	15.11	8584749	16.02
10.	Public administration	1874509	4.37	2068915	4.29	2306545	4.31
11.	Other services	5035147	11.73	5728645	11.88	6503671	12.14
	Tertiary	25930423	60.43	29673778	61.52	34105891	63.66
12.	TOTAL GSVA at basic prices	42910029	100.00	48233259	100.00	53574598	100.00

P- provisional, Q- Quick Estimate
Source: Department of Economics and Statistics.

Appendix 1.11							
Sectoral Distribution of Gross State Value Added (GSVA)							
2013-14 to 2015-16 at Constant Prices							
(₹ in lakh)							
Sl. No.	Industry of Origin	At Constant Price					
		2013-14		2014-15(P)		2015-16 (Q)	
		GSDP	Per cent share	GSDP	Per cent share	GSDP	Per cent share
1.	Agriculture, forestry and fishing	4597159	12.37	4546727	11.49	4412673	10.39
1.10	Crops	2599876	7.00	2499612	6.32	2329600	5.48
1.20	Livestock	1238024	3.33	1258427	3.18	1287477	3.03
1.30	Forestry and logging	361413	0.97	357325	0.90	355382	0.84
1.40	Fishing and aquaculture	397845	1.07	431364	1.09	440214	1.04
2.	Mining and quarrying	343746	0.92	478249	1.21	507958	1.20
	Primary	4940905	13.29	5024976	12.70	4920630	11.58
3.	Manufacturing	3668087	9.87	3758140	9.50	4233372	9.97
4.	Electricity, gas, water supply & other utility services	500728	1.35	484874	1.23	501216	1.18
5.	Construction	5615519	15.11	5996550	15.15	6383135	15.03
	Secondary	9784334	26.33	10239564	25.88	11117723	26.17
6.	Trade, repair, hotels and restaurants	6191493	16.66	6704253	16.94	7243013	17.05
6.10	Trade & repair services	5593394	15.05	6081980	15.37	6595906	15.53
6.20	Hotels & restaurants	598099	1.61	622273	1.57	647107	1.52
7.	Transport, storage, communication & services related to broadcasting	3255998	8.76	3477256	8.79	3805562	8.96
7.10	Railways	117820	0.32	126308	0.32	135407	0.32
7.20	Road transport	2337452	6.29	2387270	6.03	2437620	5.74
7.30	Water transport	18173	0.05	23485	0.06	25135	0.06
7.40	Air transport	38715	0.10	108929	0.28	273915	0.64
7.50	Services incidental to transport	59794	0.16	58580	0.15	56729	0.13
7.60	Storage	2530	0.01	2786	0.01	3115	0.01
7.70	Communication & services related to broadcasting	681515	1.83	769898	1.95	873640	2.06
8.	Financial services	1696260	4.56	1838230	4.65	1992082	4.69
9.	Real estate, ownership of dwelling & professional services	5477583	14.74	6132004	15.50	6871233	16.18
10.	Public administration	1571388	4.23	1616845	4.09	1680419	3.96
11.	Other services	4247185	11.43	4539062	11.47	4848450	11.41
	Tertiary	22439908	60.38	24307650	61.43	26440759	62.24
12.	TOTAL GSVA at basic prices	37165147	100.00	39572190	100.00	42479111	100.00

P- provisional, Q- Quick Estimate
Source: Department of Economics and Statistics.

Appendix 1. 12							
Sector wise Annual Growth Rate of GSDP - Kerala							
Base Year 2011-12		Per cent Change over Previous Year					
Sl. No.	Industry of Origin/Year	At Constant Prices			At Current Prices		
		2013-14	2014-15 (P)	2015-16 (Q)	2013-14	2014-15 (P)	2015-16 (Q)
1.	Agriculture, forestry and fishing	-6.31	-1.10	-2.95	9.23	7.80	-0.99
1.1	Crops	-9.39	-3.86	-6.80	7.47	8.21	-12.53
1.2	Livestock	0.62	1.65	2.31	9.70	6.96	14.15
1.3	Forestry and logging	-16.09	-1.13	-0.54	4.89	1.43	11.96
1.4	Fishing and aquaculture	5.69	8.43	2.05	20.90	13.08	4.52
2.	Mining and quarrying	50.14	39.13	6.21	50.12	39.07	6.21
Primary		-3.79	1.70	-2.08	11.29	9.93	-0.37
3.	Manufacturing	-4.65	2.46	12.65	0.37	5.02	9.28
4.	Electricity, gas, water supply & other utility services	8.11	-3.17	3.37	5.95	-15.48	26.64
5.	Construction	9.15	6.79	6.45	16.10	13.63	5.58
Secondary		3.49	4.65	8.58	9.27	8.97	7.73
6.	Trade, repair, hotels and restaurants	2.23	8.28	8.04	13.32	16.14	15.89
6.1	Trade & repair services	2.66	8.74	8.45	13.81	16.62	16.33
6.2	Hotels & restaurants	-1.63	4.04	3.99	8.94	11.58	11.55
7.	Transport, storage, communication & services related to broadcasting	10.68	6.80	9.44	16.02	11.43	14.73
7.1	Railways	-1.26	7.20	7.20	6.20	16.49	16.49
7.2	Road transport	9.67	2.13	2.11	15.82	6.55	7.33
7.3	Water transport	-21.81	29.23	7.03	-17.60	34.07	11.05
7.4	Air transport	-21.85	181.36	151.46	-17.65	191.91	160.91
7.5	Services incidental to transport	-5.48	-2.03	-3.16	17.67	3.06	5.18
7.6	Storage	-27.29	10.09	11.82	-22.99	14.37	16.17
7.7	Communication & services related to broadcasting	23.55	12.97	13.47	22.93	17.21	17.74
8.	Financial services	11.02	8.37	8.37	13.71	8.49	8.49
9.	Real estate, ownership of dwelling & professional services	14.27	11.95	12.06	18.52	17.72	17.80
10.	Public administration	-0.32	2.89	3.93	9.09	10.37	11.49
11.	Other services	2.37	6.87	6.82	11.82	13.77	13.53
Tertiary		6.63	8.32	8.78	14.30	14.44	14.94
12.	TOTAL GSDP at basic prices	4.29	6.48	7.35	12.54	12.41	11.07
13.	Taxes on Products	0.81	12.45	12.45	11.46	16.48	16.48
14.	Subsidies on products	7.48	-7.81	-7.81	-3.68	-4.50	-4.50
15.	Gross State Domestic Product	3.89	7.31	8.10	12.79	13.11	11.85
16.	Population ('00)*	0.45	0.49	0.50	0.45	0.49	0.50
17.	Per Capita GSDP (Rs.)	3.43	6.79	7.57	12.28	12.55	11.30

* Projected

P- provisional, Q- Quick Estimate
Source: Department of Economics and Statistics.

Appendix 1.13						
Gross State Value Added by Economic Activity -At Current Prices						
Base Year 2011-12						
(₹ in lakh)						
Sl. No.	Item	2011-12	2012-13	2013-14	2014-15(P)	2015-16(Q)
1.	Agriculture, forestry and fishing	4837594	5036409	5501261	5930617	5871958
1.1	Crops	2904593	2640015	2837347	3070386	2685772
1.2	Livestock	1125351	1411393	1548294	1656104	1890417
1.3	Forestry and logging	430286	469819	492782	499808	559582
1.4	Fishing and aquaculture	377363	515183	622837	704319	736188
2.	Mining and quarrying	272483	267683	401836	558824	593520
	Primary	5110077	5304091	5903097	6489442	6465479
3.	Manufacturing	3420404	4054145	4069129	4273567	4670069
4.	Electricity, gas, water supply & other utility services	467898	538745	570824	482470	611019
5.	Construction	5308794	5544177	6436556	7314003	7722140
	Secondary	9197095	10137066	11076510	12070040	13003229
6.	Trade, repair, hotels and restaurants	5321692	6502369	7368355	8557345	9916986
6.1	Trade & repair services	4732163	5849587	6657209	7763847	9031847
6.2	Hotels & restaurants	589529	652782	711146	793498	885139
7.	Transport, storage, communication & services related to broadcasting	2797969	3110217	3608615	4020934	4613037
7.1	Railways	98140	119548	126962	147897	172284
7.2	Road transport	2001208	2237489	2591554	2761427	2963818
7.3	Water transport	28281	24400	20105	26956	29934
7.4	Air transport	26891	52009	42831	125029	326208
7.5	Services incidental to transport	61793	59010	69440	71567	75275
7.6	Storage	3317	3736	2877	3290	3822
7.7	Communication & services related to broadcasting	578340	614025	754846	884767	1041695
8.	Financial services	1430848	1629698	1853055	2010306	2180902
9.	Real estate, ownership of dwelling & professional services	4220948	5223391	6190742	7287633	8584749
10.	Public administration	1585585	1718357	1874509	2068915	2306545
11.	Other services	3965096	4503098	5035147	5728645	6503671
	Tertiary	19322138	22687130	25930423	29673778	34105891
12.	TOTAL GSVA at basic prices	33629310	38128287	42910029	48233259	53574598
13.	Taxes on Products	3407148	3997082	4455259	5189352	6044402
14.	Subsidies on products	631670	894069	861168	822381	785341
15.	Gross State Domestic Product	36404788	41231300	46504121	52600230	58833659
16.	Population ('00)*	335015	336662	338174	339843	341525
17.	Per Capita GSDP (Rs.)	108666	122471	137515	154778	172268

P - Provisional Estimate, Q- Quick Estimate,* Projected

Appendix 1. 14						
Gross State Value Added by Economic Activity -At Constant Prices						
Base Year 2011-12						
(₹ in lakh)						
Sl. No.	Item	2011-12	2012-13	2013-14	2014-15 (P)	2015-16 (Q)
1.	Agriculture, forestry and fishing	4837594	4906807	4597159	4546727	4412673
1.1	Crops	2904593	2869263	2599876	2499612	2329600
1.2	Livestock	1125351	1230404	1238024	1258427	1287477
1.3	Forestry and logging	430286	430722	361413	357325	355382
1.4	Fishing and aquaculture	377363	376419	397845	431364	440214
2.	Mining and quarrying	272483	228953	343746	478249	507958
Primary		5110077	5135760	4940905	5024976	4920630
3.	Manufacturing	3420404	3846915	3668087	3758140	4233372
4.	Electricity, gas, water supply & other utility services	467898	463168	500728	484874	501216
5.	Construction	5308794	5144715	5615519	5996550	6383135
Secondary		9197095	9454798	9784334	10239564	11117723
6.	Trade, repair, hotels and restaurants	5321692	6056645	6191493	6704253	7243013
6.1	Trade & repair services	4732163	5448610	5593394	6081980	6595906
6.2	Hotels & restaurants	589529	608035	598099	622273	647107
7.	Transport, storage, communication & services related to broadcasting	2797970	2941811	3255998	3477256	3805562
7.1	Railways	98140	119322	117820	126308	135407
7.2	Road transport	2001208	2131348	2337452	2387270	2437620
7.3	Water transport	28281	23242	18173	23485	25135
7.4	Air transport	26891	49541	38715	108929	273915
7.5	Services incidental to transport	61793	63258	59794	58580	56729
7.6	Storage	3317	3480	2530	2786	3115
7.7	Communication & services related to broadcasting	578340	551620	681515	769898	873640
8.	Financial services	1430848	1527917	1696260	1838230	1992082
9.	Real estate, ownership of dwelling & professional services	4220948	4793379	5477583	6132004	6871233
10.	Public administration	1585585	1576474	1571388	1616845	1680419
11.	Other services	3965096	4148689	4247185	4539062	4848450
Tertiary		19322139	21044915	22439908	24307650	26440759
12.	TOTAL GSVA at basic prices	33629311	35635473	37165147	39572190	42479111
13.	Taxes on Products	3407148	3827884	3858878	4339126	4879142
14.	Subsidies on products	631670	694011	745892	687642	633941
15.	Gross State Domestic Product	36404789	38769346	40278133	43223674	46724313
16.	Population ('00)*	335015	336662	338174	339843	341525
17.	Per Capita GSDP (Rs.)	108666	115158	119105	127187	136811

P - Provisional Estimate, Q - Quick Estimate, * Projected

Appendix 1. 15						
Net State Value Added by Economic Activity -At Current Prices						
Base Year 2011-12						
(₹ in lakh)						
Sl. No.	Item	2011-12	2012-13	2013-14	2014-15(P)	2015-16(Q)
1.	Agriculture, forestry and fishing	4026831	4089863	4403936	4670332	4769543
1.1	Crops	2156600	1773676	1829736	1915841	1685691
1.2	Livestock	1111658	1394256	1529778	1626341	1868477
1.3	Forestry and logging	425567	464566	487221	494013	552519
1.4	Fishing and aquaculture	333005	457365	557201	634138	662856
2.	Mining and quarrying	239593	235208	344106	471135	497897
Primary		4266424	4325071	4748042	5141467	5267440
3.	Manufacturing	3000616	3587813	3540229	3731254	4077440
4.	Electricity, gas, water supply & other utility services	311148	352636	377734	312349	394912
5.	Construction	5058202	5251556	6045684	6873593	7257154
Secondary		8369967	9192005	9963647	10917195	11729506
6.	Trade, repair, hotels and restaurants	5125615	6266807	7097013	8246281	9557800
6.1	Trade & repair services	4557807	5637674	6435067	7508844	8735197
6.2	Hotels & restaurants	567808	629133	661946	737437	822603
7.	Transport, storage, communication & services related to broadcasting	2490301	2779788	3157737	3478987	3961739
7.1	Railways	80346	99329	103093	120618	140507
7.2	Road transport	1830748	2049227	2390525	2565434	2753460
7.3	Water transport	25872	22347	11174	17074	18960
7.4	Air transport	24600	47633	20925	100083	261123
7.5	Services incidental to transport	56529	54045	60072	62974	66237
7.6	Storage	2839	3235	2434	2752	3197
7.7	Communication & services related to broadcasting	469366	503973	569515	610052	718255
8.	Financial services	1408254	1601339	1822101	1973667	2141153
9.	Real estate, ownership of dwelling & professional services	3549760	4431327	5261901	6245986	7357701
10.	Public administration	1223566	1336124	1466780	1653869	1843828
11.	Other services	3592748	4102938	4615185	5280043	5994378
Tertiary		17390244	20518324	23420717	26878833	30856599
12.	TOTAL NSVA at basic prices	30026634	34035399	38132405	42937495	47853545
13.	Taxes on Products	3407148	3997082	4455259	5189352	6044402
14.	Subsidies on products	631670	894069	861168	822381	785341
15.	Net State Domestic Product	32802112	37138412	41726497	47304466	53112606
16.	Population ('00)*	335015	336662	338174	339843	341525
17.	Per Capita NSDP (₹)	97912	110314	123388	139195	155516

P - Provisional Estimate, Q- Quick Estimate,* Projected

Appendix 1. 16						
Net State Value Added by Economic Activity -At Constant Prices						
Base Year 2011-12						
(₹ in lakh)						
Sl. No.	Item	2011-12	2012-13	2013-14	2014-15(P)	2015-16(Q)
1.	Agriculture, forestry and fishing	4026831	3903240	3754082	3734114	3638715
1.1	Crops	2156600	1927695	1810319	1739130	1608808
1.2	Livestock	1111658	1215465	1224902	1245872	1274595
1.3	Forestry and logging	425567	425906	357801	353775	351861
1.4	Fishing and aquaculture	333005	334174	361060	395338	403452
2.	Mining and quarrying	239593	201176	298542	411927	436393
Primary		4266424	4104417	4052624	4146041	4075108
3.	Manufacturing	3000616	3404420	3226609	3325922	3746498
4.	Electricity, gas, water supply & other utility services	311148	303269	343220	328723	339717
5.	Construction	5058202	4873178	5295563	5668285	6033707
Secondary		8369967	8580866	8865392	9322930	10119922
6.	Trade, repair, hotels and restaurants	5125615	5837231	5984280	6488866	7011166
6.1	Trade & repair services	4557807	5251224	5424008	5905626	6404649
6.2	Hotels & restaurants	567808	586007	560272	583239	606516
7.	Transport, storage, communication & services related to broadcasting	2490301	2631519	2870922	3039627	3301951
7.1	Railways	80346	99142	97603	105483	113082
7.2	Road transport	1830748	1952016	2169853	2232908	2280002
7.3	Water transport	25872	21287	10679	15612	16709
7.4	Air transport	24600	45373	20338	89038	223896
7.5	Services incidental to transport	56529	57935	52208	52142	50495
7.6	Storage	2839	3013	2176	2385	2667
7.7	Communication & services related to broadcasting	469366	452752	518064	542058	615099
8.	Financial services	1408254	1501329	1669300	1807151	1958402
9.	Real estate, ownership of dwelling & professional services	3549760	4066520	4743509	5374181	6022052
10.	Public administration	1223566	1225802	1252596	1321342	1373297
11.	Other services	3592748	3780023	3919067	4218534	4506074
Tertiary		17390244	19042424	20439675	22249700	24172942
12.	TOTAL NSVA at basic prices	30026634	31727708	33357691	35718671	38367972
13.	Taxes on Products	3407148	3827884	3858878	4339126	4879142
14.	Subsidies on products	631670	694011	745892	687642	633941
15.	Net State Domestic Product	32802112	34861581	36470677	39370155	42613173
16.	Population ('00)*	335015	336662	338174	339843	341525
17.	Per Capita NSDP (₹)	97912	103551	107846	115848	124773

P - Provisional Estimate, Q- Quick Estimate, * Projected

Appendix 1. 17																
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CURRENT PRICE																
YEAR 2013-14												YEAR 2011-12				
Sl. No	Industry	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
1.	Agriculture, forestry & fishing	367125	568947	337883	329043	422826	545222	478484	370744	598915	415914	308828	228843	289497	238990	5501261
1.1	Crops	185087	265478	170155	87780	279229	326272	231220	138599	352849	197388	135501	134005	167684	166100	2837347
1.2	Livestock	120583	156918	95099	116609	128810	128308	145415	104813	152269	148969	85638	58120	81721	25022	1548294
1.3	Forestry & Logging	22601	36915	70356	2550	3690	89938	32010	46969	61763	46877	18760	35713	22090	2550	492782
1.4	Fishing	38854	109637	2272	122104	11097	705	69839	80363	32034	22679	68930	1004	18002	45318	622837
2.	Mining & Quarrying	39842	42855	19994	12218	25697	10370	67598	34047	44180	30208	20383	10593	21758	22092	401836
	Sub-Total of Primary	406967	611802	357876	341261	448523	555592	546082	404791	643095	446121	329211	239436	311256	261082	5903096
3.	Manufacturing	264397	408252	53058	500114	241202	92369	591163	433377	320354	259647	374928	20956	350193	159121	4069129
4.	Electricity, Gas, Water Supply & other Utility Services	96207	50501	26687	32464	45084	25828	82169	58339	36643	26805	44823	5460	31809	8004	570824
4.1	Electricity, gas & other utility services	87356	45926	24456	31655	40297	23189	70052	53458	32872	24595	42728	4905	30195	7367	519051
4.2	Water Supply	8851	4575	2231	810	4787	2639	12117	4881	3771	2210	2096	555	1614	637	51773
5.	Construction	879596	563928	213572	413168	291545	173977	598710	544053	406024	752527	676975	146128	539304	237048	6436556
	B. Sub-Total of Secondary	1240201	1022681	293317	945747	577831	292174	1272042	1035768	763021	1038979	1096727	172544	921305	404172	11076510
6.	Trade, hotels & restaurants	733018	879392	171092	643619	548632	218405	705280	702019	526667	718223	740598	128323	489635	163451	7368355

7.	Transport, Storage & Communication	387623	268684	96755	263371	245249	126550	603166	332088	284987	319750	244072	75326	239397	121597	3608615
8.	Financial Services	233564	135012	45383	154281	90523	82051	323912	265168	93984	138815	183179	3710	91899	11576	1853055
9.	Real estate, ownership of dwellings & professional services	586552	535580	70468	379334	364760	45638	1115965	866056	380360	795625	399824	53985	375651	220944	6190742
10.	Public Administration	278293	109797	55889	112810	120258	93176	315377	261429	80579	96226	151343	41510	119069	38754	1874509
11.	Other Services	479044	340962	225624	319073	326945	199265	453263	432699	425660	579429	446646	156764	420429	229346	5035147
C. Sub-Total of Tertiary		2698093	2269427	665212	1872488	1696366	765085	3516963	2859458	1792237	2648068	2165662	459618	1736080	785667	25930423
12.	District Value Added at basic Prices	4345261	3903911	1316405	3159495	2722720	1612852	5335087	4300018	3198352	4133169	3591599	871597	2968641	1450922	42910029
13.	Population (In Number)*	3318411	2648068	1188432	2132472	1979812	1103969	3328083	3159063	2860219	4244697	3140372	826888	2552349	1334555	33817390
14.	District Per Capita Income (₹) at Basic Price	130944	147425	110768	148161	137524	146096	160305	136117	111822	97373	114369	105407	116310	108720	126887

Populations are based on CSO.

Source: Department of Economics and Statistics.

Appendix 1.18
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CONSTANT PRICE

Sl. No.	Industry	YEAR 2013-14										₹ in lakh				
		TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
1.	Agriculture, forestry & fishing	292767	438584	292392	235674	420385	456871	410002	295707	478348	350810	258994	172607	271337	222681	4597160
1.1	Crops	155050	216634	162737	64429	306254	287957	224768	126705	288556	185031	134154	98897	177082	171622	2599876
1.2	Livestock	97199	125027	76430	93220	103716	102351	115304	83693	123100	117379	68526	46847	65429	19805	1238025
1.3	Forestry & Logging	16576	27074	51600	1870	2706	65961	23476	34448	45298	34381	13759	26192	16201	1870	361413
1.4	Fishing	23942	69850	1625	76155	7708	602	46454	50861	21394	14019	42555	671	12625	29384	397846
2.	Mining & Quarrying	34082	36660	17103	10452	21983	8871	57826	29126	37793	25841	17437	9062	18613	18898	343746
A. Sub-Total of Primary		326849	475244	309496	246126	442367	465742	467828	324833	516141	376651	276431	181669	289950	241579	4940906
3.	Manufacturing	238339	368016	47829	450824	217429	83265	532899	390665	288781	234057	337976	18890	315679	143439	3668087
4.	Electricity, Gas, Water Supply & other Utility Services	84252	44420	23451	28572	39465	22563	71967	51328	32130	23532	39350	4778	27934	6986	500727
4.1	Electricity, gas & other utility services	76832	40585	21580	27894	35452	20351	61809	47237	28968	21680	37593	4313	26581	6452	457326
4.2	Water Supply	7420	3835	1870	679	4013	2212	10157	4091	3162	1852	1757	465	1353	534	43401
5.	Construction	767396	491995	186329	360465	254356	151785	522340	474654	354232	656536	590621	127488	470511	206810	5615519
B. Sub-Total of Secondary		1089987	904430	257609	839861	511250	257613	1127206	916647	675143	914125	967947	151156	814124	357234	9784333
6.	Trade, hotels & restaurants	616017	738944	143756	540786	460988	183520	592632	589931	442554	603505	622290	107823	411413	137334	6191493
7.	Transport, Storage & Communication	350225	242373	87204	237771	221123	114045	544243	299439	257462	288397	220076	67929	215963	109750	3255998

8.	Financial Services	213801	123588	41543	141226	82863	75109	296504	242731	86031	127069	167679	3396	84123	10596	1696260
9.	Real estate, ownership of dwellings & professional services	518982	473882	62350	335636	322741	40380	987408	766288	336544	703971	353766	47766	332377	195492	5477583
10.	Public Administration	233291	92042	46852	94568	100811	78109	264379	219154	67549	80666	126870	34798	99814	32487	1571388
11.	Other Services	404077	287604	190315	269141	275780	168082	382330	364985	359048	488752	376749	132231	354635	193455	4247185
	C. Sub-Total of Tertiary	2336393	1958434	572020	1619127	1464306	659244	3067496	2482528	1549187	2292360	1867430	393942	1498325	679115	22439908
12.	District Value Added at basic Prices	3753230	3338108	1139125	2705114	2417923	1382600	4662530	3724008	2740470	3583136	3111808	726768	2602399	1277929	37165148
13.	Population (In Number)*	3318411	2648068	1188432	2132472	1979812	1103969	3328083	3159063	2860219	4244697	3140372	826888	2552349	1334555	33817390
14.	District Per Capita Income (₹) at Basic Price	113103	126058	95851	126853	122129	125239	140097	117883	95813	84414	99090	87892	101961	95757	109900

Populations are based on CSO.

Source: Department of Economics and Statistics.

Appendix 1. 19																
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CURRENT PRICE																
Base year 2011-12		YEAR 2014-15 (Provisional)										₹ in lakh				
Sl. No.	Industry	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
1.	Agriculture, forestry and fishing	400920	540328	314590	385891	363026	649693	482926	381411	635658	470383	383046	256506	330021	336221	5930618
1.1	Crops	210878	245765	136462	135964	203800	416970	187476	156922	371729	236820	188805	156500	180643	241654	3070386
1.2	Livestock	129818	169247	102550	125111	139163	138103	156212	111077	164553	158837	89913	61176	85803	24541	1656103
1.3	Forestry and Logging	22924	37441	71360	2586	3743	91220	32466	47639	62644	47546	19027	36222	22405	2586	499809
1.4	Fishing	37301	87875	4219	122230	16320	3400	106772	65773	36732	27181	85300	2608	41169	67441	704320
2.	Mining and Quarrying	51386	51574	29317	17308	33240	20553	97026	57175	72976	32669	26791	13367	35976	19466	558824
A. Sub-Total of Primary		452305	591902	343908	403199	396266	670246	579952	438585	708634	503052	409836	269873	365997	355687	6489442
3.	Manufacturing	262852	409539	54678	515170	253042	92700	612786	459002	352720		423548	22891	382440	155612	4273567
4.	Electricity, Gas, Water Supply & other Utility Services	88971	43664	22851	29333	27002	17029	67451	49542	31506	30562	36227	5663	25419	7250	482470
4.1	Electricity, gas & other utility services	77813	38773	20560	24059	24196	16212	56797	44343	27597	28156	34020	5089	23568	6583	427765
4.2	Water Supply	11158	4891	2292	5274	2806	817	10654	5199	3909	2406	2207	574	1851	668	54705
5.	Construction	983664	638854	255849	467422	327211	201583	656614	616884	459656	854494	774811	178430	633396	265135	7314003
B. Sub-Total of Secondary		1335486	1092057	333379	1011926	607255	311313	1336851	1125427	843883	#VALUE!	1234587	206984	1041254	427997	12070040
6.	Trade, hotels and restaurants	863753	1081501	191152	784288	629481	251637	780015	803413	578782	853576	849571	148575	559245	182356	8557345

7.	Transport, Storage and Communication	434325	295409	97690	311776	271654	134289	712932	363618	314826	330588	254300	85076	276695	137757	4020934
8.	Financial Services	252901	152210	48712	166892	91026	91672	346756	296331	103446	142028	211221	3186	93943	9982	2010306
9.	Real estate, ownership of dwellings and professional services	619618	713019	79792	403357	400765	44843	1454248	1049855	431295	874236	502092	61870	432469	220175	7287633
10.	Public Administration	295030	122881	57694	118888	130348	117183	339333	298510	83417	108620	172875	45111	137165	41861	2068915
11.	Other Services	602837	398910	235778	378368	403059	199039	492196	511899	438174	626378	579530	161257	451448	249772	5728645
C. Sub-Total of Tertiary		3068464	2763929	710817	2163569	1926333	838663	4125480	3323626	1949940	2935426	2569588	505074	1950965	841903	29673778
12.	District Value Added at basic Prices	4856255	4447889	1388104	3578694	2929854	1820222	6042283	4887638	3502457	#VALUE!	4214011	981932	3358216	1625587	48233260
13.	Population (In Number)*	3325229	2653162	1184859	2134348	1981920	1101974	3346538	3174337	2880583	4298583	3162268	830706	2564182	1345585	33984274
14.	District Per Capita Income (₹) at Basic Price	146043	167645	117154	167672	147829	165178	180553	153974	121588	#VALUE!	133259	118204	130966	120809	141928

Populations are based on CSO.
Source: Department of Economics and Statistics.

Appendix 1. 20																
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CONSTANT PRICE																
YEAR 2014-15 (Provisional)												(₹ in lakh)				
Sl. No.	Industry	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
1.	Agriculture, forestry and fishing	293935	410596	268556	253985	368888	479111	410552	275112	461898	378823	273815	172968	252826	245663	4546727
1.1	Crops	160308	192309	141789	79088	253767	308912	191751	119380	278709	185631	138973	103630	163136	182227	2499612
1.2	Livestock	94529	138262	73121	97594	102103	102750	129078	81166	116249	142673	69069	41795	48714	21324	1258427
1.3	Forestry and Logging	16389	26767	51017	1849	2676	65215	23211	34058	44786	33992	13603	25896	16018	1849	357325
1.4	Fishing	22709	53258	2630	75455	10342	2233	66512	40508	22154	16528	52170	1646	24957	40263	431364
2.	Mining and Quarrying	43977	44137	25090	14812	28447	17590	83036	48931	62454	27959	22928	11440	30789	16659	478249
A. Sub-Total of Primary		337912	454734	293646	268797	397335	496701	493589	324043	524352	406782	296743	184408	283615	262322	5024975
3.	Manufacturing	231150	360146	48084	453037	222523	81520	538879	403642	310180	243226	372465	20130	336314	136844	3758140
4.	Electricity, Gas, Water Supply & other Utility Services	91019	42590	22650	28671	26858	17879	66279	48766	31629	31575	37366	5884	25970	7737	484874
4.1	Electricity, gas and other utility services	82300	38768	20859	24550	24665	17241	57953	44703	28574	29694	35641	5435	24524	7216	442122
4.2	Water Supply	8720	3822	1791	4122	2193	638	8326	4063	3055	1881	1725	449	1446	522	42752
5.	Construction	806479	523779	209764	383227	268271	165273	538340	505766	376860	700576	635247	146290	519304	217377	5996550
B. Sub-Total of Secondary		1128648	926514	280497	864935	517652	264671	1143498	958174	718668	975377	1045077	172304	881588	361958	10239564
6.	Trade, hotels and restaurants	676813	847317	149747	614405	493145	197141	611092	629490	453440	668726	665568	116396	438119	142855	6704253

7.	Transport, Storage and Communication	375845	255530	84378	270037	234884	116017	616941	314580	271600	285833	219593	73556	239394	119068	3477256
8.	Financial Services	231253	139181	44543	152607	83234	83825	317074	270966	94591	129871	193141	2913	85902	9127	1838230
9.	Real estate, ownership of dwellings and professional services	521362	599953	67139	339395	337214	37732	1223642	883375	362903	735605	422473	52059	363891	185261	6132004
10.	Public Administration	230564	96031	45087	92910	101866	91578	265186	233284	65190	84886	135101	35254	107193	32714	1616845
11.	Other Services	477655	316074	186817	299798	319362	157708	389989	405600	347185	496307	459187	127771	357703	197906	4539062
C. Sub-Total of Tertiary		2513493	2254085	577711	1769152	1569705	684001	3423925	2737296	1594909	2401227	2095063	407949	1592202	686931	24307650
12.	District Value Added at basic Prices	3980052	3635333	1151854	2902885	2484692	1445373	5061012	4019513	2837929	3783386	3436883	764660	2757405	1311212	39572189
13.	Population (In Number)*	3325229	2653162	1184859	2134348	1981920	1101974	3346538	3174337	2880583	4298583	3162268	830706	2564182	1345585	33984274
14.	District Per Capita Income (₹) at Basic Price	119693	137019	97214	136008	125368	131162	151231	126625	98519	88015	108684	92049	107535	97446	116443

Populations are based on CSO.

Source: Department of Economics and Statistics.

Appendix 1. 21																
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CURRENT PRICE																
Base year 2011-12		YEAR 2015-16 (Quick)														
Sl. No.	Industry	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
₹ in lakh																
1.	Agriculture, forestry and fishing	424913	499903	283030	266886	305536	623965	488122	446641	681361	501227	389683	269890	350730	340073	5871958
1.1	Crops	189385	195901	105464	83214	168343	392504	143420	152324	329348	218592	147299	154937	186631	218411	2685772
1.2	Livestock	142935	145110	92073	94956	113023	125081	205891	185591	243127	167264	134615	71308	111008	58434	1890417
1.3	Forestry and Logging	25665	41919	79894	2895	4190	102129	36349	53336	70136	53232	21303	40554	25085	2895	559582
1.4	Fishing	66928	116973	5600	85820	19979	4251	102462	55389	38750	62140	86467	3091	28006	60333	736188
2.	Mining and Quarrying	54576	54776	31138	18383	35304	21829	103050	60725	77507	34698	28454	14197	38210	20675	593520
A. Sub-Total of Primary		479489	554679	314167	285268	340839	645794	591172	507366	758868	535925	418137	284087	388940	360747	6465479
3.	Manufacturing	295342	458040	60323	568470	276671	103656	674054	499484	376555	300119	446572	24533	409916	176335	4670069
4.	Electricity, Gas, Water Supply and other Utility Services	88342	58372	27657	39013	38453	27196	77286	56632	42709	43887	54710	8218	35551	12995	611020
4.1	Electricity, gas & other utility services	78169	54081	25735	34541	35877	26499	64108	52153	39235	41727	52535	7752	33889	12425	558728
4.2	Water Supply	10172	4290	1921	4471	2577	697	13178	4479	3475	2159	2174	466	1662	570	52292
5.	Construction	1046917	675533	263178	494598	347623	210779	705773	652012	486213	902504	815118	181850	657880	282162	7722140
B. Sub-Total of Secondary		1430600	1191945	351157	1102081	662748	341630	1457113	1208128	905477	1246509	1316400	214601	1103348	471492	13003229
6.	Trade, hotels and restaurants	985759	1217575	226870	891236	735730	292981	927072	933810	689662	978464	992843	172896	655403	216686	9916986

7.	Transport, Storage and Communication	565685	327368	109161	334715	296261	146358	885201	406102	339761	371074	299527	89971	297325	144528	4613037
8.	Financial Services	274624	162012	53129	181316	102644	98010	378700	316780	111418	158728	222366	3911	105037	12226	2180902
9.	Real estate, ownership of dwellings and professional services	771639	791310	95856	500588	488956	58055	1630303	1218842	517755	1066570	572949	73871	515181	282874	8584749
10.	Public Administration	335675	136049	66546	135677	146647	122647	383186	327240	96074	119750	189478	50685	149715	47177	2306545
11.	Other Services	684395	452878	267676	429558	457588	225967	558785	581153	497455	711120	657934	183073	512525	283564	6503671
C. Sub-Total of Tertiary		3617777	3087193	819238	2473088	2227827	944018	4763247	3783927	2252124	3405706	2935097	574407	2235186	987056	34105891
12.	District Value Added at basic Prices	5527866	4833817	1484563	3860438	3231414	1931443	6811532	5499420	3916469	5188140	4669634	1073096	3727473	1819296	53574598
13.	Population (In Number)*	3332061	2658267	1181296	2136226	1984031	1099982	3365096	3189684	2901093	4353153	3184317	834542	2576071	1356706	34152523
14.	District Per Capita Income (₹) at Basic Price	1658993	1818409	1256723	1807130	1628711	1755886	2024172	1724127	1349998	1191812	1466448	1285850	1446961	1340966	1568686

Populations are based on CSO.
Source: Department of Economics and Statistics.

Appendix 1.22																
GROSS DISTRICT VALUE ADDED (AT BASIC PRICE) - AT CONSTANT PRICE																
YEAR 2015-16(Quick)																
Base year 2011-12													(₹ in lakh)			
Sl. No.	Industry	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PLK	MLP	KKD	WYD	KNR	KSD	Total
1.	Agriculture, forestry and fishing	316428	370073	242508	175114	317158	471910	387557	315180	470192	369469	276936	182510	271945	245692	4412673
1.1	Crops	162677	175346	125369	56263	224836	319614	163619	121592	238273	185626	120037	105647	162613	168089	2329600
1.2	Livestock	97512	98932	63032	65128	77668	84750	139004	125682	164360	113085	92286	49198	76653	40186	1287477
1.3	Forestry and Logging	16299	26622	50739	1839	2661	64861	23085	33873	44542	33807	13529	25755	15931	1839	355382
1.4	Fishing	39940	69173	3368	51884	11993	2685	61850	34033	23016	36952	51084	1910	16748	35578	440214
2.	Mining and Quarrying	46708	46879	26649	15732	30214	18682	88194	51970	66333	29695	24352	12151	32702	17694	507958
A. Sub-Total of Primary		363137	416952	269157	190847	347373	490593	475751	367151	536525	399165	301288	194661	304646	263386	4920631
3.	Manufacturing	267724	415209	54682	515313	250800	93963	611023	452777	341344	272055	404813	22239	371585	159846	4233372
4.	Electricity, Gas, Water Supply and other Utility Services	72390	47903	22699	31970	31561	22354	63213	46465	35040	36047	44949	6748	29201	10676	501216
4.1	Electricity, gas and other utility services	64305	44493	21172	28417	29513	21800	52740	42905	32278	34331	43220	6377	27880	10222	459655
4.2	Water Supply	8085	3410	1527	3554	2048	554	10474	3560	2762	1716	1728	370	1321	453	41561
5.	Construction	865383	558397	217543	408836	287346	174230	583393	538954	401904	746011	673778	150318	543805	233235	6383135
B. Sub-Total of Secondary		1205497	1021509	294924	956119	569707	290547	1257630	1038197	778288	1054113	1123540	179305	944591	403757	11117722
6.	Trade, hotels and restaurants	720062	889285	165686	650882	537329	213980	677093	682074	503704	714628	725110	126271	478661	158247	7243013
7.	Transport, Storage and Communication	467939	270170	89694	276964	244293	120409	732618	335496	277953	305365	246412	74042	245376	118831	3805562
8.	Financial	250848	147986	48529	165618	93757	89524	345913	289353	101771	144985	203114	3573	95943	11168	1992082

	Services																			
9.	Real estate, ownership of dwellings and professional services	617620	633365	76723	400670	391360	46467	1304894	975561	414411	853683	458588	59127	412351	226413	6871233				
10.	Public Administration	244554	99117	48481	98846	106839	89354	279168	238408	69994	87243	138043	36926	109074	34371	1680419				
11.	Other Services	510212	337618	199551	320233	341130	168457	416571	433247	370850	530136	490486	136480	382084	211395	4848450				
	C. Sub-Total of Tertiary	2811236	2377540	628665	1913213	1714709	728192	3756257	2954139	1738682	2636040	2261753	436419	1723489	760425	26440759				
12.	District Value Added at basic Prices	4379870	3816002	1192745	3060179	2631789	1509331	5489638	4359486	3053495	4089318	3686581	810384	2972726	1427568	42479111				
13.	Population (In Number)*	3332061	2658267	1181296	2136226	1984031	1099982	3365096	3189684	2901093	4353153	3184317	834542	2576071	1356706	34152523				
14.	District Per Capita Income (₹) at Basic Price	131446	143552	100969	143252	132649	137214	163135	136675	105253	93939	115773	97105	115398	105223	124381				

Populations are based on CSO.

Source: Department of Economics and Statistics.

Appendix 1. 23						
Proportion of Poor in India and in Kerala, 1973-74 to 2011-12						
Year	Kerala			India		
	Rural	Urban	Total	Rural	Urban	Total
1973-74	59.19	62.74	59.74	56.44	49.01	54.88
1977-78	51.48	55.62	52.22	53.07	45.24	51.32
1983	39.03	45.68	40.42	45.65	40.79	44.48
1987-88	29.1	40.33	31.79	39.09	38.29	38.86
1993-94	25.76	24.55	25.43	37.27	32.36	35.97
1999-00	9.38	20.27	12.72	27.09	23.62	26.1
2004-05	13.2	20.2	15	28.3	25.7	27.5
Rangarajan Committee Estimates						
	Rural	Urban	Total	Rural	Urban	Total
2009-10	9.7	23.7	16	39.6	35.1	38.2
2011-12	7.3	15.3	11.3	30.9	26.4	29.5

Source: Planning Commission, GoI, 2014 (Lakdawala Methodology is used from 1973-74 to 2004-05)

Appendix 1. 24						
Percentage of deprived rural households against their total number of rural household across different categories						
Name of District	Categories of Rural Households (in per cent)					
	All	SC	ST	Others	Female Headed	Disabled
Thiruvananthapuram	38.36	61.28	62.72	34.61	45.49	48.37
Kollam	28.11	58.67	74.83	23.26	31.44	36.05
Pathanamthitta	26.61	63.21	59.52	20.29	27.65	35.57
Alappuzha	27.78	52.52	51.99	24.9	29.42	34.86
Kottayam	23.02	49.96	42.89	20.14	29.59	30.37
Idukki	33.99	50.65	53.76	29.36	43.34	36.79
Ernakulam	20.3	47.06	65.19	17.13	28.78	28.32
Thrissur	28.57	57.74	49.54	24.45	31.6	35.62
Palakkad	42.33	66.32	62.9	37.38	49.2	50.95
Malappuram	32.71	62.63	76.8	29.78	33.33	40.1
Kozhikode	30.89	58.05	73.52	28.31	33.14	38.64
Wayanad	36.33	50.11	55.32	31.06	42.75	39.73
Kannur	24.25	42.38	73.09	22.6	25.96	30.46
Kasaragod	32.82	64.69	81.25	28.74	34.06	39.25
State Total	30.33	57.66	61.68	26.54	34.31	38
All India	59.76	71.99	74.49	54.27	62.89	64.14

Source: - Socio Economic and Caste Census (2011)

(Rangarajan Committee) Report of The Expert Group to Review the Methodology for Measurement of Poverty, Government of India, Planning Commission, June, 2014

Appendix 1.25							
Percentage of Deprived Household in rural Kerala as per different deprivation index							
Name of District	Criteria for calculating Deprivation Index (in percentage)						
	1	2	3	4	5	6	7
	Only one room with kucha walls and kucha roof	No adult member between age 16 to 59	Female headed households with no adult male member between age 16 to 59	Disabled member and no able bodied adult member	SC/ST households	No literate adult above 25 years	Landless households deriving major part of their income from manual casual labour
Thiruvananthapuram	2.15	4.34	5.83	0.4	8.81	2.69	22.08
Kollam	1.21	2.41	3.92	0.22	8.14	1.27	15.16
Pathanamthitta	1.21	2.34	3.29	0.23	9.46	0.69	15.99
Alappuzha	1.33	2.04	3.02	0.18	5.61	0.57	18.71
Kottayam	0.59	1.63	1.97	0.13	5.01	0.41	13.79
Idukki	1.13	2.46	2.86	0.17	10.99	3.55	17.67
Ernakulam	0.75	1.62	2.12	0.14	5.05	0.84	13.59
Thrissur	1.59	2.01	3.63	0.16	7.33	1.36	19.79
Palakkad	2.2	2.7	5.1	0.24	11.64	4.79	29.04
Malappuram	1.08	1.08	3.93	0.13	5.62	1.61	24.93
Kozhikode	2.32	1.65	3.68	0.17	5.06	1.05	18.17
Wayanad	2.06	1.67	3.38	0.18	12.5	4.47	24.67
Kannur	0.59	1.81	3.29	0.15	2.99	1.01	11.41
Kasaragod	1.99	1.44	3.66	0.17	6.79	3.45	12.97
State Total	1.43	2.1	3.65	0.19	7.11	1.81	18.86
All India	13.28	3.64	3.86	0.4	21.56	23.52	30.04

Source - Socio Economic and Caste Census (2011)

Appendix 1.26														
Wholesale Price Index of Agricultural Commodities in Kerala 2015-2016 (Base: 1952-53 = 100)														
Crops	Weight	Year											2016* (upto August)	
		2011	2012	2013	2014	2015	2015	2015	2015	2015	2015	2015		2015
Percentage of variation over previous year														
		2011	2012	2013	2014	2015	2015	2015	2015	2015	2015	2015	2015	2016* (upto August)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A. Food Crops	635	5572.23	5816.05	7170.91	7887.82	7396.62	7490.71	8033.23	11.5	4.4	23.3	10.0	-6.2	7.2
a) Rice	636	4768.35	5213.48	6335.95	6517.80	6202.52	6229.17	6344.85	3.2	9.3	21.5	2.9	-4.8	1.9
b) Condiments & Spices	163	5384.60	5903.05	6303.83	9413.88	9560.11	10062.92	9725.30	23.6	9.6	6.8	49.3	1.6	-3.4
c) Fruits & Vegetables	169	8811.74	7937.62	11069.46	11637.71	9831.91	9799.47	12862.92	26.8	-9.9	39.5	5.1	-15.5	31.3
d) molasses	32	5396.47	6144.38	7592.96	7539.46	7247.79	7268.36	7464.19	-2.5	13.9	23.6	-0.7	-3.9	2.7
B.Non - food Crops	365	5243.71	4151.83	4693.98	7225.23	6983.92	7226.53	5841.01	45.7	-20.8	13.1	53.9	-3.3	-19.2
a) Oil & Oil Seeds	698	5811.56	4278.43	5004.82	8725.20	8430.04	8787.20	6691.80	58.7	-26.4	17.0	74.3	-3.4	-23.8
b) Plantation Crops	302	3931.26	3859.20	3975.55	3758.41	3641.55	3619.40	3874.59	13.8	-1.8	3.0	-5.5	-3.1	7.1
c) All Crops	1000	5452.32	5208.61	6266.83	7645.97	7245.99	7394.28	7233.07	21.5	-4.5	20.3	22.0	-5.2	-2.2

Source: Department of Economics & Statistics, GoK

Appendix 1.27													
Month-wise Wholesale Price Index of Agricultural Commodities - Kerala (2015 and 2016)													
Sl. No.	Crops	2015											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Rice	6413.71	6354.43	6274.82	6214.16	6188.75	6159.50	6124.73	6103.24	6121.08	6136.92	6128.22	6210.66
2	Molasses	8069.97	7332.52	6972.70	7186.82	7433.67	7245.23	6734.00	7171.95	6753.76	7038.72	7355.17	7678.97
3	Condiments & Spices	8363.76	9499.42	10327.25	10301.01	11215.69	11203.74	10377.25	9215.24	8617.90	8481.18	8836.60	8282.28
4	Fruits & Vegetables	9313.48	10741.43	10695.87	9789.62	9393.00	9544.51	9290.63	9627.25	9813.19	9856.59	9925.12	9992.22
5	Food Crops	7274.63	7639.77	7704.85	7515.70	7589.50	7588.52	7372.43	7240.25	7172.28	7176.52	7250.63	7234.41
6	Oil Seeds	9615.97	9642.35	9440.34	8895.23	8572.85	8381.69	7911.41	7837.79	7869.24	7790.31	7712.71	7490.64
7	Plantation Crops	3654.31	3681.91	3620.91	3591.66	3611.62	3663.27	3562.35	3569.14	3581.75	3742.07	3677.94	3741.70
8	Non - food Crops	7815.55	7842.30	7682.87	7293.55	7074.56	6956.73	6597.99	6548.66	6574.42	6567.74	6494.21	6358.46
9	All Crops	7472.07	7713.69	7696.83	7434.62	7401.55	7357.92	7089.76	6987.82	6954.06	6954.32	6974.54	6914.69

Base : 1952-53=100

Source: Department of Economics and Statistics, GoK

Month-wise Wholesale Price Index of Agricultural Commodities - Kerala (2015 and 2016)											
Base : 1952-53=100											
Sl. No.	Crops	2016									
		Jan 15	Feb 16	Mar 17	Apr 18	May 19	Jun 20	Jul 21	Aug 22		
1	Rice	6185.09	6171.77	6260.47	6264.03	6312.70	6447.49	6546.79	6570.45		
2	Molasses	7392.13	7035.71	6921.54	7220.62	7372.66	7733.00	7641.07	8396.80		
3	Condiments & Spices	8614.58	9366.99	9615.18	9886.87	10850.47	10126.48	9677.56	9664.29		
4	Fruits & Vegetables	10042.76	12014.87	12362.45	13308.17	13426.00	12910.26	13854.69	14984.16		
5	Food Crops	7271.67	7707.72	7859.67	8075.62	8288.42	8180.51	8327.16	8555.10		
6	Oil Seeds	7096.93	6831.13	6657.67	6549.98	6521.69	6496.56	6562.80	6817.66		
7	Plantation Crops	3738.85	3684.31	3702.04	3932.15	3920.19	3939.77	4027.96	4051.43		
8	Non - food Crops	6082.79	5880.79	5765.07	5759.40	5736.04	5724.41	5797.28	5982.26		
9	All Crops	6837.73	7040.89	7095.14	7230.20	7356.80	7284.03	7403.75	7616.01		

Source: Department of Economics and Statistics, CoK

Appendix 1.28																			
Annual Average Consumer Price Index Numbers (with base 1998-99 = 100) in Selected Centres of Kerala 2008 to 2016																			
Sl. No.	Centres	Year										Per cent of variation over previous year							
		2008	2009	2010	2011	2012	2013	2014	2015	2016*	2009	2010	2011	2012	2013	2014	2015	2016*	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	Thiruvananthapuram	159	168	183	204	217	244	268	282	296	5.66	8.93	11.48	6.37	12.60	9.69	5.22	4.96	
2	Kollam	158	169	182	203	218	245	268	279	291	6.96	7.69	11.54	7.39	12.58	9.20	4.10	4.30	
3	Punalur	152	165	183	203	216	248	271	283	295	8.55	10.91	10.93	6.40	14.78	9.31	4.43	4.24	
4	Pathanamthitta	159	170	188	208	225	259	283	297	309	6.92	10.59	10.64	8.17	15.15	9.23	4.95	4.04	
5	Alappuzha	151	164	178	199	215	245	270	281	296	8.61	8.54	11.80	8.04	13.84	10.32	4.07	5.34	
6	Kottayam	151	163	178	199	213	243	267	284	297	7.95	9.20	11.80	7.04	14.20	9.76	6.37	4.58	
7	Mundakayam	150	164	183	204	221	253	275	288	304	9.33	11.59	11.48	8.33	14.33	8.84	4.73	5.55	
8	Idukki	144	155	172	191	207	236	250	267	283	7.64	10.97	11.05	8.38	13.81	6.12	6.80	5.99	
9	Ernakulam	150	161	175	193	207	236	260	276	284	7.33	8.70	10.29	7.25	13.89	10.29	6.15	2.90	
10	Chalakkudy	152	165	178	195	208	240	265	279	294	8.55	7.88	9.55	6.67	15.46	10.34	5.28	5.38	
11	Thrissur	148	156	170	184	198	228	247	256	269	5.41	8.97	8.24	7.61	14.94	8.53	3.64	5.08	
12	Palakkad	155	166	182	201	216	239	257	269	281	7.10	9.64	10.44	7.46	10.65	7.53	4.67	4.46	
13	Malappuram	153	163	176	192	208	236	256	267	283	6.54	7.98	9.09	8.33	13.50	8.44	4.30	5.99	
14	Kozhikode	148	160	175	191	207	237	260	274	291	8.11	9.38	9.14	8.38	14.57	9.63	5.38	6.20	
15	Wayanad	148	157	172	186	201	230	247	264	275	6.08	9.55	8.14	8.06	14.39	7.43	6.88	4.17	
16	Kannur	146	157	174	192	208	239	261	280	298	7.53	10.83	10.34	8.33	14.82	9.28	7.28	6.43	
17	Kasaragod	148	157	175	194	209	249	272	288	303	6.08	11.46	10.86	7.73	18.94	9.42	5.88	5.21	
	State Average	151	162	178	196	211	241	263	277	291	7.28	9.88	10.11	7.65	14.22	9.13	5.32	5.05	

Source: Department of Economics and Statistics, GovK

* Average of monthly indices upto August 2016

Appendix 1. 29													
Monthly State Average Retail Prices of Certain Essential Commodities From January 2016 to November 2016													
Sl. No.	Name of Commodity	Unit	January	February	March	April	May	June	July	August	September	October	November
A	CEREALS												
1(1)	Rice (Red) Open Market												
1	Rice(red)open market Matta	Kg.	34.29	34.22	33.71	33.74	33.94	34.63	35.24	35.34	35.31	35.39	35.70
(ii)	Rice (white) open market												
2	Rice(white)open mrkt Andhra Vella	Kg.	30.92	30.67	30.36	30.35	30.48	31.00	31.62	31.92	31.90	32.37	32.85
B	PULSES												
3	Green gram	Kg	110.94	108.71	106.83	106.34	106.96	105.63	100.27	92.05	86.55	86.07	84.27
4	Green gram Dhal	Kg.	123.65	120.91	119.93	119.06	119.09	117.41	113.06	108.70	104.64	103.91	101.11
5	Black gram split w/o husk	Kg	168.65	162.14	157.74	167.20	182.11	179.17	174.73	164.11	149.67	144.40	139.86
6	Black gram split with husk	Kg	156.94	150.25	142.17	150.20	167.88	167.56	168.00	157.50	145.40	142.75	127.40
7	Black gram with out husk	Kg	166.46	158.21	153.90	165.90	181.54	176.98	172.13	160.29	142.50	138.77	131.77
8	Redgram	Kg.	64.69	64.46	63.81	65.73	67.93	70.39	80.99	83.20	81.19	81.84	78.71
9	Dhall(Tur)	Kg	162.07	149.98	143.10	145.80	151.84	151.20	148.83	142.82	131.38	134.02	132.30
C	OTHER FOOD ITEMS												
10	Sugar(O.M)	Kg.	33.99	34.58	35.38	39.89	39.93	39.43	39.53	40.69	40.06	39.91	40.00
11	Milk (Milma)	Ltr.	36.43	36.43	36.43	36.43	36.43	36.43	36.43	36.43	36.43	36.43	36.43
12	Egg Hen's (Nadan)	Dozen	75.12	74.70	73.00	71.40	71.70	72.60	74.84	73.95	71.00	72.51	75.75
13	Egg Hen's (White lagon)	Dozen	55.17	53.09	48.34	47.97	55.35	57.82	60.43	56.07	51.82	53.32	54.29
D	OIL AND OIL SEEDS												
14	Coconut oil(Loose)	Kg	109.08	102.64	99.69	98.31	98.18	96.09	94.40	104.88	111.07	111.52	113.95
15	Coconut oil(Kera)	Ltr.	137.61	131.20	128.69	121.40	115.04	110.39	109.96	112.40	123.57	127.43	128.07
16	Coconut oil(KLF Nirmal)	Ltr.	148.98	141.55	137.33	136.24	130.67	123.67	122.27	122.75	126.56	127.08	124.00
17	Groundnut oil(Gold winner)	Ltr.	112.50	113.13	120.00	120.00	120.00	123.75	125.00	125.00	120.00	120.00	0.00
18	Groundnut oil(Dhara)	Ltr.	152.38	154.83	154.00	152.58	154.00	159.13	161.00	161.00	181.83	183.50	183.50
19	Groundnut oil(Loose)	Ltr.	133.44	127.50	127.50	129.50	131.88	138.75	139.50	143.75	144.17	144.38	142.50
20	Refined Oil (Gold Winner)	Ltr.	90.54	89.64	89.36	89.47	89.75	89.09	88.81	88.84	89.17	89.13	89.21
21	Gingelly oil(Pavithram)	Ltr.	146.30	141.88	138.23	131.71	135.27	137.64	140.34	138.88	138.12	139.29	140.27
22	Gingelly oil(1dayam)	Ltr.	228.97	230.18	228.18	217.45	212.43	211.14	212.22	208.05	212.50	216.63	219.72

23	Gingelly oil (Svrnam)	Ltr.	146.76	142.05	136.93	132.45	137.09	138.86	138.69	138.57	139.88	140.11	142.16
24	Coconut without husk	10 nos	139.07	130.57	128.41	124.32	120.91	118.86	117.45	126.93	133.33	133.75	139.20
25	Coconut without Husk	Kg	25.32	23.38	22.91	22.32	21.99	21.13	20.63	22.81	24.31	24.63	25.62
E	SPICES AND CONDIMENTS												
26	Coriandar	Kg.	140.24	126.27	120.12	115.00	115.36	114.11	114.33	114.25	114.90	113.82	111.52
27	Chillies dry	Kg.	154.71	154.88	161.45	162.69	161.89	167.27	165.46	163.86	159.55	156.95	147.44
28	Onion small	Kg.	48.09	34.29	28.95	34.39	44.11	49.75	39.64	31.43	32.64	34.73	35.14
29	Tamarind without seeds loose	Kg.	97.31	97.98	99.19	101.23	101.63	102.59	104.74	108.34	110.29	115.18	113.61
F	TUBERS												
30	Chenai	Kg.	35.52	36.16	37.14	43.67	51.70	55.00	51.70	45.23	41.76	38.88	38.05
31	Tapioca Raw	Kg.	18.57	18.82	19.45	20.94	21.59	22.29	24.89	28.39	29.93	30.11	30.09
32	Potato	Kg.	28.00	25.46	25.43	27.13	29.50	29.93	30.83	31.04	29.93	28.66	29.84
33	Colocassia	Kg.	42.98	40.34	39.48	45.66	53.71	59.42	61.08	61.29	59.10	56.20	54.77
G	FRUITS AND VEGETABLES												
34	Onion big	Kg.	27.66	21.38	17.93	17.71	18.04	19.54	20.24	18.29	17.43	17.20	19.48
35	Brinjal	Kg.	41.40	32.11	31.60	29.11	32.16	30.88	31.89	29.29	27.45	27.73	27.00
36	Pumpkin	Kg.	20.38	20.52	20.14	19.03	19.21	20.16	21.14	20.77	18.93	18.14	17.98
37	Cucumber	Kg.	24.95	17.63	17.45	18.70	22.96	23.95	21.34	19.21	19.29	17.93	17.46
38	Ladies Finger	Kg.	44.95	34.70	26.76	30.42	47.25	41.29	31.41	24.84	29.95	33.86	30.09
39	Cabbage	Kg.	31.00	24.50	23.76	24.43	33.09	37.73	38.10	31.09	26.88	27.41	25.91
40	Bittergourd	Kg.	52.26	45.50	45.45	45.46	51.27	54.13	45.84	42.20	41.48	42.79	40.25
41	Ash gourd	Kg.	27.05	22.63	20.88	19.70	20.11	20.36	21.61	22.21	19.62	18.86	18.82
42	Snake gourd	Kg.	39.77	32.63	30.26	30.62	38.07	37.89	32.70	29.27	30.79	33.32	32.11
43	Tomato	Kg.	34.98	17.52	16.93	24.86	48.70	59.27	33.13	16.95	20.95	22.82	15.14
44	Chillies green	100gm	6.07	5.21	5.19	5.74	9.01	7.06	6.83	5.93	4.49	4.37	4.28
45	Banana green	Kg.	38.31	40.68	36.90	41.82	42.82	53.18	56.07	64.14	53.88	50.05	55.05
46	Plantain green	Kg.	24.78	24.54	24.08	24.32	25.38	29.15	34.00	35.90	33.69	32.58	31.75

Source: Department of Economics and Statistics, CoK

Appendix.1. 30						
Yearly Average Index Number of Prices Received and Price Paid by Farmers						
Year	Index of Prices received by Farmers	Index of Farm Cultivation Cost (₹)	Index of Domestic Expenditure (₹)	Index of Price Paid by farmers (₹)	Parity Index as Col.2 to 5	6
1	2	3	4	5	6	6
2006	2474.00	8309.00	2947.00	4947.00	50.00	50.00
2007	2746.00	9135.00	3061.00	5288.00	52.00	52.00
2008	3167.00	10036.00	3394.00	5837.00	54.00	54.00
2009	3083.00	11468.00	3640.00	6460.00	48.00	48.00
2010	3727.00	12824.00	3970.00	7135.00	52.00	52.00
2011	5117.00	14959.00	4398.00	8109.00	63.00	63.00
2012	4743.00	17447.00	4715.00	9070.00	52.00	52.00
2013	6008.50	20422.50	5376.58	10478.42	57.08	57.08
2014	8272.25	22407.33	5879.50	11477.67	72.08	72.08
2015	7706.08	24244.50	6179.92	12240.00	63.00	63.00
2016*	7528.17	25535.33	6443.00	12826.50	58.83	58.83

Source: Department of Economics and Statistics, GoK

(Base Year - 1952 - 53 = 100)

* Average of Monthly Indices up to June 2016

Appendix 1. 31		
Average Daily Wage Rates of Skilled Workers in the Agricultural Sector		
(₹)		
Agricultural Year	Average Daily Wage Rates	
	Carpenter	Mason
2004-05	199.23	194.08
2005-06	207.83	206.25
2006-07	226.33	226.5
2007-08	254.67	253.75
2008-09	297.83	295.58
2009-10	341.83	338.67
2010-11	418.50	415.00
2011-12	493.92	495.00
2012-13	573.25	563.42
2013-14	644.92	635.08
2014-15	705.08	707.75
2015-16	746.17	753.08

Source: Dept of Economics and Statistics, GoK

Appendix.1.32		
Average Daily Wage Rates of Unskilled Workers in the Agricultural Sector		
(₹)		
Agricultural Year	Average Daily Wage Rates of Paddy Field Workers	
	Male	Female
2004-05	165.58	115.75
2005-06	166.39	108.19
2006-07	179.01	123.96
2007-08	195.97	137.42
2008-09	224.40	159.02
2009-10	260.11	185.40
2010-11	312.82	228.48
2011-12	373.06	273.19
2012-13	439.01	323.67
2013-14	499.6	361.67
2014-15	545.15	392.46
2015-16	586.06	422.19

Source: Dept of Economics and Statistics, GoK

Appendix 1.33										
Revenue Receipts										
(₹ in crore)										
Year	State's Own Tax Revenue		State's Own Non Tax Revenue		State's Own Revenue (2+4)		Share of Central Taxes and Grants		Total Revenue (6 + 8)	
	Amount	Growth Rate	Amount	Growth Rate	Amount	Growth Rate	Amount	Growth Rate	Amount	Growth Rate
1	2	3	4	5	6	7	8	9	10	11
2010-11	21721.69	23.24%	1930.79	4.24%	23652.48	21.44%	7338.47	10.65%	30990.95	18.70%
2011-12	25718.60	18.40%	2592.18	34.25%	28310.78	19.69%	9699.58	32.17%	38010.36	22.65%
2012-13	30076.61	16.94%	4198.51	61.97%	34275.12	21.07%	9862.18	1.68%	44137.30	16.12%
2013-14	31995.01	6.38%	5575.03	32.79%	37570.04	9.61%	11606.89	17.69%	49176.93	11.42%
2014-15	35232.50	10.12%	7283.69	30.65%	42516.19	13.17%	15434.28	32.98%	57950.47	17.84%
2015-16	38995.15	10.68%	8425.49	15.68%	47420.64	11.54%	21612.02	40.03%	69032.66	19.12%
2016-17 (BE)	47613.61	22.10%	11359.52	34.82%	58973.13	24.36%	25643.72	18.65%	84616.85	22.58%

Source: Finance Department, Govt. of Kerala

Appendix 1.34								
State's Own Tax Revenue								
(₹ in crore)								
Year	Land Revenue	Stamps and Registration fees	State Excise Duties	Sales Tax & VAT	Motor Vehicle Tax	Others	Total	Growth Rate
1	2	3	4	5	6	7	8	9
2010-11	55.97	2552.49	1699.54	15833.11	1331.37	249.21	21721.69	23.24%
2011-12	60.75	2986.56	1883.18	18938.83	1587.13	262.15	25718.60	18.40%
2012-13	121.58	2938.37	2313.95	22511.09	1924.62	267.00	30076.61	16.94%
2013-14	88.78	2593.29	1941.72	24885.25	2161.09	324.88	31995.01	6.38%
2014-15	139.03	2659.02	1777.42	27908.33	2364.95	383.82	35232.50	10.12%
2015-16	182.29	2877.73	1964.16	30736.78	2814.31	419.88	38995.15	10.68%
2016-17 (BE)	206.34	3469.41	2397.36	37452.98	3406.49	681.03	47613.61	22.10%

Source: Finance Department, Govt. of Kerala

Appendix 1.35										
State's Own Non Tax Revenue										
(₹ in crore)										
Year	Forest		Debt Services Interest		Social Development Services		Others		Total	
	Amount	Annual growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate
1	2	3	4	5	6	7	8	9	10	11
2010-11	274.10	0.48%	171.47	12.44%	368.81	25.17%	1116.41	-1.40%	1930.79	4.24
2011-12	220.52	-19.55%	136.49	-20.40%	415.85	12.75%	1819.32	62.96%	2592.18	34.25
2012-13	237.33	7.62%	172.41	26.32%	472.78	13.69%	3315.99	82.27%	4198.51	61.97
2013-14	329.95	39.03%	149.46	-13.31%	630.05	33.26%	4465.57	34.67%	5575.03	32.79
2014-15	300.40	-8.96%	102.15	-31.65%	673.09	6.83%	6208.05	39.02%	7283.69	30.65
2015-16	283.04	-5.78%	105.03	2.82%	772.326	14.74%	7265.09	17.03%	8425.49	22.62
2016-17 (BE)	446.48	57.74%	164.94	57.04%	1046.44	35.49%	9701.66	33.54%	11359.52	

Source: Finance Department, Govt. of Kerala

Appendix 1.36						
Trend in Revenue Expenditure						
(₹ in crore)						
Year	Total Revenue Expenditure		Development Expenditure		Non Development Expenditure	
	Amount	Annual Growth Rate	Amount	% of total revenue exp.	Amount	% of total revenue exp.
1	2	3	4	5	6	7
2010-11	34664.81	11.35%	18918.58	54.58%	15746.23	45.42%
2011-12	46044.62	32.83%	25069.84	54.45%	20974.78	45.55%
2012-13	53488.75	16.17%	29889.03	55.88%	23599.72	44.12%
2013-14	60485.5	13.08%	32921.09	54.43%	27564.41	45.57%
2014-15	71746.43	18.62%	39182.20	54.61%	32564.23	45.39%
2015-16	78689.47	9.68%	42172.02	53.59%	36517.45	46.41%
2016-17 (BE)	97683.10	24.14%	53015.17	54.27%	44667.93	45.73%

Source: Finance Department, Govt. of Kerala

Appendix 1.37												
Revenue Expenditure : Development and Non- Development expenditure												
Year	Developmental Expenditure						Non Developmental Expenditure					Total Rev. Expenditure
	Education	Health	Agri, AH and Co-oprn.	Inds, labour and Empt.	Others	Total	Interest payment	Pension Payments	Others	Total		
1	2	3	4	5	6	7	8	9	10	11	12	
2002-03	2967.56	954.78	594.50	197.58	3350.38	8064.80	2946.77	2282.90	1461.58	6691.25	14756.05	
2010-11	704.36	2353.68	1854.67	704.36	13301.5	18918.58	5689.66	5767.49	4289.08	15746.23	34664.81	
2011-12	9424.73	3163.01	2807.77	742.45	8931.88	25069.84	6293.60	8700.30	5980.88	20974.78	46044.62	
2012-13	10532.02	3643.84	3442.66	1035.65	11234.9	29889.03	7204.81	8866.89	7528.02	23599.72	53488.75	
2013-14	11709.85	4088.15	3514.54	981.90	12626.7	32921.09	8265.39	9971.28	9327.74	27564.41	60485.50	
2014-15	12790.19	4709.64	3892.96	1210.96	16578.5	39182.20	9769.59	11252.67	11541.97	32564.23	71746.43	
2015-16	14133.6528	5630.82	4393.63	1185.60	16928.3	42172.02	11110.9	13065.78	12340.82	36517.45	78689.47	
2016-17 (BE)	16798.8997	6178.88	5633.64	1321.54	23182.2	53015.17	12630	15503.43	16534.55	44667.93	97683.10	

Source: Finance Department, Govt. of Kerala

Appendix 1.38						
Trend in Capital Outlay						
Year	Industries, Labour and Employment					Total
	Irrigation	Agriculture and Allied Services	Public Works	Others	Total	
1	2	3	4	5	6	7
2010-11	292.30	338.65	364.29	1515.66	852.79	3363.69
2011-12	247.19	310.81	314.47	1820.25	1160.20	3852.92
2012-13	340.60	192.11	273.95	2142.92	1653.71	4603.29
2013-14	342.39	210.63	342.24	1403.24	1995.83	4294.33
2014-15	270.25	355.9	260.22	1477.26	1890.96	4254.59
2015-16	526.23	528.08	334.94	2675.25	3435.54	7500.04
2016-17 (BE)	574.89	526.06	517.1	2216.37	5738.50	9572.92

Source: Finance Department, Govt. of Kerala

Appendix 1. 39									
Capital Expenditure and Total Expenditure									
(₹ in crore)									
Year	Capital Outlay		Loan Disbursements		Capital Expenditure		Total Expenditure		Capital Expenditure as % of total Expenditure
	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate	
1	2	3	4	5	6	7	8	9	10
2010-11	3363.69	63.34%	761.74	-13.11%	4125.43	40.51%	38790.24	13.86%	10.64%
2011-12	3852.92	14.54%	998.54	31.09%	4851.46	17.60%	50896.08	31.21%	9.53%
2012-13	4603.29	19.48%	1136.15	13.78%	5739.44	18.30%	59228.19	16.37%	9.69%
2013-14	4294.33	-6.71%	1464.17	28.87%	5758.50	0.33%	66244.01	11.85%	8.69%
2014-15	4254.59	-0.93%	743.09	-49.25%	4997.68	-13.21%	76744.12	15.85%	6.51%
2015-16	7500.04	0.76	842.25	13.34%	8342.29	66.92%	87031.76	13.41%	9.59%
2016-17 (BE)	9572.92	0.28	740.58	-12.07%	10313.50	23.63%	107996.60	24.09%	9.55%

Source: Finance Department, Govt. of Kerala

Appendix 1. 40									
Debt Profile of the State									
Item		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	BE
1	2	4	5	6	7	8	9	(₹ in crore)	
Loans and Advances from Government of India	Receipts	361.40	407.15	552.29	392.02	752.47	531.34	1630.28	
	Disbursements	307.60	370.54	326.20	351.58	349.63	361.69	356.96	
	Interest	427.78	419.32	399.60	386.73	351.36	335.56	351.29	
	Gross Retention	53.80	36.61	226.09	40.44	402.84	169.65	1273.32	
Small Savings and Deposits	Net Retention	-373.98	-382.71	-173.51	-346.29	51.48	-165.91	922.03	
	Receipts	13399.99	18020.38	19008.98	24024.80	29155.36	43307.4	32459.04	
	Disbursements	11963.44	16447.87	17311.32	21720.59	27477.82	37190.59	30394.84	
	Interest	788.29	795.41	795.71	838.40	1029.91	1105.95	1097.23	
State Provident Funds	Gross Retention	1436.55	1572.51	1697.66	2304.21	1677.54	6116.81	2064.2	
	Net Retention	648.26	777.10	901.95	1465.81	647.63	5010.86	966.97	
	Receipts	3285.57	4961.55	4811.86	5447.74	5952.29	6940.04	7267.35	
	Disbursements	2232.18	2695.02	2823.97	3520.09	3865.05	4724.77	4976.53	
Internal Debt	Interest	836.55	961.95	1142.70	1286.81	1445.18	1628.96	1900.88	
	Gross Retention	1053.39	2266.53	1987.89	1927.65	2087.24	2215.27	2290.82	
	Net Retention	216.84	1304.58	845.19	640.84	642.06	586.31	389.94	
	Receipts	6827.50	9391.82	12708.89	14069.17	17756.70	19127.4	30270.64	
Total Debt	Disbursements	1667.43	2522.52	2477.88	2893.23	5493.14	5699.05	13617.82	
	Interest	3637.81	4118.96	4874.81	5781.64	6963.70	8040.39	9280.55	
	Gross Retention	5160.07	6869.30	10231.01	11175.94	12263.56	13428.35	16652.82	
	Net Retention	1522.26	2750.34	5356.20	5394.30	5299.86	5387.96	7372.27	
Total Debt	Receipts	23874.46	32780.90	37082.02	43933.73	53616.82	69906.18	71627.31	
	Disbursements	16170.65	22035.95	22939.37	28485.49	37185.64	47976.10	49346.15	
	Interest	5690.43	6295.64	7212.82	8293.58	9790.15	11110.86	12629.95	
	Gross Retention	7703.81	10744.95	14142.65	15448.24	16431.18	21930.08	22281.16	
Net Retention	2013.38	4449.31	6929.83	7154.66	6641.03	10819.22	9651.21		

Source: Finance Department, Govt. of Kerala

Appendix 1.41											
Major state-wise distribution of Scheduled Commercial Bank Branches at the end of March 2016											
Sl. No.	State	Rural		Semi Urban		Urban		Metropolitan		Total	
		Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent
1	2	3	4	5	6	7	8	9	10	11	12
1	Andra Pradesh	2305	4.62	1980	5.55	1746	7.04	244	1.10	6275	4.73
2	Assam	1041	2.09	640	1.79	496	2.00	0	0.00	2177	1.64
3	Bihihar	3374	6.76	1712	4.79	813	3.28	460	2.07	6359	4.80
4	Chhattisgarh	1061	2.13	621	1.74	635	2.56	0	0.00	2317	1.75
5	Gujarat	2576	5.16	1834	5.14	952	3.84	1941	8.75	7303	5.51
6	Haryana	1659	3.32	1060	2.97	1542	6.22	244	1.10	4505	3.40
7	Himachal Pradesh	1125	2.25	286	0.80	86	0.35	0	0.00	1497	1.13
8	Jharkhand	1342	2.69	730	2.04	589	2.38	158	0.71	2819	2.13
9	Karnataka	3430	6.87	2132	5.97	1883	7.59	2024	9.12	9469	7.14
10	Kerala	344	0.69	4300	12.04	1522	6.14	0	0.00	6166	4.65
11	Madhya Pradesh	2303	4.62	1819	5.09	1152	4.65	874	3.94	6148	4.64
12	Maharashtra	3199	6.41	2554	7.15	1807	7.29	4229	19.06	11789	8.89
13	Odisha	2440	4.89	1169	3.27	929	3.75	0	0.00	4538	3.42
14	Panjab	2481	4.97	1835	5.14	1021	4.12	716	3.23	6053	4.57
15	Rajasthan	2780	5.57	1964	5.50	1265	5.10	639	2.88	6648	5.01
16	Tamil Nadu	2915	5.84	3435	9.62	1898	7.66	1691	7.62	9939	7.50
17	Telangana	1615	3.24	1036	2.90	523	2.11	1633	7.36	4807	3.63
18	Uttar Pradesh	7719	15.47	3317	9.29	2754	11.11	2228	10.04	16018	12.08
19	Uttarakhand	936	1.88	594	1.66	424	1.71	0	0.00	1954	1.47
20	West Bengal	3160	6.33	1209	3.39	1560	6.29	1639	7.39	7568	5.71
Total		47805	95.80	34227	95.86	23597	95.17	18720	84.37	124349	93.79
All India		49902	100.00	35704	100.00	24794	100.00	22187	100.00	132587	100.00

Figures Stands Modified As Per RBI Data
Source: Reserve Bank of India -Quarterly statistics, March 2016

Appendix 1.42										
Deposits in Scheduled Commercial Banks as on March 2013 to 2016										
Sl. No.	State	Deposits-2013		Deposits-2014		Deposits-2015		Deposits-2016		₹ in crore
		Amount	Per cent	Amount	Per cent	Amount	Per cent	Amount	Per cent	
1	2	3	4	5	6	7	8	9	10	
1	Andhra Pradesh	398497	5.65	443061	5.52	187176	2.11	213266	2.21	
2	Assam	77730	1.10	85069	1.06	97379	1.10	103795	1.07	
3	Bihar	165209	2.34	191856	2.39	216864	2.44	245223	2.54	
4	Chhattisgarh	83828	1.19	89288	1.24	99177	1.12	104054	1.08	
5	Gujarat	361054	5.12	416558	5.19	477834	5.37	522407	5.41	
6	Haryana	169911	2.41	193314	2.41	222746	2.51	253707	2.63	
7	Himachal Pradesh	45528	0.65	52440	0.75	59850	0.67	66793	0.69	
8	Jharkhand	105701	1.50	122224	1.77	142189	1.60	162469	1.68	
9	Karnataka	464639	6.59	539210	6.72	634210	7.13	704274	7.29	
10	Kerala	234217	3.32	277940	3.46	320010	3.60	363511	3.76	
11	Madhya Pradesh	200820	2.85	226897	2.83	277873	3.13	286913	2.97	
12	Maharashtra	1785043	25.31	2052530	25.57	2133718	24.00	2177596	22.54	
13	Odisha	143978	2.04	165909	2.07	189205	2.13	212055	2.20	
14	Punjab	200680	2.85	230538	2.87	261873	2.95	293084	3.03	
15	Rajasthan	177139	2.51	201603	2.51	235472	2.65	260432	2.70	
16	Tamil Nadu	446577	6.33	510694	6.36	545350	6.13	604540	6.26	
17	Telangana	0	0.00	0	0.00	327856	3.69	358650	3.71	
18	Uttar Pradesh	515015	7.30	600931	7.49	672765	7.57	749371	7.76	
19	Uttarakhand	66453	0.94	76625	1.10	88651	1.00	97521	1.01	
20	West Bengal	438344	6.22	483397	6.02	553113	6.22	615552	6.37	
Total		6080363	86.23	6960084	86.70	7743311	87.09	8395213	86.91	
All India		7051332	100.00	8028220	100.00	8890982	100.00	9659968	100.00	

Figures Stand Modified As Per RBI Data
Source: Reserve Bank of India, Quarterly statistics, March 2016

Appendix 1.43							
Major state-wise Advances Financed by Scheduled Commercial Banks at the end of March 2014, 2015 and 2016							
(₹ crore)							
Sl. No.	State	Advances-2014		Advances-2015		Advances-2016	
		Amount	Per cent	Amount	Per cent	Amount	Per cent
1	2	3	4	5	6	7	8
1	Andra Pradesh	467133	7.63	183136	2.73	222899	2.96
2	Assam	27808	0.45	31568	0.47	42671	0.57
3	Bihar	52430	0.86	61272	0.91	81246	1.08
4	Chhattisgarh	50535	0.83	58790	0.88	66067	0.88
5	Gujarat	305986	5.00	342755	5.12	392377	5.22
6	Haryana	145070	2.37	162572	2.43	178241	2.37
7	Himachal Pradesh	17645	0.29	20088	0.30	22500	0.30
8	Jharkhand	36607	0.60	40171	0.60	46635	0.62
9	Karnataka	363279	5.93	407432	6.08	490850	6.53
10	Kerala	181666	2.97	201695	3.01	224800	2.99
11	Madhya Pradesh	127828	2.09	143897	2.15	173308	2.30
12	Maharashtra	1816250	29.66	1971395	29.44	2235305	29.72
13	Odisha	66675	1.09	72734	1.09	85607	1.14
14	Panjab	178314	2.91	192179	2.87	205540	2.73
15	Rajasthan	164981	2.69	191210	2.86	190794	2.54
16	Tamil Nadu	603157	9.85	643106	9.60	682310	9.07
17	Telangana	0	0.00	322594	4.82	371581	4.94
18	Uttar Pradesh	238136	3.89	273081	4.08	327749	4.36
19	Uttarakhand	25581	0.42	28855	0.43	33617	0.45
20	West Bengal	289401	4.73	312396	4.66	333854	4.44
Total		5158482	84.24	5660926	84.53	6407951	85.20
All India		6123201	100.00	6697242	100.00	7520929	100.00

Figures Stands Modified As Per RBI Data

Source: Reserve Bank of India -Quarterly statistics , March 2016

Appendix 1.44						
Growth of Bank Deposits in Kerala						
(₹ crore)						
Year	Total Deposit		Domestic Deposit		NRI Deposit	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
2003	59400	14.99	30704	13.21	28696	16.96
2004	65683	10.58	36594	19.18	29089	1.37
2005	69396	5.65	40276	10.06	29120	0.11
2006	77677	11.93	47006	16.71	30671	5.33
2007	91698	18.05	58394	24.23	33304	8.58
2008	105488	15.04	75599	29.46	29889	-10.25
2009	130350	23.57	93331	23.46	37019	23.85
2010	143404	10.01	106518	14.13	36886	-0.36
2011	161562	12.66	123872	16.29	37690	2.18
2012	197557	22.28	149103	20.37	48454	28.56
2013	229148	15.99	162958	9.29	66190	36.60
2014	279655	22.04	185772	14.00	93883	41.84
2015	319890	14.39	210287	13.20	109603	16.74
2016	361593	13.04	225984	7.46	135609	23.73
As on June 2016	370412	2.44	227744	0.78	142668	5.21

*Figures Stands Modified as per SLBC data
Source: State Level Banker's Committee, 2016*

Appendix 1.45						
Share of NRI Deposit and CD Ratio of Major Bank in Kerala as on March 2016						
(₹ in crore)						
Sl. No.	Name of Bank	Deposits	NRI Deposits	Share of NRI Deposit %	Advances	CD Ratio %
A	State bank group					
1	State bank of India	42481	16695	39.30	27021	63.61
2	State Bank of Travancore	77858	32165	41.31	36278	46.60
	Total- State Bank Group	121241	49033	40.44	63848	52.66
B	Nationalised banks					
1	Bank of Baroda	6970	2872	41.21	2506	35.96
2	Bank of India	3166	651	20.56	2525	79.73
3	Canara bank	24667	8643	35.04	21336	86.50
4	Central bank of India	3880	987	25.44	4458	114.92
5	Corporation bank	3733	1080	28.93	2912	78.82
6	IDBI bank	5985	1616	27.00	3653	61.04
7	Indian bank	6693	1829	27.33	3188	47.63
8	Indian overseas bank	8400	2843	33.85	4178	49.74
9	Punjab national bank	6054	1391	22.98	5649	93.30
10	Syndicate bank	7156	1973	27.57	6794	94.95
11	UCO bank	1434	110	7.67	1822	127.06
12	Union bank of India	10970	2857	26.04	9316	84.92
13	Vijaya bank	3386	617	18.22	3537	104.45
	Total- Nationalised Banks	95637	27655	28.92	76394	79.88
C	R R B - Kerala Gramin Bank	10334	489	4.73	11928	115.43
	Total - Public Sector Banks	227211	77177	33.97	152171	66.97
D	Private sector banks					
1	Axis bank	6446	2638	40.92	6368	98.80
2	Catholic Syrian bank	9200	3004	32.65	3534	38.42
4	Dhanlaxmi bank	8389	1686	20.10	3764	44.87
5	Federal bank	53223	29429	55.29	25749	48.38
6	HDFC bank	10727	4644	43.29	11255	104.93
7	ICICI bank	6682	2936	43.94	5331	79.78
8	South Indian bank	30145	12845	42.61	16141	53.54
	Total- Pvt. Sector Banks	134382	58431	43.48	80247	59.72
	Total - Commercial Banks	361593	135608	37.50	232418	64.28
	Total Co-operative Banks	59734	0.00	0.00	36784	61.58
	Total Banking Sector	421327	135608	32.19	269201	63.89

Source: State Level Banker's Committee, 2016

Appendix 1.46													
State-wise Deposit, Credits and Credit-Deposit Ratio of Public Sector Banks* (₹ in crore)													
Sl. No.	STATES	Mar-13			2014			2015			2016		
		DEPOSIT	CREDIT	CD Ratio	DEPOSIT	CREDIT	CD Ratio	DEPOSIT	CREDIT	CD Ratio	DEPOSIT	CREDIT	CD Ratio
1	Andhra Pradesh	305894	350759	114.67	341007	389496	114.22	147828	156888	106.13	213266	222899	104.52
2	Assam	65918	22514	34.15	71448	24729	34.61	82353	27869	33.84	103795	42671	41.11
3	Bihar	140706	40093	28.49	162874	49773	30.56	184279	57715	31.32	245223	81246	33.13
4	Chhattisgarh	71562	37747	52.75	74440	44015	59.13	83366	50758	60.89	104054	66067	63.49
5	Gujarat	291193	203974	70.05	336216	240547	71.55	381933	264576	69.27	522407	392377	75.11
6	Haryana	114025	104112	91.31	129969	114163	87.84	146831	125412	85.41	253707	178241	70.25
7	Himachal Pradesh	40690	14644	35.99	46359	16902	36.46	53593	19165	35.76	66793	22500	33.69
8	Jharkhand	93218	28722	30.81	108363	32330	29.83	127618	35452	27.78	162469	46635	28.70
9	Karnataka	315170	235629	74.76	362309	265718	73.34	408074	293223	71.86	704274	490850	69.70
10	Kerala	145236	115290	79.38	171924	122090	71.01	193186	134227	69.48	363511	224800	61.84
11	Madhya Pradesh	171629	94951	55.32	194310	110607	56.92	243550	123705	50.79	286913	173308	60.40
12	Maharashtra	1208922	1082400	89.53	1360566	1245492	91.54	1392273	1304215	93.68	2177596	2235305	102.65
13	Odisha	115410	54720	47.41	134756	59786	44.37	155698	63905	41.04	212055	85607	40.37
14	Punjab	170487	142496	83.58	195118	154744	79.31	219073	162102	73.99	293084	205540	70.13
15	Rajasthan	135741	132508	97.62	156111	139782	89.54	181602	157862	86.93	260432	190794	73.26
16	Tamil Nadu	305539	372081	121.78	337336	413740	122.65	360032	433779	120.48	604540	682310	112.86
17	Telangana	0	0	0.00	0	0	0.00	243460	262487	107.82	358650	371581	103.61
18	Uttar Pradesh	422039	183948	43.59	492251	214900	43.66	78107	25247	32.32	749371	327749	43.74
19	Uttarakhand	58418	19343	33.11	67487	22358	33.13	550818	244788	44.44	97521	33617	34.47
20	West Bengal	352590	220800	62.62	389470	241560	62.02	447348	255747	57.17	615552	333854	54.24
	Total	4524387	3456731	76.40	5132314	3902732	76.04	5681022	4199120	73.91	8395213	6407951	76.33
	ALL-INDIA	5213154	4071101	78.09	5880219	4598076	78.20	6480454	4928311	76.05	9659968	7520929	77.86

* Excluding RRB

Source: Reserve Bank of India - Quarterly statistics March 2016

Appendix 1.47					
District wise distribution of number of branches, Aggregate Deposits, Gross Bank Credit and CD Ratio of Scheduled Commercial Banks - Kerala, March 2016.					
(₹ crore)					
Sl. No.	District	All Scheduled Commercial Banks			
		No. Branches	Deposits	Credits	C D Ratio
1	Thiruvananthapuram	706	56014	35717	63.76
2	Kollam	380	24370	14764	60.58
3	Alappuzha	371	21978	10334	47.02
4	Kottayam	487	27681	14811	53.51
5	Ernakulam	965	73629	59654	81.02
6	Thrissur	715	41948	22484	53.60
7	Palakkad	410	16900	10900	64.50
8	Idukki	173	4073	4932	121.09
9	Pathanamthitta	380	30918	7964	25.76
10	Kozhikode	437	20838	14623	70.17
11	Malapuram	433	17096	10238	59.89
12	Kannur	374	19418	10250	52.79
13	Wayanad	119	2437	2969	121.83
14	Kasaragod	216	6213	5160	83.05
Total		6166	363513	224800	61.84

Source: Reserve Bank of India- quarterly statistics march 2016

Appendix 2.1 District wise Actual Rainfall, Normal Rainfall and Percentage of departure for 2016										
Sl. No.	District / Sub division	Pre-Monsoon Rainfall (1 st March to 31st May)			South West Monsoon Rainfall (1 st June to 30th September)			North East Monsoon Rainfall (1 st October to till 31st Dec, 2016)		
		Actual rainfall (mm)	Normal rainfall (mm)	Percentage departure (%)	Actual rainfall (mm)	Normal rainfall (mm)	Percentage departure (%)	Actual rainfall (mm)	Normal rainfall (mm)	Percentage departure (%)
1	Thiruvananthapuram	506.1	368.8	37	572.4	871.3	-34	112.4	522.7	-79
2	Kollam	503.8	469.6	7	950.8	1332.3	-29	406.8	638.6	-36
3	Pathanamthitta	611.6	553.5	10	1091.4	1715.7	-36	425.8	624.2	-32
4	Alappuzha	367	477.8	-23	1135.3	1745.9	-35	208.4	572.1	-64
5	Kottayam	446.2	460.2	-3	1330.7	1897.3	-30	252.3	535.1	-53
6	Idukki	358	426.6	-16	1569.5	2276.2	-31	174	564.2	-69
7	Ernakulam	369.6	443.6	-17	1569.4	2065	-24	295.1	489.3	-40
8	Thrissur	300.8	385.3	-22	1219.6	2197.5	-44	152.1	469.4	-68
9	Palakkad	177.5	279.9	-37	1034.9	1572.7	-34	137.6	428	-68
10	Malappuram	160.9	320.8	-50	1252.9	2060.4	-39	118.3	448.3	-74
11	Kozhikode	295.7	352.6	-16	1888.1	2603.1	-27	74.5	422.2	-82
12	Wayanad	145.3	275.4	-47	1073.8	2632.1	-59	104.9	332.5	-68
13	Kannur	140.2	300.5	-53	1991	2669	-25	84.4	345.1	-76
14	Kasaragod	138.4	272.9	-49	2252.9	3007.5	-25	71.1	337.9	-79
	Kerala	313	379.9	-18	1352.3	2039.7	-34	185	480.7	-62

Source: IMD website

Legend: (percentage departure from normal value) - Excess: +20% and above, Normal: -19% to +19%, Deficient: -20% to -59%, Scanty: -60% to -99%

Appendix 2.2						
Land use Pattern in Kerala						
(Area in Ha)						
Sl. No.	Classification of Land	2014-15	2015-16	Percentage of Geographical areas	Change in area between 2014-15 and 2015-16	
					Actual	Percentage
1	Total Geographical Area	3886287	3886287	100	0	0
2	Forest	1081509	1081509	29.1	0	0
3	Land put to non-agricultural uses	419128	434646	11.8	15518	4
4	Barren and uncultivated land	12952	13100	0.34	148	1
5	Permanent Pastures and Grazing land	5	0	0	-5	-100
6	Land under miscellaneous tree crops	2653	2663	0.07	10	0
7	Cultivable waste	100676	99499	2.56	-1177	-1
8	Fallow other than current Fallow	54741	55258	1.42	517	1
9	Current Fallow	65329	70003	1.8	4674	7
10	Net area sown	2042881	2023073	52	-19808	-1
11	Area sown more than once	581743	604504	16.83	22761	4
12	Total cropped Area	2624624	2627576.59	67.4	2952.59	0
13	Cropping Intensity (%)	128	130	0	2	2

Source : Directorate of Economics and Statistics

Appendix 2.3			
Number of Operational Holdings and Area Operated by Size/Class in Kerala (2010-11)			
Sl. No.	Size of Holding (ha)	Number (in '000)	Area (in '000 ha)
1	2	3	4
1	Below 1.00	6580	886
2	1.00-1.99	180	282
3	2.00-3.99	57	159
4	4.00-9.99	12	64
5	10.00 and above	2	120
Total		6831	1511

Source: Ministry of Agriculture

Appendix 2.4							
Area, Production and Productivity of Rice in Kerala and India							
Sl. No	Year	Area (000' ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2005-06	276	44258	630	91790	2285	2074
2	2006-07	264	43810	642	93360	2435	2131
3	2007-08	229	43900	528	96700	2308	2202
4	2008-09	234	45600	590	99400	2520	2177
5	2009-10	234	41920	598	89090	2557	2125
6	2010-11	213	42560	522	95980	2452	2255
7	2011-12	208	43970	569	102750	2733	2337
8	2012-13	197	42410	508	104399	2577	2462
9	2013-14	199	43900	564	106500	2827	2424
10	2014-15	198	43860	562	10480	2837	2390
11	2015-16	196	NA	549	NA	2790	NA

Source: Directorate of Economics and Statistics, CMIE, RBI, Agriculture Statistics at a glance 2015

Appendix 2.5									
Season- wise Area, Production and Productivity of Rice in Kerala (2013-14 to 2015-16)									
Season	Area (Ha)			Production (MT)			Productivity (Kg/Ha)		
	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
1	3	4	4	6	7	7	9	10	10
Virippu	51922	63981	60418	141234	161477	160894	2720	2524	2663
Mundakan	100824	88990	89118	285614	254450	243675	2833	2859	2734
Puncha	46865	45188	47334	137477	146165	144706	2933	3235	3057
All seasons	199611	198159	196870	564325	562092	549275	2827	2837	2790

Source : DES

Appendix 2.6														
District-wise Area, Production and Productivity of Rice in Kerala														
Sl. No.	District	Area (Ha)					Production (MT)					Productivity (Kg/Ha)		
		2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	
1	2	3	4	5	6	7	8	9	10	11				
1	Thiruvananthapuram	2001	2093	2119	5326	5561	5453	2662	2657	2573				
2	Kollam	1363	1327	1555	3234	3150	3351	2373	2374	2155				
3	Pathanamthitta	2468	2592	2534	7554	7573	8396	3061	2922	3313				
4	Alappuzha	37402	34415	31724	106866	103095	89335	2857	2996	2816				
5	Kottayam	15746	17295	16272	50729	49393	49506	3222	2856	3042				
6	Idukki	661	697	887	1796	1803	2198	2717	2587	2478				
7	Ernakulam	4052	4644	5950	9056	9974	12652	2235	2148	2126				
8	Thrissur	22275	24151	24625	66653	76016	78886	2992	3148	3203				
9	Palakkad	82896	82912	81120	238065	236398	228459	2872	2851	2816				
10	Malappuram	7548	8402	8687	19709	22279	23649	2611	2652	2722				
11	Kozhikode	2433	2321	2872	3850	3423	3608	1582	1475	1256				
12	Wayanad	11481	9690	9204	30755	26168	23704	2679	2701	2575				
13	Kannur	5079	4955	5478	11293	11164	11518	2223	2253	2103				
14	Kasaragod	4206	2665	3843	9439	6095	8560	2244	2287	2227				
	State	199611	198159	196870	564325	562092	549275	2827	2837	2790				

Source : D.E.S

Appendix 2.7 District-wise and Season-wise Area, Production and Productivity of Rice for 2015-16 in Kerala												
Name of District	Autumn			Winter			Summer			Total		
	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)	Area (Ha)	Production (MT)	Productivity (kg/ha)
1	2	3	4	5	6	7	8	9	10	11	12	13
Thiruvananthapuram	1074	2746	2557	903	2374	2629	142	333	2345	2119	5453	2573
Kollam	417	1014	2432	1132	2325	2054	6	12	2000	1555	3351	2155
Pathanamthitta	28	62	2214	419	1007	2403	2087	7327	3511	2534	8396	3313
Alappuzha	10217	30662	3001	1697	4172	2458	19810	54501	2751	31724	89335	2816
Kottayam	3661	12191	3330	4251	12268	2886	8360	25047	2996	16272	49506	3042
Idukki	81	177	2185	759	1907	2513	47	114	2426	887	2198	2478
Ernakulam	1246	2327	1868	4048	8979	2218	656	1346	2052	5950	12652	2126
Thrissur	1865	4217	2261	13891	41509	2988	8869	33160	3739	24625	78886	3203
Palakkad	36244	95152	2625	41037	122157	2977	3839	11150	2904	81120	228459	2816
Malappuram	395	822	2081	6134	14284	2329	2158	8543	3959	8687	23649	2722
Kozhikode	47	58	1234	2377	2614	1100	448	936	2089	2872	3608	1256
Wayanad	0	0	0	8587	22174	2582	617	1530	2480	9204	23704	2575
Kannur	2750	5924	2154	2721	5582	2051	7	12	1714	5478	11518	2103
Kasaragod	2393	5542	2316	1162	2323	1999	288	695	2413	3843	8560	2227
STATE	60418	160894	2663	89118	243675	2734	47334	144706	3057	196870	549275	2790

DES

Appendix 2.8							
Area, Production and Productivity of Coconut in Kerala and India							
Sl. No.	Year	Area (000'Ha.)		Production (Million Nuts)		Productivity (Nuts/ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2007-08	818.812	1903	5641	14744	7067	7747
2	2008-09	787.769	1895	5802	10148	7269	7749
3	2009-10	778.618	1900	5667	10824	7100	8300
4	2010-11	770.473	1896	5287	10840	6624	5718
5	2011-12	820.867	2070	5941	23351	7443	11277
6	2012-13	798.162	2136	5799	22680	7265	10615
7	2013-14	808.647	2140	5921	21665	7322	10122
8	2014-15	793.856	1975.81	5947	20439	7491	10345
9	2015-16	790.223	NA	5873	NA	7432	NA

Source: DES, CMIE and CDB

Appendix 2.9							
Area, Production and Productivity of Cashew in Kerala and India							
Sl. No.	Year	Area (000'Ha.)		Production (000'MT)		Productivity (kg./ha.)	
		Kerala	India	Kerala	India	Kerala	India
1	2007-08	58.38	868	52.4	665	898	766
2	2008-09	53.01	893	42.33	695	799	778
3	2009-10	48.97	923	35.82	613	731	664
4	2010-11	43.85	945	34.75	653	792	691
5	2011-12	54.05	991	36.74	692	680	749
6	2012-13	52.08	982	37.91	728	728	741
7	2013-14	49.10	1006	33.37	736	680	732
8	2014-15	45.44	1027	29.71	725	654	705
9	2015-16	43.09	1034	24.73	670.3	574	648

Source :DES, Cashew Export Promotion Council of India

Appendix 2.10			
Plantation Crops- Area, Production and Productivity (2013-14 to 2015-16)			
	2013-14	2014-15	2015-16
1	2	3	4
AREA (Ha)			
Tea #	30205	30205	30205
Coffee *	85359	85359	84987
Rubber \$	548225	549955	550840
Cardamom@	39730	39730	39730
PRODUCTION MT)			
Tea #	62938	65174	57898
Coffee *	66645	67700	69230
Rubber \$	648220	507700	438630
Cardamom@	14000	16000	19500
PRODUCTIVITY(Kg/ha)			
Tea #	2084	2158	1917
Coffee *	781	793	815
Rubber \$	1182	923	796
Cardamom@	352	403	491

Tea Board, *Coffee Board, \$ Rubber Board @ Spices Board.

Source; Directorate of Economics and Statistics

Appendix 2.11			
Import of Rubber (1994-95 to 2015-16)			
Year	Import (MT)		
	Natural Rubber	Synthetic Rubber	Total
1	2	3	4
1994-95	8093	73860	81953
1995-96	51635	71735	123370
1996-97	19770	91050	110820
1997-98	32070	86389	118459
1998-99	29534	97548	127082
1999-00	20213	104842	125055
2000-01	8970	106923	115893
2001-02	49590	111323	160913
2002-03	26229	124475	150704
2003-04	44199	173784	217983
2004-05	68718	113095	181813
2005-06	45285	132118	177403
2006-07	89699	171998	261697
2007-08	86394	195705	282099
2008-09	77762	190630	268392
2009-10	177130	250210	427340
2010-11	188337	302030	490367
2011-12	213785	327625	541410
2012-13	217364	329585	546949
2013-14	360263	371839	732102
2014-15	442130	402170	844300
2015-16	458374	351301	809675

Source: Rubber Board, Kottayam.

Appendix 2.12		
Average Market Price of Natural Rubber in Domestic (Kottayam) and International (Bangkok) Markets (₹/100Kg)		
Year	Kottayam (RSS - 4)	Bangkok (RSS - 3)
1	2	3
1997-98	3580	3221
1998-99	2994	2885
1999-00	3099	2704
2000-01	3036	2958
2001-02	3228	2793
2002-03	3919	4111
2003-04	5040	5278
2004-05	5570	5751
2005-06	6699	7432
2006-07	9204	9779
2007-08	9085	9675
2008-09	10112	10379
2009-10	11498	11113
2010-11	19003	19555
2011-12	20805	20915
2012-13	17146	16432
2013-14	16602	15525
2014-15	13257	11271
2015-16	11306	9636

Source: Rubber Board, Kottayam

Appendix 2.13				
Price Trend of Rubber				
Year	Month & Year	India	World	
		(₹ per 100 kg. of RSS 4) Kottayam	(₹ per 100 kg. of RSS 3) (Bangkok)	
2015	April	12058	10819	
	May	12510	11809	
	June	13098	11813	
	July	12537	10622	
	August	11665	9661	
	September	11218	8961	
	October	11410	8628	
	November	10954	8163	
	December	10279	8412	
	2016	January	9780	8305
		February	9355	8668
		March	10812	9776
(Average 2015-16)		11306	9636	

Source: Rubber Board, Kottayam

Appendix 2. 14							
Production, Consumption, Export and Auction Price of Tea							
Year	Production			Consumption (In M Kg)	Exports		Cochin Auction Price (₹/kg)
	India (In M.Kg)	Kerala (In M.Kg)	Per cent of Kerala		India (In M Kg)	Per cent of Production	
1	2	3	4	5	6	7	8
1991-95	740.00	65.00	8.78	567.00	174.00	23.51	38.14
1996-97	780.10	61.60	7.90	618.00	162.00	20.77	44.42
1997-98	810.00	69.80	8.62	633.00	203.00	25.06	61.57
1998-99	874.10	65.90	7.54	664.00	210.00	24.02	73.39
1999-2000	824.40	67.80	8.22	650.00	192.00	23.29	62.04
2000-01	846.50	69.30	8.20	653.00	207.00	24.45	51.34
2001-02	853.70	66.10	7.70	673.00	183.00	21.44	52.21
2002-03	826.20	59.70	7.20	693.00	198.00	23.98	47.21
2003-04	857.10	56.60	6.60	714.00	173.70	20.27	45.78
2004-05	820.20	49.70	6.06	735.00	197.60	24.09	52.14
2005-06	928.00	58.50	6.30	757.00	199.10	21.45	49.66
2006-07	955.90	59.50	6.20	771.00	218.70	22.88	54.40
2007-08	944.70	56.00	5.93	786.00	178.75	18.92	56.05
2008-09	972.77	70.30	7.23	802.00	203.12	20.88	71.08
2009-10	979.90	68.90	7.03	NA	197.90	20.21	81.03
2010-11	966.40	66.80	6.91	NA	222.00	22.97	67.69
2011-12	1115.70	61.50	5.51	NA	215.40	19.31	70.03
2012-13	1126.30	63.00	5.59	NA	201.10	17.85	87.55
2013-14	1200.00	62.80	5.23	NA	219.10	18.26	99.17
2014-15	1207.30	65.17	5.40	NA	201.20	16.66	93.35
2015-16	1191.10	57.89	4.87	NA	217.70	18.27	81.67

Source : Association of Planters of Kerala, Tea Board

Appendix 2. 15

Monthly Average Farm Price of Important Agricultural Commodities for the year 2014-15

Commodities	Unit	2014												2015				
		July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June					
1	2	3	4	5	6	7	8	9	10	11	12	13	14					
Paddy Local	₹./Qtl.	1683.93	1683.33	1697.12	1698.86	1717.05	1680.36	1673.21	1692.19	1665.18	1675.00	1579.09	1622.73					
Paddy H/y	₹./Qtl.	1665.59	1657.86	1667.60	1691.69	1673.10	1652.92	1686.38	1694.36	1693.18	1664.82	1637.29	1577.94					
Coconut with husk	₹./100 Nos.	1457.45	1545.80	1529.90	1464.95	1429.84	1401.98	1421.35	1421.90	1425.31	1472.97	1428.06	1349.12					
Areca nut (Ripe)	₹./100 Nos.	229.70	180.25	144.08	118.96	103.90	95.89	108.54	128.85	149.89	159.17	170.08	186.37					
Cashew nut	₹./Qtl.	-	-	-	-	-	-	-	8179.17	8122.41	7463.51	5680.00	3500.00					
Pepper (Dry)	₹./Qtl.	69829.65	68220.93	62041.46	64538.89	66903.23	65294.29	59762.50	56012.24	52306.25	54337.23	56858.85	59578.41					
Ginger	₹./Qtl	9767.05	9176.14	7602.17	5700.00	4920.24	4791.67	3705.17	3660.14	4265.44	4871.88	5235.29	6416.00					
Ginger - dry	₹./Qtl.	-	-	-	-	-	-	17000.00	16575.00	18000.00	18500.00	17750.00	-					
Sesamum	₹./Kg	-	-	-	-	-	-	-	-	-	-	-	-					
Gloves	₹./Kg	941.88	926.25	922.50	915.63	922.50	921.50	970.00	916.79	830.36	815.36	819.29	810.83					
Nutmeg	₹./Kg	254.39	250.83	256.22	262.97	264.08	257.63	280.32	289.80	291.03	285.72	275.20	246.5					
Tapioca	₹./Qtl.	1353.77	1305.45	1297.41	1255.26	1197.37	1157.02	1099.55	1052.23	1004.55	991.18	979.17	957.27					
Turmeric Dry	₹./Kg	7271.43	6662.50	6612.50	7000.00	6250.00	6125.00	7470.00	8086.36	8825.00	9112.50	9069.23	8925.00					
Banana (local)	₹./Kg	3335.60	4238.75	4510.89	3712.50	3007.20	2975.00	2736.44	2533.02	2579.74	2701.72	3109.55	3433.77					
Plantain (palayam thodan)	₹./Kg	1760.78	1895.08	1999.17	1851.69	1567.08	1497.92	1457.20	1421.72	1365.57	1344.17	1322.95	1341.19					
Plantain (Rasakadali)	₹./Kg	3411.61	3758.04	4030.17	3762.50	3134.65	2987.29	2979.17	2833.61	2625.86	2460.25	2381.56	2527.50					
Plantain (Poovan)	₹./Kg	3535.71	3754.29	3890.28	3696.05	3203.47	3123.21	3095.71	3080.41	2800.66	2719.23	2756.10	2817.95					

Source : Directorate of Economics and Statistics

Appendix 2.16					
Yearly Average Index Number of Prices Received and Prices Paid by Farmers					
Year	Index of Prices received by Farmers (₹)	Index of Farm Cultivation Cost (₹)	Index of Domestic Expenditure (₹)	Index of Price Paid by Farmers (₹)	Parity index as Col.2 to 5
2013	6008.50	20422.50	5376.58	10478.42	57.08
2014	8272.25	22407.33	5879.50	11477.67	72.08
2015*	7776.14	23745.86	6120.86	12055.71	64.57

Base Year - 1952-53=100

*Average of monthly indices upto July 2015
Source : Directorate of Economics and statistics

Appendix 2.17					
Area covered under collective farming during 2014-15 in Kerala					
Sl. No.	District	Area Cultivated (in ha)			Total Area (ha)
		Paddy	Vegetables	Others	
1	Thiruvananthapuram	962.00	423	1283	2668
2	Kollam	409.00	112	465	939
3	Pathanamthitta	2400.00	2020	5603.00	10023.00
4	Alappuzha	100.00	795	580	1405
5	Kottayam	89.00	148	378.00	615
6	Idukki	623.00	2845	3318.00	6786.00
7	Ernakulam	3580.00	1857	3000.00	8437.00
8	Thrissur	1000.60	573.6	1049.2	2980.4
9	Palakkad	1016.00	853	1265.4	3134.4
10	Malappuram	2721.00	1320	3044	6305
11	Kozhikode	552.00	651.00	742.60	1945.60
12	Wayanad	652.00	352.00	852	1856
13	Kannur	186.00	366.00	403.00	890.00
14	Kasaragod	788.00	240	493	1521
	Total	15078.60	12555.60	22476.20	49505.40

Source: Kudumbasree

Appendix 2.18			
Allocation under Rashtriya Krishi Vikas Yojana (RKVY) (₹ crore)			
Year	Kerala		Per cent of Expenditure
	Amount released	Expenditure	
2008-09	30.06	30.06	100
2009-10	110.92	110.92	100
2010-11	149.65	149.65	100
2011-12	182.89	182.89	100
2012-13	253.03	252.55	100
2013-14	256.24	236.81	92
2014-15	300.70	300.76	100
2015-16	150.79	100.00	66
Total	1434.28	1363.64	95.07

Source: Agriculture (PPM Cell)

Appendix 2.19						
Consumption of Fertilizers/Ha. of gross cropped area in Kerala (1999-00 to 2015-16)						
(in Kg.)						
Year	N	P	K	Total (N+P+K)		N:(P+K)% (Kerala)
				Kerala	India	
1	2	3	4	5	6	7
1999-00	29.85	15.08	27.54	72.47	93.81	70
2000-01	28.43	12.66	20.82	58.32	86.34	85
2001-02	25.54	12.44	21.21	59.19	90.12	76
2002-03	29.18	13.53	26.19	68.90	86.00	73
2003-04	28.92	13.20	22.93	65.05	89.80	80
2004-05	29.87	14.14	24.2	68.21	98.34	78
2005-06	28.00	15.00	25.00	68.00	104.50	70
2006-07	31.00	16.00	43.00	89.00	113.26	53
2007-08	32.00	15.00	25.00	72.00	117.07	80
2008-09	38.00	19.00	32.00	89.00	NA	74
2009-10	39.00	20.00	32.00	91.00	NA	75
2010-11	40.00	24.00	33.00	97.00	NA	70
2011-12	44.00	22.00	32.00	98.00	NA	81
2012-13	47.00	24.00	35.00	106.00	NA	80
2013-14	53.00	27.00	45.00	125.00	NA	73
2014-15	40.00	16.00	24.00	80.00	NA	100
2015-16	50.00	19.00	31.00	80.00	NA	100

Source: Directorate of Agriculture.

Appendix 2.20				
Average Price of Agricultural Inputs (2013-14 and 2015-16)				
Sl. No.	Item	2013-14	2014-15	2015-16
1	2	3	4	5
1.	Fertilizer (Price/MT)			
a	Urea	5413.00	5413.00	5413
b	Ammonium sulphate	9825.00	12851.00	13000
c	Super Phosphate	7004.00	7680.00	7200
d	Muriate of Potash	17000.00	16000.00	16000
2.	Paddy Seed			
a	Average NSC Price (per Kg)	36.00	36.50	36
b	State Seed Farm Price (per Kg)	25.00	30.00	30
3.	Coconut Seedlings (Per seedling)			
a	WCT	50	75	75
b	Hybrids	60	125	125
4.	Cashew grafts	30	30	30
5.	Rooted pepper cuttings (price per cuttings) (₹)	5.00	5.00	5
6.	Pesticides (price per litre/kg)			
a	Quinal phos (per lit)	409.00	409.00	416
b	Copper sulphate (per kg)	156.00	156.00	163

Source: Department of Agriculture

Appendix 2.21					
Selected Indicators of Agricultural Development in Kerala (2013-14 and 2015-16)					
Sl. No.	Particulars	Unit	2013-14	2014-15	2015-16
1	2	3	4	5	6
1	Fertilizer consumption				
	a) Nitrogen	MT	135909	104543	130547
	b) Phosphorus	MT	70336	43132	48879
	c) Potash	MT	115912	61821	81004
	Total	MT	322157	209496	260430
2	Plant protection measures				
	a) Fungicide (Liquid & Solid) in terms of technical grade	MT	477.185	401.046	524.407
	b) Insecticides (Liquid & Solid) in terms of technical grade	MT	555.014	326.961	368.662
	c) Weedicide (in terms of technical grade)	MT	140.36	165.103	185.961
	d) Rodenticides (in terms of technical grade)	MT	1.074	1.421	1.66
	e) Area under Plant Protection coverage	Lakh Ha.	13.5836	10.21051	12.9552
	f) Rodent control operation	Lakh Ha.	0.264	0.400	0.45
	g) Biological control of Nephantia Serinopa parasites liberated	Lakh No.	18.72505	20.69688	51.48245
	h) Weed control	Lakh Ha.	0.14036	0.165103	0.18596
3	High Yielding Varieties of paddy seeds distributed	MT	19197.9	9309.00	4516.22
4	Quality planting materials distributed				
	a) Coconut seedlings	Lakh No.	6.35733	3.851	4.64089
	b) Rooted pepper cuttings	Lakh No.	82.29	42.19	38.99
	c) Cashew grafts	Lakh No.	3.00	1.4784	0.94831
5	Soil testing				
	Soil samples analysed	No.	118962	140773	159000
	Coconut Seedlings	Lakh No.	5.72496	2.73781	2.50848
	Hybrids (TXD, DXT)	Lakh No.	0.40884	0.40618	0.58715

Source: Department of Agriculture

Appendix 2.22

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Performance of the Dairies under Kerala Co-operative Milk Marketing Federation (2011 to 2016)

Sl. No.	Dairy	Capacity Lakh ltr./day	Procurement (Lakh Litre) Annual								Sales (lakh litre) Annual							
			2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15				
1	Thiruvananthapuram	2.00	270.10	288.35	324.85	346.86	368.79	362.59	777.45	751.90	740.95	741.71	748.69	730.41				
2	Kollam	1.50	127.75	142.35	156.95	184.55	193.77	194.68	489.10	478.15	478.15	460.93	469.48	463.87				
3	Alappuzha	1.00	120.45	146.00	153.30	182.31	142.72	192.03	306.60	292.00	292.00	292.88	313.71	332.82				
4	Pathanamthitta	0.60	98.55	109.50	116.80	136.19	182.38	135.33	160.60	186.15	186.15	185.31	187.43	197.27				
5	Kottayam	0.30	80.00	103.00	105.85	111.00	134.32	162.32	157.00	172.00	167.90	167.54	169.62	174.07				
6	Ernakulam	1.00	329.00	442.00	229.95	523.90	560.7	705.05	655.00	732.00	740.95	719.37	726.26	745.97				
7	Thrissur	0.60	83.00	101.00	138.70	154.75	103.48	113.48	156.00	179.00	182.50	187.41	196.8	209.20				
8	Palakkad	1.00	436.79	607.54	702.09	672.07	672.4	706.78	300.50	347.18	368.35	382.48	415.9	441.44				
9	Kannur	1.00	123.26	159.85	172.59	184.71	213.44	258.60	282.79	338.62	333.12	332.65	342	353.00				
10	Kozhikode	1.50	230.56	303.14	324.10	358.10	382.3	406.54	363.53	437.94	415.83	381.56	407.2	437.20				
11	Kasaragod	0.30	78.23	101.40	108.00	129.68	142.27	158.22	138.16	164.52	162.26	161.30	172.02	179.60				
12	Wayanad	0.50	294.19	361.82	395.81	446.19	486.9	542.39	161.88	217.58	264.11	286.08	304.8	329.20				
13	Kattappana Dairy	0.20	79.00	65.53	259.15	48.85	53.34	396.80	27.00	-	36.27	34.06	33.11	30.46				
	Total	11.50	2350.88	2931.48	3188.14	3479.16	3636.81	4334.81	3975.61	4297.04	4368.54	4333.28	4487.02	4624.51				

Source: KCMMF

Appendix 2.23						
Performance of Kerala Co-operative Milk Marketing Federation (2011-12 to 2015-16)						
Sl. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7
1	No. of Apcos registered (Cumulative)	3065	3120	3155	3206	3239
2	No. of Apcos functional (Cumulative)	2741	2779	2808	2859	2891
3	No. of members in apcos (Cumulative) (lakh Nos)	8.6	8.76	8.97	9.239	9.4
4	No. of Women in Apcos (Lakh Nos)	1.953	1.99	2.07	2.177	2.211
5	No. of SC/ST members in Apcos (Lakh Nos)	0.565	0.579	0.598	0.615	0.622
6	Average milk marketed/day (MT)	1188	1224	1222	1266	1304
7	Average milk procured per day (MT) - Apcos	787	880	942	1026	1109
8	Direct employment generated (No. of persons)	6219	6661	6545	6794	6891
9	No. of Veterinary routes.	265	250	250	250	289
10	No. of cases treated (Lakh Nos)		0.25	0.25	0.126	0.23
11	No. of emergency veterinary routes	272	266	263	263	260
12	No. of cases treated(Lakh Nos)	0.122	0.25	0.17	0.14	0.238
13	Cattle feed sold (Lakh MT)	1.21771	1.34	1.64	1.243	1.47
14	Quantity of ghee produced (MT)	3323	3715	4523	4844.34	4849.72
15	Quantity of ghee sold (MT)	4034	4151	4583	4884.02	5340.73

Source: KCMMF

Appendix 2.24			
Average Quantity of Milk Procured per day by APCOS (2000 – 2016)			
Year	No. of Societies (Functional)	Total Procurement/day (ltr.)	Procurement per Society/day (ltr.)
1	2	3	4
2000	2092	688864	329
2001	2130	714301	335
2002	2250	708137	315
2003	2308	671720	291
2004	2354	732615	311
2005	2399	839977	350
2006	2428	917546	378
2007	2488	853972	343
2008-09	2607	862500	331
2009-10	2668	867366	325
2010-11	2717	839974	309
2011-12	2741	943342	344
2012-13	3062	879789	287
2013-14	2808	941506	335
2014-15	2859	996187	348
2015-16	2891	1077023	380

Source: KCMMF

Appendix 2.25				
Price Revision Details of Milk (2009 onwards)				
Date of Revision /Region	FAT (₹ /Kg)	SNF(₹ /Kg)	Purchase Price (₹ /Litre (Average rate)	Sales Price (₹ /Litre (Toned Milk)
1	2	3	4	5
TRCMPU				
15.02.2009	146.23	119.61	14.6	20
28.06.2010	171.7	140.46	17.40	23
05.09.2011	217.52	177.97	23.03	28
14.10.2012	202.93	248.03	28.7	33
21.07.2014	211.11	270.25	31.28	38
ERCMPU				
15.02.2009	146.23	119.61	14.6	20
28.06.2010	171.7	140.46	17.40	23
05.09.2011	217.52	177.97	23.03	28
14.10.2012	202.93	248.03	27.17	33
21.07.2014	221.11	270.25	31.5	38
MRCMPU				
15.02.2009	146.23	119.61	14.6	20
28.06.2010	171.7	140.46	17.4	23
05.09.2011	217.52	177.97	23.03	28
14.10.2012	202.93	248.03	28.82	33
21.07.2014	214.67	262.38	29.86	38
KCMMF				
15.02.2009	146.23	119.61	14.6	20
28.06.2010	171.7	140.46	17.40	23
05.09.2011	217.52	177.97	23.03	28
14.10.2012	202.93	248.03	28.61	33
21.07.2014	214.67	262.38	29.86	38

Source: KCMMF – Annual Reports

Appendix 2.26			
Price Spread of Milk			
(Average price per lit. in ₹)			
Year	Producer/ Society	Consumer	Difference in price between producer & consumer
1	2	3	4
2009	16.91	20.00	3.09
2010	19.44	22.67	3.23
2011	20.84	24.33	3.49
TRCMPU	22.70	27.00	4.30
MRCMPU	23.84	28.00	4.16
ERCMPU	22.32	28.00	5.68
TRCMPU (2011-12)	23.55	28.00	4.45
MRCMPU (2011-12)	26.76	28.00	1.24
ERCMPU (2011-12)	23.49	28.00	4.51
TRCMPU (2012-13)	28.70	33.00	4.30
MRCMPU (2012-13)	28.82	33.00	4.18
ERCMPU (2012-13)	27.17	33.00	5.83
TRCMPU (2013-14)	28.76	33.00	4.24
MRCMPU (2013-14)	28.88	33.00	4.12
ERCMPU (2013-14)	28.19	33.00	4.81
TRCMPU (2014-15)	31.23	38.00	6.77
MRCMPU (2014-15)	31.33	38.00	6.67
ERCMPU (2014-15)	31.50	38.00	6.50
TRCMPU (2015-16)	31.28	38.00	6.72
MRCMPU (2015-16)	31.37	38.00	6.63
ERCMPU (2015-16)	29.60	36.00	6.40

Source: KCMMF – Annual Reports

Appendix 2.27			
Production and Sale of Fodder Seeds by KLD Board			
Sl. No.	Year	Quantity of Seeds Produced / Procured (MT)	Quantity of Seeds Supplied (MT)
1	2006-07	18.61	15.52
2	2007-08	37.20	44.41
3	2008-09	46.47	45.43
4	2009-10	93.713	94.13
5	2010-11	77.95	79.31
6	2011-12	86.127	84.41
7	2012-13	17.16	17.22
8	2013-14	49.85	32.50
9	2014-15	54.55	40.75
10	2015-16	37.83	48.28

Source: KLD Board

Appendix 2.28					
Production of Cattle Feed					
(in lakh MT)					
Factory	Production				
	2011-12	2012-13	2013-14	2014-15	2015-16
Pattanaud (KCMMF)	0.57	0.47	0.56	0.52	0.637
Malampuzha (KCMMF)	0.63	0.64	0.59	0.52	0.588
Erode CPA	0	0.23	0.49	0.2	0.245
Kerala Feeds Ltd.	1.83	1.94	2.28	2.37	2.50
Total	3.03	3.28	3.92	3.61	3.97

Source :Annual Reports of KCMMF/ Kerala Feeds Ltd.

Appendix 2.29							
Procurement & Supply of Fodder Seeds / Root Slips and Area Covered under Fodder Cultivation							
Sl. No.	Year	Procurement of seeds	Total quantity of seeds supplied to farmers	Area covered	Fodder root slips/stem cuttings supplied (No)	Area covered	Total area covered under fodder cultivation
		(in MT)	(in MT)	(in Ha)	(in lakh)	(in Ha)	(in Ha)
1	2010-11	NA	41.2 (Maize Sorghum)	1134	466.35	3109	4213
			Hybrid Napier - CO3		389.1	2599	
2	2011-12		Maize-13.92	232		365	2964
			Cow Pea - 4.5	100			
			Sorghum -1.98	33			
			Cow pea & S.hamata/S.s choefield-0.04				
3	2012-13		Hybrid Napier - CO3		413.4	2756	
			27.95 (Maize, Sorghum, Cowpea, Guinea and Subabul)	912.5		1467.5	4223.5
			0.14 (Maize, Grain production)	555			
4	2013-14		Hybrid Napier – CO3		422.33	2816	
			0.08 (Maize, Grain production)	320		320	3136
5	2014-15		Hybrid Napier – CO3		559.19	3727.95	
			5.16 (Maize, Cowpea Sorghum)	129.12			3857.068
6	2015-16		Hybrid Napier – CO3		559.19	3727.95	
			5.16 (Maize, Cowpea Sorghum)	129.12			3857.068

Source: Dairy Development Department

Appendix 2.30				
Production and Distribution of Frozen Semen in Kerala (1998-99 to 2015-16)				
(In lakh doses)				
Year	Production of Frozen Semen	Distribution Inside the State	Distribution Outside the State	Total Distribution
1	2	3	4	5
1998-99	25.57	15.75	7.70	23.45
1999-00	26.17	15.74	6.80	22.54
2000-01	20.13	15.83	7.60	23.43
2001-02	28.94	15.52	5.50	21.02
2002-03	23.79	15.32	6.45	21.77
2003-04	24.33	15.05	1.24	16.29
2004-05	22.71	14.99	4.2	19.21
2005-06	27.10	15.89	15.14	31.03
2006-07	32.54	15.88	11.28	27.16
2007-08	24.47	15.00	9.48	24.48
2008-09	21.25	16.47	1.86	18.33
2009-10	24.08	17.12	2.65	19.78
2010-11	16.89	17.44	3.00	20.44
2011-12	24.05	17.60	5.28	22.88
2012-13	28.39	17.67	10.49	28.17
2013-14	28.53	17.31	7.59	24.90
2014-15	34.45	17.55	11.26	28.81
2015-16	24.47	17.65	10.71	28.36

Source: KLD Board

Appendix 2.31						
Number of Artificial Inseminations Conducted and Recorded Calving						
Sl. No.	Year	Number of artificial Insemination Centres	Number of Artificial Inseminations done	Number of AI Done Per Centre	Recorded Calving	Number of inseminations per calving
1	2	3	4	5	6	7
1	2005-06	2445	1179801	483	355011	3
2	2006-07	2541	1204000	474	383000	3
3	2007-08	2550	1075000	443	358457	3
4	2008-09	2562	1216932	475	405644	3
5	2009-10	2577	1298550	504	326700	4
6	2010-11	2561	1387457	542	368925	4
7	2011-12	2515	1485171	591	413322	4
8	2012-13	2514	1290614	513	357315	4
9	2013-14	2510	1225057	488	302136	4
10	2014-15	2510	1277027	509	321194	4
11	2015-16	2515	1300154	517	325275	4

Source: Animal Husbandry Department

Appendix 2.32							
Important Activities of KLD Board During 2010-11 to 2015-16							
Sl. No.	Name of Programme	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8
1	Semen Produced (No. of doses)	16,88,950	24,05,163	28,39,625	28,53,098	34,45,137	24,47,461
2	Semen Sold (No. of doses)	20,44,268	22,88,308	28,13,107	24,90,392	28,81,063	28,36,970
3	Liquid Nitrogen (Lakh litres)	9.98	10.89	10.50	9.98	10,89	,10.11
4	Quantity of basic fodder seeds produced (kg.)	177.30	517.68	548.10	424	460	489.55
5	Quantity of commercial fodder seed supplied (MT)	79.31	85.41	17.22	32.5	40.75	48.28
6	Sale of Green Grass (MT)	22.67	15.28		-		
7	No. of kids produced						
	(I) Malabari Goat	182	213	143	200	241	203
	(ii) Boer Goat	45	33	7	3	8	3
8	No. of Malabari kids distributed:	60	122	157	125	81	170
9	No. of personnel trained	949	605	964	832	889	735
10	No. of embryos collected	32	35		8	8	13
11	Premium bull semen distributed (No. of doses)	188135	605	500	442	45	0
12	No. of pigs distributed:						
	For breeding and rearing	405	419	598	488	864	819
	For meat	49	53	62	66	75	92

Source: KLD

Appendix 2.33				
Year-wise Details of Calves Enrolled under Special Livestock Breeding Programme (2005-06 to 2015-16)				
Sl. No.	Year	Number of calves enrolled		
		Total	Cow	Buffalo
1	2005-06	21819	21819	
2	2006-07	21350	21000	350
3	2007-08	23604	21604	2000
4	2008-09	23690	21690	2000
5	2009-10	23000	21000	2000
6	2010-11	37223	36800	423
7	2011-12	12947	12947	0
8	2012-13	74571	74371	200
9	14-2013	39500	39309	191
10	15-2014	84712	84712	0
11	2015-16	29164	29164	0

Source: Animal Husbandry Department

Appendix 2.34								
Outbreaks, Attacks and Deaths due to Major Contagious Diseases								
(Unit in Numbers)								
Sl. No.	Disease	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Anthrax							
	Outbreaks	3	6	5	14	7	3	2
	Attacks	5	7	9	14	17	8	4
	Deaths	3	7	9	14	17	8	4
2	Black Quarter							
	Outbreaks	2	0	0	0	2	0	1
	Attacks	6	0	0	0	0	0	1
	Deaths	3	0	0	0	0	0	0
3	Hemorrhagic Septicemia							
	Outbreaks	2	3	7	17	17	15	80
	Attacks	4	5	27	64	49	27	115
	Deaths	4	5	22	46	36	24	13
4	Foot & Mouth Disease							
	Outbreaks	2259	45	20	17	14	9	28
	Attacks	11278	354	287	361	66020	41	1360
	Deaths	155	0	4	1	6200	1	10
5	Rinderpest (Vaccination)					2462	7308	4768

Source: AH Dept

Appendix 2.35									
Production of Vaccine by Veterinary Biological Institute (2008-09 to 2015-16)									
(lakh doses)									
Sl. No.	Name of Vaccine	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	RDVK	118.23	117.22	0	0	0	33.03	32.7	128.872
2	RDVF	11.6	21.26	23.14	16.08	35.58	36.706	38.219	6.569
3	FPV	0	2.47	3.28	0.963	4.538	1.94	5.015	1.762
4	DPV	42.54	39.34	49.65	32.938	57.184	110.598	44.498	44.694
5	HS Oil adjuvant	1.95	0.35	1.04	2.15	0.447	4.2825	1.9965	2.307
6	HS Broth	0.62	0.65	0.83	0.926	0.4362	0.7056	0.249	0.00
7	BQ	0.31	0.31	0.41	0	0.2292	0	0.165	0.00
8	Anthrax	2.04	1.01	0.98	0.971	0.747	0.568	0.426	0.138
9	Duck Pasteurella oil adjuvant Vaccine	20.47	18.84	17.71	21.866	20.056	24.85	21.52	18.486
10	RDV(R B)		0	142.838	117.224	143.592	160.392	132.746	47.91
11	CSFV		0	0	0.508	0.81015	1.14525	1.4319	0.8453

Source: Animal Husbandry Department

Appendix 2.36												
Activities in the Animal Husbandry Sector (2006-07 to 2015-16)												
Sl. No.	Activities	Unit ('000)	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Cases treated	Nos.	5260	5015	4873	4663	4287	4830	4814.817	5078.368	5452.171	5669.572
2	Operations Performed	Nos.	120	121	116	122	86	78	76.955	77.447	70.357	59.664
3	Castration done	Nos.	5	4.8	5.6	4.7	4.37	3.94	2.961	1.986	1.729	2.227
4	Vaccination done											
	1. Livestock	Nos.	2723	2517	2282	3653	1636	1681	3025.375	2885.096	2155.695	2489.783
	2. Poultry	Nos.	8752	7251	7008	8829	8903	10222	10940.02	10256.67	15456.62	10635.993
5	Anti Rabies Vaccinations done in Dogs	Nos.	197	173	207	176	141.044	167.8	143.331	126.989	179.396	287.359
6	Artificial Inseminations done	Nos.	1204	1075	1196.96	1298.55	1387.46	1485.17	1290.614	1225.057	1277.027	1300.154
7	Calvings recorded	Nos.	383	358	346.9	326.7	368.92	413	357.315	302.136	321.194	325.275
8	Chicks hatched out in Department Poultry Farms	Nos.	859	369	603	792	1054.77	1388	1385.361	2283.59	2573.886	1982.665
9	Vaccines produced in Veterinary Biologicals											
	1. Poultry	Doses	20892	11103	19285	13849	16925.5	18908	26095	36751.6	27469.8	24829.3
	2. Livestock	Doses	440	678	494	227	326	456	266.955	670.135	426.84	435.98

Source: Animal Husbandry Department

Appendix 2.37

Average Price of Livestock Products and Feeds in the State (2010-11 to 2015-16)

Sl. No.	Item	Unit	Average Price (in ₹)										Percentage increase over 2009 -10				
			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16				
1	2	3	4	5	6	7	8	9	10	11	12	13	14				
1	Meat	Chicken (Broiler)	118.22	116.51	129.11	145.80	141.12	163.78	3.24	14.41	29.20	25.05	45.13				
		Chicken (Desi)	178.81	193.44	207.42	231.74	270.57	344.62	21.84	30.64	45.96	70.42	117.06				
		Mutton	257.90	306.28	376.62	403.10	437.22	454.37	45.44	78.84	91.41	107.62	115.76				
		Beef	143.31	155.52	180.37	193.29	221.27	252.79	25.24	45.25	55.65	78.18	103.57				
		Pork	138.68	153.12	180.45	201.82	220.47	236.97	24.87	47.16	64.59	79.80	93.26				
2	Egg	Fowl (White)	287.00	299.00	352.00	389.00	390.00	420.00	12.83	32.83	46.79	47.17	58.49				
		Fowl (Brown)	388.00	422.00	472.00	532.00	559.00	620.00	24.85	39.64	57.40	65.38	83.43				
3	Milk	Duck	482.00	512.00	627.00	687.00	692.00	744.00	21.04	48.23	62.41	63.59	75.89				
		Cow	23.42	27.49	31.23	33.74	37.15	38.84	33.06	51.16	63.31	79.82	88.00				
4	Feeds (price)	Buffalo	27.62	32.88	37.25	40.11	44.86	45.20	30.32	47.64	58.98	77.80	79.15				
		Groundnut cake	24.26	28.06	35.49	37.76	41.03	45.74	30.27	64.76	75.30	90.48	112.35				
		Coconut cake	16.74	18.95	20.69	23.78	29.90	32.23	25.25	36.75	57.17	97.62	113.02				
		Gingely oil cake	20.07	20.96	26.85	32.32	34.57	37.20	12.15	43.66	72.93	84.97	99.04				
		Straw	6.60	8.00	9.02	11.93	11.45	12.22	53.55	73.13	128.98	119.77	134.55				
	Grass	3.04	2.43	4.98	3.50	3.50	3.61	-25.00	53.70	8.02	8.02	11.42					

Source : Animal Husbandry Department

Appendix 2.38										
District-wise Distribution of Fishermen Population in Kerala 2015-16 (Estimated)										
Sl. No.	District	Marine				Inland				Marine & Inland (Total)
		Male	Female	Children	Total	Male	Female	Children	Total	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	63248	55837	49616	168701	447	520	446	1413	170114
2	Kollam	39859	33262	19901	93022	13513	12723	8144	34379	127401
3	Pathanamthitta					932	810	377	2119	2119
4	Alappuzha	52139	47620	28738	128497	25014	23954	12962	61929	190426
5	Kottayam					9837	9327	5773	24937	24937
6	Idukki					268	268	170	706	706
7	Ernakulam	28706	26885	16935	72526	23721	23218	16874	63813	136339
8	Thrissur	20976	21434	13561	55971	7927	7259	4594	19780	75751
9	Palakkad					863	854	873	2590	2590
10	Malappuram	35574	28491	25803	89869	1809	1577	852	4238	94107
11	Kozhikode	38937	33790	25813	98540	4178	4396	3412	11986	110526
12	Wayanad					76	82	77	235	235
13	Kannur	17808	10771	9261	37840	2424	2563	1371	6358	44198
14	Kasaragod	17440	16162	9756	43358	412	392	185	989	44347
State		314687	274253	199384	788324	91421	87943	56110	235472	1023796

Source: Directorate of Fisheries

Appendix.2.39					
Contribution of Fisheries sector to Gross State Value Added (Base Year 2011-12)					
(₹ in crore)					
Constant Price					
Category	2011-12	2012-13	2013-14	2014-15 (provisional)	2015-16 (Quick)
Gross State Value added (at basic prices)	336293.11	356354.73	371651.47	395721.90	424791.11
Fishing and Aquaculture	3773.63	3764.19	3978.45	4313.64	4402.14
Share of fisheries sector in GSV	1.12	1.06	1.07	1.09	1.04
Primary sector	51100.77	51357.60	49409.05	50249.76	49206.30
Share of primary sector in GSV (%)	15.20	14.41	13.29	12.70	11.58

Source: Directorate of Economics & Statistics

Appendix 2.40					
Species-wise composition of Marine fish landings in Kerala (2012-13 to 2015-16)					
(MT)					
Sl. No.	Species	2012-13	2013-14	2014-15	2015-16
1	Elasmobranchs	2884	2873	4888	4464
2	Eels	166	161	630	679
3	Cat Fish	179	168	1472	1112
4	Chirocentrus	246	241	976	733
5 (a)	Oil Sardine	143585	140383	155684	72257
(b)	Lesser Sardine	59230	57981	41260	30873
(c)	Anchovilla	31511	30857	25768	37063
(d)	Trissocles	3034	2972	2206	8037
(e)	Other Clupeids	14481	14276	4046	2165
6	Saurida & Saurus	5361	5337	3654	3560
7	Hemirhamphus & Belone	692	683	379	146
8	Flying Fish	0	0	45	0
9	Perches	29358	29444	15857	30780
10	Red Mulletts	1610	1478	1060	572
11	Polynemides	66	66	381	1224
12	Sciaenides	8613	8445	3508	8015
13	Ribbon fish	14776	14585	8465	16256
14 (a)	Caranx	26595	26030	10346	9691
(b)	Chorinemus	951	908	39	55
(c)	Other Carangids	19757	19616	13758	19021
15	Leiognathus	5141	5016	3956	2662
16	Lactrious	3373	3259	647	706
17	Pomfrets	1522	1498	3069	6948
18	Mackerel	42696	43916	74395	77891
19	Seer fish	2469	2411	6575	10395
20	Tunnies	10458	10562	17280	30767
21	Sphyraena	2025	2027	725	791
22	Mugil	852	849	9	6
23	Soles	13480	13405	10941	10613
24(a)	Penaeid Prawn	44597	42126	50947	51971
(b)	Non Penaeid Prawn	1659	1516	6443	9829
(c)	Lobsters	385	387	251	0
(d)	Crabs	4465	4457	8314	12789
(e)	Stomatopods	9381	9210	0	0
25	Cephalopods	13607	13825	34057	43794
26	Miscellaneous	11433	11340	12437	10880
Total		530638	522308	524468	516745

Source: Directorate of Fisheries

Appendix 2.41									
Species-wise Inland Fish Production in Kerala (2012-13 to 2015-16)									
(In MT)									
Sl. No.	Species	2012-13		2013-14		2014-15		2015-16	
		Production	%	Production	%	Production	%	Production	%
1	2	3	4	5	6	7	8	9	10
1	Prawns	23812	15.97	23168	12.43	26225	13.01	28361	13.46
2	Etroplus	6290	4.22	6668	3.58	7640	3.79	8507	4.04
3	Murrels	5174	3.47	5372	2.88	5333	2.65	5518	2.62
4	Tilapia	10459	7.01	10860	5.83	12064	5.99	13129	6.23
5	Catfish	6059	4.06	6291	3.38	6302	3.13	6365	3.02
6	Jew Fish	3397	2.28	3517	1.88	3851	1.91	4157	1.97
7	Mussels	21231	14.24	23969	12.86	26609	13.2	24060	11.42
8	Edible Oyster	1750	1.17	1780	0.96	1823	0.9	1867	0.89
9	Mulletts	5540	3.72	5752	3.09	6294	3.12	7069	3.35
10	Labeo fimbriatus	2643	1.77	2744	1.47	3228	1.6	3429	1.63
11	Barbus	656	0.45	681	0.37	746	0.37	806	0.38
12	Mrigal	9317	6.25	12687	6.81	13666	6.78	12650	6.00
13	Crabs	1323	0.89	1735	0.93	1593	0.79	1853	0.88
14	Common crabs	8818	5.91	9159	4.92	10663	5.29	12461	5.91
15	Catla	17861	11.98	29175	15.66	29139	14.46	30242	14.35
16	Chamos	558	0.37	578	0.31	644	0.32	713	0.34
17	Eels	79	0.05	81	0.04	89	0.04	96	0.05
18	Labeo Rohitha	16998	11.4	25097	13.47	27161	13.48	29783	14.13
19	Others	7133	4.79	17023	9.13	18475	9.17	19696	9.35
Total		149098	100	186337	100	201545	100	210762	100

Source: Directorate of Fisheries

Appendix 2.42						
Fish Production in Kerala & India during the last Five years						
(lakh tones)						
Year	Kerala			All India		
	Marine	Inland	Total	Marine	Inland	Total
2011-12	5.53	1.4	6.93	33.72	52.94	86.66
2012-13	5.31	1.49	6.8	33.21	57.19	90.40
2013-14	5.22	1.86	7.08	34.43	61.36	95.79
2014-15	5.24	2.02	7.26	34.91	65.77	100.69
2015-16	5.17	2.10	7.27	Not Available		

Source: Fisheries department, GoK; Department of Animal Husbandry, Dairying & Fisheries, GoI

Annexure. 2.43			
District wise fish production in Kerala 2015-16 (lakh tonnes)			
District	Marine Fish Production	Inland Fish Production	Total Fish Production
Thiruvananthapuram	0.64	0.06	0.7
Kollam	1.09	0.2	1.29
Alappuzha	0.44	0.35	0.79
Pathanamthitta		0.03	0.03
Kottayam		0.12	0.12
Ernakulam	0.8	0.4	1.2
Idukki		0.03	0.03
Thrissur	0.21	0.27	0.48
Palakkad		0.22	0.22
Malappuram	0.6	0.07	0.67
Kozhikkode	0.94	0.06	1
Wayanad		0.02	0.02
Kannur	0.23	0.05	0.28
Kasargode	0.22	0.23	0.45
State(Kerala)	5.17	2.11	7.28

Source: Fisheries Directorate

Appendix 2.44				
Export of Marine Products from India and Kerala				
(Q: Quantity in Metric Tonnes V: Value - ₹ in crore)				
Year		India	Kerala	Per cent of Kerala share
2010-11	Q	813091	124615	15.33
	V	12901.47	2002.10	15.52
2011-12	Q	862021	155714	18.06
	V	16597.23	2988.33	18.00
2012-13	Q	928215	166399	17.93
	V	18856.26	3435.85	18.22
2013-14	Q	983756	165698	16.84
	V	30213.26	4706.36	15.58
2014-15	Q	1051243	166754	15.86
	V	33441.61	5166.08	15.45
2015-16	Q	945892	149138	15.77
	V	30420.82	4644.42	15.27

Source : MPEDA

Appendix 2.45				
Outlay and Expenditure under Fisheries Sector during 2014-15 and 2015-16				
(₹ in lakh)				
Name of Sector/Scheme	2014-15		2015-16	
	Budget Estimate	Expenditure	Budget Estimate	Expenditure
State Plan	26467.00	19451.63	36777	34504.07
Centrally Sponsored Schemes	6045.00	5763.38	5917	6301.59
NCDC assisted Integrated Fisheries Development Project (NCDC loan)	1800	0.00	1800	1800.00
Total	34312.00	25215.01	44494.00	42605.66

Source: Budget programme Book and Plans Space Kerala

Appendix 2.46								
Ongoing Fishing Harbours in Kerala								
(₹ in lakh)								
Sl. No.	Name of Fishing Harbour	Total Estimated Cost		Year of Starting	Year of Completion / target	Cumulative Expenditure up to March 2016 (including RIDF)	Amount sanctioned by GOI	Amount released by GoI as on March 2016
		Original	Revised					
1	2	3	4	5	6	7	8	9
1	Vizhinjam (50% CSS)	704	1832	1987	2013 (Partially commissioned)	1705.99	704	690.50
2(a)	Muthalappozhi (50% CSS)	1366	4468	2000	2007	1177.05	1366	683
2(b)	Muthalappozhi (RKVY)	3102		2013	2016	1699.42	3102	1900
3	Ponnani (50% CSS)	2759.4	3524	2001	Commissioned 2011	3505.27	2759.4	1379.7
4	Thalai (Including NABARD Assistance)	1925.74	3479.5	2008	2017	2034.96	3479.5	1300
5	Thottappally (50% CSS)	1458.3	1802.23	2004	2011(Commissioned)	1749.54	1802.23	870.13
6	Koyilandi (Including NABARD Assistance)	3545	6399	2006	2017	4952.15	6399	2122.50
7	Chethi (1 st and 2 nd phase) (State Scheme)	995	...	2008	2014	889.5	-	-
8	Kasaragod (RKVY Scheme as 100% CSS)	2975	...	2009	2016	2885.89	2975	2885
9	Chettuvai (75% CSS)	3024	3468	2010	2016	2785.02	3024	1833
10	Cheruvathur(75% CSS)	2906	3351	2010	Project commissioned	3030.22	2906	1750
11	Chellanum 2nd Stage NABARD Assistance	2990	...	2010	2017	2001.93		
12	Arthungal (75 % CSS)	4939	11096.23	2013	2017	2132.87	4939	1050
13	Thannor (75 % CSS)	4487	8117	2013	2017	3979.08	4487	1550
14	Vellayil (75% CSS)	3930	5346	2013	2017	3771.73	3930	650
15	Manjeshwaram (75% CSS)	4880	...	2014	2017	223.48	4880	100

Source : Harbour Engineering Department

Appendix 2.47					
Details of Revenue Collection in various Fishing Harbours/Fish Landing Centres					
(₹ in lakh)					
Sl. No.	Name of Harbour / Landing Centre	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6
I FISHING HARBOURS					
1	Neendakara	185.91	338.70	154.58	199.02
2	Puthiyappa	78.12	19.93	33.47	76.61
3	Munambam	0.00	0.00	0.00	0.00
4	Mopla Bay	18.18	11.82	25.06	10.61
5	Chombal	7.54	2.84	10.36	1.68
6	Azheekal	0.14	0.11	1.84	0.30
7	Beypore	14.53	8.79	4.4	11.83
8	Thankassery	49.38	42.77	46.58	39.88
9	Vizhinjam	11.46	16.46	4.7	10.19
10	Kayamkulam	43.06	41.65	50.14	29.17
11	Thattapally	5.19	0.44	132.49	0.00
12	Koyilandi	1.3	0.48	0.33	0.33
13	Chettuva	7.58	11.06	4.1	10.74
14	Cheruvathur	0.48	1.43	0.86	17.82
15	Ponnani	0	1.5	0	0.00
16	Arthungal	0	0	0	0.00
17	Vellayil	2.79	3.32	17.76	5.15
II FISH LANDING CENTRES					
1	Munakka kadavu	2.07	3.52	1.31	3.95
2	Neeleswaram	0.25	0.47	0.64	0.42
3	Dharmadam	0.75	0.99	0.92	0.58
4	New Mahe	0.72	0.85	0.91	0.15
5	Chalilgopalapettah	0.39	0.49	0.51	1.40
6	Palacode	0.00	0	0	0.00
7	Punnappra	5.13	2.93	0	2.40
8	Kattoor	0.00	0.03	0	0.00
9	Ettikulam	0.00	0	0	0.00
10	Thikkodi	0.00	0	0	0.00
TOTAL		434.97	510.58	490.96	422.23

Source: Harbour Engineering Department

Appendix 2.48									
Welfare Activities of Fisheries Department (2012-13 to 2015-16)									
Sl. No.	Particulars	2012-13		2013-14		2014-15		2015-16	
		Financial (lakh ₹)	Physical (Number)	Financial (lakh ₹)	Physical (Number)	Financial (lakh ₹)	Physical (Number)	Financial (lakh ₹)	Physical (Number)
1	2	3	4	5	6	7	8	9	10
1	Housing (NFWF, 13 th FCA & IDRV)	4567.5	2260	1923.5	1162	8053	4017	10000	4990
2	Group Accident Insurance Scheme for fishermen	364.04	234779	364.23	234904	379.69	236310	392.59	232501
3	Group Accident Insurance Scheme for allied workers	114.96	74139	118.59	76510	127.48	79347	300	79346
4	Fishermen Old age Pension	1311.66	39569	1573.32	39841	2660.96	44500	5477	64250
5	Pension for wives of deceased fisherman	291.52	7890	385.95	8059	525.9	8865	671.032	9181

Source: Directorate of Fisheries

Appendix 2.49					
Details of Welfare Relief Schemes Implemented By Kerala Fisherman's Welfare Fund Board – 2014-15 and 2015-16					
(₹ in lakh)					
Sl. No.	Schemes	2014-15		2015-16	
		No	Amount	No	Amount
Govt. Aided Schemes					
1	Old age pension	44500	2655.61	46814	3524.77
2	Widow pension	8865	572.86	9181	671.03
3	Group Insurance Premium (Matsya Suraksha Scheme)	236310	379.69	237501	394.31
4	Craft - Ins- premium (Matsya Suraksha Scheme)	14	0.95		
5	Bio- Metric ID Cards - Survey		1.8		1.065
6	Tanal Scheme	191713	2588.13		2911.9
	Sub Total	481402	6199.05	293496	7503.075
Board Implemented Schemes					
1	Death of fishermen	814	40.7	609	91.5
2	Fatal disease	206	75.91	268	77.62
3	Marriage Assistance	2850	42.75	1945	97.14
4	Special Sanction	0	0	1	0.15
5	Death after/ while fishing	59	11.8	39	15.95
6	Death of Dependents	853	5.12	159	0.954
7	Maternity Assistance	140	1.05	80	0.6
8	Temporary Disability	85	0.24	18	0.172
9	Sterlization Operation	26	0.13	33	0.165
10	Chairman's Relief Fund	28	3.89	76	1.77
11	SSLC cash award	285	13.68	490	22.53
12	Plus 2 cash award	31	1.75	57	3.17
13	Invalid pension	2	0.01	1	0.023
14	Sports promotion to Schools / individuals	28	1.4	35	1.967
15	Special Tuition assistance to Schools for SSLC/+2	0	0	0	0
16	Death claim for Non-insurance period	0	0	0	0
17	Hospitalisation expenses	0	0	0	0
	Sub Total	5407	198.48	3811	313.711
MATSYA SURAKSHA SCHEME COMPENSATION					
1	Insurance Compensation - Death	201	692.4	41.00	425.73
2	Insurance Compensation – PPD	7	8	0	0.00
3	Insurance Compensation – Funeral	20	1.15	10	0.59
4	Insurance Compensation - Education of Children	14	4.45	11	1.65
5	Insurance Compensation - Hospitalization	88	20.67	20	20.856
6	Craft - Insurance Compensation	1	0.22	0	0
	Sub Total	331	726.44	82	448.826
	Grand Total	487140	7124.44	297389	8265.612
Welfare Schemes in the Fishermen Welfare Scheme - 2014-15 & 2015-16					
Sl. No.	Schemes	2014-15		2015-16	
		No	Amount	No	Amount
Govt. Implemented Schemes					
1	Old Age pension (Rs.500/- pm)	5885	353.1	6024	142.104
2	Group Insurance Premium (Matsya Suraksha Scheme)	79347	127.49	83000	137.801
	Sub Total	85232	480.59	89024	279.905
	Board Implemented Schemes				

1	Old age pension (Rs.100/- pm Board share)	5885	70.62	6024	72.288
2	Death of Allied worker	114	5.7	114	6.9
3	Fatal disease	44	5.74	47	5.332
4	Marriage Assistance	311	4.66	310	10.44
5	Special Sanction	0	0	0	0
6	Maternity Assistance	24	0.18	24	2.76
7	Sterlization Operation	18	0.09	19	0.095
8	SSLC cash award/Assistance	46	2.12	45	6.109
9	Plus 2 cash award	8	0.44	8	0.90344
10	Sports promotion to Schools/individuals	0	0		0.20632
	Sub Total	511	18.94	6591	105.033
	Matsya Suraksha Scheme Compensation				
1	Insurance Compensation - Death	15	45.94	5	21.00
2	Insurance Compensation - PPD	0	0	0	0.00
3	Insurance Compensation - Funeral	3	0.06	1	0.0139
4	Insurance Compensation - Education	4	0.25	2	0.20
5	Insurance Compensation- Hospitalization	18	2.14	14	1.788
	Sub Total	551	67.34	22	23.00
	Grand Total	86294	566.89	95637	407.94

Source: Kerala Fishermen's Welfare Fund Board

Appendix 2.50				
Major Programmes of Matsyafed				
Sl. No.	Name of Programme	Unit	Physical achievement during 2015-16	Financial achievement during 2015-16
(₹ in lakh)				
1	Fish Auction	No. of fisher men	41191	25488
2	Integrated Fisheries Development Project	beneficiaries	11034	3736.265
3	Bankable scheme	beneficiaries	154	50
4	Matsyafed input security scheme	beneficiaries	24	3.857
5	Subsidy for suitable complements of fishing gear	beneficiaries	833	49.98
6	Scheme with financial assistance of NBCFDC and NMDFC	beneficiaries	570	586.14
7	SHG's (Microfinance)	beneficiaries	33000	6593.23
8	Interest Free Loan for Fisher Women	beneficiaries	21085	3137.05

Source: Matsyafed

Appendix 2.51				
Live Storage Position in the Reservoirs				
(Mm ³)				
Sl. No	Item	2014	2015	2016
1	Storage at the beginning of the Monsoon	415.19	527.83	488.35
2	Storage at the end of the Monsoon	1316.46	901.15	690.00
3	Increase due to Monsoon	901.26	373.32	201.65

Average for 10 years (2007-2016)		
1	Storage at the beginning of the Monsoon	442.05
2	Storage at the end of the Monsoon	1094.95
3	Increase due to Monsoon	652.90

Source: Water Resource Department

Appendix 2.52											
Project-wise Details of Ongoing Projects											
(₹ lakh)											
Sl. No.	Name of Project	Year of starting	Original estimate	Revised estimate	Year of revision	Cost escalation (%)	Expenditure upto October 2016	Target area to be irrigated (Ha)		Physical achievement as on 3/16 (Ha)	
								Net	Gross	Net	Gross
1	2	3	4	5	6	7	8	9	10	11	12
1	Muvattupuzha	1974	2086	94500	DSR 2014	4535	91800	19237	37737	-	32550
2	Idamalayar	1981	1785	75000	2012	4102	42654	14394	29036	-	2391.66
3	Karapuzha	1976	760	44150	2010	5709	32287	5221	8721	601	-
4	Banasurasagar	1979	800	18550	2010	2219	5278	2800	4740	-	-

Source: Water Resource Department

Appendix 2.53				
Net Area Irrigated (Source wise)				
(in Ha.)				
Sl. No.	Source	2013-14	2014-15	2015-16
1	2	3	4	5
1	Government canals	80007	85654	88817
2	Private canals	1448	1249	774
3	Tanks	45283	47095	48459
4	Wells	124850	133421	133529
5	Other sources	145588	146863	142254
6	Total	397176	414282	413833
7	Gross irrigated area	468320	469647	483647
8	Net area irrigated to net area sown (%)	19.36	20.27	20.97
9	Gross irrigated area to gross cropped area (%)	17.89	17.89	18.4
10	Irrigated area under paddy to total irrigated area	32.89	32.08	31.12

Source: Directorate of Economics & Statistics

Appendix 2.54															
Net Area Irrigated (Source Wise) - 2015-16															
Sl. No.	District	Small stream (Thodu)				Pond		Well		Bore well	Lift & Minor Irrigation	Others			Total
		Govt.	Private	Govt.	Private	Govt.	Private	From River & Lake				Other methods	Other sources		
								Pump	Wheel						
1	TVM	3833	0	588	21	1	3254	111	0	0	0	0	439	8247	
2	KLM	1368	27	15	49	31	2853	33	0	0	4	1674	6054		
3	PTA	2751	0	34	0	0	2343	4	113	0	7	1	5253		
4	ALPY	6237	1	0	462	0	819	7728	0	5567	19255	335	40404		
5	KTM	15	13	0	276	0	1952	18	107	0	12204	10	14595		
6	IDK	1214	11	54	16605	0	8341	4150	0	68	1982	9096	41521		
7	EKM	7340	6	309	1693	5	6965	465	3130	568	1027	357	21865		
8	TSR	19023	5	224	3567	70	37937	1716	991	561	4709	2530	71333		
9	PKD	42443	25	140	5729	7	13063	8741	514	7801	548	8242	87253		
10	MLP	2443	378	157	4332	69	16019	1362	1290	1072	1726	1356	30204		
11	KKD	989	8	0	513	1	2363	56	0	216	3	522	4671		
12	WYD	0	0	18	52	0	73	0	103	136	0	12123	12505		
13	KNR	631	281	22	1415	17	9223	438	34	221	652	2281	15215		
14	KGD	530	19	43	12141	15	28108	10269	15	3021	102	450	54713		
STATE TOTAL		88817	774	1604	46855	216	133313	35091	6297	19231	42219	39416	413833		

Source: Directorate of Economics & Statistics

Appendix 2.55											
Crop Wise Gross Area Under Irrigation- 2015-16											
District	Paddy	Vegetables	Coconut	Arecanut	Cloves	Nutmug	Banana	Betal leaves	Sugarcane	Other crops	(in Ha)
1	2	3	4	5	6	7	8	9	10	11	
Thiruvananthapuram	2119	3325	2742	6	0	19	2669	18	0	1891	
Kollam	1181	6260	443	12	1	34	1591	24	0	659	
Pathanamthitta	2535	1172	718	14	11	521	1513	39	0	121	
Alappuzha	30878	2599	7537	13	0	129	472	36	40	1336	
Kottayam	16184	1903	61	2	107	1863	881	7	0	152	
Idukki	886	5713	767	105	70	1384	1260	0	765	193	
Ernakulam	5273	2399	10020	1106	2	6597	4113	4	0	3038	
Thrissur	22640	1671	40437	4224	9	6759	2164	3	0	3594	
Palakkad	49111	4679	24807	3285	2	288	14420	2	338	9096	
Malappuram	6006	4171	19117	5455	2	248	6177	158	0	1988	
Kozhikkode	481	1249	2606	325	5	217	1828	9	0	255	
Wayanad	9203	1244	85	20	0	0	6718	2	0	20	
Kannur	2688	2225	12538	1632	0	209	2312	13	0	767	
Kasaragod	1330	696	43772	17928	28	158	636	18	0	4046	
STATE	150515	39306	165650	34127	237	18426	46754	333	1143	27156	

Source: Directorate of Economics & Statistics

Appendix 2.56				
Gross Area Irrigated (Crop-wise)				
(in ha.)				
Sl. No.	Crops	2013-14	2014-15	2015-16
1	2	3	4	5
1	Paddy	154029	150700	150515
2	Vegetables	21066	24472	39306
3	Coconut	166380	165214	165650
4	Areca nut	34482	33685	34127
5	Nutmeg	17045	17423	18426
6	Clove	242	223	237
7	Banana	46312	47864	46754
8	Betel leaves	332	323	333
9	Sugarcane	2200	1515	1143
10	Others	26232	28228	27156
Total		468320	469647	483647

Source: Directorate of Economics & Statistics

Appendix 2.57					
Physical Achievement of Minor Irrigation Schemes (Surface Water)					
(Net area in Ha.)					
Sl. No.	Name of Schemes	2013-14	2014-15	2015-16	2016 upto 09.2016
1	MI Class I	504.03	37.91	795.33	207.23
2	MI Class II	14.66	10.2	24.74	334.07
3	Lift Irrigation works	0	0	0	0
4	Repairs to MI structure	28.94	15.76	55.03	0
5	MI Class I – NABARD	6323.61	4573.16	6200.83	7679.39
6	MI Class II – NABARD	0	0	0	0
7	Lift Irrigation – NABARD	0	0	0	0
Total		6871.24	4637.03	7075.93	8220.69

Source: Water Resources (Irrigation and Administration) Department

Appendix 2.58		
Details of Completed Projects under different Trenches of RIDF		
Sl. No.	RIDF Trenches	No. of Schemes completed
1	2	3
1	RIDF I	59
2	RIDF II	115
3	RIDF III	91
4	RIDF IV	66
5	RIDF V	122
6	RIDF VI	82
7	RIDF VII	40
8	RIDF VIII	43
9	RIDF IX	20
10	RIDF X	12
11	RIDF XI	140
12	RIDF XIII	224
13	RIDF XIV	28
14	RIDF XV	28
15	RIDF XVI	119
16	RIDF XVII	57
17	RIDF XVIII	40
18	RIDF XIX	13
19	RIDF XX	14
20	RIDF XXI	1
Total		1314

Source: Water Resources (Irrigation and Administration) Department

Appendix 2.59

Ground Water Resources of Kerala (As on 2011)

Sl. No.	District	Total Annual Ground Water Recharge (Ha.m)	Provision for Natural Discharge (Ha.m)	Net annual Ground Water Availability (Ha.m)	Existing Gross Ground Water Draft for Irrigation (Ha.m)	Existing Gross Ground Water Draft for domestic and industrial water supply (Ha.m)	Existing Gross Ground water Draft for All uses (Ha.m)	Provision for domestic and industrial requirement supply upto 2025 (Ha.m)	Net Ground Water Availability for future irrigation development (Ha.m)	Stage of Ground Water Development (%)
		3	4	5	6	7	8	9	10	11
1	2									
1	Thiruvananthapuram	35595.85	2724.39	32871.46	3984.99	13315.72	17300.71	14699.19	14187.28	52.63
2	Kollam	46755.58	4534.58	42221.00	4014.94	11932.86	15947.83	13015.56	25190.47	37.77
3	Pathanamthitta	27880.87	2469.45	25411.42	3462.72	6004.47	9467.20	6304.40	15644.29	37.26
4	Alappuzha	48645.90	3355.78	45290.11	2991.87	1004.47	13032.34	10371.16	31926.64	28.78
5	Kottayam	49182.06	4611.98	44570.08	3490.69	9214.29	12704.99	10704.21	30375.18	28.51
6	Idukki	21838.47	2183.85	19654.62	2873.72	5495.94	8369.67	5985.33	10795.57	42.58
7	Ernakulam	64499.47	6172.78	58326.69	10308.49	13931.32	24239.82	15295.83	32722.37	41.56
8	Thrissur	75504.97	7352.16	68152.81	22167.50	13720.24	35887.73	15216.48	30768.84	52.66
9	Palakkad	85814.18	7431.58	78382.60	35494.33	13151.26	48645.59	14197.15	28894.24	62.06
10	Malappuram	54530.67	4975.66	49555.00	8166.41	20234.67	28401.08	24392.10	16996.50	57.31
11	Kozhikode	37903.86	3441.58	34462.28	5200.40	14023.92	19224.32	15792.55	13469.33	55.78
12	Wayanad	30674.72	3067.47	27607.25	652.00	4318.70	4970.70	4815.96	22139.29	18.01
13	Kannur	53231.51	5218.87	48012.65	10943.33	10939.17	21882.50	11932.23	25137.09	45.58
14	Kasaragod	36543.61	3654.36	32889.25	16704.82	6774.71	23479.53	7797.51	8386.91	71.39
	TOTAL	668601.72	61194.49	607407.22	130456.24	153097.74	283554.01	170520.10	306634.00	46.68

Source: Dynamic Ground Water Resources of Kerala (2011), Ground Water Department, GoK and Central Ground Water Board, GoI.

Appendix 2.60					
Physical Achievements under Ground water development schemes					
Sl. No.	Items	Unit	2013-14	2014-15	2015-16
1	2	3	4	5	6
1	Detailed hydrological survey (Site selection)	No.	9230	8829	7409
2	Siting and providing technical assistance for open wells	No.	904	553	563
3	Siting and construction of different types of drilled wells	No.	2130	1925	1622
4	Creation of additional irrigation facilities	ha.	1079	1076	1189
5	Training of personnel	No.	29	16	34
6	Water sample analysis	No.	4400	2876	3310

Source: Water Resources Department (GWD)

Appendix 2.61			
Outlay and Achievement during Annual Plan 2015-16			
(₹ lakh)			
SL. No.	Sub Sectors	Annual Plan 2015-16	
		Outlay	Expenditure
1	Major & Medium Irrigation	19023.00	6294.43
2	Minor Irrigation	9943.00	8197.48
3	Command Area Development	800.00	686.39
4	Flood Control & Coastal Zone Management	5035.00	16567.52
Total		34801.00	31745.82

Source: Plan Space, GoK

Appendix 2.62							
District wise Forest cover in Kerala							
(Area in sq.km)							
Sl. No.	Name of District	Geographic area	Forest cover				Per cent to GA
			Very Dense	Moderate Dense	Open forest	Total	
1	Thiruvananthapuram	2193	60	718	539	1317	60.05
2	Kollam	2491	99	671	632	1402	56.28
3	Pathanamthitta	2641	158	1202	382	1742	65.96
4	Alappuzha	1414	0	45	67	112	7.92
5	Kottayam	2203	12	530	341	883	40.08
6	Idukki	5019	349	2081	1340	3770	75.11
7	Ernakulam	2407	12	282	412	706	29.33
8	Thrissur	3033	181	454	490	1125	37.09
9	Palakkad	4480	317	677	767	1761	39.31
10	Malappuram	3549	142	417	916	1475	41.56
11	Kozhikode	2344	30	316	706	1052	44.88
12	Wayanad	2131	142	1256	301	1699	79.73
13	Kannur	2966	21	346	971	1338	45.11
14	Kasaragod	1992	0	306	551	857	43.02
State		38863	1523	9301	8415	19239	49.50

Source : FSI, 2015

Appendix 2.63			
Types of Forests in Kerala			
Sl. No.	Forest Type	Area (Sq.km.)	% of Total area
1	Tropical Wet Evergreen & Semi Evergreen	3877.44	34.28
2	Tropical Moist Deciduous Forests	3615.98	31.97
3	Tropical Dry Deciduous Forests	391.36	3.46
4	Mountain Sub Tropical Temperate shoals	386.42	3.42
5	Plantation	1567.43	13.86
6	Grass land	501.09	4.43
7	Others	969.74	8.58
Total		11309.48	100

Source: Forest Department

Appendix 2.64							
Species-wise Area Under Forest Plantation (in ha)							
Sl. No.	Name of Species	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8
(1)	Hard Wood						
1	Teak	76720.241	76902.107	77258.904	74836.97	76734.962	77440.84
2	Rosewood	39.545	59.545	94.545	95.51	55.13	45.13
3	Mahagani	103.74	143.700	184.33	259.476	360.556	478.356
4	Sandalwood	100.98	100.980	68.84	68.84	73.84	73.84
5	Mangium	4271.673	4172.253	4186.943	4257.007	3589.465	3048.425
6	Others	7213.634	7093.134	1377.767	7345.175	842.71	1550.089
	Sub Total	88449.813	88471.719	83171.329	86862.98	81656.663	82636.68
(2)	Soft Wood						
1	Eucalyptus	7120.073	7662.013	7518.436	7279.926	6566.155	7136.528
2	Gravelia Robusta	418.568	564.928	550.728	603.128	576.728	490.368
3	Pine	547.576	547.576	547.576	547.576	552.8	608.976
4	Albizzia	150.570	150.370	150.57	150.57	120.33	120.33
5	Rubber	86.470	86.470	86.47	86.47	86.37	44.37
6	Balsa	41.200	41.200	61.84	45.34	36.04	21.04
7	Wattle	2194.910	2148.130	2122.13	2122.13	2187.61	1285.62
8	Matti	510.620	526.220	502.91	493.91	497.31	486.31
9	Elavu	781.930	889.730	600.98	600.98	600.98	600.98
	Sub total	11851.917	12616.637	12141.64	11930.03	11224.323	10794.522
(3)	Bamboo & Reeds						
1	Bamboo	5209.357	5352.677	5563.843	5351.874	5057.442	5347.263
2	Reeds	227.790	374.032	395.192	374.032	515.352	415.96
3	Cane	3047.246	3646.076	3469.576	2520.933	1908.872	2946.692
	Sub Total	8484.393	9372.785	9428.611	8246.839	7481.666	8709.915
(4)	Plantation Crops						
1	Pepper	142.540	222.540	222.54	192.54	70.00	100.00
2	Cinnamon	3.740	3.740	3.74	0	0.00	0.00
3	Medicinal Plants	2345.083	2385.373		1992.453	2027.111	2025.200
	Sub Total	2491.363	2611.653	226.28	2184.993	2097.111	2125.200
(5)	Mixed Plantations						
1	Cashew	4799.953	4646.953	4593.868	4742.614	4849.459	4694.819
2	Agavu	47.000	47.000	71.64	71.64	41.640	41.640
3	Alnus	74.350	74.350	74.35	74.35	74.350	74.350
4	Accacia	6099.396	5494.347	5433.646	6132.138	5752.314	6482.983
5	Sesbania	21.070	21.630	21.07	21.07	21.070	21.070
6	Casurina	112.630	112.630	198.87	198.87	138.870	52.630
7	Teak and Soft Wood	15244.370	13769.699	15033.398	12263.28	14482.874	13537.283
8	Fruit Bearing	326.566	233.015	142.313	121.29	366.543	315.543
9	Mangroves	343.289	366.289	366.289	377.189	373.189	373.189
10	Others	10945.554	18046.837	21405.696	19492.09	28183.671	25090.501
	Sub Total	38014.178	42812.750	47341.14	43494.53	54283.980	50684.008
	Grand Total	149291.664	155885.544	152309.00	152719.4	156743.743	154950.325*

Source : Forest Department

*Includes plantation in protected area also

Appendix 2.65 Forest Rights Act – 2006 - Progress Report as on 30.11.2016																
District	No. of FRCs constituted	No of claims received by FRCs till the end of previous month	received by FRCs	Total No. of claims received by FRCs so far	No. of claims passed by Grama Sapha	No. of claims rejected by Grama Sapha	No. of claims pending with Grama Sapha	No. of claims passed by SDLC	No. of claims rejected by SDLC	No. of claims pending with SDLC	No. of claims passed by DLC	No. of claims rejected by DLC	No. of claims pending with DLC	No. of titles issued	No. of cases in which titles is not issued	Extent of land in acres
1	2	3	4	5(3+4)	6	7	8	9	10	11	12	13	14	15	16	17
Trivandrum	38	5695	0	5695	5695	0	0	4800	441	454	4794	0	6	4633	161	6478.38
Kollam	14	1214	0	1214	1162	52	0	1162	0	0	1158	4	0	1158	0	983.76
Pathanamthitta	22	1130	0	1130	1069	61	0	948	121	0	940	8	0	847	93	589.30
Kottayam	12	1704	0	1704	1553	116	35	1441	112	0	1377	63	1	1377	0	1538.64
Idukki	93	11201	0	11201	10099	1102	0	7864	41	2194	7862	2	0	7729	133	14170.36
Ernakulam	14	1553	0	1553	1415	89	49	1320	95	0	1159	161	0	1042	117	2105.28
Thrissur	36	1341	0	1341	1341	0	0	1332	9	0	816	465	51	810	6	805.47
Palakkad	143	4756	0	4756	4756	0	0	1485	2073	1198	1302	183	0	122	80	1573
Malappuram	36	1493	0	1493	1493	0	0	948	308	237	948	0	0	945	3	710.36
Kozhikodu	5	20	0	20	11	9	0	11	0	0	11	0	0	11	0	6.87
Wayanad	109	6937	0	6937	4458	2479	0	4458	0	0	4450	8	0	4262	188	3227.06
Kannur	57	1037	0	1037	1032	5	0	1031	1	0	1031	0	0	1031	0	1590.00
Total	579	38081	0	38081	34084	3913	84	26800	3201	4083	25848	894	58	25067	781	33778.11

Source: Forest Department

Appendix 2.66				
Production of Major Forest Produce (2014-15 & 2015-16)				
Sl. No.	Item	Unit	2014-15	2015-16
1	2	3	4	5
1	Timber	Cum.	32371.16	40909.75
2	Fire wood	MT.	14817.89	5831.27
3	Honey	Kg.	61317.7	56176.90
4	Reeds	MT.	5759.13	5552.91
5	Bamboo	MT.	8751.93	5718.27
6	Jungle Wood Poles	MT.	12232.94	4893.50
7	Eucaliptus	MT.	5960.45	4558.31
8	Sandal wood	Kg.	88190.94	68644.60

Source: Forest Department

Appendix 2.67					
Revenue from Timber and Other Forest Products (2011-12 to 2015-16)					
(₹ In lakh)					
Items	2011-12	2012-13	2013-14	2014-15	2015-16
A.FOREST PRODUCTS					
Timber	18119.401	20225.558	26829.613	26943.95	24089.664
Firewood and Charcoal	58.166	61.451	107.563	94.136	21.694
Live Stock	10.314	16.194	18.433	30.641	21.929
Other Items	2360.428	1709.805	2614.965	1882.759	1604.195
Total(A)	20548.309	22013.008	29570.574	28951.49	25737.482
B.OTHER RECEIPT					
Including interest on Forest Revenue Dues	1670.063	1783.754	3597.147	1120.741	3288.634
Total(B)	1670.063	1783.754	3597.147	1120.741	3288.634
Gross Revenue (A+B)	22218.372	23796.762	33167.721	30072.23	29026.116
Deduct	165.955	63.492	172.874	32.076	5.597
Net Amount	22052.417	23733.270	32994.847	30040.15	29020.519

Source : Forest Department

Appendix 2.68				
Contribution of Forestry Sector to Gross State Value Added (20011-12 prices)				
(₹ in lakh)				
Constant Price				
Category	2012-13	2013-14	2014-15 (Provisional)	2015-16 (Quick)
Forestry & Logging	430722	361413	357325	355382
Share of Primary sector in GSVA	5135760	4940905	5024976	4920630
Gross State Value Added at Basic Prices	35635473	37165147	39572190	42479111
Share of Forestry in GSVA (in percentage)	1.21	0.97	0.90	0.83
Gross State Domestic Product	38769346	40278133	43223674	46724313
Share of Primary sector in GSDP (in percentage)	13.24	12.26	11.62	10.53

Source: Directorate of Economics & Statistics

Appendix 2.69			
Sanctuaries, National Parks, Biosphere Reserves and other Protected Areas in Kerala			
Sl. No.	Name of National Park/ Wildlife Sanctuary/ Biosphere Reserve	Area In Sq. Km.	Year of Formation
National Parks			
1	Eravikulam Wildlife Sanctuary	97	1978
2	Silent Valley National Park*	237.52	1984
3	Anamudi Shola National Park	7.5	2003
4	Mathikettan Shola National Park	12.817	2003
5	Pambadum Shola National Park	1.318	2003
Wildlife Sanctuaries			
6	Periyar Wildlife Sanctuary**	925	1950
7	Neyyar Wildlife Sanctuary	128	1958
8	Peechi-Vazhani Wildlife Sanctuary	125	1958
9	Parambikulam Wildlife Sanctuary***	643.66	1973
10	Wayanad Wildlife Sanctuary	344.44	1973
11	Idukki Wildlife Sanctuary	70	1976
12	Peppara Wildlife Sanctuary	53	1983
13	Thattekkad Bird Sanctuary	25	1983
14	Shendurney Wildlife Sanctuary	171	1984
15	Chinnar Wildlife Sanctuary	90.44	1984
16	Chimmony Wildlife Sanctuary	85	1984
17	Aralam Wildlife Sanctuary	55	1984
18	Mangalavanam Bird Sanctuary	0.0274	2004
19	Kurinjimala Wildlife Sanctuary	32	2006
20	Choolannur Pea Fowl Sanctuary	3.42	2007
21	Malabar sanctuary****	74.215	2009
22	Kottiyoor Wildlife sanctuary	30.3798	2011
Community Reserve			
23	Kadalundi-Vallikunnu Community Reserve	1.5	2007
Total		3213.237	
Biosphere Reserve			
24	Agasthyamala Biosphere Reserve	1828	2001
25	Nilgiri Biosphere Reserve	1455.4	1986

Source: Forest Department

*Includes 148 Km² of buffer zone added to Bhavani range during 2007

**includes 148 Km² of critical tiger core areas from Goodrial range

***includes core or critical tiger habitate(390.89 Km²) & buffer zone (252.77 Km²)

****under the Administrative control of DFO, Kozhikode

Source: Forest Statistics 2015

Appendix 2.70			
Seedlings Distributed Through Social Forestry			
Sl. No.	Name of Scheme	Year of Starting	Seedlings distributed upto 31.03.2016 (₹ in lakh)
1	Ente Maram Project	2007-08	235.71
2	Nammude Maram Project	2008-09	50.79
3	Vazhiyora Thanal Project	2007-08	2.38
4	Haritha Theeram Project	2007-08	22.52
5	Haritha Keralam Project	2009-10	264.80
Total			576.2

Source: Forest Department

Appendix 2.71		
Outlay and Expenditure under Forest Sector during 2015-16		
(₹ in lakh)		
2015-16		
	Outlay	Expenditure
State Sector Schemes	15200.00	12535.79
Central Sector Schemes	4653.00	1894.29
Total (Plan)	19853.00	14430.08

Source: Planspace, Gok

Appendix 2.72			
Co-operatives Under the Administrative Control of Registrar of Co-operative Societies 2016			
Sl. No.	Type of Societies	Total No.	Working
1	Apex, Federal, Central Societies	30	30
2	Credit Co-operatives	3468	3335
3	Marketing Co-operatives	579	253
4	Consumer Co-operatives	4671	4043
5	Processing Co-operatives	36	15
6	Housing Co-operatives	397	296
7	SC/ST Co-operatives	834	429
8	Health Co-operatives	202	102
9	Women Co-operatives	1152	865
10	Other Co-operatives (Miscellaneous)	3918	2540
Total		15287	11908

Source: Registrar of Co-operative Societies

Appendix 2.73	
Physical Achievements under Co-operation during 2016	
(₹ in crore)	
Item	Achievement
Short Term (Agriculture)	8230.08
Medium Term (Agriculture)	4046.12
Long Term (Agriculture)	477.44
Retail sale of fertilizers	1335.31
Retail sale of Consumer goods	311.73
Agricultural produce marketed	151.22
Storage in Co-operatives	66512.78

Source : RCS

Appendix 2.74				
Selected Indicators of the Credit Operations of the Primary Agricultural Credit Societies - 2016				
Sl. No.	Indicators	Unit	2015	2016
1	No. of Societies	Nos.	1642	1647
2	No. of Advancing Societies	Nos.	1354	1408
3	No. of Members	Nos. in crore	2.28	2.29
	i) of which SC	Nos. in Lakh	13.01	13.26
	ii) of which ST	Nos. in Lakh	1.35	1.99
4	No. of Borrowing Members	Nos. in crore	2.02	2.20
5	Paid up share capital	₹ in crore	1833.00	1497.06
6	Reserves	₹ in crore	4761.93	3517.36
7	Deposits	₹ in crore	73795.62	80190.41
8	Working Capital	₹ in crore	94095.36	98852.63
9	Loans Issued	₹ in crore	83308.04	76007.84
	(i) Short-term	₹ in crore	58303.40	45627.38
	(ii) Medium-term	₹ in crore	21569.96	22893.32
	(iii) Long - term	₹ in crore	3434.68	4014.41
10	Loan Outstanding	₹ in crore	63164.44	61123.57
11	Loan Overdue	₹ in crore	10668.81	10285.64
12	Demand	₹ in crore	73017.73	61869.64
13	S.T Loan for agricultural purpose alone	₹ in crore	5742.99	4341.14
14	S.T Loan for non- agricultural purpose alone	₹ in crore	52560.41	41286.25
15	M.T loan for Agricultural purpose	₹ in crore	3458.18	2779.84
16	M.T loan for non-Agricultural purpose	₹ in crore	18111.78	20113.48
17	L.T. Loan for Agricultural purpose alone	₹ in crore	153.54	256.81
18	L.T. Loan for non-agricultural purpose alone	₹ in crore	3281.13	3757.61
19	Value of Fertilizers Sold	₹ in crore	2115.38	1495.02
20	Value of Agricultural Produce Marketed	₹ in crore	442.61	169.83
21	Dormant Societies	Numbers	30	35
22	Societies on Profit	Numbers	1013	1020
23	Profit Amount	₹ in crore	1279.01	1199.71
24	Societies on loss	Numbers	535	532
25	Loss Amount	₹ in crore	851.96	976.64
26	Societies without profit or loss (Under Liquidation)	Numbers	64	60
27	Societies having paid Secretaries	Numbers	1520	1531
28	Societies having own Godowns	Numbers	1228	1181
29	Societies having Hired Godowns	Numbers	110	126
30	Viable Societies	Numbers	1401	1383
31	Computerised societies	Numbers	1438	1464
32	Self Help Group Formed by PACS	Numbers	66071	68711
33	State Contribution to SHGs through PACS	₹ in Lakh	319.95	375.22
34	State Contribution to agri Credit	₹ in Lakh	877.25	1033.75
35	Assistance for insurance	₹ in Lakh	24281.01	26182.27

Source: Registrar of Co-operative Societies, Kerala

Appendix 2.75				
Selected indicators of performance of the Primary Agricultural Credit Societies - 2016				
Sl. No.	Indicators	Unit	2015	2016
1	2	3	4	5
1	Average membership per society	No.	13855.85	13873.71
2	Average Share Capital per Society	₹ in lakh	111.63	90.90
3	Average deposit per society	₹ in lakh	4494.25	4868.88
4	Average deposit per member	₹	32435.78	35094.27
5	Average working capital per society	₹ in lakh	5730.53	6001.98
6	Average loan per member	₹	36616.83	33263.82
7	Percentage of borrowing members to total	%	88.62	96.17
8	Average loan advanced per advancing society	₹ in lakh	6152.74	5398.28
9	Average loan advanced per borrowing members	₹	41317.28	34589.89
10	Percentage of overdue to demand	%	14.61	16.62
11	Percentage of overdue to outstanding	%	16.89	16.83

Source: Registrar of Co-operative Societies, Kerala

Appendix 2.76			
Targets and Achievements of Deposit Mobilisation Programme of Co-operatives in Kerala - 2016			
(₹ in crore)			
Year	Target	Achievement	Achievement (%)
2014-15	6000.00	6232.22	103.87
2015-16	6000.00	7311.35	121.86

Source : Registrar of Co-operative Societies , Kerala

Appendix 2.77				
Types of NCDC Assistance to Kerala (cumulative as on 31.03.2016)				
(₹ in crore)				
Sl. No.	Type of Assistance	Through State Government	Direct Funding	Total
1	Long Term Loan	1459.46	1.68	1461.14
2	Subsidy	53.96	0.25	54.20
3	Working Capital	50.00	4708.00	4758.00
Total		1563.42	4709.93	6273.34

Source NCDC

Appendix 2.78													
Activity-wise Sanction & Release of Funds to Kerala by NCDC from 2013-14 to 2015-16 (3 years)													
Sl. No.	Name of scheme	Total sanction during 2013-14	% to total sanction	Total sanction during 2014-15	% to total sanction	Total sanction during 2015-16	% to total sanction	Total Release during 2013-14	% to total release	Total Release during 2014-15	% to total release	Total Release during 2015-16	% to total release
(₹ in lakh)													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Marketing & input	91.25	0.09	258.00	0.28	147.91	0.38	240.00	0.36	102.19	0.18	104.00	0.37
2	Working Capital (Direct funding)	87000.00	83.50	64000.00	70.56	20000.00	51.76	55650.00	83.91	38500.00	69.36	24000.00	85.64
3	Agro-Processing												
	a) Rubber/Tea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	b) Food Grains	0.00	0.00	0.00	0.00	734.40	1.90	0.00	0.00	0.00	0.00	0.00	0.00
	c) Coconut	150.00	0.14	0.00	0.00	0.00	0.00	23.64	0.04	34.02	0.06	2.24	0.01
4	STORAGE	314.34	0.30	34.61	0.04	0.00	0.00	326.51	0.49	7.60	0.01	139.25	0.50
5	Rural Consumer / Student Store	5087.60	4.88	82.75	0.09	70.70	0.18	5106.15	7.70	90.88	0.16	176.38	0.63
6	I.C.D.P	5921.78	5.68	5976.75	6.59	7762.19	20.09	0.00	0.00	1248.53	2.25	1174.43	4.19
7	Fisheries	3672	3.52	3715.90	4.10	4211.00	10.90	3039.64	4.58	3545.11	6.39	1483.71	5.29
8	Coir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Handloom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Powerloom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Spinning Mills	0.00	0.00	15466.66	17.05	0.00	0.00	0.00	0.00	9936.04	17.90	332.00	1.18
12	SC/ST	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Computerisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Service Cooperatives	1944.99	1.87	1167.65	1.29	5707.35	14.77	1912.83	2.88	2039.30	3.67	603.73	2.15
15	Industrial Cooperatives	0.00	0.00	0.00	0.00	0.00	0.00	23.00	0.03	0.00	0.00	0.00	0.00
16	Dairy & Livestock	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	CSR	5.50	0.01	0.00	0.00	10.00	0.03	0.00	0.00	5.20	0.01	10.00	0.04
GRAND TOTAL		104187.46	100.00	90705.10	100.00	38643.55	100.00	66321.77	100.00	55508.86	100.00	28025.73	100.00

Table 2.79		
Year wise release of NCDC loans with Interest Rates (2013-14 to 2015-16)		
(₹ in crore)		
Year	Release of fund (Loan)	Interest rate (%)
2013-14	662.937	10.40 to 13.00
2014-15	547.817	10.50 to 12.75
2015-16	271.412	9.45 to 12.50

Source NCDC

Appendix 2.80						
Agency-wise Annual Credit flow to Agriculture and Total Priority Sector in Kerala						
(₹ in crore)						
Agency	Priority Sector			Agriculture		
	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
Commercial Banks	34281	40159	43135	18857	23889	25780
RRBs	4573	4484	5352	2785	2807	3373
Co-operatives including KSCARDB	20297	24720	28163	7008	8367	8557
Others	539	390	232	3	-	0
Grand total	59690	69753	76882	28653	35063	37710

Source: State Level Banker's Committee

Appendix 2.81

**Purpose-wise Classification of Long Term Loans Issued by
Primary Co-operative Agricultural & Rural Development Banks (2005-06 to 2014-15)**

Sl. No.	PURPOSE	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1	2	4	5	6	7	8	9	10	11	12	13
(1)	Ordinary Loan										
1	Construction of Wells/Tanks	28.77	13.55	8.85	16.27	9.97	39.76	32.15	1.75	6.9	0.50
2	Renovation of Wells/Tanks	2.10	0.45	0.50	1.00	0.00	7.02	80.9	5.35	11.75	0
3	Pumpsets & Agricultural machinery	0.45	0.25	2.50	1.40	1.40	0	0.45	73.87	11.53	99.97
4	Plantation & Horticulture	56.24	72.77	3.33	23.08	34.27	58.67	92.66	37.48	80.48	74.79
5	Animal Husbandry	20.80	15.68	1.25	8.68	9.8	81.62	0.5	25.54	39.72	50.8
6	Land Development	120.45	140.49	80.91	126.00	187.91	211.35	176.31	288.22	474.19	381.6
7	Construction of Godowns/Cattle Sheds	174.93	121.56	147.66	121.16	200.01	158.76	259.35	351.48	401.85	523.04
8	Barbed wire or stone fencing	7.28	-	-	27.68	17.15	32.58	11.42	18.92	12.75	23.37
9	Construction of drainage channels	-	-	-	-	-	-	-	-	-	-
10	Loans for Redemption of prior debts	-	-	-	-	-	-	-	-	-	-
11	Others	5.72	83.14	11.07	5.96	6.4	56.20	67.56	188.00	175.54	229.06
	Total	416.74	447.89	256.07	331.23	466.91	645.96	721.30	990.61	1214.71	1383.13
(2)	Scheme Loan										
1	Minor Irrigation	1521.59	1382.68	772.83	782.52	930.29	1014.09	1063.36	1500.06	1540.06	1429.79
2	Plantation & Horticulture	3165.09	4404.35	1776.35	1718.88	2750.99	2976.78	5043.49	6925.88	5401.93	6328.66
3	Agricultural Machinery	83.09	80.84	21.44	54.01	5.15	72.75	66.08	51.10	16.5	11.2
4	Dairy & Animal Husbandry	506.13	430.27	277.98	330.98	467.37	480.72	773.94	796.99	1394.86	2013.95
5	Land Development	3107.50	2567.52	1705.69	1795.58	2020.83	2729.93	3274.90	3663.39	4691.85	4561.88
6	Poultry	304.86	313.78	343.93	430.99	406.29	620.08	932.33	1382.04	1584.57	1838.23
7	Fisheries	66.23	82.36	30.73	48.40	70.72	51.3	45.74	76.01	87.87	170.31
8	Flexi credit	-	-	610.53	986.69	7	17.1	1012.84	528.35	2226.92	1155.74
9	Purchase of Land	-	-	631.47	558.08	414.99	1246.21	1784.84	1709.33	2581.66	979.95
10	SGP	-	223.51	120.68	195.13	75.39	148.91	1132.72	271.07	250.08	732.85
11	Others	1465.07	887.46	501.40	141.03	587.05	1315.27	1442.27	777.06	741.53	1371.09
	Total	10219.56	10372.77	6793.03	7042.29	8446.17	11668.88	16099.72	17681.28	20517.83	20593.65

Source: Kerala State Co-operative Agricultural & Rural Development Bank Ltd.

Appendix 2.82							
Agency-wise Disbursement of Refinance Assistance by NABARD in Kerala (2013-14 to 2015-16)							
(₹ in crore)							
Sl. No.	Agency	2013-14	%	2014-15	%	2015-16	%
		Amount		Amount		Amount	
1	2	3	4	5	6	7	8
1	KSCARD Bank Ltd.	778.000	31.62	1154.79	66.71	466400.52	93.15
2	Commercial Banks	1482.358	60.25	268.85	15.53	2850.33	0.56
3	State Co-op. Banks		0			17021.32	3.4
4	Regional Rural Banks	200.003	8.13	307.53	17.76	14413.01	2.89
Total		2460.361	100	1731.17	100	500685.2	100.00

Source: NABARD

Appendix 2.83							
Purpose - wise Refinance by NABARD - Kerala							
(₹ in crore)							
Sl. No.	Purpose	2013-14	2014-15		2015-16		%
		Amount	%	Amount	%	Amount	
1	Minor Irrigation	6.312	0.26	63.78	3.68	3861.91	4.95
2	Land Devpt	23.946	0.97	123.32	7.12	7371.50	9.44
3	Farm mech	166.890	6.78	2.22	0.13	448.54	0.57
4	Plantation & Hort	373.584	15.18	101.35	5.85	11180.68	14.32
5	Dairy Devt	10.610	0.43	27.07	1.56	6780.84	8.68
6	Fisheries	0.054	0.02	3.39	0.20	278.02	0.35
7	Poultry	0	0	34.01	1.96	1351.82	1.73
8	Bio-gas	0	0	0	0.00	0.00	0.00
9	SG/MY	1.061	0.04	0.1	0.01	0.00	0.00
10	NFS	1758.710	71.48	1314.59	75.94	0.00	0.00
11	Sheep, Goat, Piggery	1.990	0.08	5.55	0.32	503.72	0.64
12	SGSY	0	0	0	0	0.00	0.00
13	SHGs	21.964	0.89	1.67	0.10	0.00	0.00
14	AH others	0	0	51.87	3.00	760.57	0.97
15	Forestry	7.556	0.31	0	0.00	0.00	0.00
16	Others	87.684	3.56	2.23	0.13	45537.24	58.32
Total		2460.361	100	1731.15	100	78074.85	100.00

Source: NABARD

Appendix 2.84				
Tranche wise Sanction & Disbursement under RIDF in Kerala				
(₹ crore)				
RIDF	Kerala as on 31.3.2016		India as on 31/3/2016	
	Sanction	Disbursement	Sanction	Disbursement
I	95.93	86.21	1906	1761
II	86.91	73.02	2636	2398
III	89.29	73.88	2733	2454
IV	64.00	56.73	2903	2482
V	126.77	117.20	3435	3055
VI	172.51	158.43	4488	4071
VII	181.87	156.61	4582	4053
VIII	193.97	166.84	5950	5149
IX	89.94	74.07	5638	4916
X	216.71	176.97	7651	6569
XI	175.65	149.80	8262	7370
	241.87	214.63	10020	9022
XIII	291.34	274.81	12538	11176
XIV	500.71	481.36	14568	12539
XV	374.40	257.39	15342	12443
XVI	552.26	240.36	18194	14035
XVII	1064.52	371.13	19602	14403
XVIII	739.10	223.08	20630	13927
XIX	1006.19	135.96	22736	10611
XX	1200.57	191.43	28637	5559
XXI	709.76	116.04	NA	NA
Total	8174.27	3795.95	NA	NA

Source: NABARD

Appendix 2.85
Financial Performance Under MGNREG during the Financial Year 2015-2016

Sl. No.	District	Opening Balance(OB)		Release from State Fund (*) to districts		Authorisation of e-FMS	Misc. Receipt	Borrowed Fund			Inter-district fund transfer		Total Availability	Cumulative LB Estimation of Expenditure						Per cent Utilization	Balance	Payment due**									
		CB as OB	Entered OB	Centre	State			From other district or Revolving Fund	Refunded to district/state	Fund transfer to other district	Fund received from other districts	Unskilled Wage		Semi-skilled and Skilled Wage	Material	Tax	Rec Exp.	Non-Rec Exp.	Total Adm. Exp.			Total	On Unskilled Wage	On Semi-skilled and Skilled Wage	On Material	Tax	Total				
Phase I																															
1	Palakkad	120.57	113.2	0	0	15429.74	4.57	0	38.38	0	0	0	15509.08	0	14859.2	48.24	18.35	0	551	0.06	551.1	22=20 +21	23=16+ 17+18+ 19+22	24=(23/1 4)*10 0	25=14 -23	26	27	28	29	30=2 6+27 +28 +29	
2	Wayanad	53.19	48.47	0	0	7114.8	1.48	0	16.25	0	0	0	7148.49	0	6823.04	0	106.7	1.18	202.24	0.83	203.1	21	22=20 +21	7134.02	99.8	14.47	2.2	0	2.93	0	5.15
Phase I Total		173.76	161.61	0	0	22544.54	6.04	0	54.62	0	0	0	22657.57	0	21682.27	48.24	125.07	1.18	753.24	0.89	754.14	22610.89	99.79	46.68	10.9	0.05	4.44	0	15.39		
Phase II																															
3	Idukki	1038.6	488.1	0	0	11378.01	0.45	0	14.84	0	0	0	11902.67	0	10482.8	291.59	379.8	0	339.19	2.77	342	342	11496.1	96.58	406.5 3	7.42	1.05	32.93	0	41.4	
4	Kasaragod	437.83	448.6	0	0	6206.92	3.96	0	396.6	0	0	0	6262.8	0	5985.11	43.46	2.49	0	194.82	0.01	194.8	194.8	6225.89	99.41	36.91	0.5	0.11	0	0	0.61	
Phase II Total		1476.5	936.61	0	0	17584.93	4.41	0	411.5	0	0	0	18165.48	0	16467.92	335.05	382.27	0	534.01	2.78	536.79	17722.03	97.56	443.4 4	7.92	1.16	32.93	0	42.01		
Phase III																															
5	Alappuzha	162.98	242.9	0	0	16749.79	2.4	0	6.91	0	0	0	16988.2	0	15927.4	7.34	489.4	5.38	419.48	1.69	421.2	421.2	16850.7	99.19	137.5 2	3.07	0.11	7.1	0	10.31	

6	Ermakulam	38.36	86.23	0	0	0	9538.22	2.24	0	22.47	0	0	9604.23	0	8685	135.46	393.2	0.6	338.96	0.01	339	9553.27	99.47	50.96	0.68	2.3	38.84	0	41.82	
7	Kannur	105.27	65.78	0	0	0	6575.93	0.52	0	17.12	0	0	6625.11	0	6260.76	26.48	33.01	0.56	258.05	0.55	258.6	6579.42	99.31	45.69	2.66	0.01	0.93	0	3.6	
8	Kollam	109.21	93.43	0	0	0	11799.18	1.12	0	42.23	0	0	11851.49	0	11410.3	5.12	38.8	0.4	355.74	0.95	356.7	11811.4	99.66	40.15	4.92	0.01	3.48	0	8.41	
9	Kotayam	120.37	109.9	0	0	0	5325.12	1.24	0	18	0	0	5418.21	0	4892.9	73.25	156.2	4.68	212.58	0.22	212.8	5339.86	98.55	78.35	2.91	1.01	7.7	0.2	11.85	
10	Kozhikode	164.88	136.1	0	0	0	11425.54	1.27	0	49.36	0	0	11513.5	0	10927.8	50.42	136.1	1.98	369.46	0.34	369.8	11486.1	99.76	27.41	2.8	0.5	0.74	0	4.05	
11	Malappuram	83.06	201.8	0	0	0	10032.98	2.53	0	1.13	0	0	10236.16	0	9582.48	11.86	99.12	0	391.54	3.39	394.9	10088.4	98.56	147.77	5.1	0.23	0.53	0	5.86	
12	Pathanamthitta	16.31	38.47	0	0	0	5524.69	0.41	0	11.33	0	0	5552.24	0	5119.02	126.42	47.69	0	217.73	0.15	217.9	5511.01	99.26	41.23	0.57	0.02	1.3	0	1.89	
13	Thiruvananthapuram	286.44	285	0	0	0	19972.46	4.68	0	97.77	0	0	20164.39	0	19097.4	200.39	189.3	5.92	478.31	0.37	478.7	19971.7	99.04	192.7	2.78	5.28	34.34	1	43.39	
14	Thrissur	30.76	42.11	0	0	0	10719.53	267.63	0	0	0	0	11029.27	0	10166.4	43.9	120.6	0.23	388.89	0.11	389	10720.1	97.2	309.15	5.14	0	5.29	0	10.43	
Phase III Total		1117.6	1301.6	0	0	0	107663.44	284.04	0	266.3	0	0	108982.79	0	102069.47	680.65	1703.5	19.8	3430.7	7.8	3438.5	107911.86	99.02	1070.93	30.6	9.47	100.3	1.3	141.6	
All District Total		2767.9	2399.9	0	0	51	147792.91	294.49	0	732.4	0	0	149805.84	0	140219.67	1063.94	2210.8	20.9	4718	11.5	4729.5	148244.78	98.96	1561.05	49.4	10.7	137.6	1.3	199	
State Fund		57.66	14.59	0	0	0	0	226.63	12	12	0	8824.07	0	0	0	0	0	0	105	0	105	105	0	8719.07	0	0	0	0	0	0
Grand Total of State		2825.5	2414.5	0	0	51	147792.91	521.12	0	732.4	0	0	158629.91	0	140219.67	1063.94	2210.8	20.9	4823	11.5	4834.5	148349.78	93.45	10280.1	49.4	10.7	137.6	1.3	199	

*Status of State Fund:

Source: Commissionerate of Rural Development, Government of Kerala

- OB of State Fund= 14.59169
- Releases by Centre to State Fund in current FY= 152633.92532
- Releases by State as State share against centre release in the current FY= 2500.44
- Misc. (if any)= 226.63
- Total Availability at State Fund= 155375.58411
- Refund From SEGF= 0
- Balance of State Fund= 8719.07
- Fund in Transit = ₹. 36497.61

Appendix 2.86

Physical Details of Mahatma Gandhi National Rural Employment Guarantee Programme 2015-16

Employment Generated During The financial Year 2015-2016

Sl. No.	District	Cumulative No. of HH issued job			Cumulative No. of HH demanded employment	Cumulative No. of HH provided employment	No. of HH working under NREGA	LB: Protected Person days	Cumulative Person days generate					Cumulative No. of HH completed 100 days	No. of Disabled Beneficiary Individuals	
		SCs	STs	Others					Total	SCs	STs	Others	Total			Women
Phase I																
1	Palakkad	76513	13661	213811	303985	188389	172020	110874	4607863	2363014	628488	4645794	7637296	7069504	13124	189
2	Wayanad	4256	35080	99479	138815	71661	63666	41058	3529102	147712	954309	2055601	3157622	2786342	7606	87
Total Phase I		80769	48741	313290	442800	260050	235686	151932	8136965	2510726	1582797	6701395	10794918	9855846	20730	276
Phase II																
3	Idukki	20298	11344	145214	176856	109593	103347	64055	2378999	639308	501145	4198828	5339281	4026700	8829	145
4	Kasaragod	5183	5715	118998	129896	70290	61936	39533	1414917	158758	126148	2980675	3265581	3032483	10587	74
Total Phase II		25481	17059	264212	306752	179883	165283	103588	3793916	798066	627293	7179503	8604862	7059183	19416	219
Phase III																
5	Alappuzha	28950	675	218349	247974	142171	136741	62052	1866348	1174551	18613	7118045	8311209	7920198	18776	200
6	Ernakulam	32830	2223	170942	205995	96064	86982	51725	1322906	880767	52732	3465279	4398778	4042638	10781	123
7	Kannur	7378	5960	190053	203391	97789	88286	45322	1287740	121297	152323	3019466	3293086	3115303	3969	130
8	Kollam	27875	1020	276595	305490	160424	138011	69278	2073305	784581	35919	5339535	6160035	5490883	16060	128
9	Kotrayam	16043	3234	153057	172334	72310	64150	31924	1030819	353487	58586	2448179	2860252	2670412	4094	74
10	Kozhikode	27428	2539	247377	277344	155091	140034	74060	2193945	921398	68212	5031504	6021114	5654465	11990	198
11	Malappuram	46586	2298	243927	292811	122360	108611	56489	2446968	1654588	52792	3390888	5098268	4610716	16011	263
12	Pathanamthitta	21843	1244	108819	131906	58371	54119	30144	985755	715155	25715	2180948	2921818	2703219	5493	76
13	Thiruvananthapuram	34120	3448	308569	346137	201154	186074	95664	4465019	1353221	164716	8888518	10406455	9607252	19874	201
14	Thrissur	61705	1522	195308	258535	119120	101689	57044	2783317	1639280	34331	3629251	5302862	4971258	18794	90
Total Phase III		304758	24163	2112996	2441917	1224854	1104697	573702	20456122	9598325	663939	44511613	54773877	50786344	125842	1483
Total		411008	89963	2690498	3191469	1664787	1505666	829222	32387003	12907117	2874029	58392511	74173657	67701373	165988	197

Source: Commissionerate of Rural Development, Government of Kerala

Appendix 2.87

Financial Performance Under MGNREG during the Financial Year 2016-2017 (As on 31.10.2016)

Sl No	District	Opening Balance(OB)		Release of Last FY but received during the Current FY		Misc Receipt	Total Availability	Cumulative Expenditure						%age Utilization	Balance	Payment due**				Total			
		CB as OB	Entered OB	Centre	State			Actual Expenditure			Adm. Exp					On Unskilled Wage	On Semi-skilled and Skilled Wage	On Material	Tax				
								Unskilled Wage	Semi-skilled and Skilled Wage	Material	Tax	Rec Exp	Non-Rec Exp								Total Adm. Exp	On Unskilled Wage	On Semi-skilled and Skilled Wage
1	2	3	4	5	6	7	14=(4+5+6+7+8+9+10+13)-(11+12)	16	17	18	19	20	21	22=20+21	23=16+17+18+19+22	24=(23/14)*100	25=14-23	26	27	28	29	30=26+27+28+29	
Phase I																							
	Palakkad	-213.23	29.42	0	0	0	12776.8	11987.52	84.48	21.7	0	640.16	2.21	642.37	12736.07	99.68	40.73	254.78	7.04	3.73	0	265.55	
	Wayanad	-77.47	3.38	0	0	0	6010.27	5622.71	0.11	105.25	1.46	257.08	0.76	257.84	5987.38	99.62	22.89	89.29	0.06	27.67	0.98	118	
	Phase I Total	-290.7	32.8	0	0	0	18787.07	17610.22	84.59	126.96	1.46	897.24	2.98	900.21	18723.45	99.66	63.62	344.07	7.1	31.4	0.98	383.55	
Phase II																							
	Idukki	111.64	226.95	0	0	0	9660.96	7499.45	423.76	1101.18	0	376.25	4.99	381.25	9405.63	97.36	255.33	227.41	18.92	39.28	0	285.61	
	Kasaragod	-62.06	8.04	0	0	0	5954.26	5617.87	40.07	22.19	1.07	253.65	1.04	254.7	5935.9	99.69	18.36	218.35	9.24	1.51	0.06	229.16	
	Phase II Total	49.58	234.99	0	0	0	15615.22	13117.32	463.83	1123.36	1.07	629.91	6.04	635.94	15341.53	98.25	273.69	445.76	28.16	40.79	0.06	514.77	
Phase III																							
	Alappuzha	-49.58	32.12	0	0	0	15524.59	13837.24	30.07	1058.08	6.02	532.98	7.64	540.62	15472.03	99.66	52.56	168.31	23.67	122.79	0	314.77	
	Ermakulam	-100.98	5.79	0	0	0	7779.72	6511.02	175.88	630.58	0.62	416.61	0.86	417.48	7735.58	99.43	44.15	84.4	20.09	71.88	0	176.37	
	Kannur	-74.24	3.85	0	0	0	5405.19	4957.32	39.15	53.94	0.6	331.32	4.39	335.71	5386.73	99.66	18.47	105.68	19.73	4.09	0	129.5	
	Kollam	-192.77	4.74	0	0	0	11048.46	10417.1	10.48	116.43	0.72	466.29	2.47	468.77	11013.49	99.68	34.97	164.46	1.22	0.13	0	165.81	
	Kottayam	-46.9	11.34	0	0	0	5381.32	4388.96	145.45	498.95	4.19	322.29	0.52	322.8	5360.36	99.61	20.97	59.16	2.63	10.68	0.03	72.5	

10	Kozhikode	-118.58	6.93	0	0	0	0.06	11891.7	10848.2	88.8	434.68	7.44	475.7	8.46	484.16	11863.29	99.76	28.41	253.18	2.94	23	0.43	279.55
11	Malappuram	-70.77	13.43	0	0	0	0.09	9610.62	8623.32	34.97	401.57	0	512.2	7.36	519.56	9579.41	99.68	31.21	174.21	1.38	20.21	0	195.8
12	PATHANAMTHITTA	-96.87	3.9	0	0	0	0.02	5531.28	4982.36	190.41	73.2	0	268.95	0.49	269.44	5515.42	99.71	15.86	76.79	23.25	7.58	0	107.62
13	Thiruvananthapuram	-49.95	42.18	0	0	0	0	18079.11	16896.67	173.35	303.44	10.24	625.84	2.28	628.12	18011.82	99.63	67.29	469.66	42.79	61.11	2.34	575.9
14	Thirassur	127.65	5.5	0	0	0	0.01	9392.99	8352.31	70.27	383.36	0.5	532.7	0.27	532.97	9339.41	99.43	53.58	107.69	4.77	29.6	0	142.06
	Phase III Total	-673	129.77	0	0	0	0.57	99645	89814.49	958.84	3954.23	30.33	4484.89	34.74	4519.63	99277.54	99.63	367.47	1663.54	142.47	351.07	2.8	2159.88
	All District Total	-914.13	397.56	0	0	0	0.58	134047.3	120542.04	1507.26	5204.55	32.87	6012.03	43.76	6055.78	133342.52	99.47	704.78	2453.37	177.73	423.26	3.83	3058.19
	State Fund	8719.07	8710.19	0	0	0	0	13673.29					0	0	0	0		13673.29					
	Grand Total of State	7804.94	9107.75	0	0	0	0.58	147720.59	120542.04	1507.26	5204.55	32.87	6012.03	43.76	6055.78	133342.52	90.27	14378.07	2453.37	177.73	423.26	3.83	3058.19

*Status of State Fund:

Source: Commissionerate of Rural Development, Government of Kerala

- OB of State Fund= 8710.18836
- Releases by Centre to State Fund in current FY= 123350.31674
- Releases by State as State share against centre release in the current FY= 1809.14
- Misc (if any)= 0
- Total Availability at State Fund= 133869.6451
- Refund From SEGF= 0
- Balance of State Fund= 13673.29
- Fund in Transit=₹. 0

Note:

These Figures are Cumulatively Display.

Col 3: OB=CB of last FY as per MIS

Col 4: OB=OB entered manually in the MIS

Appendix 2.88

Employment Generated During the financial Year 2016-2017 upto 31/10/2016 under MGNREG

Sl. No.	District	Cumulative No. of HH issued job cards (Till the reporting month)			Cumulative No. of HH demanded employment (Till the reporting month)	LB: HHs Projected upto the reporting month	Cumulative No. of HH provided employment (Till the reporting month)	No. of HH working under NREGA during the reporting month	LB: Projected Person days upto the month	Cumulative Person days generate (Till the reporting month)				Cumulative No. of HH completed 100 days (Till the reporting month)	No. of HH which are beneficiary of land reform/IAY	No. of Disabled beneficiary individuals		
		SCs	ST's	Others						Total	SCs	ST's	Others				Total	Women
Phase I																		
1	Palakkad	74661	13727	216840	305228	159873	0	140144	77261	4022961	979540	341040	1945600	3266180	2979237	256	2320	164
2	Wayanad	4122	32700	91305	128127	62606	0	55045	36045	2489797	96864	672969	1280125	2049958	1802146	258	1232	76
Total Phase I		78783	46427	308145	433355	222479	0	195189	113306	6512758	1076404	1014009	3225725	5316138	4781383	514	3552	240
Phase II																		
3	Idukki	20322	11536	144622	176480	93068	0	78755	46676	2394297	111136	101625	1409162	1621923	1166312	9	2794	123
4	Kasaragod	5355	6106	123471	134932	66405	0	55584	39315	1070992	70676	78806	1394472	1543954	1425223	4	716	65
Total Phase II		25677	17642	268093	311412	159473	0	134339	85991	3465289	181812	180431	2803634	3165877	2591535	13	3510	188
Phase III																		
5	Alappuzha	29316	689	221943	251948	133405	0	125764	63757	2046490	458843	8339	2719116	3186298	3001125	29	2108	190
6	Ernakulam	32806	2203	169399	204408	80765	0	71579	40671	1040383	353747	25110	1327914	1706771	1565341	19	1247	89
7	Kannur	6240	5990	178554	190784	72196	0	60869	36216	873525	43059	74090	1029799	1146948	1068757	48	1446	74
8	Kollam	28298	1029	281549	310876	135606	0	112900	67055	1370758	305686	12051	1982630	2300367	2044977	14	1338	113
9	Kottayam	16051	3263	151424	170738	56944	0	45428	16840	825635	119443	22302	707873	849618	774756	2	1100	38
10	Kozhikode	25256	2485	239676	267417	131716	0	112875	69835	1394498	421142	32651	2311895	2765688	2582493	19	1857	164
11	Malappuram	43796	2350	236187	282333	88887	0	75915	41236	2241284	672101	32489	1240589	1945179	1761093	32	1620	188
12	Pathanamthitta	21490	1277	107093	129860	50664	0	44771	27546	723524	257126	10917	725115	993158	900807	12	1014	66
13	Thiruvananthapuram	34678	3504	315712	353894	183207	0	162030	101488	3577455	476875	57634	3155906	3690415	3363255	11	1241	177
14	Thrissur	60389	1535	193902	255826	90468	0	79104	48426	1509015	717532	20323	1540141	2277996	2143332	53	1583	69
Total Phase III		298320	24325	2095439	2418084	1023858	0	891235	513070	15602567	3825554	295906	16740978	20862438	19205936	239	14554	1168
Total		402780	88394	2671677	3162851	1405810	0	1220763	712367	25580614	5083770	1490346	22770337	29344453	26578854	766	21616	1596

Source: Commissionerate of Rural Development, Government of Kerala

Appendix 2.89					
Financial Achievement of PMAY (2015-16 to 2016-17) (upto 31/10/2016)					
(₹ In lakh)					
Year	Release		Total Fund (OB + Misc. Receipts + Central & State Release)	Expenditure	Percentage of Expenditure against Total Fund
	Central	State			
1	2	3	4	5	6
2015-16	35717.19	19155.45	63555.02	40073.65	63
2016-17 (upto 31/10/2016)	9113.40	6075.60	27349.76	9411.15	34

Source: Commissionerate of Rural Development, Government of Kerala

Appendix 2.90						
Physical Achievement of PMAY (2015-16 to 2016-17) (upto 31/10/2016)						
Year	Target	Achievement (No. of houses completed including spillover)			Total	Percentage of Achievement against Target
		New Houses	Upgradation	Credit cum subsidy		
1	2	3	4	5	6	7
2015-16	59060	49551	0	0	49551	84
2016-17 (upto 31/10/2016)	24341	26473	0	0	26473	108

Source: Commissionerate of Rural Development, Government of Kerala

Appendix 2.91			
District wise details of Open Defecation Free (ODF) declared Grama Panchayats in Kerala			
Sl. No.	District	Number of Grama Panchayats	Number of Toilets completed construction
1	2	3	4
1	Thiruvananthapuram	73	14211
2	Kollam	68	12777
3	Pathanamthitta	53	10182
4	Alappuzha	72	14985
5	Kottayam	71	9141
6	Idukki	52	21081
7	Ernakulam	82	7808
8	Thrissur	86	3002
9	Palakkad	88	23075
10	Malappuram	94	12011
11	Kozhikode	70	12799
12	Wayanad	23	13777
13	Kannur	71	7182
14	Kasaragod	38	12689
Total		941	174720

Source: Suchitwa Mission, Government of Kerala

Appendix 2.92							
District wise details of Linkage Banking							
Sl. No.	Name of District	2015-16			2016-17 upto 31/10/2016		
		NHGs Graded (Numbers)	NHGs Linked (Numbers)	Loan Disbursed (₹ in lakhs)	NHGs Graded (Numbers)	NHGs Linked (Numbers)	Loan Disbursed (₹ In lakh)
1	Thiruvananthapuram	2157	2233	7811.00	1987	1615	8764.00
2	Kollam	3280	3358	10977.00	1629	1451	6289.00
3	Pathanamthitta	1376	1511	4716.00	861	899	3600.00
4	Alappuzha	2882	3045	11286.00	1044	1173	4950.00
5	Kottayam	1735	1784	5185.00	1404	1209	3863.00
6	Idukki	1021	1040	4675.00	1054	986	4358.00
7	Ernakulam	2825	3270	7535.00	4700	4008	4700.00
8	Thrissur	3644	3842	11301.00	2860	1906	6843.00
9	Palakkad	3144	3285	7815.00	2452	2386	5990.00
10	Malappuram	3614	3771	10269.00	1525	1438	4111.00
11	Kozhikode	2039	2153	4391.00	1274	1004	2146.00
12	Wayanad	940	1004	2935.00	810	773	1963.00
13	Kannur	1743	2171	5405.00	710	640	1674.00
14	Kasaragod	687	794	1267.00	1482	526	2937.00
Total		31087	33261	95568.00	23792	20014	62188.00

Source: Kudumbashree, Government of Kerala

Appendix 2.93														
District wise Thrift and Credit Operation														
Sl. No.	District	2015-16						2016-17 (upto 31/10/2016)						
		Number of CDS	Number of ADS	Number of NHG	Total families covered under NHG	Amount of Thrift (₹ in lakh)	Amount of Loan (₹ in lakh)	Total families started Thrift	Number of CDS	Number of ADS	Number of NHG	Total families covered under NHG	Amount of Thrift (₹ in lakh)	Total families started Thrift
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Thiruvananthapuram	83	1368	19142	296680	3295.72	10678.60	296680	83	1368	19142	296680	4212.19	296680
2	Kollam	75	1797	20685	320856	3560.38	15508.50	320856	75	1797	20685	320856	4486.75	320856
3	Pathanamthitta	58	828	12026	163001	3402.38	12995.60	163001	58	828	12026	163001	4398.47	163001
4	Alappuzha	79	1589	19042	314768	4483.66	21770.20	314768	79	1589	19042	314768	5882.25	314768
5	Kottayam	78	777	10361	174185	2362.64	12955.00	174185	78	777	10361	174185	3109.85	174185
6	Idukki	54	1427	20745	286305	2883.78	9227.15	286305	54	1427	20745	286305	4123.69	286305
7	Ernakulam	101	1317	14851	229679	2710.38	7994.41	229679	101	1317	14851	229679	3787.00	229679
8	Thrissur	100	1507	26999	459832	5061.29	27859.10	459832	100	1507	26999	459832	6784.78	459832
9	Palakkad	96	2205	23879	386309	5187.23	9841.86	386309	96	2205	23879	386309	6556.57	386309
10	Malappuram	110	1682	19742	272732	2548.27	7126.40	272732	110	1682	19742	272732	3684.19	272732
11	Kozhikode	82	908	9531	149997	1494.76	3256.58	149997	82	908	9531	149997	2075.32	149997
12	Wayanad	26	1548	28652	453399	3899.29	14871.00	453399	26	1548	28652	453399	5561.53	453399
13	Kannur	87	1790	23154	362864	3875.95	25503.00	362864	87	1790	23154	362864	5015.00	362864
14	Kasaragod	42	487	9226	116416	2076.11	10080.50	116416	42	487	9226	116416	2789.58	116416
	Total	1071	19230	258035	3987023	46841.84	189667.90	3987023	1071	19230	258035	3987023	62467.17	3987023

Source: Kudumbashree, Government of Kerala

Appendix 2.94									
District wise details of Balasabha - Children's NHG									
Sl. No.	District	Number of Grama Panchayats	Number of Bala Panchayats formed	2015-16		2016-17 (upto 31/10/2016)		Cumulative	
				Number of Balasabha	Number of Children	Number of Balasabha	Number of Children	Number of Balasabha	Number of Children
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	83	80	4686	72492	4686	72492	9372	144984
2	Kollam	70	70	1325	18550	1325	18550	2650	37100
3	Pathanamthitta	54	53	2654	43469	2654	43469	5308	86938
4	Alappuzha	72	72	3523	53054	3523	53054	7046	106108
5	Kottayam	73	72	3105	45326	3105	45326	6210	90652
6	Idukki	53	50	1738	18636	1738	18636	3476	37272
7	Ernakulam	84	84	1515	22725	1515	22725	3030	45450
8	Thrissur	100	96	1090	20414	1090	20414	2180	40828
9	Palakkad	95	91	3800	65000	3800	65000	7600	130000
10	Malappuram	110	75	25	460	25	460	50	920
11	Kozhikode	70	58	2113	27850	2113	27850	4226	55700
12	Wayanad	26	26	452	4749	452	4749	904	9498
13	Kannur	81	81	850	12750	850	12750	1700	25500
14	Kasaragod	38	38	20	5076	20	5076	40	10152
Total		1009	946	26896	410551	26896	410551	53792	821102

Source: Kudumbashree, Government of Kerala

Appendix 2.95									
Public Distribution System in Kerala - Profiles 2010-11 to 2016-17									
Sl. No.	Item	Unit	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17*
1	No. of Ration Cards and Permits								
	a) Ration cards for families as on 1 st April	No.	7340488	7863698	8100536	8273778	8313107	8314211	8319700
	b) Ration permits for institution as on 1 st April	No.	7603	6311	6311	6311	4751	2077	2068
2	No. of FCI Sub Depots as on 1 st April	No.	22	22	22	24	22	25	25
3	No. of Wholesale shop as on 1 st April								
	a) Co-operatives	"	36	35	36	28	30	30	30
	c) Others	"	288	288	287	291	288	299	299
	d) Total Wholesale shops	"	334	333	333	333	330	329	239
4	No. of Retail shops as on 1 st April								
	a) Co-operatives	"	419	413	411	412	396	392	396
	b) Others	"	13833	13854	13890	13912	13935	13943	13940
	c) Total Retail shops	"	14252	14267	14301	14324	14331	14335	14336
5	Sugar (Allotted)	MT.	49362	62855	58076	55931	57422	49236	28721
6	Bale oil (Allotted)	"							
7	Kerosene (Allotted)	KL.	225096	197124	125196	120192	120132	111024	58764

Source: Civil supplies Department

* as on 31.10.2016

Appendix 2.96																					
District wise Food grains Distribution under PDS in Kerala(2015-16)																					
Sl. No.	District	BPL Scheme (other than ANP and AAY)												APL Schemes							
		Wheat (in MT)						Rice (in MT)						Wheat (in MT)				Rice (in MT)			
		Allotment	Lifting	Offtake	% of off take against allotment	Allotment	Lifting	Offtake	% of offtake against allotment	Allotment	Lifting	Offtake	% of offtake against allotment	Allotment	Lifting	Offtake	% of offtake against allotment	Allotment	Lifting	Offtake	% of off take against allotment
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
1	Thiruvananthapuram	13349	13349	12775	96	37440	37740	37702	99.98	16046	16046	15975	99.5	17256	17256	17256	100				
2	Kollam	10930	10930	10930	100	41756	41756	41756	100	8935	8935	8935	100	10411	10411	10411	100				
3	Pathanamthitta	4638	4638	4386.3	88.1	0	0	74.66	4638	4638	4386.3	4086	88.1	4638	4638	3432	74				
4	Alappuzha	10995	10995	9916.5	90.19	35401	35401	35036	98.97	8516	8516	9183.5	107.84	35401	35401	35401					
5	Kottayam	7475	7475	7041.3	94.2	25449	25449	26343	103.5	7940	7940	8389.8	105.7	36386	36386	37698	103.60				
6	Idukki	5164	5164	4573.4	88.55	16257	16257	16910	100	4186	4186	4121.3	99.45	19665	19665	19536	99				
7	Ernakulam	8503	8503	7483	88.01	26794	26794	28825	107.57	12837	12837	14202	110.63	66979	66979	67734	101.12				
8	Thrissur	12432	12432	11147	89.66	46745	12432	46899	100.32	12416	12416	11132	89.65	57143	57143	56427	98.74				
9	Palakkad	8193	8193	7630.5	93.13	27140	27140	27306	100.61	12315	12315	12543	101.85	55716	55716	55440	99.5				
10	Malappuram	11379	11379	10799	94	38615	38615	38925	100.8	14337	14337	14759	102.23	65196	65196	43408	66.58				
11	Kozhikode	10014	10014	9733.7	97.2	35017	35017	36008	102.8	10203	10203	9709.6		54694	54694	54786	100				
12	Wayanad	2594	2594	2516	97	9078	9078	8896	98	2782	2782	2670	96	12972	12972	12323	95				
13	Kannur	7185	7185	7136	99	24427	24427	26762	109	9904	9904	9795	99	45898	45898	45613	99				
14	Kasaragod	3870	3870	100	94.58	13422	13422	100	101.43	4127	4127	100	102.1	21310	21310	100	101.27				
	Total	116721	116721	173558		377541	343528	371541		129182	128930	121603		463716	499102	460771					

Source: Civil supplies Department

Appendix 2.97									
District-wise Distribution of Food grains under AAY and ANP schemes during 2015-16									
Sl. No.	District	Rice (in MT)							
		AAY				ANP			
		Allotment	Lifting	Off-take	% of off-take against allotment	Allotment	Lifting	Off-take	% of off-take against allotment
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	27080	27080	24075	88	354	354	301.542	85.18
2	Kollam	20485	20485	20485	100				
3	Pathanamthitta	10778	10778	10599.46	98.34	180	180	220.75	122.64
4	Alappuzha	18645	18645	17081.68	91.62	72	72	114.78	159.42
5	Kottayam	14582	14582	14000.87	96.01	84	84	97.94	
6	Idukki	13616	13616	13499.98	99.14	84	84	84	
7	Ernakulam	16652	16652	15790.01	94.82	156	156	183.1	117.3
8	Thrissur	24077	24077	22229.96	92.32	78	78	80.53	103.24
9	Palakkad	20933	20933	19580.7	93.54	108	108	88.79	82.21
10	Malappuram	21719	21719	22273.13	102.55	252	252	284.53	112.9
11	Kozhikode	17408	17408	17130.23		---	---	136.23	
12	Wayanad	40776	40776	39960	98	355	355	352	99.1
13	Kannur	15026	15026	14575	97	198	198	237	119
14	Kasaragod	9241	9241	8594	92.81	148.24	148.24	100	
Total		271018	271018	251282		1878.08	1961.2	2281.19	

Source: Civil supplies Department

Appendix 2.98				
Distribution of Rice & Wheat, Kerosene and Sugar through the PDS in Kerala -All schemes (ANP, AAY, BPL, APL etc.)				
Year	Rice(MT)	Wheat(MT)	Kerosene(KL)	Sugar(MT)
2010-11	1159597	186545	196923	86776
2011-12	1276636	153955	166424	60316
2012-13	1265618	180268	125196	58076
2013-14	1302739	200564	120192	54264
2014-15	1328835	178976	94077	55255
2015-16	1322896	252746	114422	53664
2016-17*	651959	154874	54025	28913

Source: Civil supplies Department

* as on 31.10.2016

Appendix 2.99								
Outlets opened by SPPLYCO in Kerala from 2010-11 to 2016-17 (in Numbers)								
Sl. No.	Details	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17*
1	2	3	4	5	6	7	8	9
1	Maveli Stores	58	18	27	36	27	28	5
2	Super Markets	17	15	8	8	9	17	7
3	Maveli Super Stores	0	0	0	0	0	1	0
4	People's Bazar	1	3	1	2	3	2	1
5	Medical Stores	1	0	2	5	7	5	3
6	Petrol Bunks	0	0	1	1	0	1	0
7	Mobile Maveli Stores	9	0	1	11	0	1	0
8	Hyper Markets	2	0	1	0	0	1	0

Source: Civil supplies Department

* as on 31.10.2016

Appendix 2.100						
Mid-day Meal Programme- Supply of food grains from 2010-11 to 2016-17						
Sl. No.	Year	No. of Schools	Number of Students Benefited	Supply of food grains (Qtls.)		
				Rice	Special Rice	Pulses
1	2010-11	12198	2779118	486670.1	141675.31	119354.8
2	2011-12	12638	2669437	492512.1	135766.68	132331.2
3	2012-13	12638	2632539	471686.4	283721.18	269525.9
4	2013-14	12638	2563848	476533.3	127322.58	0
5	2014-15	12378	2531198	939427.8	125995.02	0
6	2015-16	12367	2502230	964583.1	123725.2	0
7	2016-17*	12339	2654807	130057.1	0	0

Source: Civil supplies Department

* as on 31.10.2016

Appendix 3.1				
Growth of Manufacturing Sector in Kerala (GSDP)				
(Base Year 2011-12)				
Year	Contribution to GSDP (₹ crore)		Growth Rate (%)	
	At constant Prices	At current prices	At constant prices	At current prices
2011-12	34204.04	34204.04	0	0
2012-13	38469.15	40541.45	12.47	18.53
2013-14	36680.87	40691.29	-4.65	0.37
2014-15(P)	37581.4	42735.67	2.46	5.02
2015-16 (Q)	42333.72	46700.69	12.65	9.28

Source: Economics and Statistics Department

Appendix 3.2		
Area leased out for mining in Kerala in the case of selected minerals		
Sl. No.	Minerals	Area in Hectares
1	China Clay	72.95
2	Silica Sand	34.99
3	Bauxite	0.00
4	Lime shell/Seashell	99.40
5	Limestone	245.69
6	Mineral Sand	558.37
7	Quartz	6.82
8	Graphite	1.25
9	Iron ore	86.06
10	Laterite	34.22
Total		1139.75

Source : Mining and Geology Dept.

Appendix 3.3			
Production and Royalty of Minerals in Kerala during 2015-16			
Sl. No.	Mineral	Royalty (₹ lakh)	Production (Tons.)
1	2	3	4
Major Minerals			
1	China Clay	234.39	585965
2	Ilmenite	115.08	54798
3	Rutile	38.75	2636
4	Zircon	84.42	6267
5	Sillimanite	16.07	7205
6	Silica Sand	159.21	70447
7	Limeshell/Sea shell	27.29	34118
8	Lime stone	501.16	626451
9	Bauxite/Laterite	1622.56	1690170
10	Graphite	0.41	630
11	Leucosene	0.61	56
12	Monozite	0	0
	Subtotal	2799.95	3078743
Minor Minerals			
1	Granite Building Stone	7170.08	29875337
2	Granite Dimension Stone	51.36	1284
3	Laterite	161.14	671411
4	Lime/Sea Shell	2.25	3000
5	Brick Clay	104.10	260249
6	Ordinary Sand	532.45	1331120
7	River Sand	28.43	71076
8	Ordinary Earth	1101.68	5508414
	Subtotal	9151.49	37721891
	Grand Total	11951.44	40800634

Source: Mining and Geology Department

Appendix 3.4				
Revenue collected as Royalty, District wise, 2015-16(₹ in lakh)				
Sl. No.	Districts	Major Minerals	Minor Minerals	Total
1	2	3	4	5
1	Thiruvananthapuram	212.39	1014.83	1227.22
2	Kollam	254.93	778.16	1033.09
3	Pathanamthitta		874.21	874.21
4	Alappuzha	173.27	127.81	301.08
5	Kottayam	4.92	738.71	743.63
6	Idukki		323.18	323.18
7	Ernakulam	0.41	2250.53	2250.94
8	Thrissur		1180.74	1180.74
9	Palakkad	492.90	1250.44	1743.34
10	Malappuram	45.73	1162.90	1208.63
11	Kozhikode	18.89	607.82	626.71
12	Wayanad		360.09	360.09
13	Kannur	89.54	1210.82	1300.36
14	Kasaragod	1.75	499.54	501.29
15	Kerala Mineral Squad(NR)		37.24	37.24
16	Kerala Mineral Squad(SR)		43.58	43.58
17	Kerala Mineral Squad(CR)		141.12	141.12
18	Directorate	46.82	26.18	73.00
Total		1341.55	12627.90	13969.45

Source: Mining and Geology Dept.

Appendix 3.5			
Investment in Central PSUs, Kerala and India (in gross block)			
			(₹ crore)
Years as on (31st March 2015)	India	Kerala	Percentage of column(3) to column(2)
1	2	3	4
2012-13	1555575.29	31460.19	2.02
2013-14	1756530.80	33865.88	1.93
2014-15	1906796.31	37825.79	1.98

Source: Public Enterprises Survey 2014-15

Appendix 3.6			
Investment in Central PSUs, in selected States (in gross block) as on 31-03-2015			
Rank Number	Name of State	₹ in crore	Share in total investment in India
1	2	3	4
1	Maharashtra	323654.18	16.97
2	Tamil Nadu	124150.77	7.06
3	Uttar Pradesh	118576.46	6.75
4	Orissa	108095.85	6.15
5	Andhra Pradesh	100010.59	5.24
6	West Bengal	91564.26	5.21
7	Gujarat	87334.13	4.97
8	Madhya Pradesh	81991.08	4.67
9	Chhattisgarh	82164.08	4.68
10	Assam	78800.49	4.48
18	Kerala	37825.79	2.15
	All India	1906796.31	

Source: Public Enterprises Survey 2014-15

Appendix 3.7					
Performance of State of PSUs under Industries Department, GOK, Value in crore					
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Profit Making Units					
Number of Units	18	17	13	13	10
Value of Production	2170.87	2243	1849.3	1661.33	1424.75
Turnover	2083.13	2014.3	1835.4	1334.6	1476.86
Profit made by the profit making units	324.52	187.97	89.92	61.3	98.32
Loss Incurring Units					
Number of Units	25	26	30	30	33
Value of Production	850.3	609	608.6	1093.68	2571.96
Turnover	835.23	694.69	1142.9	1595.28	1471.4
Loss made by the loss making units	111.66	112.32	156.42	241.23	208.12
Total					
Number of Units	43	43	43	43	43
Value of Production	2925.15	2851.6	2942.9	4233.29	2829.72
Turnover	2918.37	2709.00	2978.3	2929.88	2948.27
Net Profit/Loss(-)	212.86	75.65	-66.49	-179.93	-109.8

Source : RLAB

Appendix 3.8			
Turnover and Profit / Loss of State PSUs under the Ministry of Industries 2015-16			
(Provisional)			
(₹ in crore)			
Sl. No.	Company	2015-16	
		Turnover	Net Profit /Loss
1	Kerala State Industrial Development Corporation Ltd	48.38	34.55
2	The Kerala Minerals and Metals Ltd	516.57	21.16
3	Malabar Cements Ltd	338.80	38.75
4	Kerala State Electronics Development Corp.	409.80	1.03
5	KINFRA	0.00	0.00
6	Kerala Small Industries Development Corporation Ltd	285.33	-4.99
7	CAPEX	73.72	-15.44
8	Kerala Clays and Ceramic Products Ltd	3.36	-4.57
9	Transformers and Electricals Kerala Ltd	150.62	-9.90
10	Steel and industrial forgings	55.65	-1.18
11	Travancore – Cochin Chemicals Ltd	165.69	-5.87
12	Kerala State Industrial Enterprises Ltd	52.11	0.18
13	Kerala Electrical and Allied Engineering Company Ltd	104.11	-7.58
14	The Kerala Ceramics Ltd	2.11	-4.56
15	United Electrical Industries Ltd	18.82	-5.40
16	SAIL - SCL Kerala Ltd	3.64	-12.15
17	Handicrafts Development Corporation (Kerala) Ltd	15.19	-3.07
18	The Travancore Cements Ltd	27.52	-5.69
19	Forest Industries (Travancore) Ltd	44.81	0.88
20	Traco Cable Company Ltd	120.72	-2.19
21	Kerala State Bamboo Corporation Ltd	13.53	-8.68
22	The Metal Industries Ltd	3.53	-0.06
23	Steel Industries Kerala Ltd	32.51	0.12
24	Keltron Component Complex Ltd	61.61	-0.97
25	KELPALM	0.12	-0.11
26	Kerala Artisans Development Corporation Ltd	19.57	0.42
27	Travancore Titanium Products Ltd	113.39	-4.47
28	Autokast Ltd	17.93	-5.34
29	Kerala State Drugs and Pharmaceuticals Ltd	26.75	-3.34
30	The Trichur Co-operative Spinning Mills Ltd	6.40	-6.85
31	Kerala State Textile Corporation Ltd	31.69	-29.50
32	Kerala Automobiles Ltd	14.82	-4.71
33	Kerala State Handloom Development Corporation Ltd	19.09	-2.84
34	Alleppey Co-operative Spinning Mills	11.57	-4.35
35	Keltron Electro Ceramics Ltd	12.72	0.56
36	Sitaram Textiles Ltd	10.12	-6.42
37	The Malappuram Co-operative Spinning Mills	16.53	-7.96
38	The Quilon Co-operative Spinning Mills Ltd	4.80	-6.14
39	Cannanore Co-operative Spinning Mills Ltd	15.21	-4.70
40	Kerala State Co-operative Textile Federation Ltd	0.96	-0.31
41	Kerala State Mineral Development Corporation Ltd	1.58	0.68
42	Trivandrum Spinning Mills Ltd	1.65	-2.51
43	Kerala State Cashew Development Corporation Ltd	38.67	-25.15
44	HANTEX	36.55	-1.14
Total		2948.25	-109.81

* KINFRA not included

Source: RLAB

Appendix 3.9				
Details of Joint Stock Companies Working in Kerala - 01.04.2016 to 30.09.2016				
Sl. No	Particulars	Private Limited	Public Limited	Total
1	Number of Joint Stock Companies in Kerala as on 31.03.2016	25899	1606	27505
2	Number of Companies newly registered from 01.04.2015 to 31.03.2016	1289*	107	1396
3	Number of Companies transferred from other States from 01.04.2016 to 31.03.2016	7	0	7
4	Number of Companies wound up dissolved / struck off/amalgamated from 01.04.2016 to 30.09.2016	172	10	182
5	Number of Companies transferred to other States from 01.04.2016 to 30.09.2016	7	1	8
6	Net addition to the total Number of Joint Stock Companies in Kerala from 01.04.2016 to 30.09.2016 [(2+3)-(4+5)]	1117	96	1213
A	Number of companies converted from public to private during 2015-16		3	3
B	Number of companies converted from private to public during 2015-16	2		2
7	Total Number of Joint Stock Companies in Kerala as on 30.09.2016 (Item 1+6)	27016	1702	28718
8	Total Number of Joint Stock Companies started by Women Entrepreneurs in Kerala from 01.04.2016 to 30.09.2016	645	67	712
9	Total Number of Government Companies registered in Kerala as on 31.03.2016	44	96	140
10	Total Number of Government Companies registered in Kerala from 01.04.2016 to 30.09.2016		2	2
11	Number of government Companies wound up from 01.04.2016 to 30.09.2016	0	0	0
12	Net addition to the total Number of Government Companies in Kerala from 01.04.2015 to 31.03.2016 (Item 10-11)	0	2	2
13	Total number of Government Companies in Kerala as on 30.09.2016(Item 9+12)	44	98	142
14	Name of Government Companies, newly registered in Kerala on 2015-16	1. Liect Nidhi Limited 2. Thriveni Nidhi Limited		
15	Name of Government Companies, wound up from 01.04.2015 to 31.03.2016	Nil		
16	Number of other major companies wound up from 01.04.2016 to 30.09.2016	Nil		

* including 56 OPCs

Source : Registrar of Joint Stock Companies

Appendix 3.10					
Performance of Kerala Financial Corporation at a Glance Value figures in crore					
Year	Loans sanctioned cumulative	Loans disbursed cumulative	Loans - outstanding	Profit before taxation	Profit after taxation
1	2	3	4	5	6
2009-10	3961.13	3261.06	888.39	46.65	21.14
2010-11	4468.19	3704.50	1124.81	61.89	36.40
2011-12	5007.20	4169.07	1239.84	62.63	45.65
2012-13	5668.59	4645.01	1401.43	88.42	66.83
2013-14	6680.32	5399.74	1800.37	57.09	41.34
2014-15	7627.77	6056.83	2038.18	30.03	14.37
2015-16	8653.76	6895.19	2400.19	20.35	5.33

Source : KFC

Appendix 3.11							
Kerala Financial Corporation- Details of loan sanctioned and disbursed during 2015-16							
(₹ in crore)							
Sl. No	Particulars	SSI		Others		Total	
		No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8
1	Application pending as on 1.4.2015	12	10.59	16	7.00	14	17.59
2	Application Received during 2015-16	999	551.35	384	569.14	1383	1120.49
3	Total application for consideration	1011	561.94	386	576.10	1395	1138.08
4	Application withdrawn/ rejected or otherwise disposed off	25	56.44	16	13.64	41	70.08
5	Application Sanctioned (Gross)	969	472.36	363	556.02	1332	1028.38
6	A. Application cancelled/reduced out of current year's sanction	3	0.50	1	1.89	4	2.39
	B. Application cancelled/reduced out of previous year's sanction	24	56.77	6	20.46	30	77.23
	C. Total cancellation/ reduction (6A+B)	27	57.27	7	22.35	34	79.62
7	Application sanctioned effectively (5-6A)	966	471.86	332	55.41	1298	1025.99
8	Net Sanctions (5-6C)	942	415.09	386	533.66	1328	948.75
9	Amount disbursed along with number of newly assisted units	1111	415.83	325	422.52	1436	838.36
10	Application pending sanction as on at the end of the period	17	33.13	7	6.49	24	39.62

Source : KFC

Appendix 3.12					
Industry-wise Classification of cumulative Loan Sanctioned and Disbursed by the Kerala Financial Corporation on 2015-16					
(₹ crore)					
Sl. No	Type of Industry	Amount Sanctioned (cumulative)	% of total loans sanctioned	Amount disbursed (cumulative)	% of total loan Disbursed
1	2	3	4	5	6
1	Mining	41.86	0.58	35.84	0.55
2	Crude Petroleum	2.66	0.04	2.72	0.04
3	Petroleum Refining	0.42	0.01	0.43	0.01
4	Other Food Products	404.23	5.57	384.27	5.85
5	Textiles	97.05	1.34	90.55	1.38
6	Paper and Paper Products	122.13	1.68	117.48	1.79
7	Leather and Leather Products	6.52	0.09	5.60	0.09
8	Rubber Products	107.86	1.48	106.97	1.63
9	Chemical and Chemical Products	126.47	1.74	125.73	1.91
10	Cement	2.02	0.03	2.02	0.03
11	Basic Metals				
a)	Iron and Steel	6.61	0.09	6.44	0.10
b)	Non-Ferrous	71.12	0.98	67.51	1.03
12	Metal Products	58.61	0.81	51.62	0.79
13	Capital Goods				
a)	Non-Electrical Machinery	23.57	0.32	23.50	0.36
b)	Electrical Machinery	47.76	0.66	63.64	0.97
c)	Transport Equipment	2.63	0.04	2.58	0.04
14	Electricity Generation	1.38	0.02	1.36	0.02
15	Services				
a)	Motels and Shopping Complex	3269.35	45.01	2931.36	44.59
b)	Hospitals	412.98	5.69	337.72	5.14
c)	Others	1734.62	23.88	1601.53	24.36
16	Others	723.48	9.96	614.74	9
Total		7263.33	100.00	6573.61	100.00

Source: KFC

Appendix 3.13		
Physical and Financial Performance of KSIDC during 2015-16		
Sl. No.	Particulars	2015-16
A	Physical	
1	Projects Completed	
a.	Number of projects	4
b.	Aggregate cost (₹ crore)	61.38
c.	Employment (Numbers)	342
2	Projects under implementation (31-3-2015)	
a.	Number of projects	38
b.	Aggregate cost (₹ crore)	5264.69
c.	Employment (Numbers)	10469
3	Projects cleared by KSIDC Board	
a.	Number of projects	13
b.	Aggregate cost (₹ crore)	2069.62
c.	Employment (Numbers)	1675
4	MoUs signed with private parties	
a.	Number of projects	2
b.	Estimated aggregate cost	
B	Financial (₹ crore)	
a	Gross sanction	76.65
b	Disbursement	69.76
c	Recovery	118.36
d	Operating profit	49.98

Source : KSIDC

Appendix 3.14							
Allotments in KSIDC Industrial Park as on 31/10/2016							
Sl. No	Name of Park	Year of commencement	Total area (Acres)		Investment by KSIDC (₹ lakh)	Number of industrial/business units started	Employment Generated as on 31/10/2016
			Acquired	Allotted			
1	2	3	4	5	6	7	8
1	KSIDC Investment Zone Palakkad	2008	34.05	1.5	1598.76	Nil	Nil
2	Coconut Industrial Park Kuttiyadi	2012	115	Nil	1539.07	Nil	Nil
3	KSIDC - IGC Cherthala	2001	279	195.69	5702.54	15	792
4	KSIDC - IGC Kozhikode	1996	310	100	3376.94	18	400
5	KSIDC - IGC Kannur	1997-98	250	58.51	5989.84	42	1093
6	KSIDC - IGC Malappuram		258	258*	3641.83	29	600
7	KSIDC - LSP Thonnakkal	2014-15	60.59**	2	14349.32	Nil	NA

* transferred to INKID

** Award passed for 60.59 acres, in possession by KSIDC - 59.89 acres out of 75 acres

Source : KSIDC

Appendix 3.15						
Allotments in KINFRA Industrial Park as on 31/10/2016						
Sl. No.	Name of Park	Year of commencement	Total area (Acres)		Investment (₹lakh)	Employment (Number)
			Acquired	Allotted		
1	KINFRA Small Industries Park, Thumba, Trivandrum	2000	93	31.9364	3852.15	1529
2	KINFRA International Apparal park, Thumba, Trivandrum	1998		20.78	10629.60	5404
3	KINFRA Film and Video park, Kazhakkutam, Trivandrum,	1999	50	25.83	7125.00	463
4	Special Economic Zone, KINFRA Film and Video Park, Trivandrum	2007	25			
5	Dhrishya Building	2008	100000 Sq.ft	127107 sq.ft	2047.42	806
6	KINFRA Export Promotion Industrial Park, Kakkanad	1996	180	52.59	12156.85	763
7	Incubation Centre, HITECH Park, Kalamassery (transferred to State Start up Mission)	2009	15000 sq.ft			
8	KINFRA Hi Tech Park, Kalamassery	2007	243	165.01	7253.06	110
9	KINFRA Small Industries Park, Mazhuvannur, Ernakulam	2002	64.89	45.01	8156.23	1282
10	KINFRA small Industries Park, Koratty, Thrissur	2003	33.66	21.82	3554.78	634
11	KINFRA Food Processing Park, Kakkanchery, Malappuram	2000	72	34.07	12512.17	1900
12	KINFRA Small Industries Park, Thalassery, Kannur	2002	50.12	33.68	4427.9	1114
13	KINFRA Small Industries Park, Seethangoli, Kasaragod	2002	278.82	255.12	7759.07	1360
14	KINFRA Small Industries Park, Kalpetta, Wayanad	2005	50	47.84	5563.78	563
15	KINFRA Neo Space,	2003	85762	51621.71	961.29	650

	Malappuram		sq.ft	sq.ft		
16	KINFRA Integrated Industrial and Textile Park, Palakkad	2003	1134.05	725.93	40467.48	4091
17	KINFRA Small Industries Park, Adoor, Pathanamthitta	2009	85	13.57	2563.4	206
18	KINFRA Food Processing Park, Adoor, Pathanamthitta	2009		11.99	5846.96	659
19	KINFRA Textile Centre, Nadukani, Kannur	2009	124.85	20.17	3320.39	1283
20	KINFRA Small Industries Park, Kunnammathanam, Pathanamthitta	2009	38.41	12.18	4319.03	514
21	SDF, Koratty, Thrissur	2011	38000 sq.ft	20524 sq.ft	225.5	65

Source : KINFRA

Appendix 3.16										
District wise details of Enterprises filed Memorandum under Part II (new +old) in Kerala during 2015-16 (up to Sep 2015)										
Sl. No.	District	Number of SSI/MSME units promoted by			Total Investment (₹ lakh)	Value of goods and services produced (₹lakh)	Employment provided (Numbers)			
		SC	ST	General				Total	Women	
1	2	3	4	5	6	7	8	9	10	
1	Thiruvananthapuram	43	5	1150	1198	298	17024.08	24892.98	7842	
2	Kollam	22	3	476	501	135	7550.55	14194.39	3809	
3	Pathanamthitta	44	2	412	458	160	19874.4	23227.82	2153	
4	Alappuzha	4	2	228	234	70	4737.17	13450.09	1555	
5	Kottayam	10	0	317	327	93	4635.93	12071.29	1630	
6	Idukki	15	1	171	187	40	2227.56	4220.52	876	
7	Ernakulam	15	7	1395	1417	266	28244.16	107104.73	10105	
8	Thrissur	46	1	727	774	220	14552.12	59660.07	4245	
9	Palakkad	35	0	724	759	174	8649.98	24278.75	3505	
10	Malappuram	16	2	567	585	87	5850.76	16716.04	2925	
11	Kozhikkode	31	1	481	513	87	8050.39	25526.3	3262	
12	Wayanad	2	4	178	184	47	911.04	989.87	777	
13	Kannur	14	1	314	329	94	3458.82	7049.67	1668	
14	Kasaragod	4	2	233	239	34	3589.99	4618.84	1055	
Total		301	31	7373	7705	1805	129356.95	338001.36	45407	

Source: Directorate of Industries and Commerce

Appendix 3.17										
District wise details of total working SSI/MSME units Registered in Kerala up to Sep 2015										
Sl. No.	State / District	Number of SSI/MSME units promoted by				Total Investment (₹ lakh)	Value of goods and services produced (₹ lakh)	Employment generated (Numbers)		
		SC	ST	Others	Total					
1	Kasaragode	189	104	7287	7580	39543.77	73823.05	39579		
2	Kannur	228	88	13103	13419	80913.79	227219.32	63137		
3	Wayanad	106	168	3839	4113	25864.46	75690.53	20637		
4	Kozhikode	643	87	19052	19782	133190.95	434762.45	96629		
5	Malappuram	532	97	13923	14552	98555.92	227542.23	65683		
6	Palakkad	1421	146	16403	17970	144213.35	448984.99	81275		
7	Thrissur	1422	124	31303	32849	185008.35	561216.26	136107		
8	Ernakulam	575	202	33720	34497	377620.95	1289572.68	236709		
9	Idukki	431	172	5010	5613	51767.9	1294737.06	31567		
10	Kottayam	500	187	24084	24771	129716.38	299029.1	86983		
11	Alappuzha	562	91	18036	18489	116357.65	252134.8	104622		
12	Pathanamthitta	812	50	10274	11136	88041.4	181238.19	61384		
13	Kollam	1167	112	16757	18036	127592.5	1018236.24	122186		
14	Thiruvananthapuram	1319	240	33100	34659	200259.01	380957.03	172168		
	Total	9907	1868	245891	257466	1798646.38	6765143.93	1318666		

Source: Directorate of Industries and Commerce

Appendix 3.18

Cumulative Investment in Plant and Machinery (₹ in lakh) and Employment Generated - From 18th Sep 2015 till 31st March 2016													
Sl. No.	District	Micro			Small			Medium			Total		
		No of UAMs	Investment ₹ in lakh	Employment	No of UAMs	Investment ₹ in lakh	Employment	No of UAMs	Investment ₹ in lakh	Employment	No of UAMs	Investment ₹ in lakh	Employment
1	Alappuzha	918	3601	4054	66	6559	1208	10	6121	154	994	16281	5416
2	Ernakulam	1678	10176	10143	438	29910	7758	13	8285	956	2129	48371	18857
3	Idukki	241	1407	897	27	1724	269	0	0	0	268	3131	1166
4	Kannur	424	2241	2035	74	4602	1954	1	500	2	499	7343	3991
5	Kasaragod	153	918	611	39	1826	370	0	0	0	192	2744	981
6	Kollam	839	4580	4780	126	9706	1871	2	1035	850	967	15321	7501
7	Kottayam	534	2459	2023	95	6928	1608	3	2055	32	632	11442	3663
8	Kozhikode	642	3043	3450	100	5181	1393	2	1100	33	744	9324	4876
9	Malappuram	550	3221	2394	87	6394	958	0	0	0	637	9615	3352
10	Palakkad	526	2566	2063	94	9255	1036	4	2609	46	624	14430	3145
11	Pathanamthitta	289	1356	1094	28	1969	297	2	1900	7	319	5225	1398
12	Thiruvananthapuram	1821	7480	8436	234	13922	5882	5	3325	35	2060	24727	14353
13	Thrissur	900	5158	4181	163	11672	1700	5	3502	45	1068	20332	5926
14	Wayanadu	156	922	609	28	1527	168	0	0	0	184	2449	777
Total		9,671	49,128	46,770	1,599	1,11,175	26,472	47	30,432	2,160	11,317	190,735	75,402

Source - www.nhogaadhar.gov.in

Appendix 3.19					
Year wise details of SSI/MSME units registered in Kerala during the period 2015-16 (up to 30-09-2015)					
Sl. No.	District	Total investments (₹ in lakh)	Value of goods and services produced (₹ in lakh)	Employment generated (Numbers)	Number of SSI/MSME Units
1	Thiruvananthapuram	17024.08	24892.98	7842	1198
2	Kollam	7550.55	14194.39	3809	501
3	Pathanamthitta	19874.4	23227.82	2153	458
4	Alappuzha	4737.17	13450.09	1555	234
5	Kottayam	4635.93	12071.29	1630	327
6	Idukki	2227.56	4220.52	876	187
7	Ernakulam	28244.16	107104.73	10105	1417
8	Thrissur	14552.12	59660.07	4245	774
9	Palakkad	8649.98	24278.75	3505	759
10	Malappuram	5850.76	16716.04	2925	585
11	Kozhikkode	8050.39	25526.3	3262	513
12	Wayanad	911.04	989.87	777	184
13	Kannur	3458.82	7049.67	1668	329
14	Kasaragod	3589.99	4618.84	1055	239
Total		129356.95	338001.36	45407	7705

Source : Directorate of Industries and Commerce

Appendix 3.20											
Status on Industrial Co-operative Societies in Kerala as on 31.03.2016											
Sl. No.	District	Industrial Co-operative Societies (Registered) in Kerala during the year 2015-16					Total Number of working Societies as on 31.03.2016				
		General	SC	ST	Total	Women	General	SC	ST	Total	Women
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram				0		28	19	5	52	17
2	Kollam	3			3		31	13	1	45	9
3	Pathanamthitta				0		4	1	0	5	1
4	Alappuzha	2			2		11	5	0	16	2
5	Kottayam				0		34	5	0	39	13
6	Idukki				0		4	1	2	7	3
7	Ernakulam	2			2		28	4	0	32	14
8	Thrissur				0		38	5	Nil	43	5
9	Palakkad	2			2		13	6	2	21	7
10	Malappuram				0		14	4	0	18	4
11	Kozhikkode	1			1		18	1	0	19	1
12	Wayanad	1			1		12	2	5	19	6
13	Kannur	1			1		61	6	2	69	28
14	Kasaragod				0		23	0	0	23	1
Total		12			12		319	72	17	408	111

Source: Directorate of Industries and Commerce

Appendix 3.21

Details of DAs/DPs under District Industries Centre as on 31st March 2016

District	Name of Development Area/Development Plot	Year of Commencement	Total area acquired (acres)	Allotable area (acres)	Area allotted (acres)	Total Number of units	Number of working units	Total Employment (Numbers)	Income generated (₹ lakh)
Thiruvananthapuram	DA Veli	1963	108.64	88.29	84.57	149.00	140.00	627.00	5606.00
	DP Manvila	1975	27.53	22.69	22.69	72.00	61.00	388.00	3582.00
	DP Mundakkal	1969	20.67	1809.00	1809.00	53.00	50.00	460.00	75.00
	DP Chathanoor	1982	20.75	1853.00	1391.00	1.00	0.00	0.00	
Pathanamthitta	DP Kunnamthanam	2003	20.94	15.37	14.95	81.00	63.00	765.00	1910.00
	DA Kollakadavu	1956	16.22	14.39	14.39	45.00	39.00	349.00	2334.00
Alappuzha	DP Chengannur	1987	5.51	4.56	4.56	18.00	14.00	164.00	1760.30
	DP Punnappra	1967	57.28	52.37	52.37	79.00	58.00	258.00	954.70
	Coir Park 1	1995	23.40	22.08	22.08	11.00	8.00	345.00	1100.00
	Coir Park 2	1995	17.06	15.66	15.66	5.00	2.00	48.00	3000.00
	DA Aroor	1969	62.90	52.28	52.28	96.00	83.00	2600.00	11800.00
	DP Poovanthuruthu	1992	41.25	37.45	37.35	224.00	215.00	3055.00	8.25
Kottayam	DP Athirampuzha	1989	1.00	0.75	0.75	12.00	7.00	120.00	24.00
	DP Vaikom	1978	3.75	3.36	3.36	13.00	12.00	165.00	40.00
	DP Muttom	1987	5.00	4.58	4.58	13.00	11.00	113.00	1234.52
Ernakulam	DA Aluva	1991	57.82	54.91	54.91	88.00	84.00	998.00	46400.00
	DA Edayar	1964	435.29	376.70	376.70	346.00	316.00	9320.00	251400.00
	DA Angamaly	1963	219.52	214.52	214.52	52.00	51.00	2925.00	49000.00
	DA Vazhakkulam	1991	15.26	12.16	12.16	40.00	37.00	555.00	2270.00
	DP angamaly	1961	31.91	26.62	26.62	59.00	55.00	854.00	21000.00
	DP Kalamassery	1966	78.12	64.74	64.74	178.00	173.00	3800.00	30550.00
Thrissur	DP Athani	1982	42.29	43.45	43.45	86.00	78.00	640.00	205.00
	DP Kunnamkulam	1985	3.00	2.10	2.10	26.00	23.00	150.00	24.00
	DP Ayyankunnu	2005	29.32	25.08	25.08	88.00	79.00	454.00	93.00
	DP Velakkode	2005	24.07	21.87	21.87	36.00	30.00	200.00	170.00
	Puzhakkal Padam	--	11.41	--	--	--	--	--	--
	(*) Varavoor	--	8.55	--	--	--	--	--	--

	DP Pudussey	1977	134.15	129.99	129.99	129.99	64.00	61.00	321.00	6210.45
Palakkad	NIDA Kanjikodu	1991	532.80	513.44	513.44	262.00	235.00	2215.00	14100.75	
	DP Kappur	2004	18.26	16.29	15.46	34.00	34.00	110.00	800.10	
	DP Shornur	2001	17.72	17.12	7.50	3.00	3.00	17.00	165.25	
	Functional Industrial Estate, Manjeri (Payyanad)	1993	16.19	6.79	6.23	31.00	25.00	90.00	1144.00	
Kozhikkode	DP Westhill	1970	12.63	10.30	10.30	37.00	34.00	165.00	1650.00	
	Thamarassery	1997	20.43							
Wayanad		NIL	NIL	NIL						
Kannur	DP, Andoor	1984	59.31	46.61	46.61	170.00	166.00	1250.00	16000.00	
	DP Ananthapuram	1987	103.00	79.90	57.57	52.00	15.00	150.00	1500.00	
	DP Ananthapuram	1987	108.00	83.40	5453.00	19.00	Nil	Nil	Nil	
	DP Chattanchal	1987	28.50	22.05	2045.00	20.00	12.00	75.00	550.00	
	Total		2439.45	5763.86	12656.83	2563.00	2274.00	33746.00	476094.32	

Source: Directorate of Industries and Commerce

Appendix 3.22						
Details of Mini Industrial Estates under District Industries Centre as on 31st March 2016						
Sl. No	District	Number of Industrial Estates	Total Number of SSI Units	Number of working units	Total Employment (Numbers)	Income Generated (in lakh)
1	2	3	4	5	6	7
1	Thiruvananthapuram	7	53	42	150	1000.00
2	Kollam	5	50	42	160	50.00
3	Pathanamthitta	20	20	15	60	45.00
4	Alappuzha	7	52	52	95	7.04
5	Kottayam	11	96	93	343	19.72
6	Idukki	4	39	29	109	41.80
7	Ernakulam	19	160	123	1528	2729.00
8	Thrissur	10	150	126	494	630.00
9	Palakkad	6	42	35	145	56.02
10	Malappuram	5	33	29	112	98.43
11	Kozhikkode	8	90	72	225	112.00
12	Wayanad	1	4	4	10	28.00
13	Kannur	4	29	27	105	500.00
14	Kasaragod	5	39	30	54	70.00
Total		112	857	719	3590	5387.01

Source: Directorate of Industries and Commerce

Appendix 3.23

Details of Major Industrial Estates Under SIDCO as on 31st October 2016										
Sl. No.	District	Name of Industrial Estate	Total area acquired	Total areas allotted (cents approx.)	Number of Working Units	Number of employees in working units	Number of closed units	Total Number of units	Number of sheds allotted to working units	Income generated in 2015-16 (₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	Pappanamcode	18.54	1514.97	76	820	4	80	37	16.59
2	Kollam	Umayanaloor	26.03	2138.00	77	375	9	86	38	19
		Karunagappally	8.63	737.00	22	145	7	29	25	1
3	Alappuzha	Cherthala	8.94	742.00	26	251	2	30	19	46.28
		Kollakadavu	18.79	1238.00	46	450	4	50	35	4.56
4	Kottayam	Changanacherry	14.22	1276.00	72	985	3	75	30	0.8
		Ettumanoor	29.2	2133.30	73	1250	1	74	57	10.58
5	Ernakulam	Mudickal	4.59	401.39	13	60	1	14	21	4.31
		Palluruthy	1.85	143.00	6	110	2	8	5	Nil
6	Thrissur	Ollur	29.56	2357.15	133	922	2	146	46	71.6
		Kallettumkara	5.00	450.00	16	270	4	20	17	1.33
7	Palakkad	Olavakkode	21.74	1680.41	41	248	4	45	37	37.35
		Karakkad	10.84	803.83	48	379	1	49	22	0.68
8	Malappuram	Manjeri	4.92	436.14	73	183	Nil	76	19	0.33
9	Kozhikode	West Hill	12.55	922.50	50	361	3	53	41	1.24
10	Kannur	Palayad	8.44	660.00	42	265	2	44	11	8.38
11	Kasaragod	Kasaragod	16.84	1533.19	68	320	2	70	39	28.04
Total			240.68	19166.88	882	7394	51	949	489	252.07

Source: SIDCO

Appendix 3.24

Details of Mini Industrial Estates Under SIDCO as on 31st October 2016										
Sl. No	District	Name of Industrial Estate	Total area of IE (Acres)	Total area allotted (cents)	Number of Working Units	Number of employees in working units	Number of closed units	Total Number of units	Number of sheds allotted to working units	Income generated in 2015-16 (₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11
		Ulloor	1.00	93.00	9.00	60.00	1.00	10.00	11.00	3.89
1	Thiruvananthapuram	Anad	1.00	92.00	5.00	42.00	3.00	8.00	9.00	0.03
		Vellanad	1.00	92.00	10.00	31.00	0.00	10.00	6.00	1.74
		Varkala	1.00	52.50	7.00	35.00	0.00	7.00	12.00	0.11
2	Kollam	Chithara	1.00	62.00	7.00	31.00	0.00	7.00	11.00	1.57
		Thrikkovilvattom	1.00	95.00	3.00	24.00	3.00	6.00	4.00	0.27
		Chadayamanglam	0.83	78.00	5.00	26.00	0.00	5.00	10.00	0.01
3	Alappuzha	Kadakarappally	1.05	95.00	10.00	35.00	0.00	10.00	11.00	0.32
		Mararikulam	1.00	88.00	12.00	45.00	0.00	12.00	11.00	0.04
4	Pathanamthitta	Pandalam	0.95	87.00	5.00	25.00	3.00	8.00	4.00	1.95
		Nattakam	1.00	80.00	8.00	46.00	2.00	10.00	12.00	0.00
5	Kottayam	Ayarkunnam	0.99	78.50	5.00	40.00	3.00	8.00	12.00	0.01
		Pampady	1.00	89.00	3.00	25.00	2.00	5.00	12.00	0.00
		Olamattom	0.99	84.97	5.00	40.00	0.00	5.00	12.00	0.01
6	Idukki	Kodikulam	0.93	75.00	4.00	20.00	2.00	6.00	12.00	1.61
		Adimali	1.00	67.80	5.00	35.00	0.00	5.00	12.00	10.5
		South Vazhakulam	1.00	90.00	13.00	44.00	1.00	14.00	14.00	6.64
		Piravam	1.00	75.00	4.00	35.00	4.00	8.00	11.00	0.00
7	Ernakulam	Kothamangalam	0.98	74.00	4.00	25.00	0.00	4.00	11.00	0.00
		Edathala	1.00	71.00	5.00	30.00	0.00	5.00	11.00	0.04
		Rayamangalam	1.00	89.00	9.00	32.00	0.00	9.00	12.00	0.00
		Mala	1.00	90.00	12.00	44.00	0.00	12.00	12.00	0.00
8	Thrissur	Kattur	1.00	92.00	11.00	45.00	2.00	13.00	12.00	0.49
		Arimpur	1.00	92.00	15.00	42.00	0.00	15.00	11.00	0.01
		Ottapalam	1.19	109.00	10.00	44.00	3.00	13.00	12.00	6.03
9	Palakkad	Vaniyamkulam	1.00	85.00	11.00	55.00	0.00	11.00	12.00	0.08
		Pattambi	1.00	93.00	10.00	40.00	0.00	10.00	12.00	0.01
		Edavanna	1.20	110.00	7.00	20.00	0.00	7.00	8.00	0.34
10	Malappuram	Oorakam	1.00	92.00	10.00	28.00	0.00	10.00	10.00	0.63
		Kokkoor	0.99	91.00	8.00	21.00	1.00	9.00	11.00	2.27
		Sulthan Batherly	1.00	90.00	10.00	25.00	0.00	10.00	10.00	0.00
		Kerala State Veterinary Board								Economic Review 2016

9	Kozhikode	Kadalundi	1.00	92.00	12.00	60.00	0.00	12.00	12.00	0.00	130
		Perambra	1.00	93.00	13.00	42.00	0.00	13.00	10.00	0.72	
10	Kannur	Valapattanam	1.00	85.00	6.00	26.00	1.00	7.00	10.00	0.09	
		Taliparamba	1.00	85.00	9.00	25.00	0.00	9.00	12.00	0.00	
11	Kasaragod	Kanhangad	1.00	88.00	13.00	60.00	0.00	13.00	12.00	0.00	
	Total		36.10	3095.77	295.00	1303.00	31.00	326.00	386.00	39.41	

Source: SIDCO

Appendix 3.25

Employment and Income generated in Major Industrial Estates under SIDCO for last five years

Sl. No.	District	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
		Employment (Numbers)	Income (₹ in lakh)	Employment (Numbers)	Income (₹ in lakh)	Employment (Numbers)	Income (₹ in lakh)	Employment (Numbers)	Income (₹ in lakh)	Employment (Numbers)	Income (₹ in lakh)	Employment (Numbers)	Income (₹ in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	780	8.34	780	16.96	780	5.47	780	5.01	780	51.32	820	16.59
2	Kollam	275	90.86	542	158.54	579	163.73	577	182.14	577	19.67	520	20
3	Pathanamthitta	0	0	0	0	0	0	0	0	0	0	0	0
4	Alapuzha	657	67.82	670	101.2	680	29.17	680	49.39	680	14.3	701	50.84
5	Kottayam	2250	9.08	2250	44.52	2250	10.77	2250	27.48	2265	16.9	2235	11.38
6	Idukki	0	0	0	0	0	0	0	0	0	0	0	0
7	Ernakulam	95	1.08	113	1.49	113	4.9	172	2.58	172	0.53	170	4.31
8	Thrissur	945	3.73	1146	46.46	1146	24.65	1070	6.09	1200	17.59	1192	72.93
9	palakkad	586	26.42	604	46.48	608	75.45	608	54.81	608	4.15	627	38.03
10	Malappuram	121	0.4	175	0.17	175	0.27	175	0.41	175	0.36	183	0.33
11	Kozhikode	350	10.68	350	13.53	350	4.69	350	5.23	350	6.27	361	1.24
12	Wayanadu	0	0	0	0	0	0	0	0	0	0	0	0
13	Kannur	240	0.01	272	1	272	0.99	273	14.1	273	11.27	265	8.38
14	Kasaragod	250	16.67	286	19.02	286	23.19	286	15.78	296	53.69	320	28.04
	Total	6549	235.09	7188	449.37	7239	343.28	7221	363.02	7376	196.05	7394	252.07

Source: SIDCO

Appendix 3.26
Results of Exhibitions and Fairs conducted by Department of Industries and Commerce 2015-16

Sl. No	Particulars	TVM	KLM	PTA	ALP	KTM	IDK	EKM	TSR	PKD	MPM	KKD	WYD	KNR	KSD
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Inside State															
1	Number of Exhibitions/Fairs/Expos Conducted/participated inside Kerala	9	1	2	1	1		2	2	1	1	2	1	3	1
2	Number of stalls in the Exhibitions/Fairs/Expos	44	26	30	28	30		150	22	26	28	75	14	218	18
3	Financial Assistance from Government (₹)	1593000	150000	1,66,000	150000	150000		4350000	450000	150000	150000	450000	150000	28,00,000	1,50,000
4	Actual Expenditure (₹)	1593000	150000	1,66,001	150000	150000		5397451	250000	150000	150000	450000	150000	29,04,442	1,50,000
5	Total Income generated (₹)	1593000		2,12,500	1000000	950000		13167800	250000	285000	1500000	508000	600000	10,15,78,436	2,95,000
National/International Level															
6	Number of Exhibitions/Fairs/Expos Conducted/participated outside Kerala	-		--	--				Nil	NIL	--	--	NIL		NIL
7	Number of stalls in the Exhibitions/Fairs/Expos	-		--	--				Nil	NIL	--	--			
8	Financial Assistance from Government (₹)	1500000		--	--				Nil	NIL	--	--			
9	Actual Expenditure (₹)	-		--	--				Nil	NIL	--	--			
10	Total Income generated (₹)	1040000		--	--				Nil	NIL	--	--			

Source: Directorate of Industries and Commerce

Appendix 3.27							
Outstanding Advances to Various Sectors by Commercial Banks in Kerala							
(₹ crore)							
Sl. No.	Year (ends on March)	Priority Sector Advances				Non Priority Sector Advances	Total Advances
		Total	Agri- culture	MSMEs	Other Priority Sector		
1	2	3	4	5	6	7	8
1	2009	48387	15959	8095	24333	34432	82819
2	2010	58204	21786	11758	24660	38783	96987
3	2011	71145	27439	16894	26812	50837	121982
4	2012	85606	36209	20593	28804	63687	149293
5	2013	99318	45055	23563	30700	75769	175087
6	2014	113555	48812	32069	32674	78455	192010
7	2015	128655	57656	35730	35270	90051	218706
8	2016	132256	54888	39463	37905	100161	232417

Source: State Level Bankers' Committee, Kerala

Appendix 3.28								
Micro, Small and Medium Enterprises Development Institute, Thrissur								
Achievement for 6 years up to 2015-16 (as on 31.03.2016)								
Sl. No.	Name of Activity	Unit	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	2	3	4	5	6	7	8	9
1	Project Profiles	Numbers	11	14	16	14	9	0
2	Industrial Motivation campaigns (IMC)							
i	Courses undertaken	Numbers	49	60	56	61	25	25
ii	Persons trained	Numbers	2039	4348	4020	3253	1721	1755
3	BSDP Business Skill Development Programmes							
i	Courses undertaken	Numbers	4	4	0	0	0	
ii	Persons trained	Numbers	156	131	0	0	0	
4	EDPs - Entrepreneurship Development Programme							
i	Courses undertaken	Numbers	8	10	17	16	5	21
ii	Persons trained	Numbers	184	232	375	385	117	485
5	ESDP Entrepreneurship Skill Development Programme							
i	Courses undertaken	Numbers	46	61	81	48	36	0
ii	Persons trained	Numbers	1003	1392	1813	1092	862	0
6	Management Development Programmes (MDP)							
i	Courses undertaken	Numbers	8	13	11	12	1	0
ii	Persons trained	Numbers	245	290	246	256	22	0
7	Skill Development Programme (SDPs) under PD account							
i	Courses undertaken	Numbers	15	9	17	16	14	10
ii	Persons trained	Numbers	134	153	171	241	172	144
8	Number of Jobs undertaken	Numbers	237	274	317	317	292	76
9	Number of Units benefited through services of workshop	Numbers	197	232	188	192	165	150
10	Assistance to Entrepreneurs	Numbers	2220	2384	1619	1487	989	1769

Source : Micro, Small and Medium Enterprises Development Institute, Thrissur

Appendix 3.29									
District wise Progress Report of PMEGP during 2015-16									
Sl. No.	District	Target in lakh	Number of applications received	Number of applications selected by DTFCs	Margin Money involved (in lakh)	Number of applications forwarded to banks	Number of applications sanctioned by banks	Margin Money sanctioned and released (₹ lakh)	Number of persons given EDP training
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	36	177	174	153.05	174	100	71.44	95
2	Kollam		202	108	157.36	108	51	70.13	52
3	Pathanamthitta	18	32	31	24.27	31	13	7.38	13
4	Alappuzha	30	144	144	294.77	144	95	125.94	106
5	Kottayam	50	130	130	142.33	130	60	70.68	60
6	Idukki	30	140	119	157.9	119	53	45.93	49
7	Ernakulam	70	224	138	207.24	138	56	66.836	50
8	Thrissur		29	29	26.23	29	15	13.686	14
9	Palakkad	42	122	77	89.97	77	48	43.14	48
10	Malappuram	36	56	55	116.55	55	48	43	43
11	Kozhikkode	50	122	117	233.14	117	73	145	60
12	Wayanad		141	90	146.29	90	40	86.9	40
13	Kannur	146	156	135	179.19	135	83	102.04	73
14	Kasaragod	30.1	27	31	30.02	31	23	24.99	22
Total		Total	1702	1378	1958.31	1378	758	917.092	725

Source: Directorate of Industries and Commerce

Appendix 3.30									
District wise Progress Report of PMEGP during 2015-16 (Up to September 2016)									
Sl. No.	District	Target in Lakh	** Number of applications received	Number of applications selected by DLTFs	Margin Money involved (₹ lakh)	Number of applications forwarded to Banks	Number of applications sanctioned by Banks	* Margin money sanctioned and released (₹ lakh)	Number of persons given EDP training
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	75	95	72	145.72	72	3	4.36	
2	Kollam	70	61	49		49	0	14.79	
3	Pathanamthitta	75	115	92		92	1	4.2	4
4	Alapuzha	70	141	129		129	3	10.11	1
5	Kottayam	68.42	93	83		80	1	11.44	
6	Idukki	65	26	23		23	0	4.84	
7	Ernakulam	70	202	158	273.01	158	2	22.15	
8	Thrissur	70	67	36		36	0	0.7	
9	Palakkad	85	113	94		94	4	6.22	
10	Malappuram	70	86	54		54	3	4.48	
11	Kozhikkode	70	92	64		64	8	5.46	
12	Wayanad	70	185	156		155	1	3.79	1
13	Kannur	70	76	58		58	0	5.35	
14	Kasargod	50	78	44		44	0	11.73	
Total		978.42	1430	1112		1108	26	109.62	6

*Spill over claims of 2015-16, subsidy released on 2016-17 (upto June 2016)

** Application received online, since subsidy release has moved to online platform from 01/07/2016

Source: Directorate of Industries and Commerce

Appendix 3.31					
Status of Food Processing Units in KINFRA Parks- 2015-16					
Sl. No.	Name of the Park	Number of Units	Total Area (in acres)	Investment (₹ in lakh)	Employment (in Numbers)
1	2	3	4	5	6
1	KINFRA Food Processing Park, Kakkancherry, Malappuram	15	14.273	6978	510
2	KINFRA Food Processing Park, Adoor, Pathanamthitta	8	4.66	2500	324
3	KINFRA Small Industries Park, Mazhuvannur	24	20.53	9587	631
4	KINFRA Small Industries Park, Wayanad	5	4	500	60
Total		52	43.463	19565	1525

Source: KINFRA

Appendix 3.32								
Performance in Recent years- SURABHI								
Year	Number of Societies	Total employment (Numbers)	Assistance by Govt. (₹ lakh)	Turnover (₹ lakh)	Profit/Loss (₹ lakh)	Participation in Trade Fairs/Exhibitions		
						Number of Fairs/Exhibitions	Expenditure incurred (₹ lakh)	Profit/Loss (₹ lakh)
1	2	3	4	5	6	7	8	9
2007-2008	103	20000	26.95	379.9	-33.25	5	14.29	11.91
2008-2009	103	10000	47.48	280.1	-48.47	2	6.72	2.35
2009-2010	103	13000	25	250.52	-62.34	7	11.13	2.84
2010-2011	46	13000	30.98	272.53	-51.52	7	20.15	1.73 (L)
2011-2012	46	12000	25	274.11	-34.7	6	12.86	0.95
2012-2013	46	30000	93.35	293.74	-33.86	6	16.73	4.52
2013-2014	46	30000	100	337.17	-6.12	10	69.25	18.18
2014-2015	47	30000	100	337.33	-20.24	12	39.91	11.09
*2015-2016	48	30000	170.62	280.84	-82.33	13	24	2.36

* (Provisional)

Source: Surabhi

Appendix 3.33							
Performance of Handicrafts Development Corporation							
Year	Total employment (Numbers)	Assistance by Govt. (₹ lakh)	Turnover (₹ lakh)	Profit/Loss (₹ lakh)	Participation in Trade Fairs/Exhibitions		
					Number of Fairs/Exhibitions	Expenditure incurred (₹ lakh)	Profit/Loss (₹ lakh)
1	2	3	4	5	6	7	8
2007-2008	142	27.5	1112.4	-182.98	22	32.12	8.52
2008-2009	136	115.2	1136.16	-114.37	21	41.83	6.08
2009-2010	131	322	1282.63	-79	29	35.7	10.08
2010-2011	124	121.03	1488.81	-95.36	25	51.54	11.16
2011-2012	113	75	1530	-212.98	24	46.37	13.52
2012-2013	96	560	1709.15	-209.73	49	94.78	26.3
2013-2014	95	96	1565.97	-283.43	32	65.52	19.8
2014-2015	104	50	1621.76	-328.9	42	91.67	25.99
*2015-2016	96	29.38	1518.9	-306.84	49	81.6	-2.45

*Provisional

Source: Handicrafts Development Corporation, Kerala

Appendix 3.34						
Number of Handloom Co-Operative Societies in Kerala						
Sl. No.	Nature of society	2011-12	2012-13	2013-14	2014-15	2015-16
a	Factory type:					
1	Working	108	102	107	101	84
	i. Profit making	14	15	16	15	29
	ii. Loss making	94	87	91	86	55
	iii. Total a (1)	108	102	107	101	84
2	Dormant	39	36	37	42	45
3	Under liquidation	17	13	27	20	31
4	Not started working	2	2	0	3	7
	Total (a)	166	153	171	166	167
b	Cottage type:					
1	Working	259	329	319	304	318
	i. Profit making	98	115	111	112	117
	ii. Loss making	161	214	208	192	201
	iii. Total b (1)	259	329	319	304	318
2	Dormant	113	71	68	41	37
3	Under liquidation	43	101	104	56	66
4	Not started working	10	10	43	8	12
	Total (b)	425	511	534	409	433
	Total (a+b)	591	664	705	575	600

Source: Directorate of Handloom and Textiles

Appendix 3.35						
Details of Kerala State Handloom Weavers Co-operative Society Ltd., (HANTEX)						
Sl. No.	Particulars	Provision (₹ lakh)				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	Paid up capital (as at the end of the year)	3070.00	3670.00	4270.00	477.05	5255.08
2	Total Borrowing (as at the end of the year including interest) Principal	4001.43	4051.43	4111.43	1656.18	1730.68
	Interest	5558.85	5735.54	5822.14	6666.18	2705.84
3	Gross Block (as at the end of the year)	125.38	127.43	132.76	139.81	141.74
4	Quantity and Value of production through clusters and sponsored societies (as at the end of the year)			1841.49		
5	Income through sales of products (as at the end of the year)	2844.92	2910.73	3213.28	3395.07	3869.56
6	Other Income	11.44	12.31	205.88	9927.2	368.55
a	Export of handloom cloth by KSHDC					
b	Grants, MDA, interest, processing charges etc.	534.98	236.48	92.64	6503.46	195.23
7	Expenditure on Raw Materials	2283.17	2318.84	2633.02	2801.39	3206.9
a	Yarn	504.82	603.12	685.01	487.79	469.41
b	Dyes and Chemicals	3.53	5.49	6.27	6.32	7.03
c	Fabrics	1772.86	1709.45	1948.01	2307.28	2730.45
8	Expenditure on Personal payments	630.40	572.00	641.90	612	667.08
9	Provision of Depreciation	5.0	5.0	5.0	5.0	5.0
10	Expenditure towards interest and bank charges	474.55	500.00	474.55	1536.31	142.9
11	Other Expenses	152.07	105.00	59.23	98.47	172.47
a	Trading Expenses	33.44	155.00	154.91	175.01	251.63
b	Administration and selling expenses	103.84	110.00	96.4	148.82	163.9
12	Stock differential	128.98	(-208.21)	767.47	(-285.74)	442.95
13	Net profit (+) Net loss (-)	(-420.11)	(-398.11)	(-84.26)	7659.53	695.48
14	Accumulated loss at the end of the year	(-9871.20)	(-10269.31)	(-10353.49)	(-4222.31)	-1998.48

Source : Kerala handloom Weavers' Co-operative Society Ltd - Hantex

Appendix 3.36						
Performance of Hanveev from 2011-12 to 2015-16						
Sl. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Sales Turnover (₹ lakh)	1176.08	1646.29	1755.59	1893.42	1903.94
2	Value of cloth /quantity produced (₹lakh)	897.97	1074.99	1206.75	1102.48	862.05
3	Value of yarn /quantity Purchased (₹lakh)	320.00	375.70	320.55	313.08	192.84
5	Value of Yarn/quantity Distributed (₹ lakh)	320.00	375.70	320.55	313.08	192.84
6	Number of Primary Societies registered as members(cumulative)	30	30	30	30	30
7	Number of Primary Societies forfeited membership	Nil	Nil	Nil	Nil	Nil
8	Paid up Share Capital	2500.00	2500*	2500*	2500*	2500*

Source : Kerala State Handloom Development Corporation Ltd (HANVEEV)

*Excluding share capital advance of Rs.400 lakh for every year.

Appendix 3.37

Details of Kerala State Handloom Development Corporation (HANVEEV)							
Sl. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17(April 2016-Oct 2016)- provisional
		3	4	5	6	7	8
1	2						
1	Paid up capital (as at the end of the year)	2500.00	2500*	2500.00*	2500.00*	2500.00*	4000.00
2	Total Borrowing (as at the end of the year including interest)	4022.12	4242.34	4468.49	4715.88	4964.44	5045.46
3	Gross Block (as at the end of the year)	494.14	494.38	481.43	383.83	400.72	400.72
4	Value of production through clusters and sponsored societies (as at the end of the year)	67.05	76.23	135.08	96.82	92.59	95.10
5	Income through sales of products (as at the end of the year)	1176.08	1646.29	1755.59	1893.42	1903.94	1036.80
6	Other income:-	Nil	Nil	Nil	Nil	Nil	Nil
a	Export of handloom cloth by K S H D C						
b	Grants, M D A, Interest, Processing charges etc.	117.06	76.98	87.78	249.41	26.44	35.71
7	Expenditure on Raw Materials						
a	Yarn	393.06	274.56	294.00	286.18	210.66	126.04
b	Dyes and Chemicals	16.92	20.84	40.91	28.43	29.65	7.29
c	Fabrics	548.96	709.92	827.93	740.38	790.31	58.80
8	Expenditure on personal payments	910.54	843.57	703.56	1041.01	1132.31	459.35
9	Provision of Depreciation	19.17	17.27	13.60	12.74	14.06	10.02
10	Expenditure towards interest and bank charges	179.07	180.24	181.15	186.28	191.75	**
11	Other Expenses						
a	(+)/(-) Prior Period Income/Expenditure	-4.14	-0.09	0.00	5.36	5.90	
b	Trading expenses	197.36	226.50	173.61	191.21	159.54	301.18
c	Administration and selling expenses	221.15	260.42	235.20	289.96	297.35	69.78
12	Stock differential	-427.14	-187.03	-238.15	-100.85	30.18	-169.38
13	Net Profit (+), Net loss(-)	-770.09	-623.11	-388.37	-518.71	-883.28	-129.31
14	Accumulated loss at the end of the year	5265.80	5888.90	6277.27	6795.99	7679.27	7808.58

Source : Kerala State Handloom Development Corporation Ltd (HANVEEV)

*Excluding share capital advance of Rs.400 lakh for every year.

**No provision is made for interest on Govt. loan

Appendix 3.38			
Central and State government assistance for the development of handloom industry in Kerala			
(₹ lakh)			
Particulars		2014-15	2015-16
a	Loan		
i	State Government	129.26	17.62
ii	Central Government	49.69	
iii	N.C.D.C., NABARD, HUDCO	3.2	156.24
	Total(a)	182.15	173.86
b	Grant		
i	State Government	843.42	779.76
ii	Central Government	275.81	103.41
iii	N.C.D.C., NABARD, HUDCO	1409.72	72.8
	Total(b)	2528.95	955.97
c	Amount spent as Rebate on the sale of Handloom cloth:		
i	State Government (20%)	440	683.92
ii	Central Government(10%) (MDA-50% CSS)	27.12	99.11
	Total(c)	467.12	783.03

Source: Directorate of Handloom and Textiles

Appendix 3. 39						
Details regarding production in Handloom Industry in Kerala 2011-12 to 2015-16						
Sl. No.	Item	2011-12	2012-13	2013-14	2014-15	2015-16
I	Co-Operative Sector					
i	Number of looms	30478	29761	21898	21261	21375
ii	Production of Handloom cloth (M.M.)	26.88	28.37	33.32	39.06	39.26
iii	Quantity of production					
iv	Value of Production (₹.in crore)	193.62	214.10	204.71	253.89	278.75
v	Total Turnover (₹crore)					167.25
vi	Productivity (M/L/A)	881.98	953.26	1521.55	1837.14	1836.7
vii	Number of weavers	49930	50433	20584	20984	19018
viii	Employment generated (mandays in lakh)	85.30	101.60	89.34	64.54	65.18
ix	Number of women employed	20784	20854	12688	12284	14171
2	Corporate/unorganised/private sector					
i	Number of looms	1500	1380	1510	1532	1117
ii	Production of Handloom cloth (M.M.)	1.01	1.08	0.74	0.63	0.93
iii	Quantity of production					
iv	Value of Production (₹ in crore)	33.9	37.26	40.95	45	60.5
v	Total Turnover (crore)					36.3
vi	Productivity (M/L/A)	673.33	782.61	490.07	413.53	832.5
vii	Number of weavers	1660	1738	1646	2087	1117
viii	Employment generated (mandays in lakh)	5.02	4.26	2.85	1.84	2.19
ix	Number of women employed	848	580	373	954	922
3	Total: Co-Operative and Corporate/unorganised sector					
i	Number of looms	31978	31141	23408	22793	22492
ii	Production of Handloom cloth (M.M.)	27.89	29.45	34.06	39.69	40.19
iii	Quantity of production					
iv	Value of Production (₹ .in crore)	227.52	251.36	245.66	298.89	339.25
v	Total Turn over (crore)					203.55
vi	Productivity (M/L/A)	1555.31	1735.87	2011.62	2250.67	2669.20
vii	Number of weavers	51590	52171	22230	23071	20135
viii	Employment generated (mandays in lakh)	90.32	105.86	92.19	66.38	67.37
ix	Number of women employed	21632	21434	13061	13238	15093

Source: Directorate of Handloom and Textiles

Appendix 3.40						
Production and Productivity under Power loom Industry						
Sl. No.	Items	2011-12	2012-13	2013-14	2014-15	2015-16
1	Total Number of Power looms in the state	536	963	694	658	575
2	Number of looms in the Co-operative Sector	496	651	579	594	550
3	Percentage of 2 to 1	93	68	83	90	96
4	Number of looms in the unorganized/private/corporate sector	40	312	81	64	25
5	Number of power loom co-operative societies in the state	17	21	36	45	52
6	Number of members in the co-operative sector	1504	2387	2359	1856	1684
7	Number of members in the corporate/unorganised/private sector	10	310	55	120	69
8	Number of women employed in Power loom sector	242	280	283	571	285
9	Number of women employed in co-operative sector	570	288	318	788	595
10	Number of women employed in Corporate/unorganised/private sector	32	56	28	54	42
11	Co-operative sector					
a	Production of cloth (lakh metres)	27.65	21.61	27.69	39.44	24.2
b	Value of Production (₹lakh)	377.22	247.58	624.52	671.32	1815
c	Productivity (Metre/loom)	2128.4	3719.57	4781.52	6639.67	4400
d	Total Turn over (₹crore)					1361.25
12	Corporate/unorganised/private sector					
a	Production of cloth (lakh metres)	0.17445	22.56	2.07	1.7	0.896
b	Value of Production (₹lakh)	3.12	2206.51	79.25	118.22	42.11
c	Productivity (Metre/loom)	582	332.15	2551.36	2656.25	3584
d	Total Turnover (₹ crore)					31.58
13	Total(co-operative and Corporate/unorganised/private sector)					
a	Production of cloth (lakh metres)	27.82	44.17	29.76	41.14	25.10
b	Value of Production (₹ lakh)	380.34	2454.09	703.77	789.54	1857.11
c	Productivity (Metre/loom)	2710.4	4051.72	7332.88	9295.92	7984
d	Total Turnover (₹ crore)					1392.83

Source: Directorate of Handloom and Textiles

Appendix 3.41									
Production, Sales, Employment, and Wages paid during 2014-15 and 2015-16 by Departmental and Aided Khadi and Village Industries Units									
Sl. No.	Name of Industry	Value of production		Value of sales		Employment		Wages paid	
		₹ lakh		₹ lakh		(In Numbers)		₹ lakh	
		2014-15	2015-16	2014-15	2015-16	2014-15	2015-16	2014-15	2015-16
1	2	3	4	5	6	7	8	9	10
I	Khadi	2248.05	2650.63	4860.68	4664.86	6133	6454	1046.51	1175.58
	Polyvastra	35.35	11.43	59.62	27.45	65	40	12.79	15.32
	Total I	2283.4	2662.06	4920.3	4692.31	6198	6494	1059.3	1190.9
II	Village Industries								
1	Cottage Match	430	390	452	414	4591	4331	308	331
2	Agarbathy	199	178	210	197	721	701	141	152
3	Village Leather	526	508	580	540	747	695	217	235
4	Fibre and Screwpine	336	305	361	329	29802	23403	274	301
5	Rubber based industry	1021	1023	1074	1050	1038	1000	304	329
6	Handmade paper	280	278	307	280	414	391	101	118
7	Village pottery industry	861	838	885	848	14818	14385	749	781
8	Gurkhandasari	2.8	3	3.1	3	70	65	20	23
9	Service industry	298	298	298	299	639	625	243	261
10	Non-edible oil and Soap	308	285	359	304	632	515	200	213
11	Village Oil	770	762	850	790	627	560	316	334
12	Textile	745	710	808	745	5130	5147	585	618
13	Palmgur	145	125	185	170	4675	4470	175	188
14	Bee-keeping	673	629	690	641	13183	12650	582	626
15	Processing of Cereals and Pulses	442	423	450	454	7863	7666	356	374
16	Ayurvedic medicines	371	342	435	368	976	1007	262	255
17	Fruits and Vegetable Processing	394	376	404	391	1960	1780	252	265
18	Lime	1181	1090	1223	1185	7529	7330	1015	1052
19	Cane and Bamboo	380	336	398	352	2123	1762	341	368
20	Carpentry and Black smithy	1316	1318	1375	1377	3708	3367	973	970
21	Aluminium industry	275	295	308	284	408	388	194	211
22	Electronic	247	238	260	249	562	535	149	150
23	PVC	151	154	168	168	232	228	63	65
	Total II	11351.8	10904	12083.1	11438	102448	93001	7820	8220
	Grand Total	13635.2	13566.1	17003.4	16130.3	108646	99495	8879.3	9410.9

Source: Khadi and Village Industries Board, Government of Kerala

Appendix 3.42					
District wise details of Departmental Sales outlets and Sales under Kerala Khadi and Village Industries Board for the Year 2014-15 and 2015-16					
(₹ lakh)					
Sl. No.	District	Number of Sales Outlets During 2014-15	Sales During 2014-15	Number of Sales Outlets During 2015-16	Sales During 2015-16
1	Thiruvananthapuram	18	412.66	18	291.34
2	Kollam	15	263.63	15	248.2
3	Pathanamthitta	7	186.12	7	159.68
4	Alappuzha	15	227.53	8	200.35
5	Kottayam	16	250.18	16	221.52
6	Idukki	3	139.57	3	135.52
7	Ernakulam	11	706.02	12	678.63
8	Thrissur	19	271.74	19	260.07
9	Palakkad	19	308.39	19	296.07
10	Malappuram	13	110.01	14	113.9
11	Kozhikode	27	386.98	29	427.88
12	Wayanad	1	37.57	1	41.61
13	PKC (Kannur, Kasargod)	47	1540.4	47	1534.16
Grand Total		211	4840.8	208	4608.93

Source: Khadi and Village Industries Board, Government of Kerala

Appendix 3.43					
District wise achievement of self-Employment Generation Programme during the Year 2015-16					
(₹ lakh)					
Sl. No.	Name of District	Total Project Cost (₹ lakh)	Amount of subsidy disbursed (₹lakh)	Number of units (in Numbers)	Employment Generation (in Numbers)
1	Thiruvananthapuram	51.71	15.51	25	42
2	Kollam	58.21	17.43	25	58
3	Pathanamthitta	39.07	11.53	16	46
4	Alappuzha	130.26	47.72	71	298
5	Kottayam	124.46	37.22	49	192
6	Idukki	34.34	9.96	13	42
7	Ernakulam	97.95	22.76	18	61
8	Thrissur	4.13	1.24	4	5
9	Palakkad	41.94	12.96	21	40
10	Malappuram	12.2	3.95	4	14
11	Kozhikode	43.92	13.24	15	52
12	Wayanad	114.97	33.18	36	125
13	Kannur	127	57.62	39	132
14	Kasaragod	30.43	10	15	41
Grand Total		910.59	294.32	351	1148

Source: Khadi and Village Industries Board, Government of Kerala

Appendix 3.44				
Coir Co-operative Societies in Kerala				
Sl. No.	Type of Society	Number of Societies as on 31.3.2015	Number of Societies as on 31.3.2016	
1	Primary Co-operative Societies (Yarn Sector)			
	a)	Working	420	431
		i. Profit	109	136
		ii. Loss	311	295
		iii. Total (1a)	420	431
	b)	New Societies which have not started working	120	100
	c)	Dormant Societies	74	82
	Total (1)	614	613	
2	Manufacturing Societies (Mats and Mattings)			
	a)	Working (started production)	31	31
		i. Profit	12	10
		ii. Loss	19	21
		iii. Total (2a)	31	31
	b)	New Societies which have not started working	3	3
	c)	Dormant Societies	18	15
	Total (2)	52	49	
3	Small Scale Producers Co-operative Societies			
	a)	Working	49	45
		i. Profit	37	12
		ii. Loss	12	33
		iii. Total (3 a)	49	45
	b)	New Societies which have not started working	5	5
	c)	Dormant Societies	9	9
	Total (3)	63	59	
4	Husk Procurement and distribution societies			
	a)	Working	1	1
		i. Profit		0
		ii. Loss	1	1
		iii. Total (4a)	1	1
	b)	New Societies which have not started working		0
	c)	Dormant Societies		0
	Total (4)	1	1	
5	Fibre Societies (DF mill Societies)			
	a)	Working	22	17
		i. Profit	6	6
		ii. Loss	16	11
		iii. Total (5a)	22	17
	b)	New Societies which have not started working	20	19
	c)	Dormant Societies	26	36
	Total (5)	68	72	
6	Co-operative Coir Marketing Federation			
7	ICDP Societies			
	a)	Working	56	63
		i. Profit	13	13
		ii. Loss	43	50
		iii. Total (7a)	56	63
	b)	New Societies which have not started working	4	4
	c)	Dormant Societies	3	3
	Total (7)	63	70	

8		Samyojitha CVCS		
	a)	Working	13	19
		i. Profit	0	6
		ii. Loss	13	13
		iii. Total (8a)	13	19
	b)	New Societies which have not started working	43	48
	c)	Dormant Societies	8	1
	Total (8)	64	68	
9		Total Number of Co-operative Societies		
	a)	Working	536	544
		i. Profit	164	170
		ii. Loss	372	374
		iii. Total (9a)	536	544
	b)	New Societies which have not started working	191	175
	c)	Dormant Societies	135	143
d)	Societies under liquidation	129	145	
	Total (9)	991	1007	

Source : Directorate of Coir Development, Thiruvananthapuram

Appendix 3.45									
Activities of Coir Co-operative societies									
a. Yarn Sector									
Year	Number of working societies	Number of Workers	Husk purchased		Fibre Purchased		Yarn Produced		Wages paid (₹lakh)
			Number (₹ lakh)	Value (₹lakh)	Qty. (Tonnes)	Value (₹lakh)	Qty. (Tonnes)	Value (₹lakh)	
2009-10	314	145904	100.33	61.02	7683.58	626.49	7298.66	1417.31	619.14
2010-11	378	165341	69.22	3620.14	10354.09	1356.43	44834.56	4038.47	1287.22
2011-12	378	155832	84.12	127.24	11109.8	1679.84	7922.29	3177.19	1461.01
2012-13	369	155401	77.89	81.69	13828.43	1862.47	10795.06	2888.27	1828.97
2013-14	391	162714	78.34	81.09	14290.17	2643.59	43888.89	4563.28	1308.69
2014-15	420	181134	83.21	101.22	20634.89	2906.14	9071.78	5593.07	2733.27
2015-16	455	185647	97.45	120.98	11847.27	3392.49	10771.11	5458.45	3083.58
b. Product Sector (Mats and mattings and Small scale producer Co-operatives)									
Year	Number of working societies	Number of workers.	Quantity/Value of Production (₹ lakh)		Wages paid (₹ lakh)				
2010-11	64	3770	3333.68		346.77				
2011-12	56	6031	3784.41		412.8				
2012-13	72	6554	4545.23		455.27				
2013-14	90	7147	8327.59		592.16				
2014-15	68	6933	10019.59		765.41				
2015-16	76	8289	11960.77		657.4				

Source : Directorate of Coir Development, Thiruvananthapuram

Appendix 3.46							
Export of Coir and Coir Products by Coir public Sector Undertakings/Coir fed							
Year	Kerala State Coir Corporation		Foam Mattings (India) Ltd.		Coir fed		Total Value (₹lakh)
	Value (₹lakh)	Quantity (Sq. M)	Value (₹lakh)	Quantity (Tonne)	Value (₹lakh)	Quantity (Tonne)	
2011-12	0		25.98	51.325	30.99	42.89	56.97
2012-13	112	27317	43.79	56.929	150.52	90.51	306.31
2013-14	245	59756	72.23	56.14	29.67	58.78	346.9
2014-15	416	101463	49.99	42.386	13.11	25	479.1
2015-16	814	198537	13.05	9.95	29.17	10.91	856.22

Source : Directorate of Coir Development, Thiruvananthapuram

Appendix 3.47						
Foreign Exchange Earnings of India from Cashew Industry						
Year	Export Value			Import Value of Raw Cashew Nut	Net Foreign Exchange Earned	Total
	Cashew Kernels	Cashew Nut Shell Liquid	Cashew Nut			
1	2	3	4	5	6	
2007-08	2289.02	11.98	2301	1746.84	554.16	
2008-09	2988.4	26.06	3014.46	2632.4	382.06	
2009-10	2801.6	27.62	2829.22	3037.35	-208.13	
2010-11	2819.39	33.77	2853.16	2649.56	203.6	
2011-12	4383.82	59.46	4443.28	5338.64	-895.36	
2012-13	4046.23	29.84	4076.07	5331.74	-1255.7	
2013-14	5058.73	38.61	5097.34	4563.99	533.35	
2014-15	5432.85	55.81	5488.66	6570.93	-1082.3	
2015-16	4952.12	57.59	5009.71	8561.01	-3551.3	
2016-17						
April-October- (Estimate)	2561.38	27.17	2588.55	5986.88	-3398.3	

Source: Cashew Export Promotion Council of India, Kollam

Appendix 3.48																		
State wise production of Raw Cashew nuts in India																		
Area And Production Of Raw Cashewnut In India																		
A = Area in ha. P= Production in M.T																		
States	2010-11			2011-12			2012-13			2013-14			2014-15			2015-16		
	A	P	% Share	A	P	% Share	A	P	% Share	A	P	% Share	A	P	% Share	A	P	% Share
Maharashtra	181000	208000	31.85	183000	223000	32.23	184200	224640	30.84	184200	242610	32.94	186200	235000	32.4	186200	220000	32.82
Andhra Pradesh	183000	107000	16.39	184000	110000	15.9	183950	118144	16.22	184950	100420	13.63	185450	100000	13.8	185570	95500	14.25
Orissa	149000	91000	13.94	158000	97000	14.02	163910	100840	13.84	166910	85710	11.64	180410	85500	11.8	182910	80500	12.01
Karnataka	119000	57000	8.73	121000	60000	8.67	121880	74640	10.25	124110	80610	10.94	124710	80500	11.1	125860	73000	10.89
Kerala	78000	71000	10.87	83000	73000	10.55	84880	76960	10.56	84930	83120	11.28	84530	80000	11	87010	72000	10.74
Tamil Nadu	135000	65000	9.95	136000	68000	9.83	136420	62400	8.57	139420	67390	9.15	140420	67000	9.24	141330	58000	8.65
Goa	56000	24000	3.68	58000	25000	3.61	57470	29950	4.11	57970	32350	4.39	58170	32000	4.41	58170	28000	4.18
West Bengal	11000	11000	1.68	---	---	---	11000	12060	1.66	11160	13030	1.77	11360	13000	1.79	11360	12000	1.79
Jharkhand	---	---	---	20000	5000	0.72	11500	4640	0.64	14500	1200	0.16	14830	4500	0.62	14830	5000	0.75
Others	19000	19000	2.91	48000	31000	4.48	27000	24200	3.32	38090	30120	4.09	41120	27920	3.85	41750	26300	3.92
Total	931000	634000	97.09	943000	661000	95.52	955210	704274	96.68	1006240	736560	100	1027200	725420	100	1034990	670300	100

Source : Directorate of Cashewnut and Cocoa Development (DCCD), Kochi

Appendix 3.49					
Performance of Kerala State Cashew Development Corporation (KSCDC)					
Period	Number of Factories	Total Employment	Number of working days in factories	Turnover	Profit/Loss
				(₹ lakh)	(₹ lakh)
2008-09	30	18448	209	12788	-7774
2009-10	30	18240	284	17948	-6254
2010-11	30	18918	282	20655	-8979
2011-12	30	18205	288	27041	-12795
2012-13	30	17215	202	12674	-88768
2013-14	30	13486	198	12260	-3274
2014-15	30	11687	190	14690	-3279
2015-16	30	10632	106	6940	-2058

Source: KSCDC, Kollam

Appendix 3.50					
Performance of CAPEX					
Period	Number of Factories	Total Employment	Number of working days in factories	Turnover	Profit/Loss
				(₹ lakh)	(₹ lakh)
2008-09	10	1053570	210	3671.87	-490.13
2009-10	10	1254770	242	4822.77	-156.93
2010-11	10	1344881	257	4878.55	-318.12
2011-12	10	1200876	229	6775.97	-58.52
2012-13	10	1340635	265	6882.94	-16.64
2013-14	10	1016752	212	6347.86	-945.73
2014-15	10	867330	207	7385.74	-1445.95
2015-16	10	878120	232	7372	-1537

Source: CAPEX, Kollam

Appendix 3.51						
Mandays lost due to the Strikes (Numbers)						
Items	2011	2012	2013	2014	2015	2016 (up to 30-10-2016)
Pending	3	7	8	11	4	1
Arose	14	13	10	5	7	5
Total	17	20	18	16	11	6
Mandays lost	91,207	1,80,709	2,68,947	94,021	2,21,619	34,692

Source: Labour Commissionerate, GoK

Appendix 3.52						
Mandays lost due to the Lockouts (Numbers)						
Items	2011	2012	2013	2014	2015	2016 (up to 30-10-2016)
Pending	13	13	10	10	7	9
Arose	7	6	1	0	2	6
Total	20	19	11	10	9	15
Mandays lost	5,54,329	3,16,851	3,53,002	2,91,964	3,18,250	4,69,988

Source: Labour Commissionerate, GoK

Appendix 3.53						
Mandays lost due to the Layoffs (Numbers)						
Items	2011	2012	2013	2014	2015	2016 (up to 30-10-2016)
Pending	6	4	2	4	5	6
Arose	5	3	2	8	9	3
Total	11	7	4	12	14	9
Mandays lost	41,336	52,574	26,691	68,337	72,935	3,15,088

Source: Labour Commissionerate, GoK

Appendix 3.54					
Industrial Disputes Arose, handled and Settled in Kerala during 2009-2010 to 2014-2015					
Sl. No	Particulars	2012-13	2013-14	2014-15	2015-16
1	Number of disputes pending at the beginning of the year	3752	3890	3525	3203
2	Number of disputes that arose during the year	1865	2019	1920	2439
3	Number of disputes handled during the year	5617	5909	5445	5642
4	Number of disputes settled during the year				
a	By voluntary negotiation between parties	419	539	671	723
b	By conciliation	784	1158	847	1151
c	By withdrawal	355	583	554	615
d	Referred for adjudication	169	96	170	239
e	Referred for arbitration	0	8	0	1
f	Total Number of disputes settled	1727	2384	2242	2729
5	Number of disputes pending at the end of the year	3890	3525	3203	2913
6	Number of disputes led to				
a	Strike (including pending previously)	26	18	8	10
b	Lockout (including pending previously)	14	11	7	10
7	Number of workers affected due to				
a	Strike	7028	5261	2374	13842
b	Lockout	1728	1422	1142	1664
8	Man days Lost				
a	Strike	278965	222448	121276	160273
b	Lockout	254156	355506	287060	356060

Source: Labour Commissionerate

Appendix 3.55						
Industrial Accidents 2011-2016 (Numbers)						
Accident	2011	2012	2013	2014	2015	2016 (up to 31-10-2016)
Fatal	255	214	414	274	131	147
Non Fatal	498	460	365	370	341	264

Source: Factories and Boilers Department

Appendix 3.56			
Programmes conducted by Factories and Boilers Department			
Sl. No.	Programmes	2015-16 (revised)	2016-17 Up to 31-10-2016
1	Priority inspection at MAH factories	57	84
2	Air Monitoring studies in hazardous factories	71	125
3	Workshop/training programmes for workers/managers	6	6
4	Inspection at hazardous factories other than MAH factories	20	47
5	Medical examination of crusher factor workers	930	1232
Total		1078	1494

Source: Factories and Boilers Department

Appendix 3.57		
Growth of Working Factories and Average Daily Employment in Kerala 2005-2016		
Year	Number of factories	Employment
2006	17641	446204
2007	17814	448524
2008	18131	497326
2009	18740	624388
2010	19065	639286
2011	19676	644606
2012	20473	644802
2013	21382	645013
2014	21764	646923
2015	21850	688199
2016	22834	702129

Source: Factories and Boilers Department

Appendix 3.58						
Physical and Financial Achievements of RSBY/CHIS						
Year	Number of Patients (in lakh)			Amount (in crore)		
	Public	Private	Total	Public	Private	Total
2014-15	4.16	1.71	5.87	158.72	69.40	228.12
2015-16	3.71	1.54	5.25	145.32	60.26	205.58
Total	7.87	3.25	11.12	304.04	129.66	433.7

Source: Labour Commissionerate

Appendix 3.59	
State /UT wise Unemployment Rate based on UPS Approach	
States/UT	Unemployment Rate
Andra Pradesh	3.9
Arunachal Pradesh	8.9
Assam	6.1
Bihar	6
Chhattisgarh	1.9
Delhi	3.3
Goa	9.6
Gujarat	0.9
Haryana	4.7
Himachal Pradesh	10.6
Jammu and Kashmir	7.2
Jharkhand	7.7
Karnataka	1.5
Kerala	12.5
Madhya Pradesh	4.3
Maharashtra	2.1
Manipur	5.7
Meghalaya	4.8
Mizoram	3
Nagaland	8.5
Orissa	5
Punjab	6
Rajasthan	7.1
Sikkim	18.1
Tamil Nadu	4.2
Telungala	2.8
Tripura	19.7
Uttarakhand	7
Uttar Pradesh	7.4
West Bengal	4.9
Andoman and Nikkobar Islands	12.7
Chandigarh	3.4
Dadra and Nagar Haveli	2.8
Daman and Diu	0.3
Lakshadweep	16.1
Puducherry	4.9
All-India	5.0

Source : Fifth Annual Employment-Unemployment Survey (2015-16), Govt. of India

Appendix 3.60									
Some important Employment and Unemployment Indicators (per 1000) – Kerala									
(Based on the surveys conducted in 2011-12 and 2009-10)									
Age: All Ages									
Indicator	Rural			Urban			Total (Rural and Urban)		
	Male	Female	Male + Female	Male	Female	Male + Female	Male	Female	Male + Female
1	2	3	4	5	6	7	8	9	10
NSS 68th round (July 2011-June 2012)									
Usual Principal Status									
LFPR	565	208	375	558	199	370	563	205	373
WPR	543	161	339	540	161	341	542	161	340
PU	22	47	35	18	38	29	21	45	34
UR	39	227	94	33	192	78	37	218	90
Usual Principal And Subsidiary Status									
LFPR	583	258	410	567	222	386	579	248	403
WPR	565	221	382	552	191	363	562	213	377
PU	18	36	28	15	31	23	17	35	27
UR	31	142	68	27	139	61	30	141	66
Current Weekly Status									
LFPR	561	226	382	551	204	369	558	220	379
WPR	527	180	342	525	168	338	526	177	341
PU	34	47	41	26	37	32	32	44	38
UR	61	206	107	47	179	85	57	199	101
Current Daily Status									
LFPR	527	200	353	528	190	351	527	198	352
WPR	462	145	293	482	150	308	468	146	297
PU	64	55	60	46	41	43	59	51	55
UR	122	277	169	87	213	123	112	260	156
NSS 66th round (July 2009-June 2010)									
Usual Principal Status									
LFPR	572	223	389	553	213	375	567	220	385
WPR	550	176	354	534	171	344	545	175	351
PU	22	47	35	19	42	31	21	46	34
UR	38	210	90	34	198	83	37	207	88
Usual Principal And Subsidiary Status									
LFPR	583	260	414	564	233	391	578	253	408
WPR	564	218	383	547	194	363	560	212	377
PU	19	42	31	16	39	28	18	41	30
UR	32	161	75	29	168	73	32	163	74
Current Weekly Status									
LFPR	566	238	394	555	218	379	563	233	390
WPR	539	191	357	526	179	344	536	188	353
PU	27	47	38	29	39	34	27	45	37
UR	47	199	95	52	181	91	48	194	94
Current Daily Status									
LFPR	541	213	370	534	201	360	539	210	367
WPR	471	155	306	469	158	307	471	156	306
PU	70	59	64	64	43	53	68	54	61
UR	129	274	173	121	213	148	127	259	167

Labour Force Participation Rate (LFPR): LFPR is defined as the number of persons/person-days in the labour force per 1000 persons/person-days

Worker Population Ratio (WPR): WPR is defined as the number of persons/person-days employed per 1000 persons/person-days

Proportion Unemployed (PU): It is defined as the number of persons/person-days unemployed per 1000 persons/person-days.

Unemployment Rate (UR): UR is defined as the number of persons/person-days unemployed per 1000 persons/person-days in the labour force (which include both the employed and unemployed.)

Source: 1. Key indicators of Employment and Unemployment in India 2011-12, NSSO June 2013
2. Key indicators of Employment and Unemployment in India 2009-10, NSSO June 2011

Appendix 3.61									
Some important Employment and Unemployment Indicators (per 1000) -All India									
(Based on surveys conducted in 2011-12 and 2009-10)									
Age: All Ages									
Indicator	Rural			Urban			Rural + Urban		
	Male	Female	Male+ Female	Male	Female	Male+ Female	Male	Female	Male+ Female
1	2	3	4	5	6	7	8	9	10
NSS 68th round (July 2011-June 2012)									
Usual Principal Status									
LFPR	547	181	368	560	134	356	550	168	364
WPR	535	176	359	542	125	342	537	161	354
PU	12	5	8	18	9	14	13	6	10
UR	21	29	23	32	66	38	24	37	27
Usual Principal And Subsidiary Status									
LFPR	553	253	406	563	155	367	556	225	395
WPR	543	248	399	546	147	355	544	219	386
PU	10	4	7	17	8	13	12	5	9
UR	17	17	17	30	52	34	21	24	22
Current Weekly Status									
LFPR	545	215	383	561	148	363	549	196	377
WPR	526	207	370	539	138	347	530	188	364
PU	18	8	13	22	10	16	19	8	14
UR	33	35	34	38	67	44	35	42	37
Current Daily Status									
LFPR	534	180	361	555	136	354	540	168	359
WPR	504	169	340	528	125	335	511	156	339
PU	29	11	20	27	11	19	29	11	20
UR	55	62	57	49	80	55	53	66	56
NSS 66th round (July 2009-June 2010)									
Usual Principal Status									
LFPR	548	208	382	556	128	352	550	186	374
WPR	537	202	374	539	119	339	538	180	365
PU	11	5	8	17	9	13	12	6	9
UR	19	24	21	30	70	37	22	33	25
Usual Principal And Subsidiary Status									
LFPR	556	265	414	559	146	362	557	233	400
WPR	547	261	408	543	138	350	546	228	392
PU	9	4	7	16	8	12	11	5	8
UR	16	16	16	28	57	34	20	23	20
Current Weekly Status									
LFPR	548	231	394	556	141	358	550	207	384
WPR	531	223	381	536	130	343	532	198	370
PU	17	8	13	20	10	15	18	9	14
UR	32	37	33	36	72	42	33	43	36
Current Daily Status									
LFPR	536	197	371	550	129	350	540	179	365
WPR	501	182	346	522	117	329	507	164	341
PU	35	16	25	28	12	20	33	15	24
UR	64	80	68	51	91	58	61	82	66

Labour Force Participation Rate (LFPR): LFPR is defined as the number of persons/person-days in the labour force per 1000 persons/person-days

Worker Population Ratio (WPR): WPR is defined as the number of persons/person-days employed per 1000 persons/person-days

Proportion Unemployed (PU): It is defined as the number of persons/person-days unemployed per 1000 persons/person-days.

Unemployment Rate (UR): UR is defined as the number of persons/person-days unemployed per 1000 persons/person-days in the labour force (which include both the employed and unemployed)

Source: 1. Key indicators of Employment and Unemployment in India 2011-12, NSSO June 2013

2. Key indicators of Employment and Unemployment in India 2009-10, NSSO June 2011

Appendix 3.62									
Employment in the Organised Sector in Kerala									
(lakh Persons as on 31st March)									
Year	Public Sector			Private Sector			Total: Organised Sector (Public and Private)		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10
2000	4.51	1.93	6.44	2.96	2.86	5.82	7.47	4.79	12.26
2005	4.27	1.88	6.15	2.63	2.62	5.25	6.90	4.50	11.40
2010	4.18	1.95	6.13	2.49	2.53	5.02	6.67	4.48	11.15
2011	4.21	1.91	6.12	2.45	2.54	4.99	6.66	4.45	11.11
2012	3.92	1.85	5.77	2.48	2.64	5.12	6.40	4.49	10.89
2013	3.83	1.82	5.65	2.48	2.75	5.23	6.31	4.57	10.88
2014	3.86	1.93	5.79	2.66	2.84	5.50	6.52	4.77	11.29
2015	3.78	1.92	5.70	1.96	3.70	5.66	5.74	5.62	11.36
2016	3.88	1.87	5.75	2.95	3.15	6.10	6.83	5.02	11.85

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 3.63						
Employment in Various Branches Under Public Sector in Kerala						
(lakh persons as on 31 st March)						
Year	Central Govt.	State Govt.	Central Quasi Govt.	State Quasi Govt.	LSGI	Total
1	2	3	4	5	6	7
2000	0.87	2.93	1.08	1.31	0.25	6.44
2005	0.77	2.80	1.01	1.31	0.27	6.16
2010	0.61	2.67	0.91	1.67	0.27	6.13
2011	0.61	2.65	0.92	1.69	0.26	6.13
2012	0.60	2.68	0.87	1.36	0.25	5.76
2013	0.57	2.63	0.85	1.34	0.26	5.65
2014	0.57	2.65	0.90	1.40	0.27	5.79
2015	0.56	2.59	0.92	1.37	0.27	5.71
2016	0.58	2.75	0.89	1.26	0.27	5.75

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 3.64										
District-wise Employment in Organised Sector in Kerala										
No.	District	Number of persons employed (lakh Persons as on 31st March)								
		2000	2005	2010	2011	2012	2013	2014	2015	2016
A) Public Sector										
1	Thiruvananthapuram	1.50	1.36	1.38	1.28	1.13	1.13	1.17	1.12	1.23
2	Kollam	0.48	0.46	0.48	0.47	0.47	0.47	0.47	0.47	0.47
3	Pathanamthitta	0.28	0.26	0.26	0.26	0.24	0.20	0.23	0.22	0.22
4	Alapuzha	0.31	0.32	0.26	0.24	0.24	0.24	0.25	0.25	0.17
5	Kottayam	0.36	0.33	0.33	0.34	0.33	0.33	0.29	0.3	0.18
6	Idukki	0.16	0.16	0.15	0.11	0.11	0.12	0.12	0.13	0.13
7	Ernakulam	0.89	0.92	0.83	0.87	0.90	0.82	0.85	0.86	0.86
8	Thrissur	0.54	0.52	0.52	0.50	0.50	0.50	0.51	0.51	0.55
9	Palakkad	0.47	0.45	0.46	0.49	0.39	0.38	0.41	0.41	0.42
10	Malappuram	0.36	0.34	0.36	0.36	0.37	0.39	0.40	0.35	0.43
11	Wayanad	0.16	0.14	0.14	0.16	0.14	0.13	0.13	0.13	0.13
12	Kozhikode	0.40	0.36	0.39	0.48	0.38	0.38	0.39	0.38	0.38
13	Kannur	0.33	0.36	0.36	0.38	0.38	0.38	0.39	0.39	0.39
14	Kasaragode	0.20	0.17	0.20	0.18	0.18	0.18	0.18	0.18	0.19
	Total	6.44	6.15	6.12	6.12	5.76	5.65	5.79	5.70	5.75
B) Private Sector										
1	Thiruvananthapuram	0.42	0.47	0.36	0.35	0.36	0.36	0.34	0.36	0.36
2	Kollam	0.55	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.46
3	Pathanamthitta	0.14	0.18	0.15	0.15	0.15	0.14	0.18	0.18	0.17
4	Alapuzha	0.27	0.16	0.37	0.38	0.38	0.38	0.45	0.47	0.39
5	Kottayam	0.29	0.27	0.27	0.28	0.34	0.34	0.35	0.35	0.33
6	Idukki	0.74	0.63	0.44	0.44	0.44	0.39	0.37	0.37	0.37
7	Ernakulam	0.67	0.72	0.78	0.79	0.93	1.06	1.06	1.14	1.42
8	Thrissur	0.49	0.55	0.47	0.47	0.48	0.48	0.44	0.47	0.63
9	Palakkad	0.34	0.22	0.22	0.23	0.23	0.23	0.25	0.29	0.31
10	Malappuram	0.31	0.29	0.31	0.23	0.25	0.33	0.34	0.3	0.3
11	Wayanad	0.19	0.36	0.14	0.13	0.12	0.12	0.13	0.13	0.14
12	Kozhikode	0.50	0.15	0.33	0.32	0.32	0.32	0.44	0.49	0.5
13	Kannur	0.55	0.44	0.42	0.42	0.39	0.34	0.34	0.38	0.38
14	Kasaragode	0.37	0.33	0.30	0.34	0.27	0.27	0.34	0.27	0.34
	Total	5.82	5.23	5.02	4.99	5.12	5.23	5.50	5.67	6.10
Total (Public and Private)										
1	Thiruvananthapuram	1.92	1.83	1.74	1.63	1.49	1.49	1.51	1.48	1.59
2	Kollam	1.03	0.92	0.94	0.93	0.93	0.94	0.94	0.94	0.93
3	Pathanamthitta	0.42	0.44	0.41	0.41	0.39	0.34	0.41	0.4	0.39
4	Alapuzha	0.58	0.48	0.63	0.62	0.62	0.62	0.70	0.72	0.56
5	Kottayam	0.65	0.60	0.60	0.62	0.67	0.67	0.64	0.65	0.51
6	Idukki	0.90	0.79	0.59	0.55	0.55	0.51	0.49	0.5	0.5
7	Ernakulam	1.56	1.64	1.61	1.66	1.83	1.88	1.91	2	2.28
8	Thrissur	1.03	1.07	0.99	0.97	0.98	0.98	0.95	0.98	1.18
9	Palakkad	0.81	0.67	0.68	0.72	0.62	0.61	0.66	0.7	0.73
10	Malappuram	0.67	0.63	0.67	0.59	0.62	0.72	0.74	0.65	0.73
11	Wayanad	0.35	0.50	0.28	0.29	0.26	0.25	0.26	0.26	0.27
12	Kozhikode	0.90	0.51	0.72	0.80	0.70	0.70	0.83	0.87	0.88
13	Kannur	0.88	0.80	0.78	0.80	0.77	0.72	0.73	0.77	0.77
14	Kasaragode	0.57	0.50	0.50	0.52	0.45	0.45	0.52	0.45	0.53
	Total	12.27	11.38	11.14	11.11	10.88	10.88	11.29	11.37	11.85

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 3.65													
District wise and Branch-wise Employment under Public sector in Kerala (2015-16)													
Sl. No	District	Central Govt.		State Govt.		Central Quasi		State Quasi		LSGI		Total	
		Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
1	Thiruvananthapuram	21232	3593	46351	16785	12587	3866	37054	4812	5417	1991	122641	31047
2	Kollam	649	244	18958	8205	5417	1396	18825	10022	3052	1003	46901	20870
3	Pathanamthitta	1646	639	10632	5482	1666	664	6948	1843	1169	552	22061	9180
4	Alapuzha	765	282	10485	4826	3029	939	1390	518	1391	519	17060	7084
5	Kottayam	914	460	8323	4046	3688	1392	4883	1201	729	331	18537	7430
6	Idukki	334	140	8247	2490	779	176	2649	363	787	149	12796	3318
7	Ernakulam	9855	2569	29033	12621	26815	5943	18610	4155	2056	713	86369	26001
8	Thrissur	5867	1643	29077	13071	5718	1741	12055	4075	2109	827	54826	21357
9	Palakkad	9511	2266	21104	8894	4036	956	5471	639	1789	564	41911	13319
10	Malappuram	1753	548	28787	10979	3030	559	7392	1284	2088	208	43050	13578
11	Wayanad	2459	787	18628	6376	6767	1964	6679	1324	3264	1326	37797	11777
12	Kozhikode	152	33	897	159	8967	3285	2684	325	411	115	13111	3917
13	Kannur	2363	585	22037	6277	4701	1028	8320	3378	1656	547	39077	11815
14	Kasaragode	759	196	12812	4666	1546	466	2952	618	751	226	18820	6172
	State	58259	13985	265371	104877	88746	24375	135912	34557	26669	9071	574957	186865

Source: Directorate of Employment, Govt. of Kerala 2016

Appendix 3.66										
Employment in Organised Sectors by Industry in Kerala										
(lakh Persons as on 31st March)										
Sl. No.	Industry	2005	2010	2011	2012	2013	2014	2015	2016	
1	2	3	4	5	6	7	8	9	10	
A) Public Sector										
1	Agriculture and Allied Industries	0.20	0.17	0.17	0.16	0.16	0.17	0.17	0.16	
2	Mining and Quarrying	0.03	0.05	0.05	0.03	0.05	0.01	0.01	0.007	
3	Manufacturing	0.53	0.60	0.60	0.52	0.48	0.56	0.48	0.53	
4	Construction	0.21	0.20	0.20	0.19	0.18	0.12	0.13	0.12	
5	Electricity, Gas, Water and Sanitary Services	0.24	0.28	0.28	0.30	0.30	0.24	0.24	0.2	
6	Trade, Restaurants and Hotels	0.06	0.08	0.08	0.05	0.05	0.12	0.12	0.15	
7	Transport, Storage and Communication	0.98	0.91	0.91	0.86	0.86	0.73	0.68	0.67	
8	Financing, Insurance, Real Estate and Business Services	0.67	0.66	0.67	0.53	0.52	0.58	0.49	0.56	
9	Community, Social and Personal Services	3.22	3.18	3.17	3.13	3.06	3.26	3.39	3.25	
Total: Public Sector		6.15	6.13	6.13	5.77	5.65	5.79	5.71	5.65	
B) Private Sector										
1	Agriculture and Allied Industries	0.66	0.61	0.58	0.59	0.52	0.51	0.51	0.5	
2	Mining and Quarrying	0.09	0.00	0.01	0.01	0.00	0.00	0.00	0	
3	Manufacturing	2.02	1.98	1.94	1.82	1.78	1.75	1.84	1.9	
4	Construction	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	
5	Electricity, Gas, Water and Sanitary Services	0.02	0.00	0.00	0.01	0.01	0.02	0.02	0.02	
6	Trade, Restaurants and Hotels	0.25	0.28	0.29	0.34	0.36	0.23	0.25	0.27	
7	Transport, Storage and Communication	0.04	0.05	0.05	0.05	0.06	0.31	0.33	0.48	
8	Financing, Insurance, Real Estate and Business Services	0.29	0.34	0.34	0.42	0.49	0.46	0.36	0.35	
9	Community, Social and Personal Services	1.88	1.74	1.76	1.86	1.98	2.21	2.35	2.57	
Total: Private Sector		5.25	5.02	4.99	5.12	5.23	5.50	5.67	6.10	
Total (Public and Private)										
1	Agriculture and Allied Industries	Persons	0.86	0.78	0.75	0.75	0.68	0.68	0.68	0.66
		%	7.54	7.00	6.74	6.89	6.25	6.02	5.98	5.62
2	Mining and Quarrying	Persons	0.12	0.05	0.06	0.04	0.05	0.01	0.01	0.007
		%	1.05	0.45	0.54	0.37	0.46	0.09	0.09	0.06
3	Manufacturing	Persons	2.55	2.58	2.54	2.34	2.26	2.31	2.32	2.43
		%	22.37	23.16	22.84	21.49	20.77	20.46	20.39	20.69
4	Construction	Persons	0.22	0.21	0.22	0.21	0.20	0.13	0.14	0.13
		%	1.93	1.89	1.98	1.93	1.84	1.15	1.23	1.11
5	Electricity, Gas, Water and Sanitary Services	Persons	0.26	0.28	0.28	0.31	0.31	0.26	0.26	0.22
		%	2.28	2.51	2.52	2.85	2.85	2.30	2.28	1.87
6	Trade, Restaurants and Hotels	Persons	0.31	0.36	0.37	0.39	0.41	0.35	0.37	0.42
		%	2.72	3.23	3.33	3.58	3.77	3.10	3.25	3.58
7	Transport, Storage and	Persons	1.02	0.96	0.96	0.91	0.92	1.04	1.01	1.15
		%	8.95	8.62	8.63	8.36	8.46	9.21	8.88	9.79

	Communication									
8	Financing, Insurance, Real Estate and Business Services	Persons	0.96	1.00	1.01	0.95	1.01	1.04	0.85	0.91
		%	8.42	8.98	9.08	8.72	9.28	9.21	7.45	7.75
9	Community, Social and Personal Services	Persons	5.10	4.92	4.93	4.99	5.04	5.47	5.74	5.82
		%	44.74	44.17	44.33	45.82	46.32	48.45	50.43	49.54
Total (Public and Private)		Persons	11.40	11.14	11.12	10.89	10.88	11.29	11.38	11.75
		%	100.00	100.00	100.00	100.00	100.00	100.0	100	100

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 3.67			
Total Work Seekers in Kerala (lakh persons)			
Year (at the end of December)	General Work seekers	Professional/ Technical work Seekers	Total Work Seekers
1	2	3	4
2005	34.93	1.77	36.70
2006	36.93	1.64	38.57
2007	38.39	1.49	39.88
2008	40.01	1.43	41.44
2009	41.54	1.46	43.00
2010	41.60	1.50	43.10
2011	41.98	1.64	43.62
2012	43.29	1.70	44.99
2013	34.83	1.68	36.51
2014	36.21	1.51	37.72
2015	34.09	1.63	35.72
2016*	32.67	1.7	34.37

Source: Directorate of Employment, Govt. of Kerala, 2016

Note (1) In the case of Professional/Technical work seekers given in col 3, only the registered persons under the categories of Medical/ Engineering Graduates, Diploma/ Certificate holders in Engineering, Agricultural/Veterinary graduates are included.

(2) Data on work seekers having other professional qualifications like LLB/LLM, MCA, MBA, PGDCA, BLisc/MLisc. etc. are included under col. 2.

* Up to 30/10/2016

Appendix 3.68								
Distribution of Work Seekers in Kerala by Educational Level (lakh persons)								
Year (at the end of December)	Below SSLC	SSLC	HSC	Degree	Post graduate	SSLC and above	% to Total Work Seekers	Total Work seekers
1	2	3	4	5	6	7	8	9
2005	6.29	21.81	5.75	2.30	0.55	30.41	82.9%	36.70
2006	6.37	23.16	6.17	2.33	0.54	32.20	83.5%	38.57
2007	6.31	24.21	6.45	2.38	0.53	33.57	84.2%	39.88
2008	6.21	25.50	6.85	2.35	0.53	35.23	85.0%	41.44
2009	6.24	26.76	7.08	2.39	0.53	36.76	85.5%	43.00
2010	5.94	26.90	7.18	2.61	0.47	37.16	86.2%	43.10
2011	5.88	27.40	7.24	2.62	0.48	37.74	86.5%	43.62
2012	5.98	28.37	7.49	2.66	0.49	39.01	86.7%	44.99
2013	4.26	23.09	6.37	2.25	0.54	32.25	88.3%	36.51
2014	3.81	22.86	6.65	2.39	0.50	32.40	89.5%	36.21
2015	3.73	20.84	6.57	2.37	0.58	30.36	89.1%	34.09
2016*	3.47	20.19	6.87	2.01	0.13	29.20	89.4%	32.67

Source: Directorate of Employment, Govt. of Kerala, 2016

* Up to 30/10/2016

Appendix 3.69							
Number of Professional and Technical Work Seekers (Number of Persons)							
Year (at the end of December)	Medical Graduates	Engg. Graduates	Diploma Holders in Engg.	ITI Certificate Holders	Agricultural Graduates	Veterinary Graduates	Total
1	2	3	4	5	6	7	8
2005	3428	6389	41345	124410	803	547	176922
2006	2925	8466	41700	109780	762	522	164155
2007	2319	7608	35216	103018	704	584	149449
2008	2225	7941	31850	100183	654	578	143431
2009	2420	9495	36186	96655	581	602	145939
2010	2090	8143	35164	104201	402	411	150411
2011	2439	10953	37748	111751	491	517	163899
2012	2912	14477	38841	112493	529	719	169971
2013	2945	40091	38010	85590	500	583	167719
2014	3439	25203	39495	85444	803	707	155091
2015	3497	23984	46061	87727	915	557	162741
2016*	3369	30719	48180	86191	1182	609	170250

* Up to 30/10/2016

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 3.70							
District-wise Distribution of Work Seekers as on 30.09.2016							
(Number of persons)							
Sl. No.	Districts	General work seekers		Professional/Tech nical work seekers		Total work seekers	
		Men	Women	Men	Wome n	Men [2+4]	Women [3+5]
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	169836	287819	26132	36766	195968	324585
2	Kollam	138582	231519	9921	5067	148503	236586
3	Pathananthitta	43171	74092	3389	911	46560	75003
4	Alappuzha	111616	190442	13657	2863	125273	193305
5	Kottayam	74873	123914	6746	3529	81619	127443
6	Idukki	43461	63107	2310	1138	45771	64245
7	Ernakulam	103381	167834	18941	23000	122322	190834
8	Thrissur	101410	200023	7634	2740	109044	202763
9	Palakkad	87346	141569	7925	2702	95271	144271
10	Malappuram	99445	167743	5379	1224	104824	168967
11	Kozhikode	102957	195268	18900	33697	121857	228965
12	Waynad	32387	51609	1689	694	34076	52303
13	Kannur	57585	122801	12314	3257	69899	126058
14	Kasaragod	28468	54800	1745	1904	30213	56704
Total		1194518	2072540	136682	119492	1331200	2192032

Source: Directorate of Employment, Govt. of Kerala, 2016

Appendix 4.1			
Literacy rate- Kerala 1951-2016			
Year	Persons	Male	Female
1	2	3	4
1951	47.18	58.35	36.43
1961	55.08	64.89	45.56
1971	69.75	77.13	62.53
1981	78.85	84.56	73.36
1991	89.81	93.62	86.17
2001	90.92	94.2	87.86
2011	93.91	96.02	91.61
2012	93.95	96.21	91.99
2013	94.01	96.41	92.09
2014	94.36	96.67	92.65
2015	94.47	96.52	92.41
2016	94.57	96.61	92.52

Source: KSLMA

Appendix 4.2							
Literacy rate by Sex for State and Districts; 2004 - 2016 -Kerala							
Sl. No.	States/District	Literacy rate					
		Persons		Male		Female	
		2004	2016	2004	2016	2004	2016
1	2	3	4	5	6	7	8
	Kerala	90.86	93.91	94.24	96.02	87.72	91.98
1	Thiruvananthapuram	89.28	92.66	92.64	94.6	86.14	90.89
2	Kollam	91.18	93.77	94.43	95.83	88.18	91.95
3	Pathanamthitta	94.84	96.93	96.41	97.7	93.43	96.26
4	Alappuzha	93.43	96.26	96.27	97.9	90.82	94.8
5	Kottayam	95.82	96.4	97.34	97.17	94.35	95.67
6	Idukki	88.69	92.20	92.33	94.84	85.02	89.59
7	Ernakulam	93.2	95.68	95.81	97.14	90.66	94.27
8	Thrissur	92.27	95.32	95.11	96.98	89.71	93.85
9	Palakkad	84.35	88.49	89.52	92.27	79.56	84.99
10	Malappuram	89.61	93.56	93.25	95.78	86.26	91.55
11	Kozhikode	92.24	95.24	96.11	97.57	88.62	93.16
12	Wayanad	85.25	89.32	89.77	92.84	80.72	85.94
13	Kannur	92.59	95.41	96.13	97.54	89.4	93.57
14	Kasaragod	84.57	89.85	90.36	93.93	79.12	86.13

Source: KSLMA

Appendix 4.3		
Details on the Number of people benefited from Std. VII Equivalency programme of Kerala State Literacy Mission-2006-07 to 2015-16		
Year	Number of People benefitted	
	Male	Female
1	2	3
2006-07	9354	11845
2007-08	3271	4324
2008-09	4526	5071
2009-10	2762	4867
2010-11	5873	7915
2011-12	5175	6040
2012-13	3700	4450
2013-14	3542	3962
2014-15	2740	2082
2015-16	2080	1217
Total	43023	51773

Source: KSLMA

Appendix 4.4																	
District-wise/ Management-wise/Stage-wise Number of Schools in Kerala: 2015-16																	
Sl. No.	District	High Schools			U.P. Schools			L.P. Schools			Total						
		G	PA	PUA	Total	G	PA	PUA	Total	G	PA	PUA	Total	PA	PUA	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Trivandrum	126	94	50	270	98	94	25	217	304	172	31	507	528	360	106	994
2	KLM	86	125	19	230	64	133	25	222	277	179	45	501	427	437	89	953
3	PTA	50	109	9	168	43	85	16	144	168	231	21	420	261	425	46	732
4	ALP	62	128	7	197	69	79	8	156	199	188	23	410	330	395	38	763
5	KTM	65	166	23	254	63	128	10	201	172	257	24	453	300	551	57	908
6	IDY	80	70	13	163	25	60	5	90	94	125	17	236	199	255	35	489
7	EKM	95	175	52	322	86	99	18	203	186	256	32	474	367	530	102	999
8	TSR	82	148	33	263	56	161	13	230	119	374	39	532	257	683	85	1025
9	PKD	89	76	43	208	43	159	20	222	197	344	34	575	329	579	97	1005
10	MLP	94	85	118	297	105	221	49	375	347	475	54	876	546	781	221	1548
11	KKD	79	98	27	204	67	239	17	323	182	524	36	742	328	861	80	1269
12	WYD	61	23	5	89	22	40	7	69	89	46	10	145	172	109	22	303
13	KNR	96	76	27	199	67	280	24	371	116	603	16	735	279	959	67	1305
14	KSD	97	33	27	157	57	70	29	156	142	112	22	276	296	215	78	589
	Total	1162	1406	453	3021	865	1848	266	2979	2592	3886	404	6882	4619	7140	1123	12882

Source: Directorate of Public Instruction

Appendix 4.5					
District wise Number of Schools (other than state syllabus) in Kerala - 2015 - 2016					
Sl. No.	District	CBSE	ICSE	Kendriya Vidyalaya	Jawahar Navodaya
1	2	3	4	5	6
1	Thiruvananthapuram	121	15	5	1
2	Kollam	101	18	1	1
3	Pathanamthitta	52	16	2	1
4	Alappuzha	81	14	1	1
5	Kottayam	105	16	2	1
6	Idukky	49	4	1	1
7	Ernakulam	181	26	6	1
8	Thrissur	106	17	2	1
9	Palakkad	69	4	3	1
10	Malappuram	113	3	1	1
11	Kozhikode	76	4	2	1
12	Wayanad	26	3	1	1
13	Kannur	87	4	6	1
14	Kasaragod	43	4	3	1
Total		1210	148	36	14

Source: Directorate of Public Instruction

Appendix 4.6													
District - wise Details of Govt. Schools having Building Facilities - Kerala (2015-16)													
Sl. No	District	Number of Schools having Pucca Buildings			Number of Schools having Thatched Sheds			Number of Schools working in Rented Buildings.			Total		
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total	L.P		U.P	H.S
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	301	98	128	527				0	0	0	0	0
2	Kollam	245	59	86	390				0	0	0	0	0
3	Pathanamthitta	143	38	47	228				0	2	0	0	2
4	Alappuzha	188	60	59	307				0	0	0	0	0
5	Kottayam	199	75	64	338				0	0	0	0	0
6	Idukky	93	38	77	208				0	0	0	0	0
7	Ernakulam	174	92	95	361				0	0	0	0	0
8	Thrissur	117	55	85	257				0	9	0	1	10
9	Palakkad	191	63	89	343				0	19	1	2	22
10	Malappuram	342	93	85	520				0	16	4	0	20
11	Kozhikode	176	68	79	323				0	12	2	0	14
12	Wayanad	89	34	58	181				0	0	0	19	19
13	Kannur	108	71	95	274				0	13	7	1	21
14	Kasaragod	141	75	91	307				0	3	3	2	8
	Total	2507	919	1138	4564	0	0	0	0	74	17	25	116

Source: Directorate of Public Instruction

Appendix 4.7									
District - wise Details of Govt. Schools having Drinking water/Latrines/Urinal Facilities in Kerala-2015-2016									
Sl. No.	District	Number of Schools having							
		Drinking Water				Urinals / Latrines			
		L.P	U.P	H.S	Total	L.P	U.P	H.S	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	302	98	129	529	301	98	129	528
2	Kollam	246	59	86	391	246	59	86	391
3	Pathanamthitta	145	36	47	228	147	43	47	237
4	Alappuzha	194	59	59	312	191	63	62	316
5	Kottayam	198	77	64	339	200	63	64	327
6	Idukky	96	43	78	217	96	25	80	201
7	Ernakulam	176	93	95	364	176	86	95	357
8	Thrissur	113	54	83	250	117	55	84	256
9	Palakkad	188	65	88	341	195	43	89	327
10	Malappuram	345	94	92	531	347	94	93	534
11	Kozhikode	176	68	76	320	179	67	79	325
12	Wayanad	87	34	39	160	93	22	40	155
13	Kannur	110	74	99	283	112	67	99	278
14	Kasaragod	142	75	93	310	142	57	96	295
Total		2518	929	1128	4575	2542	842	1143	4527

Source: Directorate of Public Instruction

Appendix 4.8				
Stage-wise Enrolment of Students in Schools in Kerala from 2012-13 to 2016-17				
Year	LPS	UPS	HS	Total
1	2	3	4	5
2012-13	1284361	1260685	1426491	3971537
2013-14	1240143	1201682	1406242	3848067
2014-15	1228361	1163276	1397590	3789227
2015-16	1263261	1135287	1364621	3763169
2016-17 (Provisional)	1268101	1115596	1317880	3701577

Source: Directorate of Public Instruction

Appendix 4.9														
Management-wise/Standard wise Enrolment of Students in Schools: Kerala 2016-17(Provisional)														
Management	Standards											Total I to X		
	I	II	III	IV	Total	V	VI	VII	Total	VIII	IX		X	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Government	91210	94485	96754	98728	381177	100445	102932	109395	312772	135828	145873	150593	432294	1126243
Aided	158323	166040	172120	176752	673235	219786	231231	241220	692237	251208	269078	271207	791493	2156965
Un Aided	55414	53998	53170	51107	213689	38982	36062	35543	110587	31439	31077	31577	94093	418369
Grand Total	304947	314523	322044	326587	1268101	359213	370225	386158	1115596	418475	446028	453377	1317880	3701577

Source: Directorate of Public Instruction

Appendix 4.10														
Enrolment of Students in Schools- District-wise , Stage-wise and Sex-wise during 2016-17														
Sl. No	Districts	L.P.S(I-IV)				U.P.S(V-VII)				H.S(VIII-X)				TOTAL
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	Thiruvananthapuram	47484	49664	97148	45292	45647	90939	55388	55110	110498	148164	150421	298585	
2	Kollam	39069	39609	78678	38831	38377	77208	49092	46964	96056	126992	124950	251942	
3	Pathanamthitta	13430	13398	26828	13703	13162	26865	17635	16286	33921	44768	42846	87614	
4	Alappuzha	26175	27034	53209	27263	27138	54401	36175	34975	71150	89613	89147	178760	
5	Kottayam	26588	27112	53700	25150	25069	50219	31420	30858	62278	83158	83039	166197	
6	Idukky	18519	17731	36250	15998	15029	31027	19783	17990	37773	54300	50750	105050	
7	Ernakulam	43311	44456	87767	39995	40105	80100	51229	48805	100034	134535	133366	267901	
8	Thrissur	54059	55052	109111	46851	45698	92549	55057	51399	106456	155967	152149	308116	
9	Palakkad	60826	61124	121950	51243	51226	102469	64804	61851	126655	176873	174201	351074	
10	Malappuram	132905	130479	263384	109564	106625	216189	122359	116836	239195	364828	353940	718768	
11	Kozhikode	66955	67145	134100	60124	59304	119428	69349	66620	135969	196428	193069	389497	
12	Wayanad	19822	19371	39193	17317	16549	33866	19858	19165	39023	56997	55085	112082	
13	Kannur	51564	50731	102295	44685	43737	88422	51599	49874	101473	147848	144342	292190	
14	Kasaragod	32616	31872	64488	26433	25481	51914	29735	27664	57399	88784	85017	173801	
Total		633323	634778	1268101	562449	553147	1115596	673483	644397	1317880	1869255	1832322	3701577	

Source: Directorate of Public Instruction

Appendix 4.11

Standard wise Strength of SC/ST Students in Kerala: 2016-17 (Provisional)

Standard	Government Schools			Private Aided Schools			Private Unaided Schools			
	Total	Others	SC	Total	Others	SC	Total	Others	SC	ST
1	2	3	4	6	7	8	9	10	11	13
I	91210	73464	14157	158323	137897	17388	3038	55414	52403	217
II	94485	76273	14617	166040	144824	18148	3068	53998	51108	203
II	96754	78930	14143	172120	150275	18744	3101	53170	50146	200
IV	98728	80626	14275	176752	154238	19291	3223	51107	48422	205
V	100445	82878	13276	219786	191506	24469	3811	38982	37375	183
VI	102932	85655	13024	231231	202349	24983	3899	36062	34642	165
VII	109395	91060	13794	241220	211603	25510	4107	35543	34232	177
VIII	135828	113713	16968	251208	223262	24836	3110	31439	30354	166
IX	145873	122104	18232	269078	238763	26893	3422	31077	30014	203
X	150593	126643	19079	271207	241029	27446	2732	31577	30503	219
Total	1126243	931346	151565	2156965	1895746	227708	33511	418369	399199	1938

Source: Directorate of Public Instruction

Appendix 4.12

District-wise/Stage-wise Drop Out Ratio in Schools: 2014-15

Sl. No.	Districts	LP Stage			UP Stage			HS Stage		
		Enrolment	Drop Out	% Drop Out	Enrolment	Drop Out	% Drop Out	Enrolment	Drop Out	% Drop Out
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	97100	626	0.64	96530	410	0.42	119182	378	0.32
2	Kollam	78981	419	0.53	81404	187	0.23	101607	463	0.46
3	Pathanamthitta	26514	99	0.37	29078	36	0.12	36665	55	0.15
4	Alappuzha	53572	44	0.08	57895	26	0.04	77786	98	0.13
5	Kottayam	54268	197	0.36	53332	77	0.14	67017	320	0.48
6	Idukky	33620	357	1.06	33749	163	0.48	40948	400	0.98
7	Ernakulam	85878	231	0.27	83470	79	0.09	109097	405	0.37
8	Thrissur	107182	76	0.07	98139	75	0.08	120972	595	0.49
9	Palakkad	117769	400	0.34	108458	244	0.22	129912	710	0.55
10	Malappuram	252797	596	0.24	225930	270	0.12	243139	415	0.17
11	Kozhikode	127040	444	0.35	121467	200	0.16	143494	374	0.26
12	Wayanad	38082	246	0.65	36167	378	1.05	38996	1123	2.88
13	Kannur	94966	149	0.16	85717	114	0.13	107840	356	0.33
14	Kasaragod	60592	440	0.73	51940	144	0.28	60935	515	0.85
Kerala State Planning Board	Total	1228361	4324	0.35	1163276	2403	0.21	1397590	6207	0.44

Source: Directorate of Public Instruction

Appendix 4.13												
District-wise/Stage wise Drop out Ratio among SC Students in Kerala: 2014-15												
Sl. No.	District	Government School			Private Aided School			Private Un-Aided School				
		Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out	Enrolment	Drop out	% Drop out		
1	Thiruvananthapuram	2	3	4	5	6	7	8	9	10		
2	Kollam	26087	109	0.42	19349	99	0.51	3106	16	0.52		
3	Pathanamthitta	6366	22	0.35	12970	16	0.12	750	1	0.13		
4	Alappuzha	8044	8	0.10	15543	14	0.09	903	0	0.00		
5	Kottayam	4416	20	0.45	14899	65	0.44	591	4	0.68		
6	Idukky	7039	70	0.99	6960	45	0.65	660	0	0.00		
7	Ernakulam	8794	32	0.36	20495	69	0.34	2266	2	0.09		
8	Thrissur	12932	6	0.05	34559	160	0.46	1172	0	0.00		
9	Palakkad	23410	179	0.76	36595	144	0.39	1364	13	0.95		
10	Malappuram	23431	36	0.15	27970	38	0.14	881	0	0.00		
11	Kozhikode	10133	17	0.17	17062	39	0.23	478	0	0.00		
12	Wayanad	2722	18	0.66	3653	7	0.19	120	0	0.00		
13	Kannur	3741	15	0.40	6120	13	0.21	138	0	0.00		
14	Kasaragod	4349	51	1.17	3589	45	1.25	46	0	0.00		
	Total	160766	638	0.40	245506	912	0.37	14047	40	0.28		

Source: Directorate of Public Instruction

Appendix 4.14											
District-wise/Stage wise Drop out Ratio among ST Students in Kerala: 2014-15											
Sl.No	District	Govt. School			Private Aided School			Private Un-Aided School			
		Enrolment	Drop out	%Drop out	Enrolment	Drop out	%Drop out	Enrolment	Drop out	%Drop out	
1	2	3	4	5	6	7	8	9	10	11	
1	Thiruvananthapuram	1991	108	5.42	837	94	11.23	220	0	0.00	
2	Kollam	553	3	0.54	445	9	2.02	3	0	0.00	
3	Pathanamthitta	370	2	0.54	648	30	4.63	240	0	0.00	
4	Alappuzha	322	1	0.31	292	2	0.68	5	0	0.00	
5	Kottayam	691	15	2.17	1860	15	0.81	13	0	0.00	
6	Idukky	4019	131	3.26	2336	71	3.04	315	0	0.00	
7	Ernakulam	910	5	0.55	1079	15	1.39	76	0	0.00	
8	Thrissur	780	7	0.90	1130	16	1.42	18	0	0.00	
9	Palakkad	5197	103	1.98	2432	68	2.80	455	13	2.86	
10	Malappuram	1908	16	0.84	1436	39	2.72	39	0	0.00	
11	Kozhikode	760	15	1.97	1182	29	2.45	59	0	0.00	
12	Wayanad	17406	1017	5.84	10635	334	3.14	87	0	0.00	
13	Kannur	2930	32	1.09	3825	100	2.61	5	0	0.00	
14	Kasaragod	7425	79	1.06	3273	16	0.49	6	0	0.00	
Total		45262	1534	3.39	31410	838	2.67	1541	13	0.84	

Source: Directorate of Public Instruction

Appendix 4.15												
Stage-wise and Management-wise Number of Teachers in Schools in Kerala: 2015-16												
Stage	Government			Aided			Unaided			Total Teachers		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
L.P School	3258	9601	12859	5647	17860	23507	229	1672	1901	9134	29133	38267
U.P School	3468	7726	11194	8110	19329	27439	374	1484	1858	11952	28539	40491
High School	9362	18293	27655	12956	33621	46577	2033	9182	11215	24351	61096	85447
TTI's	94	186	280	69	322	391	3	5	8	166	513	679
Total	16182	35806	51988	26782	71132	97914	2639	12343	14982	45603	119281	164884

Source: Directorate of Public Instruction

Appendix 4.16													
Uneconomic School During the Year 2015-2016													
Sl. No.	District	Number of Schools											
		Government				Aided				Grand Total			
		LPS	UPS	HS	Total	LPS	UPS	HS	Total	LPS	UPS	HS	Total
1	2	3	4	5	6	7	8	9	10	7	8	9	10
1	Thiruvananthapuram	214	42	20	276	96	36	2	134	310	78	22	410
2	Kollam	210	28	8	246	110	49	13	172	320	77	21	418
3	Pathanamthitta	153	39	24	216	213	57	15	285	366	96	39	501
4	Alappuzha	164	50	17	231	135	36	9	180	299	86	26	411
5	Kottayam	164	63	44	271	192	75	22	289	356	138	66	560
6	Idukki	86	32	30	148	78	21	12	111	164	53	42	259
7	Ernakulam	147	75	57	279	161	42	8	211	308	117	65	490
8	Trissur	89	37	21	147	218	58	10	286	307	95	31	433
9	Palakkad	146	8	1	155	196	31	0	227	342	39	1	382
10	Malappuram	111	2	0	113	116	2	0	118	227	4	0	231
11	Kozhikode	142	17	8	167	375	51	0	426	517	68	8	593
12	Wayanad	66	9	1	76	15	2	0	17	81	11	1	93
13	Kannur	101	38	1	140	483	100	0	583	584	138	1	723
14	Kasaragod	112	29	0	141	59	11	0	70	171	40	0	211
	Total	1905	469	232	2606	2447	571	91	3109	4352	1040	323	5715

Source: Directorate of Public Instruction

Appendix 4.17									
District-wise/Management-wise Number of Higher Secondary Schools in Kerala 2016									
Sl. No.	Districts	Number of Higher Secondary Schools				Number of Batches			
		Govt.	Aided	Un-aided	Total	Science	Hum	Com	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	82	54	42	178	371	123	139	633
2	Kollam	61	56	20	137	302	94	136	532
3	Pathanamthitta	33	45	18	96	178	48	77	303
4	Alappuzha	46	64	15	125	262	66	130	458
5	Kottayam	40	71	24	135	285	69	93	447
6	Idukki	36	32	13	81	127	42	73	242
7	Ernakulam	68	93	48	209	372	83	199	654
8	Thrissur	72	95	37	204	356	107	193	656
9	Palakkad	63	62	27	152	263	125	173	561
10	Malappuram	86	89	73	248	323	147	219	689
11	Kozhikode	64	87	30	181	432	262	357	1051
12	Wayanad	36	20	5	61	77	45	51	173
13	Kannur	81	62	17	160	267	114	179	560
14	Kasaragod	65	24	17	106	116	75	98	289
	Total	833	854	386	2073	3731	1400	2117	7248

Source: Directorate of Higher Secondary Education

Appendix 4.18										
District - Wise Enrolment of Students in Higher Secondary Schools										
Sl. No.	Districts	Govt.		Aided		Un-aided		Total		Grand Total
		Male	Female	Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	7299	8546	7236	6763	1993	2323	16528	17632	34160
2	Kollam	5458	6480	7287	7378	1041	773	13786	14631	28417
3	Pathanamthitta	2192	2021	4238	4491	314	257	6744	6769	13513
4	Alappuzha	3273	4431	8197	7515	513	498	11983	12444	24427
5	Kottayam	3025	2888	7033	8192	949	846	11007	11926	22933
6	Idukki	2221	2200	3179	3622	412	350	5812	6172	11984
7	Ernakulam	5447	5747	9199	10282	1887	1570	16533	17599	34132
8	Thrissur	6068	6944	9090	9793	1333	1232	16491	17969	34460
9	Palakkad	6724	8589	6131	6876	1083	1006	13938	16471	30409
10	Malappuram	7018	8569	8752	10292	1916	1335	17686	20196	37882
11	Kozhikode	11912	14093	9389	13296	4122	3102	25423	30491	55914
12	Wayanad	2889	3031	1488	1844	113	102	4490	4977	9467
13	Kannur	8463	8538	5858	6680	705	477	15026	15695	30721
14	Kasaragode	4855	5046	1932	2307	592	431	7379	7784	15163
Total		76844	87123	89009	99331	16973	14302	182826	200756	383582

Source: Directorate of Higher Secondary Education

Appendix 4.19							
Number of Students appeared and passed in Higher Secondary Examination(2013- 2016)							
Year	Number of students appeared			Number of students Passed			% of Pass
	Boys	Girls	Total	Boys	Girls	Total	
1	2	3	4	5	6	7	8
2013-14	204980	209517	414497	130110	168525	298635	72.05
2014-15	213826	218567	432393	181333	139454	320787	74.19
2015-16	216326	218068	434394	137270	180617	317887	73.18

Source: Directorate of Higher Secondary Education

Appendix 4.20								
Second Year Higher Secondary Examination Results (School Going) from 2013 to 2016								
Year	Number of students appeared			A+ for All subjects			EHS	% EHS
	Boys	Girls	Total	Boys	Girls	Total		
1	2	3	4	5	6	7	8	9
Mar-13	147549	166139	313688	1664	3624	5288	256874	81.89
Mar-14	162320	180009	342329	2205	4775	6980	272567	79.62
Mar-15	160014	183470	343484	3191	7982	11173	288642	84.03
Mar-16	216326	218068	434394	3158	7233	10391	317887	73.18

Source: Directorate of Higher Secondary Education

Appendix 4.21							
Number of SC Students Appeared and Passed in Higher Secondary Examination- 2013 to 2016							
Year	Number of Students appeared			Number of Students Passed			
	Boys	Girls	Total	Boys	Girls	Total	%
1	2	3	4	5	6	7	8
2013-2014	18288	20768	39056	9094	13280	22374	57.29
2014-15	19214	21475	40689	9952	14805	24757	60.84
2015-16	19567	21297	40864	9237	14371	23608	57.77

Source: Directorate of Higher Secondary Education

Appendix 4.22							
Number of ST Students Appeared and Passed in Higher Secondary Examination-2013 to 2016							
Year	Number of Students Appeared			Number of Students Passed			
	Boys	Girls	Total	Boys	Girls	Total	%
1	2	3	4	5	6	7	8
2013-2014	2189	2464	4653	1052	1520	2572	55.28
2014-2015	2220	2636	4856	1220	1761	2981	61.39
2015-2016	2559	2921	5480	1315	1870	3185	58.12

Source: Directorate of Higher Secondary Education

Appendix 4.23							
District-wise details of Vocational Higher Secondary Schools and Courses during 2016-17							
Sl. No.	District	Number of Schools			Number of Courses		
		Govt.	Aided	Total	Govt.	Aided	Total
1	2	3	4	5	6	7	8
1	Thiruvananthapuram	30	11	41	75	36	111
2	Kollam	20	32	52	52	109	161
3	Alappuzha	14	7	21	35	21	56
4	Pathanamthitta	10	17	27	26	51	77
5	Kottayam	21	10	31	49	26	75
6	Ernakulam	22	12	34	54	39	93
7	Idukki	11	5	16	31	15	46
8	Thrissur	26	10	36	64	32	96
9	Palakkad	18	7	25	49	20	69
10	Malappuram	24	3	27	86	7	93
11	Kozhikode	20	8	28	64	23	87
12	Wayanad	8	2	10	22	5	27
13	Kannur	18	1	19	54	2	56
14	Kasaragod	19	3	22	45	8	53
Total		261	128	389	706	394	1100

Source: Directorate of Vocational Higher Secondary Education

Appendix 4.24						
Number of Students Appeared and Passed in Vocational Higher Secondary Examination from 2011 to 2016						
Year of Examination	Number of students Appeared			Number of students Passed		
	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7
2010 March	12771	13804	26575	8893	11188	20081
2010 SAY	3263	2039	5302	1404	939	2343
2011 March	13936	13775	27711	9642	11768	21410
2011 SAY	3073	1212	4285	974	480	1454
2012 March	13567	13185	26752	11985	12572	24557
2012 SAY	2082	632	2714	676	143	819
2013 March	12580	13674	26254	11890	11823	23713
2013 SAY	2290	766	3056	446	176	622
2014 March	14172	12653	26825	12106	11812	23918
2014 SAY	3928	2198	6126	914	987	1901
2015 March	14628	13074	27702	11112	11234	22346
2015 SAY	2963	1625	4588	1028	804	1832
2016 March	16401	13202	29603	10860	11319	22179
2016 SAY	3721	1212	4933	858	407	1265

Appendix 4.25			
Vocational Higher Secondary Results for 2012 to 2016 (School Going)			
Year of Examination	Number of Students Appeared	Number of Students Passed	% Eligible to Higher studies
1	2	3	4
2012 March	26702	22625	84.73
2013 March	26254	22408	85.35
2014 March	26825	23917	89.16
2015 March	27702	25398	80.54
2016 March	29603	22179	74.92

Source: Directorate of Vocational Higher Secondary Education

Appendix 4.26				
District wise Number of Arts and Science Colleges (Government and Private Aided) in Kerala 2015-2016				
Sl. No.	District	Government	Private	Total
1	Thiruvananthapuram	10	12	22
2	Kollam	1	13	14
3	Pathanamthitta	1	9	10
4	Alappuzha	1	12	13
5	Kottayam	1	21	22
6	Idukki	2	6	8
7	Ernakulam	4	21	25
8	Thrissur	5	17	22
9	Palakkad	7	7	14
10	Malappuram	8	12	20
11	Kozhikode	10	8	18
12	Wayanad	2	4	6
13	Kannur	4	9	13
14	Kasaragod	4	2	6
Total		60	153	213

Source: Directorate of Collegiate Education

Appendix 4.27							
Details of B.A Degree Enrolment in Colleges during the year 2015 -16							
(Number of Students)							
Sl. No	Subject	First Year		Second Year		Third Year	
		Total	of which girls	Total	of which girls	Total	of which girls
1	2	3	4	5	6	7	8
1	Malayalam	5523	4965	4029	3947	3146	2068
2	English	7966	5270	7002	4618	6999	4509
3	Hindi	1005	978	999	788	880	650
4	Sanskrit	387	298	370	283	368	287
5	French	31	31	28	28	19	19
6	Tamil	108	70	95	66	92	60
7	Urdu	97	83	93	79	87	68
8	Arabic	710	518	698	506	680	494
9	History	7194	4086	6576	3992	5646	3795
10	Economics	9265	5193	8998	4976	7431	5118
11	Philosophy	670	323	629	324	576	311
12	Politics	1823	918	1718	889	1588	866
13	Development Economics	168	85	153	67	148	67
14	Mass Communication	199	92	184	95	180	83
15	Sociology	623	466	598	458	554	438
16	Islamic History	405	252	375	248	365	241
17	Communicative English	546	418	538	403	513	395
18	Functional English	467	348	423	330	426	328
19	Psychology	210	141	219	98	141	88
20	Music	98	74	85	68	81	66
21	Kannada	56	47	53	43	54	41
22	Travel and Tourism	225	103	217	98	141	83
23	Tourism Hotel Management	128	49	116	35	98	29
24	Tourism	84	35	79	33	76	24
25	Bharathanatyam	19	19	13	13	7	7
26	B. V. M. C.	51	23	49	19	45	18
27	B.B.A	1421	971	1308	763	1283	759
Total		39479	25856	35645	23267	31624	20912

Source: Directorate of Collegiate Education

Appendix 4.28							
Details of B.Sc. Degree Enrolment in Colleges during 2015- 2016							
(Number of Students)							
Sl. No.	Subject	First Year		Second Year		Final Year	
		Total	Out of which girls	Total	Out of which girls	Total	Out of which girls
1	2	3	4	5	6	7	8
1	Mathematics	6521	4732	6245	4497	6521	3990
2	Physics	6735	3894	6366	3670	5559	3347
3	Chemistry	4842	4198	4817	3932	4798	3780
4	Polymer Chemistry	308	230	300	229	298	218
5	Botany	4105	3627	4010	3457	3903	3287
6	Zoology	4032	3590	4015	3490	3998	3390
7	Bio-Technology	305	242	293	233	289	236
8	Home Science	391	268	385	259	268	262
9	Industrial Chemistry	180	89	157	95	148	83
10	Statistics	467	359	448	328	438	309
11	Computer Science	999	737	983	689	834	625
12	Electronics	504	198	498	178	346	153
13	Industrial Microbiology	178	73	97	54	88	49
14	Bio-Chemistry	290	214	268	210	256	198
15	Computer Application	683	428	659	394	611	354
16	Geology	214	141	210	132	198	121
17	Geography	150	96	138	92	99	65
18	Plant Science	131	121	129	119	126	188
19	Applied Physics	119	75	116	68	89	65
20	Agrochemical	22	13	19	14	17	11
21	Micro-Biology	331	266	320	261	310	259
22	Physics Instrumentation	78	29	66	28	59	25
23	Environmental Chemistry	145	85	130	86	98	54
24	Aquaculture	83	58	81	49	78	54
25	Bio-Physics	40	28	37	26	38	25
26	Psychology	687	501	636	488	410	318
27	Family and community science	181	181	176	176	145	145
28	Forestry	33	28	30	28	28	26
29	Food Technology	184	109	166	105	131	80
30	C.M. and E	40	13	37	9	35	6
31	B.T and S.P	78	41	61	24	47	26
Total		33056	24664	31893	23420	30263	21749

Source: Directorate of Collegiate Education

Appendix 4.29							
Details of B.Com Degree Enrolment in Colleges 2015-16							
(Students in Numbers)							
Sl. No.	Subject	First Year		Second Year		Third Year	
		Total	Of which girls	Total	Of which girls	Total	Of which girls
1	2	3	4	5	6	7	8
1	B.Com	8628	5460	8500	5338	8598	5129
2	B.Com (Tax, Marketing)	1218	786	914	571	826	461
3	B.Com(Computer Application)	1980	1186	1678	979	1230	869
4	B.Com (Co-operation)	1109	678	768	456	620	412
5	B.Com (Finance)	1271	893	1131	805	967	619
6	B. Com.(Travel and Tourism)	258	133	152	94	75	46
Total		14464	9136	13143	8243	12316	7536

Source: Directorate of Collegiate Education

Appendix 4.30					
Details of Enrolment of M.A. Students in Colleges during 2015- 2016					
(Number of Students)					
Sl. No.	Subject	First Year		Second Year	
		Total	Of which Girls	Total	Of which Girls
1	2		4	5	6
1	Malayalam	603	475	584	469
2	English	1684	1412	1561	1292
3	Hindi	275	214	254	206
4	Arabic	159	112	154	122
5	Kannada	30	24	30	26
6	Sanskrit	107	79	95	74
7	Tamil	45	30	29	21
8	Philosophy	130	95	105	92
9	Applied Economics	59	38	54	46
10	Politics	234	168	232	167
11	Psychology	55	47	57	49
12	Islamic History	63	45	59	42
13	History	875	520	768	513
14	Economics	1915	1071	1694	1066
15	Sociology	117	97	141	111
16	Personal Management	20	9	21	10
17	Public Administration	11	6	10	5
18	Development Economics	38	35	38	34
19	Business Economics	48	35	39	32
20	Music	23	20	25	22
21	M.T.A	46	19	40	18
22	M.M.H	36	11	39	13
Total		6573	4562	6029	4430

Source: Directorate of Collegiate Education

Appendix 4.31					
Details of Enrolment of M.Sc. Students in Arts and Science Colleges during 2015- 16					
(Number of Students)					
Sl. No.	Subject	First Year		Second Year	
		Total	Of which girls	Total	Of which girls
1	2	3	4	5	6
1	Mathematics	1774	1230	1610	1290
2	Physics	1584	1115	1492	1045
3	Chemistry	1519	1166	1365	1123
4	Pure Chemistry	86	61	85	77
5	Botany	816	525	716	511
6	Zoology	663	524	623	522
7	Geology	53	36	46	39
8	Statistics	372	243	308	261
9	Applied Chemistry	46	38	41	32
10	Geography	32	21	30	22
11	Physics Instrumentation	48	20	43	19
12	Analytical Chemistry	103	79	121	88
13	Health and Yoga Therapy	22	12	20	13
14	Polymer Chemistry	89	63	77	58
15	Aquaculture	29	21	27	22
16	Computer Science	210	177	178	135
17	Bio-Technology	175	126	149	125
18	Plant Science	17	11	16	10
19	Clinical Psychology	22	20	19	18
20	Nutrition and Diet	33	33	31	31
21	Environment Science	45	31	37	36
22	FSMD	17	17	16	16
23	Social Work	19	8	18	7
24	Home Science	56	49	52	39
25	OR and CA	11	5	9	5
26	MSW	177	135	155	119
27	MCJ	30	19	28	16
Total		8048	5785	7312	5679

Source: Directorate of Collegiate Education

Appendix 4.32					
Details of Enrolment of M.Com Students in Colleges during 2015-16					
(Students in Numbers)					
Sl. No	Subject	First Year		Second Year	
		Total	Of which Girls	Total	Of which Girls
1	2	3	4	5	6
1	M.Com	2710	1917	2398	1635
Total		2710	1917	2398	1635

Source: Directorate of Collegiate Educa

Appendix 4.33							
Details of Scheduled Caste/Scheduled Tribe Students Studying in Government and Private (Aided) Arts and Science Colleges in Kerala during 2015-16							
(Number of students)							
Sl. No.	Name of Course	Scheduled Caste			Scheduled Tribe		
		Boys	Girls	Total	Boys	Girls	Total
1	B.A	4281	9014	13295	820	1764	2584
2	B.Sc.	3035	10068	13103	336	554	890
3	B.Com	2334	3270	5604	292	418	710
4	M.A	298	1591	1889	173	421	594
5	M.Sc.	285	1568	1853	156	266	422
6	M.Com	267	405	672	37	84	121
Total		10500	25916	36416	1814	3507	5321

Source: Directorate of Collegiate Education

Appendix 4.34				
Scholarships Distribution from 2013-14 to 2015-16				
Sl. No.	Name of Scholarship	Number of Students		
		2013-14	2014-15	2015-16
1	Merit Cum Means Scholarship	353	Nil	Nil
2	Post Matric Scholarship	87968	93264	47199
3	Central Sector Scholarship	6799	2324	1580
4	Kerala State Suvarna Jubilee Scholarship	4000	3000	4000
5	National Merit Scholarship	Nil	Nil	Nil
6	Muslim / Nadar Scholarship	48	79	17
7	Merit Scholarship to Children of School Teachers	4	Nil	Nil
8	Educational Concession to Blind Students	699	896	915
9	Music / Fine Arts Scholarship	31	15	2
10	District Merit Scholarship	9683	9721	14149
11	IAS Coaching Scholarship	10	8	16
12	Muslim Girls Scholarship	8912	4091	2112
13	State Merit Scholarship	791	767	817
14	Sanskrit Scholarship	143	146	135
15	Hindi Scholarship	475	447	518
16	Hostel for Muslim Girls Scholarship	2798	1351	400

Source: Directorate of Collegiate Education

Appendix 4.35											
University-wise Number of Teachers in Arts and Science Colleges in Kerala (2013-14 to 2015-16)											
Sl. No.	Name of University	Number of Teachers									Total
		2013-14			2014-15			2015-16			
		Men	Women	Total	Men	Women	Total	Men	Women	Total	
1	2	3	4	5	6	6	8	9	10	11	
1	Kerala University	1261	1523	2784	1067	1620	2687	1081	1575	2656	
2	Mahatma Gandhi University	1651	1799	3450	1540	1865	3405	1449	1925	3374	
3	Calicut University	1430	1478	2908	1387	1538	2925	1397	1533	2930	
4	Kannur University	463	354	817	469	352	821	431	336	767	
5	Sree Sankara University	0	0	0	0	0	0	0	0	0	
	Total	4805	5154	9959	4463	5375	9838	4358	5369	9727	

Source: Directorate of Collegiate Education

Appendix 4.36						
Number of Teachers having Ph.D. Degree in Arts and Science Colleges in 2015 and 2016						
Year	Government Colleges		Private Aided Colleges		Total	
	Men	Women	Men	Women	Men	Women
2015	310	275	1281	1352	2633	3218
2016	400	318	1256	1338	2594	3312

Source: Directorate of Collegiate Education

Appendix 4.37			
Number of Guest Lectures appointed in Arts and Science Colleges in 2014 to 2016			
Year	Government Colleges	Private Aided Colleges	Total
2014	328	1166	1494
2015	462	1476	1938
2016	490	1582	2072

Source: Directorate of Collegiate Education

Appendix 4.38		
Technical Institutions under Directorate of Technical Education-2016		
Sl. No	Institutions	Numbers
1	Government Engineering Colleges	9
2	Private Aided Engineering Colleges	3
3	Government Polytechnic Colleges	38
4	Government Women's Polytechnic Colleges	7
5	Private Aided Polytechnic Colleges	6
6	Fine Arts Colleges	3
7	Government Technical High Schools	39
8	Government Commercial Institutes	17
9	Govt. Institutes of Fashion Designing (Formerly known as TGMT)	42
10	Vocational Training Centres	4
Total		168

Source : Directorate of Technical Education

Appendix 4.39									
District-wise and Management wise details of Engineering Colleges in Kerala-2016									
Sl. No.	Name of District	Number of Colleges				Sanctioned Intake			
		Govt.	Aided	Unaided	Total	Govt.	Aided	Unaided	Total
1	2	3	4	5	6	7	8	9	10
1	Thiruvananthapuram	2	0	26	28	943	0	7940	8883
2	Kollam	0	1	18	19	0	740	4820	5560
3	Pathanamthitta	0	0	8	8	0	0	2520	2520
4	Alappuzha	0	0	12	12	0	0	3930	3930
5	Kottayam	1	0	10	11	340	0	4045	4385
6	Idukki	1	0	5	6	300	0	1360	1660
7	Ernakulam	0	1	31	32	0	540	11975	12515
8	Thrissur	1	0	20	21	530	0	6880	7410
9	Palakkad	1	1	9	11	240	570	2930	3740
10	Malappuram	0	0	11	11	0	0	2949	2949
11	Kozhikode	1	0	9	10	300	0	2200	2500
12	Wayanad	1	0	1	2	300	0	40	340
13	Kannur	1	0	6	7	330	0	2004	2334
14	Kasaragod	0	0	5	5	0	0	1650	1650
Total		9	3	171	183	3283	1850	55243	60376

Source : Directorate of Technical Education

Appendix 4.40		
Branch-wise Distribution of Seats in Engineering Colleges-2016-17		
Sl. No.	Name of Course/Branch	Total Sanctioned Seats
1	2	3
1	Applied Electronics and Instrumentation	960
2	Agricultural Engineering	49
3	Architecture	1240
4	Automobile Engineering	600
5	Bio-medical Engineering	240
6	Bio-Technology	300
7	Civil Engineering	10412
8	Chemical Engineering	350
9	Computer Science and Engineering	10269
10	Diary Science and Technology	180
11	Electronics and Communication	12063
12	Electrical and Electronics	8839
13	Electronics and Instrumentation	360
14	Food Technology	30
15	Instrumentation and Control Engineering	120
16	Industrial Engineering	60
17	Information Technology	1779
18	Mechanical (Automobile)	120
19	Mechanical Engineering	11165
20	Mechanical(Production Engineering)	180
21	Polymer Engineering	60
22	Production Engineering	90
23	Printing Technology	30
24	Aeronautical Engineering	420
25	Safety and Fire Engineering	60
26	Food Engineering	100
27	Mechatronics Engineering	180
28	Metallurgy	60
29	Naval Architecture and Ship Building	60
Total		60,376

Source : Directorate of Technical Education

Appendix 4.41									
Course-wise Annual intake of students in Government and Aided Engineering colleges at Graduate level 2015-16 and 2016-17									
Sl. No.	Name of Course	Annual Intake 2015-16				Annual Intake 2016-17			
		Govt.		Aided		Govt.		Aided	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
1	2	3	4	5	6	7	8	9	10
1	Applied Electronics and Instrumentation	140	178	Nil	Nil	57	57	Nil	Nil
2	Architecture	64	53	66	25	78	39	47	33
3	Civil Engineering	365	300	179	203	245	192	180	193
4	Chemical Engineering	111	198	17	52	32	73	24	42
5	Computer Science and Engineering	207	230	65	128	185	243	66	121
6	Electronics and Communication	439	414	170	179	345	285	132	194
7	Electrical and Electronics	198	342	124	256	211	378	106	261
8	Instrumentation and Control Engineering	Nil	Nil	15	48	55	58	21	31
9	Industrial engineering	20	40	Nil	Nil	Nil	Nil	Nil	Nil
10	Information Technology	112	347	Nil	Nil	37	24	Nil	Nil
11	Mechanical Engineering	43	555	5	388	29	686	7	270
12	Mechanical (Production Engineering)	Nil	Nil	4	60	Nil	Nil	7	60
13	Production Engineering	4	26	Nil	Nil	6	24	Nil	Nil
Total		1703	2683	645	1339	1280	2059	590	1205

Source : Directorate of Technical Education

Appendix 4.42									
Course-wise Annual intake of students in Government and Aided Engineering colleges at Post Graduate level 2015-16 and 2016-17									
Sl. No.	Name of Course	2015-16				2016-17			
		Government		Aided		Government		Aided	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
1	2	3	4	5	6	7	8	9	10
1	Civil Engineering	126	53	37	23	128	52	53	23
2	Mechanical Engineering	16	197	7	48	27	198	3	38
3	Electrical and Electronics	98	82	27	9	117	67	24	13
4	Electronics and Communication	169	64	46	11	180	35	48	9
5	Chemical Engineering	35	17	Nil	Nil	21	3	Nil	Nil
6	MCA	Nil	Nil	Nil	Nil	91	49	38	26
7	M Plan	14	4	Nil	Nil	19	17	Nil	Nil
8	Production	1	17	Nil	Nil	1	17	Nil	Nil
9	Computer Science	94	32	44	14	98	27	48	9
10	Information Technology	28	8	Nil	Nil	31	5	Nil	Nil
Total		581	474	161	105	713	470	214	118

Source : Directorate of Technical Education

Appendix 4.43		
Number of visiting faculty Programmes in various engineering colleges		
Sl. No.	Name of College	Number of Programmes
1	College of Engineering, Thiruvananthapuram	46
2	Govt. Engineering College, Barton Hill	3
3	RIT, Kottayam	14
4	Govt. Engineering College, Idukki	13
5	Govt. Engineering College, Thrissur	3
6	Govt. Engineering College, Palakkad	120
7	Govt. Engineering College, Kozhikode	Nil
8	Govt. Engineering College, Wayanad	6
9	Govt. Engineering College, Kannur	24
Total		229

Source : Directorate of Technical Education

Appendix 4.44							
Annual Intake and Students Strength in Government Polytechnic in Kerala							
(2014-15 to 2016-17)							
Year	Number of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2014 - 15	43	17115	9268	26383	6369	3648	10017
2015 - 16	43	18354	9246	27600	7114	3219	10333
2016 -17	45	18616	9245	27861	6760	2948	9708

Source : Directorate of Technical Education

Appendix 4.45							
Annual Intake and Students Strength in Private Aided Polytechnic in Kerala							
(2014-15 to 2016-17)							
Year	Number of Polytechnics	Students Strength			Annual Intake		
		Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8
2014-15	6	2865	977	3842	1089	381	1470
2015-16	6	3233	1272	4505	1182	361	1543
2016-17	6	3423	1025	4448	1131	344	1475

Source : Directorate of Technical Education

Appendix 4.46		
Trade-wise Annual Intake of students in Polytechnics - 2016-17		
Sl. No.	Name of Trade	Sanctioned Intake
1	Civil Engineering	2170
2	Mechanical Engineering	2620
3	Electrical and Electronics Engineering	1730
4	Electronics Engineering	2120
5	Chemical Engineering	110
6	Automobile Engineering	1010
7	Textile Technology	120
8	Computer Engineering	2190
9	Instrumentation Engineering	650
10	Polymer Technology	180
11	Computer Hardware Engineering	640
12	Tool and Die Engineering	300
13	Architecture	330
14	Electronics and Communication	880
15	Wood and Paper Technology	40
16	Printing Technology	70
17	Bio-medical Engineering	180
18	Information Technology	60
19	Computer Application and Business Management	220
20	Commercial Practice	330
21	Computer Engineering (Hearing Impaired)	30
22	Civil Engineering (Hearing Impaired)	10
Total		15990

Source : Directorate of Technical Education

Appendix 4.47												
Number of Students and Teachers in Polytechnics 2015 and 2016												
Type of Institutions	Students (in Numbers)						Teachers (in Numbers)					
	2015			2016			2015			2016		
	Boys	Girls	Total	Boys	Girls	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Government	18354	9246	27600	18616	9245	27861	920	425	1345	910	481	1391
2. Private (Aided)	3233	1272	4505	3423	1025	4448	329	82	411	328	82	410
Total	21587	10518	32105	22039	10270	32309	1249	507	1756	1238	563	1801

Source : Directorate of Technical Education

Appendix 4.48												
Number of SC/ST Students and SC/ST Teachers in Polytechnics(2015-16 to 2016-17)												
Type of Institution	Students						Teachers					
	2015-16			2016-17			2015-16			2016-17		
	SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Government Polytechnics	1955	236	2191	1910	199	2109	114	35	149	140	29	169
Private Aided Polytechnics	246	17	263	228	21	249	1	0	1	1	0	1
Total	2201	253	2454	2138	220	2358	115	35	150	141	29	170

Appendix 4.49						
Number of Students and Teachers in Technical High Schools (2014-15 to 2016-17)						
Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2014-15	7988	721	8709	658	197	855
2015-16	8218	654	8872	604	190	794
2016-17	7230	494	7724	585	197	782

Appendix 4.50						
Number of SC Students and SC Teachers in Technical High Schools (2014-15 to 2016-17)						
Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2014-15	939	172	1111	51	18	69
2015-16	729	101	830	51	16	67
2016-17	768	91	859	58	14	72

Appendix 4.51						
Number of ST Students and ST Teachers in Technical High Schools (2014-15 to 2016-17)						
Year	Number of Students			Number of Teachers		
	Boys	Girls	Total	Men	Women	Total
1	2	3	4	5	6	7
2014-15	66	18	84	6	2	8
2015-16	52	4	56	6	3	9
2016-17	63	6	69	9	4	13

Source : Directorate of Technical Education

Appendix 4.52			
District wise Patients treated and death reported - Leptospirosis 2016 (up to Sept.)			
(Numbers)			
Sl. No.	District	Leptospirosis	
		Treated	Death reported
1	2	5	6
1	Thiruvananthapuram	622	7
2	Kollam	57	6
3	Pathanamthitta	40	1
4	Idukki	7	2
5	Kottayam	54	0
6	Alappuzha	185	2
7	Ernakulam	53	0
8	Thrissur	91	0
9	Palakkad	19	2
10	Malappuram	5	1
11	Kozhikode	105	0
12	Wayanad	86	0
13	Kannur	12	0
14	Kasaragode	3	0
STATE		1339	21

Source: Directorate of Health Services.

Appendix 4.53			
District wise Patients treated for Chikungunia and Viral Fever - 2016 (Up to Sept.)			
(Numbers)			
Sl. No.	District	Chickungunia	Viral Fever
1	2	3	4
1	Thiruvananthapuram	77	226053
2	Kollam	2	154443
3	Pathanamthitta		60980
4	Alappuzha	1	105575
5	Kottayam	1	62127
6	Idukki		70606
7	Ernakulam	1	143637
8	Thrissur	15	193227
9	Palakkad	1	186321
10	Malappuram		301129
11	Kozhikode		160845
12	Wayanad	7	119181
13	Kannur		167434
14	Kasaragode	1	89109
Kerala		106	2040667

Source: Directorate of Health Services.

Appendix 4.54							
Present Scenario of Leprosy cases in Kerala							
Sl. No.	Indicators	2016-17 (till Sep 30th)			2015-16		
		PB	MB	Total	PB	MB	Total
1	Number of New Cases Detected	92	531	623	168	406	574
2	Female cases	28	43	71	69	100	169
3	Gr. I deformity	1	18	19	6	48	54
4	Gr. II deformity	1	35	36	2	40	42
5	Number of case among SC	3	14	17	9	22	31
6	Number of case among ST	8	10	18	12	21	33
7	Number of Child case	18	4	22	29	11	40
8	Number of new cases under treatment at the end of the year	94	651	745	102	535	637
9	Number of Reconstructive Surgery done for leprosy affected persons	6			26		
10	Prevalence Rate (PR)				0.169		
11	Annual New Case Detection Rate (ANCDR)				1.88		
12	Kerala's % of the total annual case detection in India				0.45%		

Source: Directorate of Health Services.

Appendix 4.55 Medical Institutions and Beds in Kerala - Category-wise - 2016																					
Sl. No	District	General Hospital		District Hospitals		Primary Health Centres		Community Health Centres		Speciality		T.B. Clinics/Centres		Taluk Hospitals		24 X 7 PHC		Others		Total	
		Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds	Number	Beds
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Thiruvananthapuram	2	1183	2	562	63	158	23	692	5	1483	1	0	7	688	6	67	9	46	118	4879
2	Kollam	0	0	1	537	52	32	17	443	2	323	2	0	8	939	6	114	1	0	89	2388
3	Pathanamthitta	2	714	1	210	38	264	12	218	0	0	1	0	4	430	5	96	1	10	64	1942
4	Alappuzha	1	400	2	487	42	54	16	424	4	1107	1	24	6	674	17	254	1	0	90	3424
5	Kottayam	4	1064	0	0	43	62	20	734	1	150	2	0	3	551	12	292	0	0	85	2853
6	Idukki	0	0	2	274	31	122	13	282	0	0	1	0	4	254	11	164	2	0	64	1096
7	Ernakulam	2	1049	1	217	42	60	23	775	1	132	1	40	11	1453	33	848	1	0	115	4574
8	Thrissur	2	456	1	117	68	262	24	806	2	1021	1	0	6	691	11	166	3	0	118	3519
9	Palakkad	0	0	1	544	65	414	19	623	2	304	1	0	6	668	11	206	9	10	114	2769
10	Malappuram	1	501	3	483	65	164	22	473	0	0	2	52	6	497	19	302	6	36	124	2508
11	Kozhikode	1	550	1	210	57	80	16	283	3	1032	1	0	7	577	6	88	0	0	92	2820
12	Wayanad	1	250	1	500	15	24	9	267	0	0	1	0	2	186	8	140	5	0	42	1367
13	Kannur	1	541	1	616	70	442	11	363	1	100	1	0	7	672	13	290	3	46	108	3070
14	Kasarode	1	212	1	400	30	0	9	229	0	0	1	0	2	84	10	168	3	0	57	1093
	Total	18	6920	18	5157	681	2138	234	6612	21	5652	17	116	79	8364	168	3195	44	148	1280	38302

Source: Directorate of Health Services.

Appendix 4.56											
District -wise details of IP, OP, major/ minor operations conducted in hospitals/ dispensaries under DHS (2015 and 2016)											
Sl. No.	District	2015-16				2016 (April to September)					
		IP	OP	Major	Minor	IP	OP	Major	Minor		
1	2	3	4	5	6	7	8	9	10		
1	Thiruvananthapuram	346679	12144311	33583	37924	171594	6356423	19142	21040		
2	Kollam	113141	7171054	14832	17256	62750	3726854	7012	10658		
3	Pathanamthitta	169898	5050586	17513	19573	94467	2676339	9109	11037		
4	Idukki	151822	4119661	14584	31901	80140	2234991	8555	12276		
5	Kottayam	242359	7328610	21891	50103	130990	3825858	12144	27408		
6	Alappuzha	174289	7069617	13478	20876	108628	3685769	6940	11521		
7	Ernakulam	360659	11170051	30591	24707	201671	6139415	18487	18076		
8	Thrissur	461827	10142090	36697	83810	264941	5255083	22410	55824		
9	Palakkad	207284	5868578	10866	21450	111106	3300877	6322	11754		
10	Malappuram	541575	13876765	60349	45303	253978	7047118	26443	20201		
11	Kozhikode	314036	8192070	29813	41146	119662	4219944	9371	9606		
12	Wayanad	68502	2756173	5302	4262	37975	1545343	2549	1714		
13	Kannur	112638	6028991	7956	31011	51279	3373046	4821	17819		
14	Kasargode	54267	2501218	3167	2769	46587	1549163	2787	4343		
	Total	3318976	103419775	300622	432091	1735768	54936223	156092	233277		

Source: Directorate of Health Services.

Appendix 4.57											
District-wise details of Medical and Paramedical Personnel under DHS - 2016											
Sl. No.	District	Medical Officers	Dentists	Head nurses	Staff Nurses	Lady Health Inspectors	Pharmacists	JPHN (ANMS)	Junior Health Inspectors	Health Inspectors	
1	2	3	4	5	6	7	8	9	10	11	
1	Thiruvananthapuram	520	8	168	665	71	191	517	312	75	
2	Kollam	331	5	87	367	79	104	427	302	73	
3	Pathanamthitta	253	5	52	288	44	77	266	187	45	
4	Idukki	198	4	44	178	59	65	315	227	55	
5	Kottayam	489	8	97	715	78	110	423	235	64	
6	Alappuzha	351	6	109	531	71	134	361	231	53	
7	Ernakulam	363	6	263	685	80	148	515	278	72	
8	Thrissur	432	8	91	427	99	148	589	327	79	
9	Palakkad	698	5	87	421	170	125	857	307	72	
10	Malappuram	455	7	188	427	98	141	590	343	83	
11	Kozhikode	442	6	222	896	99	114	484	286	79	
12	Wayanad	195	6	33	185	34	47	205	131	30	
13	Kannur	406	5	120	514	84	134	426	295	74	
14	Kasaragode	202	4	31	207	41	61	249	177	39	
Total		5335	83	1592	6506	1107	1599	6224	3638	893	

Source: Directorate of Health Services.

Appendix 4.58									
Medical and Para-medical courses conducted in Government Medical Colleges with annual intake of Students 2015-2016									
Name of Course	Number of seats in Medical Colleges								
	Thiruvananthapuram	Alappuzha	Kottayam	Thrissur	Kozhikode	EKM	Manjeri	Idukki	Total
1	2	3	4	5	6	7	8	9	10
Degree Courses									
1. M.B.B.S.	260	150	150	150	250	100	100	50	1210
2. B.D.S	50	50	40	50	50	-	-	-	240
3. B.Sc. Nursing	75	60	60	60	60	60	-	-	375
4. B.Pharm	60	20	60	-	20	-	-	-	160
5.B.Sc. MLT	24	-	-	-	24	-	-	-	48
6.B.Sc Optometry	20	-	-	-	20	-	-	-	40
7. Post basic Nursing	30	-	-	-	-	-	-	-	30
Sub - Total	519	280	310	260	424	160	100	50	2103
Post Graduate Courses									
1. M.Sc. Nursing	28	20	22	20	30	-	-	-	120
2. M.Pharm	42	-	-	-	20	-	-	-	62
3.M.Sc MLT	12	-	-	-	-	-	-	-	12
4. M.D.S.	26	-	24	-	18	-	-	-	68
5. M.D.Anaesthesia	5	1	3	4	3	-	-	-	16
6. M.D.Biochemistry	2	-	1	1	1	-	-	-	5
7. M.D.Forensic medicine	2	1	1	2		-	-	-	6
8. M.D.Dermatology and Venerology and leprosy	2	2	2	2	3	-	-	-	11
9. M.D.General Medicine	9	3	7	4	7	2	-	-	32
10. M.D.Microbiology	2	-	1	3	1	1	-	-	8
11. M.S..Obstetrics and Gynaecology	6	1	3	5	5	1	-	-	21
12. M.D.Pathology	5	1	4	5	2		-	-	17
13. M.D.Pharmacology	3	1	1	2	1	-	-	-	8
14. M.D.Physiology	2	1	1	2	3				9
15.M.D. Physical Medicine and Rehabilitation	1	-	1		2				4
16. M.D.Paediatric	4	2	4	2	4	1			17
17. M.D.Psychiatry	2		1	2	2	1			8
18. M.D.Radio Diagnosis	1	2	1	2	3				9
19.M.D.Radiotherapy	2	-	1	1	1				5
20. M.D. Community Medicine	3	1	1	2	2				9
21.M.D.Respiratory Medicine	2	-	1	2	1				6
22.M.D.Transfusion Medicine	2	1	-						3
23. M.S. Anatomy	2	1	1	1	3				8

24. M.S.Oto Rhino Laryngology	2	1	2	1	2				8
25. M.S.General Surgery	12	1	5	4	8				30
26. M.S.Ophthalmology	5	0	1	3	2				11
27. M.S Orthopaedics	3	1	1	5	3				13
28. MD. Emergency Medicine	-				1				1
29 MD. Family Medicine	-				1				1
Sub - Total	187	41	90	75	129	6	0		528
Post Graduate Diploma Courses									
1. Diploma in Anaesthesia	4	1	3		3				11
2. Diploma in child Health	3	1			6				10
3. Diploma in Clinical Pathology	1				3				4
4. Diploma in Dermatology and Venerology					1				1
5. Diploma in Laryngology and Otology	1	1	1		3				6
6. D.M.R.D	1				1				2
7. D.M.R.T.	1								1
8. Diploma in Obstetrics and Gynaecology	6	1	3		6				16
9. Diploma in Ophthalmology	1	1	2		3				7
10. Diploma in Orthopaedics	4	1	3		3				11
11. Diploma in Physical Medicine and Rehabilitation	1				2				3
12. Diploma in Psychiatric Medicine	2								2
13. Diploma in Public Health	2								2
14. D.T.C.D	2				1				3
Sub - Total	29	6	12	0	32	0	0	0	79
Super Speciality course									
1. Mch.Paediatric Surgery	6		1		4				11
2. Mch.Plastic Surgery	2		1		2				5
3. Mch. Genito Urinary surgery	6	2	3		4				15
4. Mch. Thorasic Surgery	4		1		2				7
5. Mch. Neuro Surgery	6	2	2	1	2				13
6. Mch..Gastro Enterology Surgery	1								1
7. D.M.Cardiology	8	2	4		6				20

8. Mch.Gastro Enterology	6		1		4				11
9. D.M.Neurology	5	2	1		2				10
10. D.M.Nephrology	3		1		2				6
11. D.M.Pulmonary Medicine					1				1
Sub - Total	47	8	15	1	29	0	0	0	100
Diploma / Certificate Courses.									
1.DMLT	60	15	15	35	30				155
2.DRT	40	10	15	35	30				130
3.DOA	25	5	15	25	10				80
4.DOTT	15	10	10	15	15				65
5.DDT	15		10		10				35
6.DET	4				4				8
7.DNT	8	4			4				16
8.D.PHARM	60	40	30		50				180
9.DHC	10								10
10.DMC	15				10				25
11.General Nursing	30		20		30				80
Sub - Total	282	84	115	110	193	0	0	0	784
Post Graduate Diploma Courses (Paramedical)									
1.PGDCCD	12								12
2.DORA	10				10				20
3. DR					4				4
Sub - Total	22	0	0	0	14	0	0	0	36
Total	1086	419	542	446	821	166	100	50	3630

Source: Directorate of Medical Education

Appendix 4.59

Details of clinical and non-clinical personnel in Medical Colleges under DME

Sl. No.	Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Medical Education													
1	Director/JDME/Principal	7	7	7	7	7	7	7	8	9	9	12	12
2	Professor	190	190	190	190	190	191	232	292	242	254	273	241
3	Associate/Professor	224	225	227	227	229	230	284	306	294	300	341	325
4	Assistant Professor	453	457	457	457	456	469	546	607	1161	903	659	1107
5	Tutor/Lecturer	741	746	750	750	754	742	894	985	312	598	943	
	Sub Total	1615	1625	1631	1631	1636	1639	1963	2198	2018	2064	2228	1685
Nursing Education													
6	Director/Principal	3	3	3	3	5	5	5	5	5	5	6	6
7	Professor	7	7	7	7	9	9	9	8	8	8	13	8
8	Associate/Professor	17	17	17	19	20	22	22	22	22	22	22	23
9	Assistant Professor	29	29	29	29	29	29	29	29	29	29	29	151
10	Tutor	57	57	57	60	65	85	85	85	85	85	85	nil
	Sub Total	113	113	113	118	128	150	150	149	149	149	155	188
M.L.T. Course													
11	Director											0	0
12	Assistant Professor	3	3	3	3	3	3	3	3	3	3	3	8
13	Tutor/Lecturer	5	5	5	5	5	5	6	5	5	5	5	0
14	Tutor Technician	15	15	15	15	15	15	15	15	15	15	15	13
	Sub Total	23	23	23	23	23	23	24	23	23	23	23	21
Dental													
15	Principal/JDME	2	3	3	3	3	3	3	3	3	5	6	5
16	Professor	20	23	25	26	26	26	27	27	27	30	33	35
17	Associate Professor	5	7	8	9	9	9	9	9	9	14	18	17
18	Assistant Professor	30	34	38	38	38	38	38	38	100	105	116	87
19	Tutor/Lecturer	58	58	64	64	66	66	66	66	5	6	6	6
	Sub Total	115	125	138	140	142	142	143	143	144	160	179	150
Pharmacy													
20	Director											0	0
21	Professor	6	6	6	6	6	6	7	9	11	11	11	13

Appendix 4.61													
District-wise Distribution of Institutions, Beds and patients treated under Government Homoeopathy Directorate (2015 and 2016)													
Sl. No.	District	Hospitals		Beds		Dispensaries		Institutions		Patients treated 2016		Doctors-2016 Sanctioned Strength	Vacant
		2015	2016	2015	2016	2015	2016	2015	2016	I.P	O.P		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Thiruvananthapuram	4	4	185	185	67	67	71	71	3299	2017564	83	1
2	Kollam	3	3	75	75	48	48	51	51	1083	1652193	58	1
3	Pathanamthitta	1	1	--	--	35	35	36	36	-	988311	39	4
4	Alappuzha	3	3	75	75	52	52	55	55	1269	1881310	62	3
5	Kottayam	3	3	175	175	54	54	57	57	5838	1956502	66	5
6	Idukki	2	2	50	50	38	38	40	40	7324	1087017	45	4
7	Ernakulam	3	3	85	85	63	63	66	66	6729	2440200	73	2
8	Thrissur	1	1	25	25	49	49	50	50	3772	1485542	53	5
9	Palakkad	1	1	25	25	49	49	50	50	453	1514309	53	7
10	Malappuram	4	4	60	60	55	55	59	59	2689	1952584	67	3
11	Kozhikode	3	3	75	75	55	55	58	58	1967	7496100	65	1
12	Wayanad	1	1	25	25	20	20	21	21	1795	676184	24	1
13	Kannur	2	2	25	25	47	47	48	48	3995	1780596	53	3
14	Kasaragode	3	3	75	75	27	27	30	30	1753	948758	37	10
	Total	34	34	955	955	659	659	692	692	41966	27877170	778	50

Source: Directorate of Homoeopathy Department.

Appendix 4.62				
Annual intake of students and courses in Homoeo Colleges - 2016				
Sl. No.	Name of College	Annual intake of students		
		BHMS	P.G. Degree	CCP
1	2	3	4	5
Government				
1	Homoeopathic Medical college, Thiruvananthapuram	50	17	50
2	Homoeopathic Medical college, Kozhikode	50	17	50
Government aided				
3	Athurasramam N.S.S. Homoeopathic Medical college, Kottayam	50	--	
4	Dr.Padiyar memorial Homoeopathic Medical college, Ernakulam	50	--	
5	Sree Vidhyhiraja Homoeopathic Medical College, Nemom, Thiruvananthapuram	50	--	
Un Aided (N.C.P)				
	AKBRss Mission Trust Sarada Health Centre, Koyilandi, Kozhikode	60	--	
Total		310	34	100

Source: Directorate of Homoeo medical education

Appendix 4.63

Target and achievement of Immunisation programme

Sl. No	Item	Unit	2012-13			2013-14			2014-15			2015-16			2016-17 (up to September 2016)		
			Target	Achievement	%	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M.C.H. Programme																	
Immunisation Programme																	
a)	D.P.T		460000	In Kerala instead of 3 Doses of DPT we are giving 3 doses of Pentavalent													
	Pentavalent 1					522350	518255	99.22	522350	517993	99.17	473783	517993	109.33	473783	246054	51.93
	Pentavalent 2					522350	516016	98.79	522350	509914	97.62	473783	509914	107.63	473783	238963	50.44
	Pentavalent 3					522350	508176	97.29	522350	496735	95.1	473783	496735	104.84	473783	229906	48.53
	Oral Polio Vaccine 0					522350	486570	93.15	509575	460252	90.32	489805	460252	93.97	489805	224671	45.87
	Oral Polio Vaccine 1					522350	518244	99.21	522350	488342	93.49	465663	500479	107.48	489805	243366	49.69
	Oral Polio Vaccine 2					522350	518849	99.33	522350	482584	92.39	465663	491673	105.59	489805	235935	48.17
	Oral Polio Vaccine 3					522350	509467	97.53	509575	468716	91.98	465663	468716	100.66	465663	226454	48.63
(ii)	Polio		466821														
(iii)	B.C.G.		474400	507545	106.99	509575	509498	99.98	522350	501793	96.06	489805	501793	102.45	489805	237156	48.42
(iv)	Measles		448600	507501	113.13	509575	503836	98.87	522350	489165	93.65	489805	489165	99.87	489805	237074	48.4
(v)	T.T for Pregnant women		467700	419293	89.65	540992	453544	83.84	549800	424356	77.18	514863	416379	80.87	525063	201386	38.35
(vi)	T.T. for 5 Years		451700	354989	78.59	522350	365942	70.06	522350	346818	66.40	465663	346818	74.48	465663	234715	50.4
(vii)	T.T. for 10 Years		451700	336132	74.41	522350	351012	67.20	522350	334740	64.08	465663	334740	71.88	465663	230734	49.55
(VI II)	T.T. for 16 Years		451700	356171	78.85	522350	358660	68.66	522350	334100	63.96	465663	334100	71.75	465663	206465	44.34
b)	Prophylaxis against nutritional anaemia for pregnant									503764			408578			169847	

Source: Directorate of Health Services

Appendix 4.64		
Major Government Departments and Agencies for Social Security Measures		
Sl. No	Major Government Departments/Agencies	Major Activities
1	Directorate of Social Justice Department	Social security and Welfare activities, social defence activities and nutrition programmes
2	Prisons Department	Welfare, protection, employment and economic upliftment of prisoners.
3	Sainik Welfare Department	Welfare of Ex-servicemen, war-widows and their dependents.
4	State Commissionerate for Persons with Disabilities	Welfare and social security measures for the disabled.
5	Kerala Women's Commission	Welfare and social justice measures addressing atrocities against women, adalaths, legal workshops and jagratha samithies
6	Kerala State Women's Development Corporation	Welfare, skill development and economic development through income generating and employment generating schemes.
7	National Institute of Speech and Hearing	Welfare, education and health activities of disabled in speech and hearing.
8	Kerala Social Security Mission	Service and support to the destitute, poor, aged, children, women and other weaker sections of the population.
9	Kerala State Handicapped Persons Welfare Corporation	Welfare, employment and income generating programmes of physically handicapped persons.
10	Kerala State Commission for Protection of Child Rights	Protection of child rights and implementation and monitoring of Protection of Children from Sexual Offences Act, 2012.

Source: Social Justice Department

Appendix 4.65																	
District-wise Number of Inmates in Welfare Institutions under SJD during 2015-16 (as on March, 2016)																	
Sl. No.	Name of Welfare Institution	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thrisur	Palakkad	Malappuram	Kozhikode	Wyanad	Kannur	Kasaragod	Total	Sanctioned strength
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Old age homes	150	46	42		24		40	68		59	75		68	51	623	1235
2	Mahila Mandiram	36	21	20	12	16		19	22	23	32	35		40	24	300	350
3	Ashabhavan	139						46	62			109				356	300
4	Day Care centre and Old age home	44														44	25
5	Care home for disabled children	33						25				15				73	125
6	Care home for dabled children													9		9	50
7	Aftercare home for adolescents		41									53		18		112	250
8	Home for physically handicapped(aged)				22		56			28			34			148	140
9	Rescue home										27					27	100
10	Children's home	64	128		81	75		194	102			337				981	900
11	Pratheeksha Bhavan										84					84	50
12	HMDC											36				36	50
13	Short stay home											18				18	25
14	Prathyasha Bhavan								22							22	25
15	Vocational training centre	50										64				114	220
16	Dementia Care centre							8								8	15
	Total	516	236	62	115	115	56	332	276	51	202	742	34	135	75	2955	3860

Source: Directorate of Social Justice

Appendix 4.66																		
District-wise Number of Inmates in all Welfare Institutions Registered under SJD during 2015-16 (as on March, 2016)																		
Sl. No.	Name of Registered Welfare Institutions	Number of Institutions	Thiruvananthapuram	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikkode	Wayanad	Kannur	Kasaragod	Total	Santonned Strength
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Old age Homes	558	1031	1603	692	756	2841	1198	3029	2215	612	162	629	348	1409	351	16876	25617
2	Foundling Homes	30	121	11			47	31	125	65	10	6	15	7	34		472	1005
3	Institutions for Differently abled	214	588	655	524	609	1485	155	1083	1719	457		182	171	487	40	8155	12486
4	Home for Women in Distress	40	50	25	3	87	42	110	336	120			65	50	30		918	1248
5	Institutions for Psycho Social Rehabilitation	94				11			230			60		40			341	350
6	Institutions for MIR	22	163	164	400				432	50	102	150	20		40		1521	1600
7	Orphanages	1198	4049	2166	1049	1721	3746	2195	6333	5959	4904	7128	5149	2302	2528	2317	51546	79931
8	Begger homes	11	74				76		47			367			206		770	770
9	Nirbhaya shelter homes	11	106					33	22	10	15	43	17	26		31	303	275
10	Others (through Orphanage Control Board(OCB))	40	130	48	25	75	35	160	91	169	10	163	20	38	204		1168	2018
	Total	2218	6312	4672	2693	3259	8272	3882	11728	10307	6110	8079	6097	2982	4938	2739	82070	125300

Source: Directorate of Social Justice

Appendix 4.67																
Major Pension Schemes in Kerala through Panchayat Department - District-wise Beneficiaries during 2015-16 (as on March, 2016)																
Sl. No.	Name of Pension Scheme	Thiruvananthapuram	Kollam	Alappuzha	Pathanamthitta	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	State Total
1	Disability Pension	34428	31462	11626	23160	17357	9512	27236	28825	26082	41365	28865	7594	23377	15360	326249
2	Widow Pension	120379	110554	35887	58611	46074	29750	98755	117387	105349	131342	105494	30677	79052	49954	1119265
3	National Old Age Pension	155336	102097	48290	86535	76503	53025	128322	134496	135722	148837	98446	33553	124959	50516	1376637
4	Unmarried women above 50 years of old	4441	2458	1288	4821	2790	721	6013	12239	8025	5118	9376	431	11628	1727	71076
5	Agriculture Labour Pension	49023	26249	16843	51012	32755	11707	39662	51061	57880	42194	55402	14055	43130	14928	505901
	Total	363607	272820	113934	224139	175479	104715	299988	34408	333058	368856	297583	86310	282146	132485	3399128

Source: Directorate of Panchayat

Appendix 4.68								
Workers in the sector and Workers enrolled as Members in the Welfare Fund Boards during 2015-16 (as on March, 2016)								
Sl. No	Name of the Board	Total Workers in the sector (Numbers)	Members enrolled in the Board (Numbers)			Percentage of Members to total enrolled members in the sector		
			Male	Female	Total	Male	Female	Total
1	Kerala Beedi and Cigar Workers' Welfare Fund Board	NA	1	101	102	1	99	100
2	Kerala Agricultural Workers Welfare Fund Board	NA	707723	1614107	2321830	30.48	69.52	100
3	Kerala Shops and Commercial Establishments Workers Welfare Fund Board	12,00,000	63049	21372	84421	75	25	100
4	Kerala Barber- Beauticians Workers Welfare Fund Board	31200	1165	635	1800	65	35	100
5	Kerala Labour Welfare Fund Board	4,11,143	NA	NA	NA	NA	NA	NA
6	Kerala Laundry Workers Welfare Fund Board	6278	86	350	436	19.72	80.28	100
7	Kerala Khadi Workers Welfare Fund Board	819	30	789	819	3.66	96.34	100
8	Kerala Bamboo, Kattuvally, Pandanus Leaf Workers Welfare Fund Board, Anagamally	7358	1221	6137	7358	17	83	100
9	Kerala Coir Workers Welfare Fund Board	242971	29157	213814	242971	12	88	100
10	Kerala Abkari Workers Welfare Fund Board	3488	339	3	342	99	1	100
11	Kerala Head Load Workers Welfare Fund Board	3,00,000	72046	367	72413	99.49	0.51	100
12	Kerala Building and Other Construction Workers Welfare Fund Board	1563520	12156	5232	17388	69.90	30.10	100
13	Kerala Dairy Farmers Welfare Fund Board	4,50,000	216000	234000	450000	48	52	100
14	Kerala Advocates Clerks Welfare Fund Board	12600	4054	1461	5515	73	27	100
15	Kerala Toddy Workers Welfare Fund Board	33563	31151	230	31381	99	1	100
16	Kerala State Lottery Agents'and Sellers Welfare Fund Board	NA	27963	4809	32772	85	15	100
17	Kerala Ration Dealers Welfare Fund Board	14335	8529	4014	12543	68	32	100
18	Kerala Jewellery Workers Welfare Fund Board	2,00,000	11391	5034	16425	69	31	100
19	Kerala State Co-operative Employees Welfare Fund Board	NA	33300	23063	56363	59	41	100
20	Kerala Fishermen's Welfare Fund Board	311848	222901	88947	311848	71	29	100
21	Kerala Tailoring Workers	10,80,000	NA	NA	7,60,601	NA	NA	NA

	Welfare Fund Board							
22	Kerala Traders Welfare Fund Board	10,00,000	99000	2016	101016	98	2	100
23	Kerala Motor Transport Workers Welfare Fund Board	40,00,000	773616	716	774332	99.90	0.10	100
24	Kerala Autorikshaw Workers Welfare Fund Board	17000	17000		17000	NA	NA	NA
25	Kerala Automobile Workers Welfare Fund Board	12500	12500		12500	NA	NA	NA
26	Kerala Cashew Workers Relife and Welfare Fund Board	101456	3802	97654	101456	4	96	100
27	Kerala Artisans and Skilled Workers Welfare Fund Board	423549	5155	12028	17183	30	70	100
28	Kerala Handloom Workers Welfare Fund Board	NA	10308	17126	27434	NA	NA	NA
29	Kerala Anganwadi Workers and Helpers Welfare Fund Board	66230	NA	61810	61810	NA	100	100
30	Kerala Small Scale Plantation Workers Welfare Fund Board	150000	126	136	262	48	52	100
31	Kerala State Cultural Activities Workers Welfare Fund Board	NA	NA	NA	NA	NA	NA	NA
32	Kerala Unorganised workers social security board	NA	NA	NA	NA	NA	NA	NA
33	Kerala Domestic Workers Welfare Scheme	12444	238	1335	1573	15	85	100

Source: Various Welfare Fund Boards

NA: Not Available

Appendix 4.69

District wise number of Complaints received by Kerala Women's Commission during 2015-16 (as on March, 2016)

Sl. No.	Item	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Idukki	Kottayam	Ernakulam	Trissur	Palakkad	Malappuram	Wayanad	Kozhikode	Kannur	Kasarode	Total
1	Harassment of women	244	82	36	49	40	86	89	33	40	24	14	39	23	8	807
2	Dowry harassment	33	16	1	3	2	4	4	7	5	3	4	3	2	1	88
3	Harassment by husband	3	--	1	--	--	--	--	1	--	--	--	--	--	--	5
4	Cheating	112	30	9	20	21	30	31	25	15	12	3	14	14	3	339
5	Divorced by husband	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1
6	Suspicious death	13	3	1	4	7	6	8	3	1	3	1	5	2	1	58
7	Property related	280	85	27	64	42	91	75	59	43	37	9	37	38	20	907
8	Job related	39	14	5	8	5	17	25	11	8	12	9	19	6	8	186
9	Threatening to life	1	--	--	--	--	2	1	--	--	1	--	--	--	--	5
10	Sexual harassment	23	14	--	2	3	13	5	2	5	6	7	3	4	1	88
11	Use of abusive language	59	12	6	15	11	22	7	3	1	2	2	4	6	1	151
12	Neighbour's nuisance	58	18	5	14	10	15	13	7	4	6	2	10	10	3	175
13	Atrocities	--	--	--	--	--	--	--	--	--	--	--	--	1	1	2
14	Against police	27	15	4	10	4	13	9	12	5	11	1	6	6	2	125
15	Theft	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
16	Beating	110	27	16	25	18	25	28	8	6	11	7	8	5	7	301
17	Nuisance of anti-social elements	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
18	To get divorce	3	1	1	5	--	3	3	1	1	3	--	1	--	--	22
19	Nuisance after drinking	38	5	4	--	9	8	8	1	--	2	1	2	2	1	81
20	Economic help	3	1	--	2	--	6	--	--	1	1	1	--	--	1	16
21	Path problems	53	17	8	11	9	18	13	3	8	4	1	8	6	4	163
22	Doctors negligence	5	1	2	1	--	1	--	1	1	1	--	--	--	1	14
23	Child marriage	--	--	--	--	--	--	1	--	--	--	1	--	--	--	2
24	Miscellaneous	62	27	7	16	15	36	19	15	8	13	10	19	11	5	263
25	Rape	1	--	--	--	--	--	--	1	--	--	--	--	1	--	3

26	Harassment-below 18 Yrs	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	
27	Domestic violence	195	32	26	34	18	57	35	19	22	16	8	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	496
28	Family problems	545	75	35	51	36	158	73	38	45	33	18	37	14	10	1168											1168	
29	Harassment at work place	33	7	3	8	4	1	8	10	3	9	2	5	7	2	102											102	
30	Problem of nun	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1											1	
31	DNA test	2	4	--	--	--	1	1	--	--	1	--	--	1	2	12											12	
32	Mental and physical harassment at divine centre	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0											0	
33	Harassment at work place (Pvt))	2	2	--	1	1	2	3	1	1	--	--	--	2	--	15											15	
34	Harassment at work place (Govt.)	25	6	2	5	6	5	1	11	8	1	--	6	1	7	84											84	
35	Attempt to rape	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0											0	
36	Kidnapping/Abduction	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0											0	
37	Custody of children	7	2	1	1	--	2	2	1	2	--	--	1	--	17												17	
38	Maintenance	34	5	1	5	3	12	4	4	5	2	1	3	3	82												82	
39	Police apathy	--	--	--	--	--	--	--	--	--	--	--	--	--	0												0	
40	Police harassment	5	8	--	1	1	2	3	3	--	1	1	6	2	33												33	
41	Cyber/ mobile nuisance	8	4	--	3	1	2	3	3	--	1	--	1	2	28												28	
42	Breach of marriage contract	--	1	--	--	--	--	--	--	--	1	--	--	2	4												4	
43	Sexual cheating by offering marriage	14	4	2	3	2	7	5	2	--	2	1	2	2	46												46	
44	Man missing	5	1	--	3	1	6	1	1	--	3	--	--	--	21												21	
45	For counselling	9	1	--	2	--	1	1	1	2	--	--	--	1	18												18	
46	House trespass	50	28	12	12	7	24	19	12	11	12	2	10	11	211												211	
47	Child sexual abuse	--	1	--	--	--	--	--	1	--	--	--	--	1	3												3	
48	Recovery of loan, property, Salary etc.	8	2	1	--	2	8	1	3	4	3	--	2	1	37												37	
49	Problem related to old age people	71	12	3	14	5	27	18	8	14	5	5	6	8	196												196	
	Total	2182	564	219	392	283	711	515	311	269	242	111	266	209	103	6377										6377		

Source: Kerala Women's Commission

Appendix 4.70															
District-wise Number of Prisoners in Jails in Kerala during 2015-16 (as on March, 2016)															
Sl. No	District	Central Jail		District Jail		Sub Jail		Open Jail		Women Jail		Special Sub Jail		Grand Total	
		Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Trivandrum	1287	0	345	0	90	0	387	0	0	76	386	0	2495	76
2	Kollam	0	0	262	0	0	0	0	0	0	0	124	10	386	10
3	Pathanamthitta	0	0	41	0	0	0	0	0	0	0	0	0	41	0
4	Alappuzha	0	0	80	0	0	0	0	0	0	0	116	4	196	4
5	Kottayam	0	0	70	7	23	0	0	0	0	0	65	0	158	7
6	Idukki	0	0	0	0	67	0	0	0	0	0	30	0	97	0
7	Eranakulam	0	0	185	0	234	12	0	0	0	0	123	0	542	12
8	Thrissur	756	0	150	0	175	0	0	0	0	48	71	0	1152	48
9	Palakkad	0	0	0	0	98	0	0	0	0	0	193	6	291	6
10	Malappuram	0	0	0	0	69	0	0	0	0	0	71	9	140	9
11	Kozhikode	0	0	356	15	79	0	0	0	0	0	41	0	476	15
12	Wayanad	0	0	77	0	0	0	0	0	0	0	43	2	120	2
13	Kannur	1027	0	111	0	65	0	0	0	0	16	164	0	1367	16
14	Kasargod	0	0	78	8	0	0	163		0	0	68	0	309	8
Total		3070	0	1755	30	900	12	550	0	0	140	1495	31	7770	213

Source: Prison Department

Appendix 4.71						
Number of Adopted Children in Kerala from 2012-13 to 2015-16						
Year	In-Country Adoption			Inter-country Adoption		
	Male	Female	Total	Male	Female	Total
2012-13	98	90	188	7	12	19
2013-14	80	107	187	4	8	12
2014-15	99	73	172	4	7	11
2015-16	63	70	133	2	13	15
Total	340	340	680	17	40	57

Source: Directorate of Social Justice

Appendix 4.72										
District-wise ICDS Beneficiaries in Kerala during 2015 - 2016 (as on March, 2016)										
Sl. No	Districts	No. of AWCs reporting	No. of AWCs providing SNP for 21+ days in a month	Total population with in project		No. of SNP Beneficiaries			No. of pre-school Beneficiaries	
				0-6 years	Preg. And Lact women	0-3 years	3-6 years	Preg. and Lact women	3-6 years Boys	3-6 years Girls
1	2	3	4	5	6	7	8	9	10	11
1	Thiruvananthapuram	3061	3061	226991	31380	29589	44304	16036	22337	21967
2	Kollam	2723	2723	192451	29481	37072	36710	13722	18145	18565
3	Pathanamthitta	1389	1389	66290	10175	14279	13486	4820	6776	6710
4	Alappuzha	2150	2150	142018	19889	25850	32768	10299	16179	16589
5	Kottayam	2050	2050	121301	17759	20735	27633	7534	13914	13719
6	Idukki	1561	1561	75384	13231	20166	19819	6760	9860	9959
7	Ernakulam	2858	2858	212118	29801	30243	44977	11926	22946	22031
8	Thrissur	3016	3016	238174	35128	30929	37506	10906	18890	18616
9	Palakkad	2835	2835	236728	36588	38905	31728	16668	16276	15452
10	Malappuram	3808	3808	529811	86543	65324	49296	21688	24613	24683
11	Kozhikkode	874	874	73872	11786	17341	9396	7744	4647	4749
12	Wayanad	2938	2938	269304	40947	31634	34821	22486	17640	17181
13	Kannur	2503*	2503	217854	33229	35144	38685	11445	19359	19326
14	Kasaragod	1348	1348	129835	22439	13149	21250	5381	10787	10463
Total		30611	33114	2732131	418376	410360	442379	167415	222369	220010

Source: Directorate of Social Justice

* 1AWC Temporarily closed in Kalliyasseri addi. Project (Kannur)

Appendix 4.73								
Number per 1000 Households having 'Sufficient' and 'Improved source' of Drinking Water in India								
States	improved source of Drinking Water				Sufficient Water throughout the year			
	Rural	Per cent	Urban	Per cent	Rural	Per cent	Urban	Per cent
Andrapradesh	919	91.9	975	97.5	865	86.5	876	87.6
Assam	851	85.1	928	92.8	961	96.1	945	94.5
Bihar	976	97.6	997	99.7	924	92.4	952	95.2
Gujarat	892	89.2	956	95.6	863	86.3	961	96.1
Madhypradesh	832	83.2	971	97.1	762	76.2	762	76.2
Jharkhand	644	64.4	883	88.3	703	70.3	793	79.3
Karnataka	951	95.1	960	96	750	75	795	79.5
Kerala	295	29.5	568	56.8	860	86	916	91.6
Maharashtra	855	85.5	987	98.7	735	73.5	931	93.1
Punjab	995	99.5	997	99.7	931	93.1	908	90.8
Rajasthan	791	79.1	923	92.3	747	74.7	814	81.4
Tamilnadu	940	94	950	95	932	93.2	925	92.5
Uttarpradesh	966	96.6	992	99.2	971	97.1	966	96.6
West Bengal	950	95	947	94.7	880	88	935	93.5
Uttarakhand	928	92.8	999	99.9	877	87.7	900	90
All India	885	88.5	953	95.3	858	85.8	896	89.6

source: NSSO 69th Round(2014) on Drinking Water Sanitation, Hygiene and Housing Condition in India

Appendix 4.74 Households by Location of Source of Drinking Water in Kerala												
Sl. No.	District	Within the Premise			Near the Premise			Away			Total	
		Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total		
1	Thiruvananthapuram	320847	377209	698056	45633	37762	83395	24127	23196	47323		
2	Kollam	317765	250790	568555	35664	28821	64485	20248	9988	30236		
3	Pathanamthitta	225249	29771	255020	34705	2938	37643	25435	1870	27305		
4	Alappuzha	172093	212146	384239	44000	40378	84378	29756	29902	59658		
5	Kottayam	239193	111242	350435	55033	16823	71856	48481	9681	58162		
6	Idukki	104461	10317	114778	85634	1272	86906	74554	738	75292		
7	Ernakulam	200111	435559	635670	38060	79904	117964	18139	19964	38103		
8	Thrissur	198211	424764	622975	34127	52205	86332	14590	19933	34523		
9	Palakkad	330012	120426	450438	100466	23942	124408	45840	7601	53441		
10	Malappuram	343421	285384	628805	60518	34553	95071	33572	17147	50719		
11	Kozhikkode	171803	370464	542267	32733	53275	86008	27692	27858	55550		
12	Wayanad	106673	4975	111648	42613	1260	43873	29400	482	29882		
13	Kannur	145344	295266	440610	29808	33703	63511	23694	15394	39088		
14	Kasargod	109370	86223	195593	30204	10111	40315	26395	5459	31854		
All Kerala		2984553	3014536	5999089	669198	416947	1086145	441923	189213	631136		
India		58739356	56152547.1	114891903	71997667.2	16325249	88322916.1	37089707.3	6388140.9	43477848.2		

Note: As per census data 2011

Source: Kerala Water Authority

Appendix 4.75

District Wise Quality Profile of Drinking Water In Kerala During (2016-17) (As On 31.3.2016)

Sl. No.	District	Total Sources Tested	Tested sources not found contaminated	Number of sources with Single Chemical Contaminants						Number of sources with Bacteriological contaminants			Number of sources with multiple contaminants			Number of sources with other contaminants
				Iron	Fluoride	Salinity	Nitrate	Arsenic	Other	E coli	Coliform	Iron / Fluoride / Salinity / Nitrate / Arsenic				
1	Thiruvananthapuram	3191		10	0	0	0	0	2358	739	2366	0	288			
2	Kollam	2619		58	0	0	1	0	2031	0	1993	1	154			
3	Pathanamthitta	6155		23	0	0	0	0	5002	1	5877	31	142			
4	Alappuzha	6577		41	0	0	0	0	2923	1743	6052	50	540			
5	Kottayam	11022		13	0	0	0	0	6976	337	10528	2	73			
6	Idukki	6966		8	0	0	0	0	1494	5	6715	0	41			
7	Ernakulam	7992		54	0	0	2	0	4402	5	6585	1	24			
8	Thrissur	11917		557	0	0	1	0	5787	2013	2963	2	449			
9	Palakkad	11896		447	4	0	0	0	4057	930	10345	85	384			
10	Malappuram	10920		281	0	0	5	0	5093	774	7720	10	182			
11	Kozhikode	8970		47	0	0	1	0	5560	1574	8493	10	226			
12	Wayanad	14549		129	0	0	1	0	7815	4510	11584	0	506			
13	Kannur	6620		18	0	0	1	0	3530	5	4204	0	189			
14	Kasargod	8629		12	0	2	0	0	4220	5	8228	7	253			
	Total	118023		1698	4	2	12	0	61248	12641	93653	199	3451			

IMIS (Integrated Management Information System) Data Source:- Kerala Water Authority

Appendix 4.76										
Data on Waterborne Disease										
Year	Name of Diseases									
	ADD (Diarrhoea)		Hepatitis - A		Hepatitis - E		Cholera		Typhoid	
	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death
2012	357252	8	6305	8	27	1	30	2	2849	1
2013	411819	2	6166	8	13	1	20	0	2930	0
2014	442109	5	2833	6	24	0	8	1	1955	0
2015	467102	4	1980	10	8	0	1	0	1772	0
2016	458170	13	1264	9	24	0	10	0	1574	1

Source: DHS (Integrated Disease surveillance project (IDSP) Kerala)

Appendix 4.77			
Lpcd water availability as on 31.9.16			
Sl. No.	District	Existing lpcd	Target lpcd
1	Thiruvananthapuram	154	100 lpcd in rural areas, 150 lpcd in urban areas
2	Kollam	112.22	
3	Pathanamthitta	159.64	
4	Alappuzha	99.04	
5	Kottayam	91.9	
6	Idukki	50.29	
7	Ernakulam	198.9	
8	Thrissur	79.75	
9	Palakkad	52.23	
10	Malappuram	49.23	
11	Kozhikode	102.2	
12	Wayanad	61.36	
13	Kannur	104.49	
14	Kasaragod	33.34	
Total		100.79	

Source:- Kerala Water Authority

Note: The mentioned existing lpcd is average lpcd computed based on production capacity in the district by existing schemes and as per census 2011. The lpcd is varying in different habitations in the districts even with value 0 in some habitations

Appendix 4.78											
District-wise population covered by Water Supply Schemes As on 31-03-2016											
Sl. No.	District	Rural population covered	% to Total Rural population	Urban population covered	% to Total Urban population	Total Population covered	% to Total Population	Number of Schemes	Population	Number of Schemes	Population
1	Thiruvananthapuram	1017000	66.56	1360000	76.44	2377000	71.87	4	267053	4	267053
2	Kollam	1089231	75.46	459269	38.71	1548500	58.88	3	253561	3	253561
3	Pathanamthitta	510597	47.99	74427	56.62	585024	48.93	2	91,961	2	91,961
4	Alappuzha	590530	60.57	780440	68.04	1370970	64.61	1	30300	1	30300
5	Kottayam	1079301	76.34	278740	49.28	1358041	68.61	2	104542	2	104542
6	Idukki	304653	28.87	33010	63.45	337663	30.49	2	135775	2	135775
7	Ernakulam	743512	70.99	1931808	86.53	2675320	81.57	4	44628	4	44628
8	Thrissur	655538	63.00	1508400	72.18	2163938	69.13	1	229500	1	229500
9	Palakkad	953800	44.70	543800	80.30	1497600	53.28	7	446205	7	446205
10	Malappuram	718155	31.30	312945	17.23	1031100	25.08	4	243994	4	243994
11	Kozhikode	396786	36.24	615487	29.67	1012273	31.94	2	30878	2	30878
12	Wayanad	440816	56.16	16585	52.52	457401	56.02	0	0	0	0
13	Kannur	217000	24.58	630400	38.37	847400	33.55	2	235624	2	235624
14	Kasaragod	200822	25.18	51000	10.10	251822	19.33	0	0	0	0
	Total	8917741	50.80	8596311	53.96	17514052	52.30	34	2022151.961	34	2022151.961

Source- Kerala Water Authority

Note: Some panchayats were converted to Municipalities, Prepared as per census 2011, hence there may be slight variations

Appendix 4.79					
District-wise and Category-wise Number of Water Supply Schemes in operation as on 31/3/2016					
Sl. No.	Name of District	Number of Urban Water Supply Schemes	Rural Water Supply Schemes		Total
			Multi Panchayat	Single Panchayat	
1	Thiruvananthapuram	6	12	86	104
2	Kollam	3	6	83	92
3	Pathanamathitta	2	8	61	71
4	Alappuzha	4	1	49	54
5	Kottayam	5	21	43	69
6	Idukki	1	12	64	77
7	Ernakulam	8	17	73	98
8	Thrissur	4	8	95	107
9	Palakkad	4	8	49	61
10	Malappuram	6	10	38	54
11	Kozhikkode	2	13	70	85
12	Wayanad	0	5	23	28
13	Kannur	3	6	91	100
14	Kasargode	1	5	72	78
Total		49	132	897	1078

Appendix 4.80									
District wise details of Water Supply Connections and Street taps as on 31/3/2016									
Sl. No.	Name of Districts	Water Supply Connections				Street Taps			
		Domestic	Non Domestic	Industrial	Total	Panchayaths	Corporations	Municipalities	Total
1	Thiruvananthapuram	230654	25799	143	256596	13987	4027	1809	19823
2	Kollam	150572	6699	212	157483	15132	3248	1522	19902
3	Pathanamthitta	65915	3943	38	69896	11189		1543	12732
4	Alappuzha	23970	2192	6	26168	3480		380	3860
5	Kottayam	165342	4471	273	170086	23523		4593	28116
6	Idukki	90967	5244	44	96255	7880		2111	9991
7	Ernakulam	440106	33661	405	474172	28560	5917	3438	37915
8	Thrissur	164424	5606	55	170085	21774	2301	3081	27156
9	Palakkad	123762	8033	91	131886	12569		3180	15749
10	Malappuram	76153	4191	19	80363	7117		2350	9467
11	Kozhikkodu	72467	6703	62	79232	4547	2638	817	8002
12	Wayanad	15333	1512	6	16851	3686		222	3908
13	Kannur	57617	5221	91	62929	5823		1638	7461
14	Kasargod	19412	1104	10	20526	3301		651	3952
Total		1696694	114379	1455	1812528	162568	18131	27335	208034

Source:- Kerala Water Authority

Appendix 4.81					
District wise Population covered by Water Supply Schemes Implemented by KRWSA as on 31.03.2016 (Jalanidhi Phase-1 and Phase 2)					
Name of District	Number of schemes in operation	Number of water supply connection			
		Domestic	Non-Domestic	Street taps	Population covered
Thrissur	528	28096	9	7	162651
Palakkad	714	36868	31	680	206842
Malappuram	906	53624	87	0	295070
Kozhikode	824	33003	25	0	174712
Thiruvananthapuram	110	20285	1	0	23313
Kollam	61	4572	0	0	111568
Pathanamthitta	86	4214	0	0	21106
Kottayam	389	23531	2	0	104956
Ernakulam	49	2173	8	0	11952
Idukki	317	13614	0	0	60144
Wayanad	242	12085	1	60	60819
Kannur	314	16717	11	0	79976
Kasargode	232	9657	0	0	52130
Total	4772	258439	175	747	1365239

Source: Jalanidhi

Appendix 4.82			
RWH Structures in service under Jalanidhi Project (Jalanidhi Phase I and Phase II) as on 31/03/2016			
District	Phase-1	Phase-2	Total
Palakkad	2183		2183
Malappuram	1395		1395
Calicut	1701		1701
Thrissur	393		393
Kollam	695		695
Pathanamthitta	754		754
Ernakulam	690	0	690
Kottayam	1645	1751	3396
Idukki	900	2765	3665
Wayanad	80		80
Kannur	839	419	1258
Kasaragod	2029		2029
Total	13304	4935	18239

Source: Jalanidhi

Appendix 4.83						
Jalanidhi - Phase- II						
Project Performance - (Physical)						
Sl. No.	Item description	Unit	Target	Taken up by the project	Completed overall	Achievement in 2016-17 Up to 30-09-2016
1	Number of project GPs	Numbers	200	115	10	1
2	Number of Beneficiary Groups	Numbers	4,513	3,761	1529	170
3	Households covered	Numbers	2.87	2.59	0.84	0.14
4	Population covered-WSS	Numbers	13.76	11.65	3.71	0.6
5	Population covered-Sanitation	Numbers	3.7	3.21	2.71	1.06
6	Total number of schemes WSS	Numbers	3,928	2,176	1232	170
7	Number of TDP GPs to be covered	Numbers	22	19	0	0
8	Number of persons trained	Numbers	6.02	5.91	5.91	1.82
9	Individual latrine constructed as part of ODF Programme	Numbers	--	31542	22670	22670
10	GWR structures constructed	Numbers	--	4127	1365	53

Source: Jalanidhi

Appendix 4.84												
Income from water charges												
(₹ in lakh)												
Year	Urban Schemes			Rural comprehensive schemes			Rural single Panchayat scheme			Total		
	Domestic /non-domestic and Industrial	Street taps	Total	Domestic/n on-domestic and Industrial	Street taps	Total	Domestic /non-domestic and Industrial	Street taps	Total	Domestic/ non-domestic and Industrial	Street taps	Total
2007-08	8598	1074	9672	2150	794	2944	1075	689	1764	11823	2557	14380
2008-09	12031	1363	13394	3008	1007	4015	1504	874	2378	16543	3244	19787
2009-10	15426	2618	18044	3857	1935	5792	1928	1679	3607	21211	6232	27443
2010-11	15969	5551	21520	3992	4103	8095	1974	1595	3569	21935	11249	33184
2011-12	15789	2487	18276	3947	1838	5785	1974	1595	3569	21710	5920	27630
2012-13	16868	4356	21224	4217	4958	9175	2343	8038	10381	23428	12394	35822
2013-14	16454	1560	18014	4736	2165	6901	2379	4020	6399	23570	7745	31315
2014-15	18988	2777	21765	5465	2358	7823	2998	4379	7377	27451	9514	36965
2015-16	25194	1746	26940	7252	2749	10001	3978	5106	9084	36424	9601	46025

Source:- Kerala Water Authority

Appendix 4.85		
Existing Water Rates (w.e.f 01/10/2014)		
Sl. No.	Type of Connections and Consumption per Month	Rate (in ₹)
A	Domestic	
	Up to 5000 lrs. Minimum	20
	5000 to 10000 lrs.	40
	10000 to 15000 lrs.	65
	15000 to 20000 lrs.	₹ 6/Kl
	20000 to 25000 lrs.	₹ 7/Kl
	20000 to 30000 lrs.	₹ 9/Kl
	30000 to 40000 lrs.	₹ 12/Kl
	40000 to 50000 lrs.	₹ 14/Kl
	Above 50000 lrs	700+₹ 40/Kl
B	Non Domestic	
	Up to 15000 lrs.	150+50
	15000 to 30000 lrs.	50+225+₹ 21/Kl.
	30000 to 50000 lrs.	50+540+₹ 28/Kl
	Above 50000 lrs	50+1100+₹ 40/Kl
C	Industrial	
	Minimum	150+250
	For consumption in a month	150+ ₹ 40/Kl
D	Local Bodies	
	Corp./Municipal Taps	7884
	Panchayath Taps	5250
E	Sewerage Charge	10% of water charge

Source:- Kerala Water Authority

Appendix 4.86																	
District wise and category wise number of on-going water supply schemes during 2016-17 (as on 31.3.2016)																	
Name of District	Number of on-going Water Supply Schemes																
	Rural Water Supply Schemes								Urban Water Supply Schemes								
	NRDWP	Technology Mission	TRP schemes funded by Govt	State Plan	SAARK(2010-2011)	New Water Supply Schemes(2010-11)	NABARD	Externally Assisted (QICA)	Far marked quality	KWA (For schemes of local bodies/other SAARK(2009-10)New capital schemes	Completion of ongoing WSS - special package	Externally Assisted (QICA)	JNNURM	SAARK(2009-10) Replacement of old Pipes.	UIDSSMT	Bank	Total
Thiruvananthapuram	13			2		6	1		56	1	2	1	1				83
Kollam	6		1			1	1		57								66
Pathanamthitta	13					3			51								67
Alappuzha	11	1				1			59					1			73
Kottayam	32			2		3			57	1							95
Idukki	22					1			30								53
Ernakulam	8			1		2			203		1		1				216
Thrissur	6			2	1	3			224		5			1			242
Palakkad	17					2			31		1			2			53
Malappuram	30			1	3	3			89								126
Kozhikkode	11					2	1		8			1					23
Wayanadu	4					3		2	73					1			83
Kannur	6			2	1	1			22		3			2			37
Kasaragode	8					8			18								34
Total	187	1		11	5	0	39	3	2	978	2	12	2	2	7		1251

Source:- Kerala Water Authority

Appendix 4.87				
District wise Slipped Back Habitations in Kerala (2015-16) up to 30.9.2016				
Sl. No.	District	Total Habitation	Slipped Back Habitation	% to Total Habitation
1	Thiruvananthapuram	1038	0	
2	Kollam	1023	3	0.29%
3	Pathanamthitta	640	0	
4	Alappuzha	808	0	
5	Kottayam	888	12	1.35%
6	Idukki	617	0	
7	Ernakulam	875	0	
8	Thrissur	1077	0	
9	Palakkad	1136	0	
10	Malappuram	1438	0	
11	Kozhikkode	883	0	
12	Wayanad	359	0	
13	Kannur	625	0	
14	Kasargod	476	2	0.42%
Total		11883	17	0.14%

Source:- Kerala Water Authority

Appendix 4.88								
Receipts of Kerala Water Authority from various sources from 2006-07 to 2016-17 (up to 31.3.16 and 30.9.16)								
								(₹ in lakh)
Year	Revenue from Water/ Sewerage	State Govt.		Deposits from Local Bodies	Govt. of India	Loan from LIC/ HUDCO/ Bank	Others (TRP/D RW /CCDU/ JALANIDHI/ National games)	Total
		Plan	Non-plan					
2006-07	13839.09	23782.00	8860.00	829.00	6527.00	3046.13		56883.22
2007-08	15022.78	70783.00	9946.00	951.00	8972.00	2836.00		108510.78
2008-09	23890.00	45800.00	10720.60	1225.81	12474.00	25000*		119110.41
						1301.40		1301.40
2009-10	29261.84	66661.00	16792.66	598.37	15447.08	660.48	7041.86	136463.29
2010-11		37553.00	19971.80	678.46	14876.08	689.75	579.00	74348.09
2011-12		46825.74	19152.16	1260.00	12446.43	77.52	1922.16	81684.01
2012-13	32839.74	57554.75	22865.04	5531.37	24903.58	77.77	3217.14	146989.39
2013-14	38711.82	51501.00	19864.90	9174.40	21204.01	-	600.00	141056.13
2014-15	40297.23	28238.71	23511.36	9595.81	11512.03	683.65	1100.00	114938.79
2015-16	45991.00	52519.07	26510.86	16328.42	5702.99	213.50	1879.88	149145.72
2016-17 up to 30-09-2016*	24276.15	2917.19	14962.30	8008.57	2802.22	1561.15	1500.00	56027.58

* The amount of ₹. 250.00 crore taken from banks for one-time settlement of Electricity charges

Appendix 4.89											
Plan and Non-Plan Expenditure of Kerala Water Authority From 2008-09 To 2016-17											
Sl. No.	Items	Audited						Provisional			
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 UPTO 30-09-2016	
I. Plan Expenditure											
1	State Plan Schemes	5890.25	22,710.89	3,431.83	25,983.99	34,867.63	21,588.00	23,107.00	48,221.60	15,849.08	
2	LIC/HUDCO								0.00	0.00	
3	Externally Aided Project (EAP and JBIC)	52541.55	31,557.13	17,290.69	19,307.00	26,438.28	17,939.00	10,486.00	7,226.00	0.00	
4	Centrally Assisted	9713.9	8,138.22	2,916.92	2,375.13	23,889.37	26,159.00	12,948.00	6,112.86	2,463.69	
5	Others, if any	2617.57		12,059.32			8,428.00	4,737.00			
Sub-Total (Plan Expenditure)		70763.27	62,406.24	35,698.76	47,666.12	85,195.28	74,114.00	51,278.00	61,560.46	18,312.77	
II. Non-Plan Expenditure											
1	Salary, Pension and Establishment	24,754.54	22,745.34	26,110.82	36,681.13	55,502.90	56,592.36	56,497.16	76,252.87	37,448.11	
2	Power charge	14,400.00	15,404.42	16,071.24	14,796.99	18,400.00	22,209.45	22,750.00	22,896.00	791.28	
3	Operation and Maintenance	5,109.30	5,928.87	6,770.63	7,778.23	6,385.26	5,019.34	6,416.97	11,213.76	3,107.31	
4	Interest on Loans (Excluding GOK)	2,710.94	6,660.65	6,214.34	3,927.78	3,093.64	2,540.30	1,175.74	1,213.80	313.85	
5	Repayment of loans (Excluding GOK)	3,547.76	4,973.25	10,841.72	5,039.66	9,857.36	7,513.14	7,332.85	2,736.03	632.48	
6	Others, if any	951.45	999.02	1,019.00	1,049.57	1,102.05	1,146.13	1,169.06	1,204.13	620.13	
Total Non-Plan Expenditure		51,473.99	56,711.55	67,027.75	69,273.36	94,341.21	95,020.72	95,341.78	1,15,516.59	42,913.16	

Source:- Kerala Water Authority

Appendix 4.90					
Sex Ratio in Kerala in comparison to neighboring States					
year	All India	Kerala	Tamil Nadu	Karnataka	Andhra Pradesh
1991	927	1036	971	960	972
2001	933	1058	987	965	978
2011	940	1084	995	968	992

Source: Census of India, 2011

Appendix 4.91					
Workforce Participation Rate in Kerala					
Sl. No.	State / District	Male		Female	
		2001	2011	2001	2011
1	Kasargode	49.1	51.7	21	20.3
2	Kannur	49.9	51.6	15.3	16
3	Wayanad	55.8	56.9	23.2	26.8
4	Kozhikode	48.7	51.1	8.2	12.2
5	Malappuram	42.8	45.8	6.6	7.6
6	Palakkad	52	54.9	21.2	20.4
7	Thrissur	50.6	53.3	15.2	18.7
8	Ernakulam	55.1	56.4	17.2	20.2
9	Idukki	58.1	60	28.1	33.2
10	Kottayam	52.2	54.8	14	20.4
11	Alappuzha	49.4	53	20.3	24
12	Pathanamthitta	47.5	50.2	13.4	17.5
13	Kollam	48.4	51.7	16.8	19.3
14	Thiruvananthapuram	51.4	54.6	14.5	21.4
15	Kerala	50.2	52.7	15.4	18.2

Source: Census of India 2011

Appendix 4.92					
Percentage share of female workers enrolled as members in the Welfare Fund Boards (WFBs)					
-2015-16					
Sl. No.	Name of the Board	Total Members enrolled in Boards (Numbers)	Percentage of Members to total enrolled members in the sector		
			Male	Female	Total
1	Kerala Beedi and Cigar Workers' Welfare Fund Board	102	1	99	100
2	Kerala Agricultural Workers Welfare Fund Board	2321830	30.48	69.52	100
3	Kerala Shops and Commercial Establishments Workers Welfare Fund Board	84421	75	25	100
4	Kerala Barber- Beauticians Workers Welfare Fund Board	1800	65	35	100
5	Kerala Khadi Workers Welfare Fund Board	819	3.66	96.34	100
6	Kerala Bamboo, Kattuvally, Pandanus Leaf Workers Welfare Fund Board, Anagamally	7358	17	83	100
7	Kerala Coir Workers Welfare Fund Board	242971	12	88	100
8	Kerala Abkari Workers Welfare Fund Board	342	99	1	100
9	Kerala Head Load Workers Welfare Fund Board	72413	99.49	0.51	100
10	Kerala Building and Other Construction Workers Welfare Fund Board	17388	69.90	30.10	100
11	Kerala Dairy Farmers Welfare Fund Board	450000	48	52	100
12	Kerala Toddy Workers Welfare Fund Board	31381	92.81	0.68	93.49
13	Kerala State Lottery Agents and Sellers Welfare Fund Board	32772	85	15	100
14	Kerala Ration Dealers Welfare Fund Board	12543	68	32	100
15	Kerala State Co-operative Employees Welfare Fund Board	56363	59	41	100
16	Kerala Fishermen's Welfare Fund Board	311848	71	29	100
17	Kerala Traders Welfare Fund Board	101016	98	2	100
18	Kerala Cashew Workers Relifeand Welfare Fund Board	101456	4	96	100
19	Kerala Anganwadi Workers and Helpers Welfare Fund Board	61810	--	100	100
20	Kerala Small Scale Plantation Workers Welfare Fund Board	262	48	52	100

Source: Various Welfare Fund Boards

Appendix 4.93

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Crimes against Women in Kerala, 2016											
1	Rape	500	548	554	617	1132	1019	1221	1283	1263	1319
2	Molestation	2604	2756	2539	2939	3756	3735	4362	4357	3991	3351
3	Kidnapping	166	167	171	175	221	214	185	145	177	126
4	Eve teasing	262	255	394	539	573	498	404	257	265	276
5	Dowry death (304(B) IPC)	22	25	21	21	15	32	21	19	7	15
6	Cruelty by husband / relatives	3976	4135	3976	4788	5377	5216	4820	4810	3664	2822
7	Other offences	1851	1820	1699	1702	2205	2288	2725	3009	3016	3699
	Total	9381	9706	9354	10781	13279	13002	13738	13880	12383	11608

Source: State Crime Records Bureau, Kerala

Appendix 4.94

Plan Outlays and Women Component outlays for 11th and 12th Plan

Sl. No.	Name of Sector	11 th Plan		Annual plan 2012-13		Annual plan 2013-14		Annual plan 2014-15		Annual plan 2015-16	
		Outlay	Of which flow to WCP	Outlay	Of which flow to WCP	Outlay	Of which flow to WCP	Outlay	Of which flow to WCP	Outlay	Of which flow to WCP
1	2	3	4	5	6	7	8	9	10	11	12
1	Agriculture And allied Sectors										
	Crop Husbandry	2250	225		1095	7325	735	8100	810		
	Animal Husbandry	7080	1390	436	130.8	6095	1886.25	5543	1662.96	5889	1780.5
	Dairy Development	5000	1000	2400	240	2400	240	3988	877	5850	1287
	Fisheries Development	3225	1405	1315	838	1300	755	1300	755	900	535
2	Co-Operation	750	150	150	150	1200	150	2865	205	3400	525
3	Rural development	115657	106048			20865	18380	36090.8	13240.5	51134	14428
4	Industry and allied sector	45327.1	9787.41	17369.47	5745	20369	9066.6	13916	6783	14698.4	6713
5	Transport and communication			1000	1000						
6	Science technology and environment	7565	1435	3400	800	4217	1000	4040	750	3850	750
7	General economic services			480	480	500	500	550	550	550	550
8	Social services										
	Education	6000	1150	1100	250	1700	1700	7020	3656.36	8826	2949
	Medical and Public Health	1450	1450	1850	1850	800	800	2424	2208	2460	2435
	Water Supply and Sanitation	11493.1	6321.21	1000	550						
	Labour and Labour Welfare			7955	250	50	50	150	150	185	185
	Social Security and Welfare	12515	10965	2498	2498	3640	3570	4625	4525	5274	5164
9	welfare of SC,ST,OBC Etc.										
	Welfare of Scheduled Caste	50300	31221	17219	9199	3400	3400	105298	35777	111251	3075
	Welfare of Scheduled Tribe	4650	2360			880	575	15128	7298	17260	9065
	Welfare of Minorities							680	548	2980	2624
	Welfare of OBCs	2675	2005					4861	2630		
	Kerala State welfare Corpn. for forward communities Ltd.					1000	250	1440	475	2140	673
10	General services			300	300	350	350	400	400	300	300
	Total	275937	176913	58472.5	25375.8	76091	43407.9	218419	83301	236947	53039

Source: Annual Plan 2015-16

Appendix 4.95					
Status of SC/ST (as per census 2011)					
Sl. No	Item	SC		ST	
		Kerala	India	Kerala	India
1	Population (in lakh)	30.39	2013	4.85	1042
2	Percentage to total Population	9.1	16.6	1.45	8.6
3	Decadal Growth Rate (%)	-2.7	20.8	33.1	23.7
4	Child Population to the total population	14.5	9.4	11.2	16
5	Sex Ratio	1057	945	1035	990
6	Literacy rate	88.7	66.07	75.81	58.96
7	Literacy rate-Female	85.07	56.46	71.1	49.35
8	Literacy rate-Male	92.64	75.17	80.76	68.53

Source : Population Census 2011

Appendix 4.96										
Details of District wise Scheduled Caste/Scheduled Tribe Population										
Sl no	District	Total Population			Scheduled Caste			Scheduled Tribes		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11
1	Kasargod	628613	678762	1307375	26385	26898	53283	23950	24907	48857
2	Kannur	1181446	1341557	2523003	40260	43090	83350	20141	21230	41371
3	Wayand	401684	415736	817420	16406	16172	32578	74476	76967	151443
4	Kozhikode	1470942	1615351	3086293	97279	101912	199191	7429	7799	15228
5	Malappuram	1960328	2152592	4112920	151557	156709	308266	11272	11718	22990
6	Palakkad	1359478	1450456	2809934	197451	206382	403833	24314	24658	48972
7	Thrissur	1480763	1640437	3121200	156480	167870	324350	4362	5068	9430
8	Ernakulam	1619557	1662831	3282388	131573	136838	268411	8349	8210	16559
9	Idukki	552808	556166	1108974	72399	73087	145486	27995	27820	55815
10	Kottayam	968289	1006262	1974551	75503	78406	153909	10974	10998	21972
11	Alappuzha	1013142	1114647	2127789	97183	104028	201211	3175	3399	6574
12	Pathanamthitta	561716	635696	1197412	78942	85523	164465	3947	4161	8108
13	Kollam	1246968	1388407	2635375	157801	170462	328263	5195	5566	10761
14	Trivandrum	1581678	1719749	3301427	178589	194388	372977	12624	14135	26759
	Kerala	16027412	17378649	33406061	1477808	1561765	3039573	238203	246636	484839

Source : Population Census 2011

Appendix 4.97					
District-wise distribution of SC/ST Population in Kerala					
Sl. No.	District	Percentage Distribution		Percentage to total Population	
		SC	ST	SC	ST
1	Kasargod	1.75	10.08	4.08	3.74
2	Kannur	2.74	8.53	3.30	1.64
3	Wayand	1.07	31.24	3.99	18.53
4	Kozhikode	6.55	3.14	6.45	0.49
5	Malappuram	10.14	4.74	7.50	0.56
6	Palakkad	13.29	10.10	14.37	1.74
7	Thrissur	10.67	1.94	10.39	0.30
8	Ernakulam	8.83	3.42	8.18	0.50
9	Idukki	4.79	11.51	13.12	5.03
10	Kottayam	5.06	4.53	7.79	1.11
11	Alappuzha	6.62	1.36	9.46	0.31
12	Pathanamthitta	5.41	1.67	13.74	0.68
13	Kollam	10.80	2.22	12.46	0.41
14	Trivandrum	12.27	5.52	11.30	0.81
Total		100.00	100.00	9.10	1.45

Source : Population Census 2011

Appendix 4.98						
A comparative picture of Assets of Scheduled Caste Households						
Sl. No.	Percentage of households having access to-	India	Kerala	Tamil Nadu	Karnataka	Andhra Pradesh
1	Availing banking services	50.94	60.15	39.26	47.03	45.28
2	Television	39.15	61.17	84.73	46.22	48.91
3	Computer with Internet	1.27	1.93	1.61	1.66	1.09
4	Landline Phone	3.00	6.34	4.50	4.75	2.83
5	Two Wheeler	11.99	10.60	19.94	13.55	10.13
6	Car	1.82	2.31	1.54	2.14	1.02
7	None of these assets	22.60	11.46	6.91	23.71	25.83

Source : Population Census 2011

Appendix 4.99						
A comparative picture of Assets of Scheduled Tribe Households						
Sl. No.	Percentage of households having access to-	India	Kerala	Tamil Nadu	Karnataka	Andhra Pradesh
1	Availing banking services	44.98	54.7	37.98	47.37	42.6
2	Television	21.88	39.59	80.96	44.18	35.33
3	Computer with Internet	0.84	1.95	3.22	1.60	0.884
4	Landline Phone	1.95	5.45	6.58	4.80	22.26
5	Two Wheeler	8.97	7.66	21.88	13.80	8.9
6	Car	1.63	3.03	2.60	2.28	1.06
7	None of these assets	37.34	23.50	8.68	23.93	36.36

Source : Population Census 2011

Appendix 4.100							
Distribution of Main Workers 2001-2011 (in percentage)							
Sl. No.	Category	Total		Scheduled Castes		Scheduled Tribes	
		2001	2011	2001	2011	2001	2011
1	Main workers*	25.87	27.93	29.75	32.93	30.17	33.29
2	Male Main Workers	41.77	44.8	41.54	47.03	40.66	44.24
3	Female Main Workers	10.85	12.37	18.51	19.59	19.9	22.71
4	Percentage of Cultivators to Main Workers	7.12	7.18	1.61	2.28	13.67	12.94
5	Percentage of Agricultural Laborers to Main Workers	12.4	14.18	29.48	29.9	41.12	59.49
6	Percentage of Main Workers engaged in Household Industry	3.35	2.93	2.6	2.07	2.57	1.74
7	Percentage of Main Workers engaged in other services	77.13	75.71	66.31	65.75	42.65	25.83
8	Marginal Workers*	6.43	6.85	10.63	10.9	16.18	14.2
9	Work Participation Rate	32.3	34.78	40.38	43.83	46.35	47.49

*Percentage of distribution is based on total population

Source : Population Census 2001,2011

Appendix 4.101															
Details of Scheduled Castes/Scheduled Tribes Employees in Government Service as on 01.01.2012 to 01.01.2016															
Category	2012 (Review of 73/82 Dept.'s completed)			2013 (Review of 65/82 Dept.'s completed)			2014 (Review of 60/82 Dept.'s completed)			2015 (Review of 51/83 Dept.'s completed)			2016 (Review of 4/83 Dept.'s completed)		
	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Gazatted	31583	3223	610	26158	2747	589	26333	2653	578	9268	1045	203	701	72	11
2.Non-Gazatted (Excluding Last Grade)	112190	10353	2769	87366	8510	2258	89507	8474	2300	50020	4604	1354	5578	547	169
3.Last Grade	27077	3345	738	17304	2278	466	16476	2066	1124	10166	1013	981	917	130	17
TOTAL	170850	16921	4117	130828	13535	3313	132316	13193	4002	69454	6662	2538	7196	749	197

Source: General Administration (Employment Cell-A) Department

Appendix 4.102		
Year-wise SCSP/TSP outlay from 2012-13 to 2016-17 (₹ in crore)		
Year	SCSP	TSP
2012-13	1289.21	312.41
2013-14	1667.7	389.85
2014-15	1962	600
2015-16	1968.5	604.5
2016-17	2354.4	682.8

Source: Budget Documents

Appendix 4.103					
Scheme wise Outlay and Expenditure for Welfare of Scheduled Castes					
(₹ in lakh)					
Sl. No.	Name of scheme	Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Expenditure	Outlay	Expenditure (as on 30.09.2015)
I	State Schemes				
A	Schemes through SCDD				
1	Land to Landless Families for Construction of Houses	12993	12872.99	17497	3479.21
	One time ACA (*Revised Outlay- 2007 Lakhs)	2007	2005.50		
2	House to Houseless	18000	25865.65	26500	7498.38
3	Pooled Fund for special Projects proposed by other Departments under SCSP	500	442.16	500	57.84
4	Share Capital Contribution to Kerala State Development Corporation for Scheduled Castes and Scheduled Tribes (51% State Share)	1020	520	2500	500
5	Modernization and e-governance Initiatives in Development Department	700	532.67	800	21.46
6	Implementation of Protection of Civil Rights (PCR) Act and Prevention of Autrocities(POA) Act (50% state share)	550	542.20	500	237.68
		200	44.77	200	0.34
7	Critical Gap filling Scheme (Corpus fund)	20761.00	13601.24	24523.00	3408.19
8	Contribution of Kerala State Federation of SCs/STs Development Co-operative Limited.	200	0	200	0
9	Development Programme for the Vulnerable Communities among SC	1400	1310.63	1700	291.51
10	Financial Assistance for Marriage of SC Girls	3000	3833.80	5000	3725.90
11	Management of Model Residential Schools including Ayyankali Memorial Model Residential School for Sports, Vellayani.	1300	959.35	1500	471.16
12	Assistance for Education of SC Students	15000	5570.38	38000	3026.63
	Palakkad Medical College	15000	0.00	0	0.00
13	Assistance for Training and Employment	4000	2235.02	4000	912.61
14	Implementation of Priority Schemes under the Kerala Perspective Plan 2030 under SCD	100	48.90	0	0.00
Sub total: A		96731	70385.260	123420	23630.91
B	Schemes through LSGD				
15	Boarding Grants				
	Assistance to Municipalities	15	13.86	20	7.41
	Assistance to Block Panchayats	30	24.91	30	11.21
	Assistance to Municipal corporations	15	1.41	20	0.00
16	Tuition System in Pre-Matric Hostels				
	Assistance to Block Panchayats	205	150.63	200	21.95
	Assistance to Municipalities	40	29.53	40	12.41
	Assistance to Municipal Corporations	5	4.03	10	0.00
17	Pre Primary Education				
	Assistance to village Panchayats	40	17.64	50	5.31
	Assistance to Municipalities	15	10.25	20	0.86
	Assistance to Municipal Corporations	15	3.00	20	1.57
Sub total: B		380	255.26	410	60.72
C	Schemes through Rural Development Department				

18	Indira Awas Yojana - SCP(25% state share)	4696	4728.00	5120	1318.72
19	NRLM(National Rural Livelihood Mission) - SCSP (25% State Share)(only first installment received)	385	347.20	700	0.00
Sub total: C		5081	5075.2	5820	1318.72
D	Schemes through PWD				
20	Construction of Boy's Hostels SC (50% state share)	400	23.44	400	0.00
21	Works and Buildings	1500	433.21	1500	89.68
Sub total: D		1900	456.65	1900	89.68
Total: State Plan Schemes (A+B+C+D)		104092	76172.37	131550	25100.03
II	Centrally Sponsered/Assisted Schemes				
A					
22	Special Central Assistance to Scheduled Caste Sub Plan (Outside state plan) (Allotment Received:-827.63 lakh) (Available fund ₹ 827.63 lakh+Rs 606.30 lakh=₹ 1433.93 lakh)	2400	1057.02	2400	1.10
B	Centrally sponsored scheme 50%				
23	Implementation of Protection of Civil Rights (PCR) Act and Prevention of Autrocities(POA) Act (50% central share)	550	542.20	500	237.68
		200	44.77	200	0.34
24	PMAY-G-SCSP (60%CSS)			7680	1978.08
25	NRLM-SCSP (60% Central Share)			1050	
26	KSDC for SC and ST Ltd (49% Central share)	980	500.00	980	0.00
27	Construction of Boy's Hostels SC (50% Central share)	400	23.44	400	0.00
Subtotal: 50% CSS		2130	1110.41	10810	2216.1
C	Centrally sponsored scheme 100%				
28	Post Matriculation studies	25000	22195.86	26000	14694.37
29	Upgradation of merit of SC students	19	6.16	20	20.00000
30	Pre-matric Scholarships to the Children of those engaged in unclean occupations	40	24.98	40	0.00000
31	Construction of Girls' hostels(post matric)-Babu Jagjivan Ram Chhatrawas Yojana (100% CSS)	300	0.00000	400	0.00000
32	Prematric Scholarship for SC Students studying in classes 9 and 10 (100% CSS)	2000	2000.00	2000	0.00000
Sub total 100% CSS		27359	24227	28460	14714.37
Total: Central Schemes		31889	26394.43	41670	16931.57
Grand Total		135981	102566.8	173220	42031.6

Source : SC Development Department

Appendix 4.104				
Physical Achievement of Schemes for Scheduled Caste Development 2015-16 and 2016-17 (up to 30-10-2016)				
Sl. No	Name of the Scheme	Unit	Achievement 2015	Achievement 16-17(up to 31.10.2016)
I	State Schemes			
A	Schemes through SCDD			
1	Land to Landless Families for Construction of Houses	Beneficiaries	3569	810
2	House to Houseless	Beneficiaries	Spill over Completed: 3920 14-15 Completed :364 Total: 4284	Spill over Completed:3751 New:1710 Total:5515
3	Pooled Fund for special Projects proposed by other Departments under SCP		Scheme implemented through Tourism Dept SubalaPark, Pathanamthitta	
4	Share Capital Contribution to Kerala State Development Corporation for Scheduled Castes and scheduled Tribes (51% State share)			
5	Modernization and e-governance Initiatives in Development Department		Assistance Given:MRS-5 Training Institutes-20 Prematric hostels-10 District Offices-3	
6	Implementation of Protection of Civil Rights (PCR) Act and prevention of atrocities(POA) Act (50% state share)	Intercaste Couples	1930	914
		Victims	197	
7	Critical Gap filling Scheme (Corpus fund)		Treatment :12113 Toilet Phase-1:1085 Toilet Phase-2:1559 Toilet new:10397 Honarium SC Promoters:2439 Vinjanvadi:43 Self employment:560	Treatment:8309 Toilet Phase-1:1510 Toilet new:195
8	Contribution of Kerala State Federation of SCs/STs Development Co-operative Limited.			
9	Development Programme for the Vulnerable Communities among SC	Beneficiaries	351 House 154 land	16
10	Financial Assistance for Marriage of SC Girls	Couples	6692	7800
11	Management of Model Residential Schools including Ayyankali Memorial Model Residential School for Sports, Vellayani.	Students	1796	1094
12	Assistance for Education of SC Students	Students	134766	128270
13	Assistance for Training and Employment		141	1727
B	Schemes through LSGD			
14	Boarding Grants			
	Assistance to Municipalities			

	Assistance to Block Panchayats	Institutions	180	
	Assistance to Municipal corporations			
15	Tuition System in Pre-Matric Hostels			
	Assistance to Municipalities	Institutions	135	91
	Assistance to Block Panchayats	Institutions	10	42
	Assistance to Municipal Corporations			
16	Pre Primary Education			
	Assistance to village Panchayats	Institutions	71	
	Assistance to Municipalities	Institutions	21	
	Assistance to Municipal Corporations			
C	Schemes through Rural Development Department			
17	Indira Awas Yojana - SCP(25% state share)			
18	National Rural Livelihood Mission/NRLM - SCP (25% State Share)			
D	Schemes through PWD			
19	Construction of Boy's Hostels SC (50% state share)			
20	Works and Buildings			
A	Centrally Sponsored Schemes/Central Assisted Schemes			
21	Special Central Assistance to Special Component Plan (Outside state plan)		8542	
B	Centrally sponsored scheme 50 %			
22	Implementation of Protection of Civil Rights (PCR) Act and prevention of atrocities(POA) Act (50% state share)			
23	KSDC for SC and ST Ltd (49% Central share)			
24	Construction of Boy's Hostels SC (50% Central share)			
C	Centrally sponsored scheme 100%			
25	Post Matriculation studies	Students	81483	
26	Upgradation of merit of SC students			
27	Pre-matric Scholarships to the Children of those engaged in unclean occupations			
28	Construction of Girls' hostels(post matric)-Babu Jagjivan Ram Chhatrawas Yojana (100% CSS)			
29	Prematric Scholarship for SC Students studying in classes 9 and 10 (100% CSS)			

Source : SC Development Department

Appendix 4.105

Number of Scheduled Caste students benefited- Lumpsum grant and Scholarships during 2016-17 (upto 31-10-16)													
Course	Stipend		Lumpsum grant		Pocket money		Paying guest fees		Contingency		PROJECT		
	No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount	No. of beneficiaries	Amount	
Accounting And Taxation	36	80020	36	32400									
Acharya	1	1960	2	2500	1	490							
Agriculture - crop health management	66	147523	66	59860									
Agriculture business and farm services	47	101387	47	42760									
Agriculture science and processing technology	15	37236	15	13500									
Agromachinery and power engineering	1	120	1	900									
Automobile technology	3	4083	3	2700									
B Arch	9	14187	27	49050	14	2400	2	9000					
B Com (vocational) office management and secretarial practice	10	21660	11	10450	1	450							
B. Voc (Animation and Graphic Design)	8	14860	8	7600									
B. Voc Digital Film Production	3	7200	3	2850									
B. Voc Hospitality Management	3	10200	3	2850									
B. Voc Logistic Management	22	57760	23	21850	1	900							
B. Voc Marketing Management and Information Technology	7	24000	8	7600	1	900							
B. Voc Medical Laboratory Technology	1	3000	1	950									
B. Voc Multimedia	6	15100	8	7600	2	1500							
B. Voc Retail Management and Information Technology	3	10200	5	4750	1	900							
B. Voc Software Development	16	50000	16	15200									
B.A.	10	25286	33	31590	23	4650							

B.Sc Food Technology	12	10300	15	14250	3	750			
B.Sc Geology	25	50000	35	33970	7	3130			
B.Sc Micro Biology	62	138372	83	79330	18	12482	1	6000	
B.Sc Plant Science	24	68788	24	22800					
B.Sc Polymer Chemistry	44	115375	45	42990	1	900	2	3000	
B.Sc.	1	600	1	950					
B.Sc. Applied Physics	10	28296	10	9500					
B.Sc. Aqua	8	14400	9	16200	1	450			
B.Sc. Biochemistry	55	96816	62	60100	5	2535			
B.Sc. Biotechnology	52	87731	59	56290	5	3450			
B.Sc. Botany	997	2125863	1106	1062400	101	61367			
B.Sc. Botany & Bio-technology	19	42132	22	20900	2	1350			
B.Sc. Chemistry	1092	2284351	1181	1131310	74	43069			
B.Sc. Clinical Nutrition and Dietetics	1	3000	1	950					
B.Sc. Computer	1	3600	2	1900	1	900			
B.Sc. Computer science	408	867874		415880	19	12450			
B.Sc. Cyber Forensic	7	14100	12	11400			5	7500	
B.Sc. Electronics	200	484704	201	192150	1	750			
B.Sc. Environmental Science	10	14177	11	10450					
B.Sc. EWM	11	31900	11	10450					
B.Sc. FCS	4	5494	5	4750	1	150			
B.Sc. Food Science and Quality Control	1	2280	1	950					
B.Sc. Forestry	3	4969	6	6420	1	600			
B.Sc. Forestry and Wood Technology	4	8000							
B.Sc. Geography	46	70203	71	68170	18	10600	1	6100	
B.Sc. HomeScience	45	93368	51	48450	7	4935			
B.Sc. Hospitality and Hotel Administration	11	7061	25	23750	13	1592			
B.Sc. Industrial Chemistry	30	45088	33	32310	2	820			
B.Sc. Industrial Microbiology	27	53800	29	27550	1	750	1	7500	
B.Sc. Instrumentation	21	72600	22	20900	1	115			
B.Sc. Mathematics	937	1989456	996	952680	47	26144			

Bachelor of Visual Communication (BVC)	3	9000	3	2850	1	102							
Bakery & confectionery	3	1151	4	2800	1	102							
Basic Nursing And Palliative Care	1	1500	1	900									
BBA	469	912456	521	498570	24	11267	2	10500					
BBA(HRM)	3	9600	3	2850									
BBA(Tourism Management)	8	15084	12	12140	3	1800	1	4500					
BBA-LLB(Honours)(LLB 5 Year)	10	28650	27	46200	5	2910	13	97500					
BBM	29	48100	30	28500	1	300							
BCA	145	305695	159	152490	14	8238							
BCA (Self Finance)	3	5160	5	4750	2	1500							
BDS			8	20000	8	2780							
BFA	7	20500	8	7600	1	750							
BFSc	6	7200	8	14400	2	600							
BHM	1	600	15	27000	14	3000							
BHMS	1	7200	13	23400	12	7982							
Bio Medical	17	22100	21	14700			4	6000					
Biomedical Equipment Technology	5	12645	5	5190									
BPE			1	1500	2	380	1	1500					
BSW	2	6600	2	1900									
BTA			3	3570	3	570							
BTHM	8	24000	8	7600									
BVMC	13	9900	14	13300									
BVSc			3	6750	3	147							
Certificate in Offset Printing Technology	16	8349	16	11200									
Chemical Engineering	5	5400	6	4200	2	450							
Civil construction technology	12	31099	12	11260									
Computer Application and Business Management	8	24000	8	5600									
Computer hardware engineering	14	12494	14	11600									
Computer Maintenance and Electronics	2	3000	2	1900									
Computer science and	22	57580	24	23670	2	270							

VHSE-Grp2-Para-Dental Technology	2	5452	2	1800															
VHSE-Grp2-para-Domestic Nursing	31	77480	31	28360															
VHSE-Grp2-Para-ECG and Audiometric Technician	17	25900	17	15300															
VHSE-Grp2-Para-Medical Laboratory Technician	324	584231	324	293900															
VHSE-Grp2-Para-Physiotherapy	2	6000	2	1800															
VHSE-Grp3-Hum-Travel and Tourism	51	107419	51	45900															
VHSE-Grp4-Bic-Accountancy and Auditing	167	264528	170	156450	3	2250													
VHSE-Grp4-Bic-Banking Assistance	37	84572	40	36000	3	2250													
VHSE-Grp4-Bic-Catering and Restaurant Management	6	5500	6	5400															
VHSE-Grp4-Bic-General Insurance	31	55285	31	28130															
VHSE-Grp4-Bic-Marketing and Salesmanship	42	93419	42	38260															
VHSE-Grp4-Bic-Office Secretaryship	143	287476	144	131440			1	1500											
VHSE-Grp4-Bic-Reception, Book-Keeping and Communication	2	1100	2	1800															

Source : SC Development Department

Appendix 4.106										
Number of Houses Sanctioned and Constructed by the SC Development Department during 2012-13 to 2016-17 (up to 31-10-2016)										
Sl. No.	District	Houses 2012-13		Houses 2013-14		Houses 2014-15		Houses 2015-16		Houses 2016-17
		Sanctioned	Completed	Sanctioned	Completed	Sanctioned	Completed	Sanctioned	Completed	Sanctioned
1	Thiruvananthapuram	595	179	866	530	458	38	614	34	920
2	Kollam	515	334	736	345	404	21	540	222	810
3	Pathanamthitta	260	64	336	179	212	17	340	57	406
4	Alappuzha	250	63	363	157	219	54	331	109	497
5	Kottayam	240	186	289	120	177	15	253	111	380
6	Idukki	255	44	294	108	214	92	239	125	359
7	Ernakulam	495	248	537	285	330	103	441	143	662
8	Trissur	565	152	651	312	410	97	559	151	800
9	Palakkad	690	501	750	289	488	145	724	13	996
10	Malappuram	460	362	869	387	634	25	507		761
11	Kozhikode	320	27	339	202	247	73	328	23	492
12	Wayanad	50	40	62	54	52	20	64	64	80
13	Kannur	160	27	200	128	87	14	174	30	206
14	Kasaragod	145	121	105	78	68	22	101	101	131
Total		5000	2348	6397	3174	4000	736	5215	1183	7500
										440

Source : SC Development Department

Appendix 4.107											
Details of Land Provided to SC during 2014-15, 2015-16 and 2016-17 (up to 30-10-2016)											
Sl. No	Districts	2014-15			2015-16			2016-17 (up to 30.10.2016)			
		Amount	Expenditure	Persons benefited	Amount	Expenditure	Persons benefited	Amount	Expenditure	Persons benefited	
1	Thiruvananthapuram	1544.55	1544.55	368	2095.6	2095.6	505	2302.5	370.75	83	
2	Kollam	1551.23	1550.4	378	1724.9	1721.15	412	307.69	53.63	54	
3	Pathanamthitta	583	582.43	155	711.39	700.14	189	956.25	295.25	75	
4	Alappuzha	990.5	987.75	263	732.64	695.25	190	978.75	184.5	50	
5	Kottayam	693.75	693.75	185	723	723	190	1095	249.11	66	
6	Idukki	877.5	866.25	252	828.5	794.75	219	735	33.75		
7	Ernakulam	1317.65	1317.65	339	1902.12	1902.12	496	1785	195.75	51	
8	Trissur	1545.5	1542.06	388	1642.35	1642.35	404	1597.5	433.61	113	
9	Palakkad	2955	2954.44	475	1237.5	1236.7	322	1725	186.75	49	
10	Malappuram	1155	1152.38	303	930	929	240	1162.5	307.32	81	
11	Kozhikode	990.5	989.73	232	1304	1302	303	1241.25	428.58	101	
12	Wayanad	268.75	266.25	63	328.5	328.5	85	652.5	43.5	11	
13	Kannur	355.95	355.94	94	373.96	373.96	100	786	164.03	44	
14	Kasaragod	266.25	266.25	75	433.5	433.5	112	705	11.25	3	
Total		15095.13	15069.83	3570	14967.96	14878.02	3767	16029.9	2957.78	781	

Source : SC Development Department

Appendix 4. 108							
Number of persons benefitted under Self Employment Schemes during 2015-16 and 2016-17							
Sl. No	District	2015-16			2016-17		
		Amount Sanctioned (2015-16)	Expenditure as on 31.03.16	Persons Benefitted	Amount Sanctioned (2016-17)	Expenditure as on 31/10/16	Persons Benefitted
1	Thiruvananthapuram	65.48	65.48	127	20.38	20.38	35
2	Kollam	17.83	17.68	24	0	0	0
3	Pathanamthitta	12.48	12.48	22	9.4	9.4	15
4	Alappuzha	51.58	51.57	68	27.51	17.33	34
5	Kottayam	15.8	15.8	21	6.76	2	10
6	Idukki	16.52	16.52	23	5.74	2.85	8
7	Ernakulam	42.22	42.22	58	17.11	17.11	48
8	Trissur	16.32	16.32	25	13.96	6.85	20
9	Palakkad	69.56	69.56	105	63.72	36.76	86
10	Malappuram	9.45	9.45	16	7.38	6.5	10
11	Kozhikode	9.76	9.76	13	4.69	1	6
12	Wayanad	6.42	6.42	9	1.92	1.92	7
13	Kannur	18.64	18.64	31	8.56	8.56	22
14	Kasaragod	18.25	18.25	27	4.36	2.73	8
Total		370.31	370.15	569	191.49	133.39	309

Source : SC Development Department

Appendix 4.109		
Number of Harassment/Atrocities against SCs in Kerala		
Year	No of cases	Compensation Granted (₹ in lakh)
2011-12	330	59.67
2012-13	491	107.2
2013-14	350	127.2
2014-15	351	150.29
2015-16	245	54.79
2016-17 (as on 30.10.16)	68	47.71

Source : SC Development Department

Appendix 4.110			
Outlay and Expenditure under Critical Gap Filling Scheme (Corpus Fund)			
(₹ in lakh)			
Year	SCSP		% of Expenditure
	Outlay	Expenditure	
2011-12	13614	13436.69	98.7
2012-13	11500	11481.19	99.84
2013-14	18178.85	17750.89	97.65
2014-15	12300	12722	103.43
2015-16	20761	14609.4	70.36
2016-17 (as on 31.10.16)	24523	3408.19	13.9

Source : SC Development Department

Appendix 4.111			
Details of Schemes under Corpus Fund (2015-16) undertaken by SC Development Department (₹ in lakh)			
Sl. No	Name of Scheme	Outlay	Expenditure
1	Treatment grant		4567.4
2	Toilet grant		3808.69
3	Honorarium for SC Promoters		360.98
4	Stipend for Apprentice Clerk cum typist		55.82
5	Vinjanvadi		63.17
6	Self employment Subsidy		390.67
7	Vision 2013	20761	79.38
8	Renovation of crematorium		72.11
9	1/3 to Dist Collectors fund		2035.18
10	Trade fair, Paithrukolsavam		22.41
11	Other		3153.59
Total			14609.4

Source : SC Development Department

Appendix 4.112			
Outlay and Expenditure under Pooled Fund (₹ in lakh)			
Year	SCSP		
	Outlay (Revised)	Expenditure	% of Expenditure
2011-12	6000	5228.57	87.14
2012-13	5060	5059.54	99.99
2013-14	3000	2431.11	81.04
2014-15	1000	524.77	52.48
2015-16	500	442.16	88.43
2016-17 (as on 31.10.16)	500	57.84	11.57

Source: SC Development Department

Appendix 4.113			
Outlay and Expenditure under SCA to SCSP (₹ in lakh)			
Year	Outlay	Expenditure	Percentage
2011-12	700	698.66	99.81
2012-13	1000	905.99	90.6
2013-14	2000	1395.62	92.43
2014-15	1433.93*	1291.17	90.04
2015-16	1497	1057.02	70.61
2016-17 (as on 31.10.16)	2400	1.1	0.05

Source : SC Development Department

* Actual release from Govt. of India

Appendix 4.114					
Scheme wise Outlay and Expenditure of ST Development during 2015-16 and 2016-17 (up to 31.10.2016)					
(₹ in lakh)					
Sl. No	Name of the Scheme	Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Expdr.	Outlay	Expdr. (As on 31.10.16)
A	STATE PLAN SCHEMES				
	Assistance to the Welfare of Scheduled Tribes				
1	i) Assistance for the Marriage of ST girls	150.00	150.00	175	54.4
	ii) Assistance to Sickle Cell Anemia patients	120.00	97.21	150	77.68
	iii) Janani - JanmaRaksha	655.00	655.00	1000	342.26
	iv) Financial assistance to traditional tribal healers	25.00	25.00	25	0
	Incentive and Assistance to students (T)				
2	i) Special Incentive to Brilliant students	40.00	39.96	100	71.95
	ii) Ayyankali Memorial talented Search and Development Scheme	30.00	29.75	40	16.05
	(iii) Asst to study tour to schools and college going students	20.00	19.98	50	8.62
	(iv) Asst to Orphans	11.00	31.00	80	23.63
	(v) Supply to study table and chair to all students studying in high school higher secondary school and colleges				
	vi) Supply of Lap top to students	109.00	88.56	140	0
3	Critical Gap filling Schemes [Corpus Fund] under TSP	4924.99	941.10	5057.69	777.29
4	Special Programme for Adiya, Paniyas Primitive Tribal Groups and Tribes living in Forest	250.00	239.32	300.00	54.58
5	Food Support Programme	500.00	499.99	2500.00	766.2
6	Assistance to Tribal Welfare Institutions	200.00	200.00	220.00	
7	Comprehensive Health Care Package	1000.00	1309.96	1500.00	1058.76
8	Housess to Houseless	4783.00	4813.57	5000.00	2305.72
9	Implementation of Finance Commission Award for Particularly Vulnerable Tribal Groups	3700.00	468.51		
10	Implementation of Kerala State Restriction of Transfer of Lands and Restoration of Alienated Land Act 1999	100.00	9.12	50.00	0.25
11	Management cost for the Running of Model Residential Schools/Ashram Schools [19]	4000.00	3575.54	5000.00	1463.11
12	Promotion of Education among Scheduled Tribes (T)	650.00	646.91	1000.00	459.74
13	Pooled funds for special projects proposed by other Depts under TSP	1000.00	839.00	1000.00	128.58
14	Post-matric Hostels for tribals	100.00	75.45	125.00	48.78
15	Publicity Wing/Information, Education and Communication [I.E.C. Project]	150.00	139.42	200.00	30.82
16	Resettlement of Landless tribals (TRDM)	2000.00	1956.88	4200.00	2093.58
17	Schemes Implemented with Grant-in-aid under Article 275[1]	548.00	376.87	600.00	
18	Enhancement of facilities in tribal areas.	185.00	150.90	250.00	

19	Improving facilities and renovation of Prematric and Post matric Hostels	345.00	333.86	500.00	2.9
20	Honorarium to Tribal Promoters (T)				
	i) Tribal Promoters	1100.00	820.99	1100.00	674.32
	ii) Organisation of Oorukoottams	100.00	29.81	50.00	17.62
	iii) Honorarium to Management Trainees and Health management Trainees	100.00	89.05	133.00	78.47
	iv) Honorarium to Counsellors engaged in the Hostels and MRS	75.00	55.06	98.00	0.77
	v) Engaging social workers in Tribal Welfare	100.00	98.65	219.00	32.87
21	Modernisation of Tribal Development Department	125.00	104.35	200.00	58.7
22	Assistance for Self Employment and skill Development training to ST youths	300.00	300.00	500.00	66.05
23	Assistance to Adikala Kendram	35.00	35.00	35.00	0
24	Hamlet Development	1000.00	967.06	1000.00	
25	ATSP fund/Special Package	8500.00	8627.22	15000.00	10405.92
		6500.00	5146.58		
26	Gurukulam (Kalinga Model)	100.00		100.00	
27	Implementation of Priority schemes under the Kerala Perspective Plan 2030 under ST Devt	100.00	18.49		
28	State centre for Tribal Healers			50.00	
	50% STATE SHARE OF CENTRALLY SPONSORED SCHEMES				
29	Construction of buildings for MRS/Ashram Schools (50%SS)	1500.00	70.64	1500.00	53.56
30	Construction of Boys Hostel [50% SS)	400.00	225.73	410.00	33.39
31	Enforcement of Prevention of Atrocities Act [50%SS]	5.00	5.00	15.00	12.19
		5.00	0.00	15.00	
32	Grant-in-aid to Kerala Institute for Research, Training and Development studies for SC/ST (KIRTADS) [50%SS]	70.00	64.67	100.00	
33	Share Capital contribution to KSDC for SC/ST [State Share 51%]	22.00	22.00	22.95	
	Rural Development (40%SS)				
34	IAY [Block Panchayat] (40%SS)	655.00	655.00	2614.36	299.2
35	SGSY / NRLM [Block Panchayat] (40% SS)	140.00	0.00	255.00	41.73
	50% CENTRAL SHARE OF CENTRALLY SPONSORED SCHEMES				
36	Construction of buildings for MRS/Ashram Schools (50%CSS)	1500.00	70.64	1500.00	53.56
37	Construction of Boys Hostel [50% C.S.S)	400.00	225.73	410.00	33.39
38	Enforcement of Prevention of Atrocities Act [Central Share 50%]	5.00	5.00	15.00	12.19
		5.00		15.00	
39	Grant-in-aid to Kerala Institute for Research, Training and Development studies for SC/ST (KIRTADS) [50%CSS]	70.00	64.67	100.00	
40	Share Capital contribution to KSDC for SC/ST [Central Share 49%]	21.14		22.05	
B. 100% Centrally Sponsored Schemes and SCA to TSP					
	Rural Development Scheme (60%CSS)				
1	IAY [Block Panchayat]	1965.00	1425.28	3921.54	449

2	SGSY / NRLM [Block Panchayat]	420.00		382.00	62.6
	100% CENTRAL SHARE OF CENTRALLY SPONSORED SCHEMES				
1	Post matric scholarship	2500.00	2499.81	2500.00	1100
2	Special Central Assistance to Tribal Sub Plan [SCA to TSP]	1000.00	992.85	1200.00	
3	Pre-matric Scholarship for Tribal Students studying in IX and X classes	500.00	383.83	500.00	195.14
4	Construction of Girls Hostels	350.00	71.13	350.00	
5	Construction of MRS, Under art 275(1)	370.00	131.22	370.00	120.74
6	Implementation of STs and other traditional forest Dwellers [Recognition of forest Right Act , 2006]	100.00	99.10	100.00	
7	Vocational Training Institute for Scheduled Tribes	80.00	41.94	80.00	15.92
8	Upgradation of Merits of ST students	0.01		0.01	
9	Conservation cum Development of Primitive Tribal Group [CCD]	0.01		0.01	
10	Grant in aid to the Kerala State Federation of SCs and STs Development co-operative Ltd.	0.01	6.00	0.01	206.77
11	Infrastructure facilities to KIRTADS	0.01	0.01	0.01	
12	Multi purpose hostel for Scheduled Tribes	299.82		300.37	
13	Vanabandhu Kalyan Yojana			1000.00	0

Source : ST Development Department

Appendix 4.115				
Physical Achievement of Schemes of Scheduled Tribes Department for the period 2015-16 and 2016-17 (up to 31.10.2016)				
Sl. No.	Schemes	Unit	2015-16	2016-17 (31/10/16)
1	2	3	4	5
A	STATE PLAN SCHEMES			
	Assistance to the Welfare of Scheduled Tribes			
1	i) Assistance for the Marriage of ST girls	Beneficiaries	300	108
	ii) Assistance to Sickle Cell Anemia patients	Beneficiaries	600	600
	iii) Janani - JanmaRaksha	"	11850	3500
	iv) Financial assistance to traditional tribal healers	"	25	
	Incentive and Assistance to students (T)			
2	i) Special Incentive to Brilliant students	Students	1755	938
	ii) Ayyankali Memorial talented Search and Development Scheme	"	1238	400
	(iii) Assistance to study tour to schools and college going students	"	60	468
	(iv) Assistance to Orphans	"	535	231
	vi) Supply of Lap top to students	"	193	
3	Critical Gap filling Schemes [Corpus Fund] under TSP	Beneficiaries	6289	15933
4	Special Programme for Adiya, Paniyas Primitive Tribal Groups and Tribes living in Forest	"	15046	1049
5	Food Support Programme	"	85761	83103
6	Assistance to Tribal Welfare Institutions		965	
7	Comprehensive Health Care Package	Beneficiaries	30000	19855
8	Houesses to Houseless	Houses	Spill over houses	
9	Implementation of 13th Finance Commission Award for Particularly Vulnerable Tribal Groups	families	8101	0
10	Implementation of Kerala State Restriction of Transfer of Lands and Restoration of Alienated Land Act 1999	Beneficiaries	50	
11	Management cost for the Running of Model Residential Schools/Ashram Schools [19]	Students	5721	6000
12	Promotion of Education among Scheduled Tribes (T)	Students	21500	9821
13	Pooled funds for special projects proposed by other Depts under TSP	Beneficiaries	805	40
14	Post-matric Hostels for tribals	Students	250	168
15	Publicity Wing/Information, Education and Communication [I.E.C. Project]	Projects	50	10
16	Resettlement of Landless tribals (TRDM)	Beneficiaries	4500	6600
17	Schemes Implemented with Grant-in-aid under Article 275[1]	Beneficiaries	1250	
18	Enhancement of facilities in tribal areas.	Beneficiaries	965	
19	Improving facilities and rennovation of	Beneficiaries	6452	50

	Parametric and Post matric Hostels			
	Honorarium to Tribal Promoters (T)			
20	i) Tribal Promoters	Promoters	1178	1185
	ii) Organisation of Oorukoottams	Projects	300	50
	iii) Honorarium to Management Trainees and Health management Trainees	Trainees	140	140
	iv) Honorarium to Counsellors engaged in the Hostels and MRS	Counsellors	49	49
	v) Engaging social workers in Tribal Welfare	Social workers	123	126
21	Modernisation of Tribal Development Department	Projects	50	12
22	Assistance for Self Employment and skill Development training to ST youths	Beneficiaries	1524	521
23	Hamlet Development	Hamlets	10	
24	ATSP fund/Special Package	Families	17312	9362
25	Implementation of Priority schemes under the Kerala Perspective Plan 2030 under ST Devt	Families	50	
50% STATE SHARE OF CENTRALLY SPONSORED SCHEMES				
26	Enforcement of Prevention of Atrocities Act [State Share 50%SS]	Beneficiaries	141	34
27	Share Capital contribution to KSDC for SC/ST [State Share 51%]	Families	425	
B.	100% Centrally Sponsored Schemes and SCA to TSP			
1	Post matric scholarship	Students	14745	12000
2	Special Central Assistance to Tribal Sub Plan [SCA to TSP]	Beneficiaries	5485	
3	Pre-matric Scholarship for Tribal Students studying in IX and X classes	Students	3357	7047
4	Implementation of STs and other traditional forest Dwellers [Recognition of forest Right Act , 2006]	Beneficiaries	490	
5	Vocational Training Institute for Scheduled Tribes	Students	60	
6	Grant in aid to the Kerala State Federation of SCs and STs Development co-operative Ltd.	Beneficiaries	98	1000

Source : ST Development Department

Appendix 4.116													
Details of Lump sum Grant, Stipend, Scholarships etc. to Scheduled Tribes Students during the year 2015-16 and 2016-17 (up to 31/10/2016)													
Sl. No	Name of Sector	Number of students benefited and amount sanctioned											
		2015-16						2016-17					
		Lump sum Grant		Stipend		Pocket Money		Lump sum Grant		Stipend		Pocket Money	
		Number of students	Amount (in lakh)	Number of students	Amount (in lakh)	Number of students	Amount (in lakh)	Number of students	Amount (in lakh)	Number of students	Amount (in lakh)	Number of students	Amount (in lakh)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Lower primary	31107	138.56	30894	306.89	755	7.2	26648	72.04	26570	136.99	151	1.1
2	Upper Primary	25131	130.23	24289	281.78	1249	122.04	21970	117.64	21447	227.94	742	2.65
3	High School	19979	138.69	18960	240.73	1535	23.87	19871	16.13	19044	158.02	1215	4.70
4	Plus two	7762	69.60	7118	348.77	454	6.00	3638	33.30	3321	52.41	233	0.73
5	Vocational Higher Secondary	360	3.23	309	15.26	29	0.28	145	1.31	128	1.88	11	0.03
6	I.T.I	255	1.96	329	21.73	1	0.02	61	0.42	132	3.40		
7	I.T.C	23	1.50	23	1.15			22	0.11	22	0.55		
8	Polytechnics	509	3.56	433	28.81	61	0.73	119	0.86	89	0.95	21	0.07
9	Degree	3699	35.61	2405	129.20	1139	15.98	2204	21.26	1400	25.34	713	2.80
10	Post-Graduation	729	8.68	365	18.38	285	3.93	235	2.97	114	1.84	101	0.35
11	Engineering												
a)	Government Aided	291	52.02	63	3.60	182	2.70	57	1.07	15	0.10	33	0.03
b)	Self-Financing	101	1.80	48	2.97	38	0.61	55	1.01	31	0.25	19	0.05
12	Medical												
a)	Government	288	4.68	26	1.44	232	3.43	33	0.57	6	0.09	22	0.10
b)	Co-operation												
c)	Self-Financing	270	3.57	22	1.14	234	3.55	18	0.30	2	0.01	13	0.07
13	Others (specify)	535	3.47	257	13.45	245	3.51	220	1.45	99	1.90	112	0.64
	Total	91039	597.16	85541	1415.30	6439	193.85	75296	270.44	72420	611.67	3386	13.32

Source : ST Development Department

Appendix 4.117				
Details of Educational Concessions distributed by Scheduled Tribes Development Department from 2009-10 onwards				
(₹ in lakh)				
Year	Number of students (Pre-matric)	Plan (Pre-matric)	Number of students (Post-matric)	Plan (Post-matric)
1	2	3	4	5
2009-10	0	0	12001	712.23
2010-11	0	0	12127	788.67
2011-12	0	0	12287	800
2012-13	0	0	12567	1260
2013-14	0	0	12835	1798.97
2014-15	13880	390	13281	1996.62
2015-16	14980	383.83	13597	2499.81
2016-17 (up to 31.10.16)	15210	286.5	12612	841.56

Source : ST Development Department

Appendix 4.118				
Outlay (Plan) and Expenditure of Prematric and Post matric Education from 2009-10 onwards				
(₹ in lakh)				
Year	Prematric (Plan)		Postmatric (Plan)	
	Outlay	Expenditure	Outlay	Expenditure
2009-10			800.00	712.23
2010-11			800.00	788.67
2011-12			800.00	800.00
2012-13			1260.00	1260.00
2013-14	57.00	0.00	1800.00	1798.97
2014-15	390.00	390.00	2000.00	1996.62
2015-16	500.00	383.83	2500.00	2499.81
2016-17 (up to 31.10.16)	500.00	286.50	2500.00	841.56

Source : ST Development Department

Appendix 4.119		
Outlay and Expenditure of Education Sector (Plan)		
Year	Outlay	Expenditure
2009-10	3957.98	3194.90
2010-11	7302.00	6497.45
2011-12	6573.42	5975.83
2012-13	8071.70	5102.67
2013-14	9798.70	6302.00
2014-15	12877.65	9377.65
2015-16	13480.02	8919.88
2016-17 (as on 31.10.16)	15530.01	4706.78

Source : ST Development Department

Appendix 4.120					
Details of Housing Programme undertaken by ST Development Department from 2009-10 onwards					
Year	Outlay (₹in lakh)	Expenditure (₹in lakh)	Houses Sanctioned	Houses Completed	Incomplete houses
2009-10	500.00	498.56	454	384	70
2010-11	1000.00	877.27	972	678	294
2011-12	2000.00	1999.86	1223	915	308
2012-13	2500.00	2499.90	833	533	300
2013-14	2750.00	2749.87	1122	659	463
2014-15	3300.00	3271.15	2778	391	2387
2015-16 General Housing	4873.00	4873	Spill over houses		
2015-16 ATSP Housing	8899.61	8899.61	9448	30	9418
2016-17 General Housing (up to 31.10.16)	5047.30	3515.85	spill over houses		
2016-17 ATSP Housing (up to 31.10.16)	15000.00	11935.00	spill over houses	201	9217
Total	45869.91	41120.07	16830.00	3791.00	18635

Source : ST Development Department

Appendix 4.121

Number of Houses Constructed by the ST Development Department from 2009-10 onwards

District	2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16			2016-17(31/10/16)			
	Number of houses undertaken in different schemes	Number of houses completed including spill over	Number of houses undertaken in different schemes	Number of houses completed including spill over	Number of houses undertaken in different schemes	Number of houses completed including spill over	Number of houses undertaken in different schemes	Number of houses completed including spill over	Number of houses undertaken in different schemes	Number of houses completed including spill over	Number of houses undertaken in different schemes	Number of houses completed including spill over	Sanctioned	completed	Sanctioned	General houses completed	HUDCO completed	Number of houses undertaken in different schemes	
																			HUDCO
Thiruvananthapuram	55	41	51	49	63	60	80	57	70	46	299	7	61	400	0	315	25	5	1
Kollam	55	39	30	15	41	35	30	28	52	39	131	2	25	70	1	166	1	4	4
Alappuzha																			
Pathanamthitta	19	13	37	29	54	42	32	19	43	31	80	8	22	50	14	75	26	11	24
Kottayam	51	45	48	44	70	61	49	43	55	50	98	7	18	30	0	91	15	2	10
Idukki	96	76	115	75	150	125	100	81	158	144	361	15	59	221	1	1241	48	1	25
Ernakulam	19	18	30	27	50	37	32	26	43	22	86	2	18	100	0	90	3	0	14
Thrissur	54	47	106	75	43	34	28	23	42	22	80	3	28	100	0	52	2	0	8
Palakkad	121	60	62	36	40	12	28	10	56	12	124	0	1	100	0	625	1	1	0
Palakkad	251	241	99	76	117	104	68	37	102	50	246	2	6	150	0	2517	0	1	0
Malappuram	39	31	90	64	53	35	31	22	50	19	100	0	1	100	2	350	7	2	9
Kozhikode	34	31	41	39	58	41	32	26	40	20	79	0	0	49	0	199	0	0	0
ITDP Wayanad	121	58	139	53	120	79	80	51	108	66	243	2	14	150	19	750	39	3	41
TDO, Sulthan Bathery	358	323	153	104	151	92	80	23	100	36	255	0	0	200	2	850	1	0	0
TDO, Mananthavady	158	139	115	85	150	115	95	77	102	66	306	24	32	150	0	750	14	0	1
Kannur	87	68	75	56	63	40	32	3	52	24	94	3	6	50	0	292	9	1	1
Kasaragod	117	104	80	67	100	76	63	51	75	38	221	4	22	100	9	1085	37	2	33
Total	1635	1334	1271	894	1323	988	860	577	1148	685	2803	79	313	2020	48	9448	228	33	171

Source : ST Development Department

Appendix 4.122		
Details of Health Programme undertaken by ST Development Department from 2009-10 onwards		
(₹ in lakh)		
Year	Plan	
	Outlay	Expenditure
2009-10	80.00	79.99
2010-11	125.00	125.00
2011-12	174.00	174.23
2012-13	220.00	214.76
2013-14	1230.00	1167.29
2014-15	1120.00	1075.49
2015-16	2085.00	2062.17
2016-17 (up to 31.10.16)	2650.00	1538.64

Source : ST Development Department

APPENDIX 4.123															
District wise details of Land Distribution for the period 2013-14 to 2016-17 (upto 31.10.2016)															
District	2013-14			2014-15			2015-16			2016-17			Grand Total		
	Land purchase (In acre)	Number of families	Amount (₹)	Land purchase (In acre)	Number of families	Amount (₹)	Land purchase (In acre)	Number of families	Amount (₹)	Land purchase (In acre)	Number of families	Amount (₹)	Land purchase (In acre)	Number of families	Amount (₹)
Thiruvananthapuram	0		0	0	0	0	0	0	0	0	0	0	0	0	0
Kollam	0		0	1.52	5	49.95	4	15	147	0	0	0	5.52	20	196.95
Pathanamthitta	1.28	5	50	3.99	13	120	5.97	22	161.36	3.5	14	179.47	14.74	54	510.83
Kotayam	0		0	0.75	3	30.83	0.5	2	20.56	0		0	1.25	5	51.39
Alappuzha	0		0	3.24	13	126.21	1.963	6	61.42	0	0	0	5.203	19	187.63
Idukki	0		0	4.058	7	67.36	0	0	0	3.088	9	86	7.146	16	153.36
Ernakulam	0		0	2.51	9	89.49	0.75	3	30.18	0	0	0	3.26	12	119.67
Thrissur	0		0	4.3	17	174.77	0	0	0	0	0	0	4.3	17	174.77
Kozhikode	0.95	3	29.99	0.76	3	29.58	0	0	0	0	0	0	1.71	6	59.57
Palakkad	0.86	3	30.71	1	1	8.75	10.627	34	305.52	1.56	6	40.76	14.047	44	385.74
Malappuram	0		0	3.1775	10	102.46	4.175	16	138.56	0	0	0	7.3525	26	241.02
Kannur	0		0	0	0	0	0	0	0	0	0	0	0	0	0
Wayanad	19.799	49	414.16	98.67	289	1428.07	45.5274	61	326.52	2.51	7	852.43	166.5064	406	3021.18
Kasaragod	1	1	9.55	3.41	6	52.43	29.76	49	453.44	15.11	20	189.64	49.28	76	705.06
Total	23.889	61	534.41	127.3855	376	2279.9	103.2724	208	1644.56	25.768	56	1348.3	280.3149	701	5807.17

Source : ST Development Department

Appendix 4.124		
Statement showing the Outlay and Expenditure under Corpus Fund from 2009-10 onwards (₹ in lakhs)		
Year	Outlay	Expenditure
2009-10	1135.11	1129.57
2010-11	383.3	383.3
2011-12	3363.00	3355.85
2012-13	2300	2348.62
2013-14	3460	3400.98
2014-15	5000.00	4744.00
2015-16	4924.99	941.10
2016-17 (up to 31.10.16)	5057.69	777.29

Source : ST Development Department

Appendix 4.125				
District wise Outlay and Expenditure under Corpus Fund by ST Development Department during 2016-17 (up to 31.10.2016)				
(₹ in lakh)				
Sl No	District	ITDP/TDO/Directorate	2016-17	
			Outlay	Expenditure
1	Thiruvananthapuram	ITDP, Nedumangad	100.00	83.40
2	Kollam and Alappuzha	TDO, Punalur	66.00	0.00
3	Pathanamthitta	TDO, Ranni	50.00	7.35
4	Kottayam	ITDP, Kanjirappally	50.00	45.49
5	Idukki	ITDP, Idukki	205.21	2.46
		TDO Adimali	75.00	14.16
6	Ernakulam	TDO, Muvattupuzha	35.00	0.00
7	Thrissur	TDO, Chalakkudi	70.00	37.65
8	Palakkad	ITDP, Attappadi	135.00	25.44
		TDO, Palakkad	80.00	104.32
9	Malappuram	ITDP, Nilambur	135.00	0.00
10	Kozhikkode	TDO, Kozhikkode	60.00	16.34
11	Wayanad	TDO, Sulthan Batheri	160.00	15.60
		ITDP, Kalpetta	160.00	11.70
		TDO, Mananthavady	160.00	49.33
12	Kannur	ITDP, Kannur	100.00	0.00
13	Kasargod	TDO, Kasargod	125	0
Sub Total			1766.21	413.24
		STDD Directorate	364.05	364.05
Grand Total			2130.26	777.29

Source: ST Development Department

Appendix 4.126			
Details of Schemes under Pooled Fund undertaken by ST Development Department for the period 2015-16 and 2016-17 (up to 31.10.2016)			
(₹ in lakh)			
2015-16			
Sl. No.	Name of Scheme	Outlay for projects	Expenditure
1	Financial Assistance to Vilangad ST labour contract co-operative society, Kozhikode	2.5	2.5
2	Electrification of Ponginchuvadu and Idukki ST colony under Electrical section Vengoor, Ernakulam	301.37	301.37
3	Sustainable livelihood support (Icecream company) to 40 ST families in Ernakulam, Thrissur, Kottayam and Idukki	120	120
4	Livelihood support Tribal people of Vaniyampara, Thrissur	115.43	115.43
5	Imparting certificate course on Animal Handlers in Zoo and Forest in Kerala Veterinary Animal Science University	27.38	27.38
6	Skill Development in Computer and fire and safety	37.46	37.46
7	Technical Skill Development programme in Plastic product Design and Development and in Plastic product manufacturing and Quality control	54.00	54.00
8	Conduct of Diploma in Computer Application (DCA) course for ST youths in Attapady	15.625	15.625
9	Mini Dairy unit in Memari colony, Idukki	75.73	75.73
10	Job Linked training for ST students in NTTTF centres - 3rd year fees for Jan 2014 batch	89.50	89.50
	Total	838.995	838.995
2016-17			
Sl. No.	Name of Scheme	Outlay for projects (31-10-2016)	Expenditure (31.10.2016)
1	Livelihood support for STs in Malappuram	128.58	128.58
	Total	128.58	128.58

Source : ST Development Department

Appendix 4.127				
Details of Project/Schemes under ATSP Fund undertaken by ST Development Department during 2016-17 (up to 31.10.2016)				
(₹ in lakh)				
ATSP Housing Scheme				
Sl. No.	District -wise	2016-17		
		Outlay	Expenditure	%
1	ITDP Nedumangad	500.00	398.50	79.70
2	ITDP Kanjirappally	100.00	76.01	76.01
3	ITDP Idukki	1500.00	1056.09	70.41
4	ITDP Nilamboor	385.00	364.26	94.61
5	ITDP Attappady	4400.00	3285.55	74.67
6	ITDP Kalpetta	900.00	896.28	99.59
7	ITDP Kannoor	300.00	300.00	100.00
8	TDO Punaloor	200.00	177.26	88.63
9	TDO Ranni	100.00	73.15	73.15
10	TDO Moovattupuzha	150.00	132.82	88.55
11	TDO Chalakkudi	55.75	26.58	47.68
12	TDO Palakkad	600.00	504.85	84.14
13	TDO Kozhikode	200.00	199.43	99.72
14	TDO Sulthanbathery	1000.00	892.03	89.20
15	TDO Mananthavadi	1100.00	811.48	73.77
16	TDO Kasaragode	1700.00	1373.92	80.82
17	TDO Adimali	200.00	115.33	57.67
18	Directorate	1321.81	1321.81	100.00
	Total	14712.56	12005.35	81.60

Source : ST Development Department

Appendix 4.128				
Outlay and Expenditure under SCA to TSP from 2009-10 onwards				
Year	Outlay (₹ in lakh)	Expenditure (₹ in lakh)	Physical Achievement	
			Unit	Achievement
2009-10	450.00	448.80	Number of beneficiaries	1192
2010-11	500.00	499.54		5876
2011-12	590.00	588.08		4300
2012-13				
2013-14	767.00	765.46		4500
2014-15	700.00	699.82		5000
2015-16	1000.00	992.85		5485
2016-17 (up to 31/10/2016)	1200.00	0		0

Source : ST Development Department

Appendix 4.129				
Number of Anthropological investigation cases against SC/STs in Kerala from 2009-10 onwards				
Year	Number of cases filed		Number of cases completed	
2009-10	770	413	582	313
2010-11	742	409	582	264
2011-12	587	397	446	267
2012-13	1016	337	886	213
2013-14	1088	501	915	365
2014-15	1202	469	1038	338
2015-16	562	277	439	155
2016-17 (as on 31.10.2016)	481	176	412	133

Source : KIRTADS

Appendix 4.130					
Scheme - wise Outlay and Expenditure of KIRTADS for the period 2015-16 and 2016-17					
(₹ in lakh)					
Sl. No.	Name of Scheme	Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Expenditure	Outlay	Expenditure as on 30.09.2016
1	2	3	4	5	6
State Plan Schemes					
1	Adikalagramam (2225-02-800-56)	35.00	34.98	35.00	Nil
2	2225-80-001-98 PLAN	140.00	129.34	200.00	26.87
3	100% CSS Schemes				
4	Infrastructure facilities to KIRTADS (2225-02-800-27)	1000	0	1000	0
5	KIRTADS - Organizer Tribal Festival (CSS) (2225-80-001-96 SDG)	7.50	7.47	NIL	NIL
6	KIRTADS - Grant In Aid To Tribal Research Institute (CSS) (2225-80-001-97 SDG)	45.45	36.78	NIL	NIL

Source : KIRTADS

Appendix 4.131						
Kerala State Development Corporation for SCs/STs Limited						
Sl. No	Scheme	Category	Financial achievement (₹ in lakh)		Physical achievement	
			2015-16	2016-17 (up to 31/10/16)	2015-16	2016-17 (up to 31/10/16)
I	INCOME GENERATING SCHEMES					
A	KSDC SCHEMES					
1	Beneficiary oriented scheme	SC	2269.15	1042.87	2486	1057
		ST	42.25	68.32	50	76
2	Foreign employment scheme	SC	1.00	0.00	2	0
3	Professional service scheme	SC	0.00	1.00	0	1
4	Transport scheme XL (Auto)	SC	91.47	51.54	49	26
5	Woman empowerment programme for SHGS	SC	23.00	9.00	80	30
6	Multi Purpose Unit Loan	SC	28.00	6.50	4	1
7	Working capital loan to petroleum dealers	SC	157.50	15.00	21	2
B	NSFDC SCHEMES					
1	Land purchase scheme for Agri.Labourers	SC	211.81	68.30	76	24
2	Mini venture loans	SC	14.00	3.06	5	1
3	Laghu Vyavasay Yojana	SC	0.00	0.00	0	0
4	Micro credit finance scheme	SC	60.50	51.5	121	103
5	Mahila Samridhi Yojana	SC	59.00	58.5	118	117
6	Transport scheme XLV (Auto taxi)	SC	5.00	2.5	2	1
C	NSTFDC SCHEMES					
1	Small Enterprises loan	ST	2.50	0.00	5	0
2	Adivasi Mahila Sasakthikaran Yojana	ST	6.00	2	12	4
3	Diesel Autorickshaw	ST	7.75	5.85	4	3
4	Loan to Tribal Entrepreneurs	ST	116.55	12.2	114	12
II	OTHER SOCIAL WELFARE SCHEMES					
A	KSDC SCHEMES					
1	Education loan	SC	36.36	13.31	35	10
		ST	0.33	0.70	0	1
2	Foreign Education Loan	SC	0.00	0.00	0	0
3	Marriage Assistance	SC	1848.01	1035.91	1561	844
		ST	34.50	20.75	34	16
4	Computer loan to SC students	SC	9.89	4.67	25	12
5	Personal loan to Govt. Employees	SC	304.25	212.25	312	217
		ST	65.75	53.50	68	54
6	Two wheeler loan to Govt. employees	SC	2.00	1.00	4	2
	TOTAL		5396.57	2740.23	5188.00	2614.00

Source: Kerala State Development Corporation for SC/ST Ltd

Appendix 4.132					
Scheme-wise Outlay and Expenditure for OBC Development Department					
(₹ in lakh)					
Sl. No.	Name of Scheme	Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Expenditure	Outlay	Expenditure as on 31/10/16
1	2	3	4	5	6
1	Office Automation	75	5.31	135	
2	Post-matric Assistance- OEC	1950	1950	2000	2000
3	Pre-matric Scholarship - OEC	200	200	300	300
4	Post Matric Scholarship(100% CSS)-OBC	5000	2056	5000	11
5	Pre Matric Scholarship(50 % CSS)	6400	2522	6400	
6	Overseas Scholarship	200	61	200	26.25
7	Employability Enhancement Programme/Training	550	930.58	550	
8	Assistance to Voluntary Organisations(90%CSS)	10	0		
9	Assistance to Traditional Pottery workers	170	53.56	170	50
10	Career in Automobile Industry	100	7.05	40	6
11	Construction of OBC Post matric Hostels (50% CSS)	400	-	400	
12	Assistance for Modernisation of traditional Barbershops	255	143.28	255	
13	Skill Development Training and Toolkit Grant for Traditional Craftsman among OBC's			250	-
Total		15310	7928.78	15700	2393.25

Source: Directorate of Backward Communities Development Department

Appendix 4.133				
Physical Achievement of Schemes for OBC Development Department for the period 2015-16 and 2016-17 (as on 31/10/2016)				
Sl. No.	Name of Scheme	Unit	2015-16	2016-17
1	2	3	4	5
1	Office Automation	Computers, Telephone and Office Equipment's		
2	Post-matric Assistance- OEC	Number of students	106506	150000
3	Pre-matric Assistance- OEC	Number of students	209698	250000
4	Post Matric Scholarship(100% CSS)- OBC	Number of students		
5	Pre Matric Scholarship(50 % CSS)	Number of students		
6	Overseas Scholarship	Number of students	17	
7	Employability Enhancement Programme/Training	Number of students	3288	
8	Assistance to Pottery workers	Family	203	180
9	Career in Automobile Industry	Skilled labours and Technicians	24	
10	Construction of OBC Postmatric Hostels (50% CSS)	Number of Hostels		
11	Assistance for Modernisation of traditional Barbershops	Traditional barbers	954	

Source: Directorate of Backward Communities Development Department

Appendix 4.134										
Kerala State Backward Classes Development Corporation Ltd.										
Physical and Financial Achievement 2015-16 and 2016-17 (up to 30/10/2016)										
Sl. No.	Source of fund	Fund received (₹ in lakh)			Expenditure (₹ in lakh)		Physical Target and Achievements (Numbers)			
		2015-16	2016-17	2016-17	2015-16	2016-17	2015-16	2015-16	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	
1	Government of Kerala	801.00	0.00		9,252.53	12,940	12,149	13,345	5,315	
2	Fund incurred by KSBDC**	16,289.51	9603.71		3,393.64	8,800	12,467	8,435	3,530	
3	NBCFDC 1	5,000.00	2,000.00		2,271.76	7,260	4,584	7,820	1,679	
4	NMDFC 2	6,000.00	800							
5	Opening Balance	3,234.61	3,722.26							
	Total	31,325.12	16,125.97	27,602.86	14,917.93	29,000	29,200	29,600	10,524	

**Source: KSBDC accruals

1.National Backward Classes Finance and Development Corporation

2.National Minority Development and Finance Corporation

Appendix 4.135		
KSDC for Christian converts from Scheduled Castes and the Recommended Communities-year wise disbursement of State Government assisted loan schemes		
Year wise	Physical	Financial (₹ in lakh)
2012-13	3166	757.95
2013-14	2816	788.93
2014-15	2267	283.82
2015-16	2480	516.3
2016-17 (up to 30/10/16)	225	344.79

Source: KSDC for Christian Converts from Scheduled Castes and the Recommended Communities

Appendix 4.136							
Kerala State Development Corporation for Christian Converts from Scheduled Castes and the Recommended Communities							
(₹ in lakhs)							
Sl. No.	Scheme	Outlay		Expenditure		Physical Achievement (Numbers)	
		2015-16	2016-17	2015-16	2016-17 (up to 30/10/2016)	2015-16	2016-17 (up to 30/10/2016)
	State Scheme						
1	Agricultural Land Purchase Scheme	30.00	30.00	1.3	0.00	1	
2	House Construction	1000.00	1100.00	411.7	306.60	250	127.00
	1st Instalment						
	2nd and 3rd Instalment						
3	House Revamping	50.00	60.00	8.50	3.50	17	7.00
4	Marriage Loan	170.00	180.00	44.27	16.90	45	17.00
5	Incentive Grant	42.00	52.00	19.50	0.18	2076	20.00
6	Landless Houseless scheme	60.00	66.00	3.20	4.94	2	3.00
7	Job Oriented Training Course	20.00	20.00		0.00	0.00	
8	Medical /Engineering Entrance Coaching Programme	20.00	30.00	13.96	6.95	78	47.00
9	Awareness Camp	3.00	8.00	0	0	0	0
10	PSC/Bank test Coaching Programme	40.00	40.00	0	0	0	0
	Corporation's Own Fund scheme						
11	Personal Loan						
	NBCFDC Scheme						
12	Self-Employment Scheme	15.00	0.00	8.99	4.99	7	3.00
	1st Instalment						
	2nd Instalment						
	3rd Instalment						
13	Education Loan	0	0	4.88	0.73	4	1.00
	1st Instalment						
	2nd Instalment						
	5th Instalment						
	Total	1450.00	1586.00	516.30	344.79	2480	225.00

Source: KSDC for Christian Converts from Scheduled Castes and the Recommended Communities

Appendix 4.137					
Scheme-wise Outlay and Expenditure for Minority Welfare Department					
(₹ in lakh)					
Sl. No.	Name of Scheme	Annual Plan 2015-16		Annual Plan 2016-17	
		Outlay	Expenditure	Outlay	Expenditure as on 31/10/16
1	2	3	4	5	6
1	CA/ICWA/CS Scholarship	180	112.56	200	
2	Housing Scheme for Divorced Women and Widows	2500	2500	3100	
3	Career Guidance Programme for minority students	100	100	100	
4	Fee reimbursement for ITC students	200	200	300	
5	Drinking Water Scheme for Minority Concentrated Areas	1040	973.26	450	
6	Short term Research Fellowship	20	17.03	
7	Multi Sectoral Development Programme (MSDP)	3600 (75%CSS)	3366.28	2000	
8	Kerala State Minority Development Financial Corporation (KSMDFC)	1000	1500 (RS. 500 Lakhs additional authorisation)	1500	
9	Pulikottil Hyder Smaraka Kala Padana Kendram	60	60		
10	Upgrading the Skill and Training in traditional arts/Crafts for development(USTTAD)			500	
11	Scholarship for Talented Minority Students			150	
	Total	8700	8829.13	8300	0

Source: Minority Welfare Department

Appendix 4.138 Physical Achievement of Schemes for Minority Welfare Department for the period 2015-16 and 2016-17 (as on 31/10/16)				
Sl No	Name of Scheme	Unit	2015-16	2016-17
1	2	3	4	5
1	CA/ICWA/CS Scholarship	1 person/unit	1205 persons	(No Expenditure has been reported so far)
2	Housing Scheme for Divorced Women and Widows	1 house/family	798 families	
3	Career Guidance for minority students	100 students/camp	125 camps(2 day camp)	
4	Fee reimbursement for ITC students	1 student/unit	2000 students	
5	Drinking Water Scheme for Minority Concentrated Areas	1 project/unit	More than 40,000 families (60 projects)	
6	Short term Research Fellowship	1 person/unit	15 persons	
7	Multi Sectoral Development Programme (MSDP)		Implementation under progress	
8	Kerala State Minority Development Financial Corporation (KSMDFC)		Fund transferred to KSMDFC.	
9	Pulikottil Hyder Smaraka Kala Padana Kendram	--	Construction under progress	
10	Upgrading the skill and Training in traditional Arts/Crafts for development (USTAD)		
11	Scholarship for talented minority students	1 student /unit		

Source: Minority Welfare Department

Appendix 4.139						
Kerala State Minority Development Finance Corporation						
Sl. No	Scheme	Category	Financial Achievement (` in lakhs)		Physical Achievement	
			2015-16	2016-17(upto 31/10/2016)	2015-16	2016-17(upto 31/10/2016)
1	Self-Employment	KSMDFC	168	39	16	19
2	Self-Employment	NMDFC	1,027	445	434	152
3	Parent Plus Education Loan	KSMDFC	90	36	60	6
4	Education Loan	NMDFC	233	94	87	1
5	Employees Loan	KSMDFC	676	56	217	12
6	Madrassa Teacher Housing Loan	KSMDFC		96	-	77
7	Pravasi Loan, VISA and Niraqat	KSMDFC	46	3	17	-
8	Business Development Loan	KSMDFC	155	24	48	7
Total			2,395	769	879	274

Source : Kerala State Minority Development Finance Corporation

Appendix 4.140							
Scheme-wise Outlay and Expenditure of Kerala State Welfare Corporation for Forward Communities							
(₹ in lakh)							
Sl. No.	Scheme	Annual Plan 2015-16			Annual Plan 2016-17		
		Outlay	Expenditure	Physical Achievement	Outlay	Expenditure	Physical Achievement
1	Scholarship	1500	1484.26	44408 (Students)	1500		
2	Coaching Assistance	140	152.76	1987	140		
3	Term Loan Assistance	400	400	2996	400		
4	Skills and Entrepreneurship Development	100	20.42	294	100	2.99	59
5	Renovation of Aghararas	-	-	-	300	26.73	42
	Total	2140	2057.44	49685	2440	29.72	101

Source: Kerala State Welfare Corporation for Forward Communities

Appendix 5.1									
Major Development Indicators of Transport and Communication Sector from 2010									
Sl. No.	Item	Unit	2010	2011	2012	2013	2014	2015	2016
1	2	3	4	5	6	7	8	9	10
1	Road Length (PWD)	km	21578	23241.709	23241.709	31811.6	31811.6	31811.6	31812.096
2	Motor Vehicles	(Numbers)	4880059	5397652	6072019	6870354	8547966	9421245	1,01,71,813
3	Buses owned by KSRTC	(Numbers)	5115	5402	5741	5803	5860	5629	5686
4	Railway route length	km	1148	1198.9	1257	1257	1257	1257	1588
5	Flight operated (Domestic and International)	(Numbers)	82313	73208	73208	82010	66122	92259	95790
6	Boat /Junkars operated by SWTD	(Numbers)	81	81	92	95	97	95	98
7	Route Distance by SWTD	km	6730	6730	6890	6890	6890	6890	6890
8	Post Offices	(Numbers)	5068	5070	5067	5068	5068	5068	5066
9	Telephone Exchanges	(Numbers)	1240	1246	1245	1245	1269	1269	1321
10	Public Call Offices	(Numbers)	118841	95193	95193	95193	28915	28915	28915

Source : Various Departments

Appendix 5.2						
District-wise and Category-wise Length of Roads Maintained by PWD (R and B) as on 31-3-2016						
Sl. No	Name of District	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	180.360	2377.374	0.000	0.000	2557.734
2	Kollam	123.790	2079.079	0.000	0.000	2202.869
3	Alappuzha	170.841	1301.493	0.000	0.000	1472.334
4	Pathanamthitta	249.194	1782.178	0.000	0.000	2031.372
5	Kottayam	406.531	3049.683	0.000	0.000	3456.214
6	Idukki	998.372	1868.994	0.000	0.000	2867.366
7	Ernakulam	325.206	2760.075	0.000	0.000	3085.281
8	Thrissur	374.033	1690.183	0.000	0.000	2064.216
9	Palakkad	245.987	1938.706	0.000	0.000	2184.693
10	Malappuram	374.764	2305.388	0.000	0.000	2680.152
11	Kozhikode	377.173	2077.474	0.000	0.000	2454.647
12	Wayanad	128.955	900.359	0.000	0.000	1029.314
13	Kannur	244.665	2020.577	0.000	0.000	2265.242
14	Kasaragod	141.780	1318.882	0.000	0.000	1460.662
Total Length (in Kms)		4341.651	27470.445	0.000	0.000	31812.096

Source : PWD (R and B)

Appendix 5.3												
District-wise, Surface-wise and Category-wise length of Roads maintained by Kerala PWD as on 31-03-2016												
Sl. No.	District	State Highways				Major District Roads				Total		
		CC	BT	WBM	Others	CC	BT	WBM	Others	Roads		
1	2	3	4	5	6	7	8	9	10	11		
1	Thiruvananthapuram.	0.000	180.360	0.000	0.000	0.000	2377.384	0.000	0.000	2557.744		
2	Kollam	0.000	123.790	0.000	0.000	0.000	2079.079	0.000	0.000	2202.869		
3	Alappuzha	0.000	170.841	0.000	0.000	0.000	1301.493	0.000	0.000	1472.334		
4	Pathanamthita	0.000	249.194	0.000	0.000	0.000	1782.178	0.000	0.000	2031.372		
5	Kottayam	0.000	406.531	0.000	0.000	0.000	3049.683	0.000	0.000	3456.214		
6	Idukki	0.000	998.372	0.000	0.000	0.000	1868.994	0.000	0.000	2851.762		
7	Ernakulam	0.000	325.206	0.000	0.000	0.000	2760.075	0.000	0.000	3140.756		
8	Thrissur	0.000	374.033	0.000	0.000	0.000	1690.183	0.000	0.000	2064.216		
9	Palakkad	0.000	245.987	0.000	0.000	0.000	1938.706	0.000	0.000	2172.787		
10	Malappuram	0.000	374.764	0.000	0.000	0.000	2305.388	0.000	0.000	2680.152		
11	Kozhikkode	0.000	377.173	0.000	0.000	0.000	2077.474	0.000	0.000	2454.647		
12	Wayanad	0.000	128.955	0.000	0.000	0.000	900.359	0.000	0.000	1029.314		
13	Kannur	0.000	244.665	0.000	0.000	0.000	2020.577	0.000	0.000	2265.242		
14	Kasaragod	0.000	141.780	0.000	0.000	0.000	1318.882	0.000	0.000	1460.662		
	Total	0.000	4341.651	0.000	0.000	0.000	27470.455	0.000	0.000	31812.106		

Source: PWD (Roads and Bridges)

CC Cement Concrete
 BT Bituminous Surface
 WBM Water bound Macadam
 Others Mud and Earthen Roads

Appendix 5.4					
Surface-wise and Category-wise Length of P.W.D. Roads added during 2015-2016					
Item	State Highways	Major District Roads	Other District Roads	Village Roads	Total
1	2	3	4	5	6
Cement Concrete					
Length as on 31.3.2015	0.000	0.000	0.000	0.000	0.000
Length added in 15-16	0.000	0.000	0.000	0.000	0.000
Length as on 31.3.2016	0.000	0.000	0.000	0.000	0.000
Black topped					
Length as on 31.3.2015	4341.651	27470.455	0.000	0.000	31812.106
Length added in 15-16	0.000	0.000	0.000	0.000	0.000
Length as on 31.3.2016	4341.651	27470.455	0.000	0.000	31812.106
Water Bound Macadam					
Length as on 31.3.2015	0.000	0.000	0.000	0.000	0.000
Length added in 15-16	0.000	0.000	0.000	0.000	0.000
Length as on 31.3.2016	0.000	0.000	0.000	0.000	0.000
Others					
Length as on 31.3.2015	0.000	0.000	0.000	0.000	0.000
Length added in 15-16	0.000	0.000	0.000	0.000	0.000
Length as on 31.3.2016	0.000	0.000	0.000	0.000	0.000
Total					
Length as on 31.3.2015	4341.651	27469.950	0.000	0.000	31812.106
Length added in 15-16	0.000	0.000	0.000	0.000	
Length as on 31.3.2016	4341.651	27469.950	0.000	0.000	31812.106

Source : PWD (Roads and Bridges)

Appendix 5.5						
District-wise and Surface-wise Length of Roads Maintained by P.W.D. as on 31.3.2016						
Sl. No	Name of District	Cement Concrete	Black Topped	Water Bound Macadam	Others	Total
1	2	3	4	5	6	7
1	Thiruvananthapuram	0.000	2557.744	0.000	0.000	2557.744
2	Kallam	0.000	2202.869	0.000	0.000	2202.869
3	Alappuzha	0.000	1472.334	0.000	0.000	1472.334
4	Pathanamthitta	0.000	2031.372	0.000	0.000	2031.372
5	Kottayam	0.000	3456.214	0.000	0.000	3456.214
6	Idukki	0.000	2867.366	0.000	0.000	2867.366
7	Ernakulam	0.000	3085.281	0.000	0.000	3085.281
8	Thrissur	0.000	2064.216	0.000	0.000	2064.216
9	Palakkad	0.000	2184.693	0.000	0.000	2184.693
10	Malappuram	0.000	2680.152	0.000	0.000	2680.152
11	Kozhikode	0.000	2454.647	0.000	0.000	2454.647
12	Wayanad	0.000	1029.314	0.000	0.000	1029.314
13	Kannur	0.000	2265.242	0.000	0.000	2265.242
14	Kasaragode	0.000	1460.662	0.000	0.000	1460.662
Total		0.000	31812.11	0.000	0.000	31812.11

Source : PWD (Roads and Bridges)

Appendix 5.6				
Number of Bridges and Culverts in P.W.D. Roads as on 31.3.2016				
SI. No.	Item	SH	MDR	Total
1	2	3	4	5
1	Total Number of bridges	648	1605	1806
2	Number of unsafe bridges			61
3	Total Number of culverts	11520	39880	51400
4	Number of unsafe culverts	345	1212	1557

Source : PWD (Roads and Bridges)

Appendix 5.7

Number Of Motor Vehicles Having Valid Registration As On 31.03.2016

Sl. No	District	Goods Vehicles		Buses		Four Wheelers			Three wheelers			Two Wheelers		Tractors/ Trailors			Total
		Four Wheelers above	Three wheelers including tempos	Stage Carriage	Contract Carriages / Omnibuses	Cars	Taxis	Jeeps	Autorickshaws	Motorised cycle rickshaws	Motorised cycles	Scooter/Motor cycles	Tractors/ Trailors	Trailers	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1	Thiruvananthapuram	36478	12186	13247	10251	278468	9027	0	70689	0	834151	741	143	25211	1290592		
2	Kollam	28431	9358	1293	4574	154931	6078	0	50941	0	505136	646	31	14895	776314		
3	Pathanamthitta	15441	5433	707	2359	106005	5404	0	24538	0	253265	353	2	10770	424277		
4	Alappuzha	25981	8500	1298	4541	115402	9359	0	28183	0	490034	672	38	13195	697203		
5	Kottayam	30733	7489	2620	4932	171510	8269	0	40981	0	353356	659	34	19033	639616		
6	Idukki	11796	2956	1229	1634	46588	3529	0	21593	0	102198	420	12	7478	199433		
7	Ernakulam	69643	17124	4074	9945	336445	17276	0	58271	0	1004232	2117	147	39996	1559270		
8	Thrissur	38150	14640	4292	7660	196851	11342	0	60023	0	703506	2157	66	20683	1059370		
9	Palakkad	25395	11769	2128	4018	99379	6641	0	44909	0	466043	3244	118	12347	675991		
10	Malappuram	49615	18330	3217	4593	177798	6194	0	76019	0	543813	1559	35	22497	903670		
11	Kozhikode	34296	13984	3630	3802	155605	9729	0	51449	0	639437	434	35	14987	927388		
12	Wayanad	7939	3171	621	723	28111	2984	0	13138	0	77139	684	8	4633	139151		
13	Kannur	34399	9862	3678	3730	135028	8537	0	45220	0	344968	298	6	16064	601790		
14	Kasargode	11560	2136	673	1289	68514	3198	0	24281	0	155024	229	24	10820	277748		
Total		419857	136938	42707	64051	2070635	107567	0	610235	0	6472302	14213	699	232609	10171813		

Source : Motor Vehicles Department

Appendix 5.8																					
Newly Registered Vehicles For The Year 2015-16																					
Sl. No.	Classification Of Vehicles	TVM	KLM	PTA	ALP	KTM	IDK	ERK	TSR	PKD	MLP	KZD	WYD	KNR	KSD	NS	ATL	MUV	VKA	Total	
	Transport Vehicles																				
1	Multiaxied Articulated Vehicles	1	0	2	8	4	1	80	9	19	5	0	3	0	1		0	3	3	139	
2	Trucks and Lorries	282	334	175	200	341	123	452	396	274	367	250	113	533	94		122	369	101	4526	
3	Four Wheelers	625	860	474	820	939	423	1447	1172	711	1339	660	320	1007	383		347	522	412	12461	
4	Three Wheelers	278	321	227	303	259	130	369	436	322	675	359	172	428	96		179	118	277	4949	
	Total	1186	1515	878	1331	1543	677	2348	2013	1326	2386	1269	608	1968	574	0	648	1012	793	22075	
5	Stage Carriage	7	31	12	19	99	57	45	105	88	96	67	17	190	24		864	52	71	1858	
6	Contract Carriage	328	263	188	274	411	158	557	452	250	333	133	48	283	106		129	157	129	4199	
7	Private Service Vehicles	29	13	12	0	12	3	32	19	4	10	26	3	9	1		5	6	6	190	
8	Other Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
	Total	364	307	212	293	522	218	634	576	342	439	226	68	482	131	148	215	206	5383		
9	Motor Cabs	531	555	423	954	630	201	1844	1295	654	537	322	199	959	417		295	338	456	10610	
10	Maxi Cabs/Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
11	Other Taxis	46	3	0	0	0	9	11	4	33	2	1	3	24	10		6	1	4	157	
12	LMV 3 Seater	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
13	LMV 4 to 6 Seater	3769	1739	881	917	1036	942	1664	1429	1117	2586	1356	776	1782	1030		1022	318	1000	23364	
14	Motor Cycle Hire	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
	Total	4346	2297	1304	1871	1666	1152	3519	2728	1804	3125	1679	978	2765	1457	0	1323	657	1460	34131	
	Other TVs	172	58	34	81	109	47	230	130	99	196	107	43	146	68		26	103	34	1683	
	Total Transport	6068	4177	2428	3576	3840	2094	6731	5447	3571	6146	3281	1697	5361	2230	864	2145	1987	2493	64136	
15	Scooters	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
16	Mopads	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
17	Motor Cycles including above and below 95cc	45520	51998	22825	38761	29235	12634	54975	60423	46559	63419	39655	11151	40826	18605		20837	20596	27016	605035	
	Total	45520	51998	22825	38761	29235	12634	54975	60423	46559	63419	39655	11151	40826	18605	0	20837	20596	27016	605035	
18	Cars	16285	14089	9223	10247	13054	3944	19373	16774	10007	18827	9363	2807	14582	8415		5294	5992	6650	184926	
19	Jeeps	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
20	Omni Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	

21	Tractors	28	14	7	18	11	3	24	36	57	40	9	13	13	11	2	306
22	Trailors	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
23	Others	621	626	242	490	501	342	368	717	362	659	282	123	536	373	307	6920
	Total	16934	14729	9472	10755	13566	4289	19765	17527	10426	19526	9654	2943	15131	8799	0	192152
	Total Non Transport	62454	66727	32297	49516	42801	16923	74740	77950	56985	82945	49309	14094	55957	27404	0	797187
	GRAND TOTAL	68522	70904	34725	53092	46641	19017	81471	83397	60556	89091	52590	15791	61318	29634	864	861323

Source : Motor Vehicles Department

Appendix 5.9																		
District wise Growth of Motor Vehicles in Kerala and their Index (Base 2002=100)																		
District	2010-11			2011-12			2012-13			2013-14			2014-15			2015-16		
	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index	Motor Vehicles (Number)	Index		
1	2	3	4	5	6	7	8	9	10	11	12							
Thiruvananthapuram	799220	250	896681	280	971104	303	1066318	332	1175647	1290592	379							
Kollam	457960	271	523739	310	600042	355	600398	355	661896	776314	548							
Pathanamthitta	258064	243	294860	277	314668	296	340619	319	375598	424277	490							
Alappuzha	421246	302	478641	342	531940	380	561495	401	618697	697203	442							
Kottayam	445940	227	497638	253	551517	280	550237	276	606121	639616	413							
Idukki	105468	290	124528	342	141497	389	194107	533	212784	199433	552							
Ermakulam	985267	243	1103542	272	1238040	305	1467028	361	1617972	1559270	374							
Thrissur	636754	264	706674	292	763501	315	895730	370	987444	1059370	385							
Palakkad	397134	294	446083	330	670461	496	588140	435	647896	675991	504							
Malappuram	501855	288	572164	327	688191	393	739133	422	814962	903670	557							
Kozhikode	507297	266	583519	305	570267	298	757103	395	834769	927388	502							
Wayanad	73362	232	84007	266	426014	1349	117466	371	129092	139151	398							
Kannur	332989	282	383166	324	280026	237	464885	393	512320	601790	605							
Kasaragod	149463	293	175112	343	295273	578	205307	402	226047	277748	618							
Total	6072019		6870354		8042541		8547966		9421245	10171813								

Source : Motor Vehicles Department

Appendix 5.10						
Category - Wise Growth of Motor Vehicles in Kerala since 2011 to 2016						
Sl. No	Type of Vehicles	2011-12	2012-13	2013-14	2014-15	2015-16
I	Goods Vehicles					
1	Four Wheeler and above	322450	354296	373218	411347	419813
2	Three Wheelers including tempos	128452	206901	140278	154610	136938
II	BUSES					
1	Stage Carriages	21457	34161	28386	31286	42707
2	Contract Carriages/Omni buses	124290	137731	132144	145645	64051
III	Cars And Station Wagons					
1	Cars	1226691	1358728	1538246	1702926	2070665
2	Taxi Cars	175638	128250	194358	214214	107567
3	Jeeps	73700	74167	73700	73700	0
IV	Three Wheelers Including Tempos					
1	Autorickshaws	575763	602547	663241	730999	610235
2	Motorised Cycle rickshaws	0	0	0	0	0
V	Two Wheelers					
1	Motorised Cycle	0	0	0	0	0
2	Scooter/Motor Cycles	4127227	5041495	5288529	5828816	6472335
VI	Tractors	13740	14183	15030	15297	14213
VII	Tillers	5399	5399	5414	5967	187
VIII	Trailors	2407	2744	2411	2657	699
IX	Others	68325	88071	93011	103781	232403
Total(Construction equipment's, Ambulance, Road Rollars and Private Service Vehicles for personal use)		6865539	8048673	8547966	9421245	10171813
Percentage increase over the previous year		14%	17%	6%	10%	8%

Source : Motor Vehicles Department

Appendix 5.11												
Motor Vehicle Accidents in Kerala by Primary Cause of Accidents during 2016 (2015 April to 2016 March)												
Sl. No	Name of District	Fault of Driver of motor vehicles	Fault of driver other than motor vehicles	Fault of Cyclist	Fault of Pedestrian	Fault of passengers	Defect of Motor vehicles	Defect of road surface	Bad weather condition	Other causes	Causes not known	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Thiruvananthapuram City	2231	0	0	0	0	3	0	0	51	0	2285
2	Thiruvananthapuram Rural	2743	0	0	0	0	3	0	0	126	0	2872
3	Kollam City	1544	0	0	0	0	0	0	0	38	0	1582
4	Kollam Rural	1304	0	0	0	0	3	0	0	51	0	1358
5	Pathanamthitta	1506	0	0	0	0	1	0	0	36	0	1543
6	Alappuzha	3001	0	0	0	0	0	0	0	57	0	3058
7	Kottayam	2729	0	0	0	0	4	0	0	46	0	2779
8	Idukki	1142	0	0	0	0	0	0	0	16	0	1158
9	Ernakulam City	2543	0	0	0	0	4	0	0	30	0	2577
10	Ernakulam Rural	3470	0	0	0	0	5	0	0	52	0	3527
11	Thrissur City	1350	0	0	0	0	0	0	0	7	0	1357
12	Thrissur Rural	2840	0	0	0	0	0	0	0	21	0	2861
13	Palakkad	2556	0	0	0	0	4	0	0	18	0	2578
14	Malappuram	2875	0	0	0	0	5	0	0	8	0	2888
15	Kozhikode City	1486	0	0	0	0	0	0	0	12	0	1498
16	Kozhikode Rural	1631	0	0	0	0	4	0	0	8	0	1643
17	Wayanad	742	0	0	0	0	0	0	0	6	0	748
18	Kannur	1862	0	0	0	0	1	0	0	8	0	1871
19	Kasaragod	946	0	0	0	0	2	0	0	6	0	954
Total		38501	0	0	0	0	39	0	0	597	0	39137
Percentage to total		98.37	0.01	0.00	0.00	0.00	0.10	0.00	0.00	1.53	0.00	100.00

Source : State Crime Records Bureau

Appendix 5.12											
Category-wise details of Motor Vehicles Involved in Road Accidents in Kerala during 2016 (April 2015- March 2016)											
Sl. No	District	KSRTC Buses	Other Buses	Goods Vehicles	Motor Cars	Jeeps	Autorick-shaws	Two wheelers	Miscellaneous vehicles	Class not known	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	Thiruvananthapuram City	120	61	114	629	13	304	2114	54	10	3419
2	Thiruvananthapuram Rural	148	84	215	647	34	445	2676	88	17	4354
3	Kollam City	55	91	155	453	11	203	1487	121	6	2582
4	Kollam Rural	71	75	118	390	26	229	1135	44	0	2088
5	Pathanamthitta	58	94	105	515	49	268	1178	52	11	2330
6	Alappuzha	108	139	287	906	13	415	2691	231	21	4811
7	Kottayam	104	254	278	940	52	457	2102	110	25	4322
8	Idukki	86	327	260	915	21	342	2144	161	9	4265
9	Ernakulam City	96	245	415	961	58	496	3090	189	12	5562
10	Ernakulam Rural	51	99	86	321	104	262	706	21	3	1653
11	Thrissur City	39	140	149	469	19	220	1104	43	11	2194
12	Thrissur Rural	69	231	308	904	28	416	2342	204	9	4511
12	Palakkad	36	226	328	664	48	463	2020	84	22	3891
13	Malappuram	95	368	356	1025	66	573	1950	95	8	4536
14	Kozhikode City	39	274	133	475	28	178	1149	38	7	2321
15	Kozhikode Rural	42	211	189	455	70	305	1269	39	9	2589
16	Wayanad	45	59	60	234	59	146	488	25	5	1121
17	Kannur	34	249	242	586	47	392	1305	71	14	2940
18	Kasaragod	34	76	135	342	32	163	645	29	4	1460
Total		1330	3303	3933	11831	778	6277	31595	1699	203	60949
Percentage to Total		2.18	5.42	6.45	19.41	1.28	10.30	51.84	2.79	0.33	100.00

Source : State Crime Records Bureau

Appendix 5.13			
Age - Wise Details of Vehicles Owned by KSRTC during 2015-2016			
Sl. No.	Buses	2015 March	2016 March
1	10 years and above	1444	1095
2	Above 7 years and below 10 years	873	1420
3	Above 5 years and below 7 years	1400	1327
4	Below 5 years	1912	1844
Total		5629	5686

Number of Buses scrapped during 2014 - 15 - 407

Number of Buses scrapped during 2015 - 16 - 579

Source : KSRTC

Appendix 5.14							
Major Indicators Showing Operational Efficiency of KSRTC/KURTC							
Sl. No	items	KSRTC			KURTC		
		2014-15	2015-16	2015-16	2014-15	2015-16	Increase / Decrease during last year
1	2	3	4	5	6	7	8
1	Fleet Strength (as on March 31st)	5629	5682	(+) 53	320	603	(+)283
2	Gross revenue earnings (₹ crore)	1923.82	2165.16	(+) 241.39	105.23	132.27	(+)26.99
3	Gross Revenue expenditure (₹crore)	2541.1	2778.3	(+)237.20	109.23	136.54	(+)27.33
4	Gross operating loss (crore)	617.33	613.14	(-) 4.19	3.95	4.27	(+)0.32
5	Number of schedules operated as on 31st March	4602	4522	(-) 80	320	603	(+)283
6	Average earning per vehicle on road per day (₹)	10928	11191	(+) 263	10456	12060	(+)1604
7	Average earning per Km of Buses operated (Paise)	3268	3309	(+) 41	4000	4082	(+)82
8	Average earning per passenger (Paise)	1636	1741	(+) 105	1663	2311	(+)648
9	Average route length (Kms)	63.78	60.76	(-) 3.02			
10	Average Kms .Run per bus per day	329.16	332.54	(+) 3.38	261.42	295.41	(+)33.99
11	Average number of buses held daily (Numbers)	5691	5636	(-) 55	320	522	(+)202
12	Passengers Carried (lakh)	11059.43	10437.78	(-) 621.65	498.73	653.9	(+)155.17

* Provisional Figures

Source : KSRTC

Appendix 5.15

District Wise Operational Statistics of KSRTC during 2015-16

Sl. No.	Unit	Number of buses held		Number of schedules as on 31.03.2016	Number of routes	Route Distance (Kms.)	Gross Kms. Operated (in lakh)	Effective Kms. Operated (in lakh)	Passengers Carried (in lakh)	Average carrying capacity per bus
1	2	3	4	5	6	7	8	9	10	
1	Thiruvananthapuram	1383	1540	2212	93440	1248.2	1175.31	2982.17	60	
2	Kollam	595	646	969	58905	614.63	568.63	1293.52	60	
3	Pathanamthitta	311	370	477	33042	322.25	311.77	554.23	60	
4	Alappuzha	453	402	491	33434	436.51	147.57	564.81	60	
5	Kottayam	496	430	531	43567	509.95	485.45	693.49	60	
6	Eranakulam	555	579	952	53006	554.8	522.26	977.95	60	
7	Idukki	246	226	344	27901	259.67	236.05	294.41	60	
8	Trissur	343	354	398	27881	390.11	362.83	554.48	60	
9	Palakkad	201	194	185	13960	267.59	253.29	335.39	60	
10	Malappuram	198	210	184	12611	248.54	321.56	300.35	60	
11	Kozhikkode	235	224	221	15024	266.34	242.72	332.61	60	
12	Kannur	246	243	322	25272	295.22	269.71	510.22	60	
13	Kazargode	268	246	109	7132	160.54	146.18	294.99	60	
14	Wayanad	147	145	153	13440	295.76	266.56	449.14	60	
Total		5677	5809	7548	458615	5870.11	5309.89	10137.76		

Source :KSRTC

Appendix 5.16

Fare structure of KSRTC during 2010-16

Sl. No.	Type of service	Basic fare per KM (Paise)										Minimum fare (₹)					
		2010-11	2011-12	2012-2013	2013-14	2014-15	2015-16	2010-11	2011-12	2012-2013	2013-2014	2014-15	2015-16				
1	City	55	55	58	58	64	64	64	68	68	72	5	5	6	6	7	7
2	Ordinary	55	55	58	58	64	64	64	68	68	72	5	5	6	6	7	7
3	City Fast Passenger	57	57	62	62	68	68	68	72	72	77	7	7	6	6	7	7
4	Fast Passenger	57	57	62	62	68	68	68	72	72	77	7	7	6	6	7	7
5	Super Fast	60	60	65	65	72	72	72	77	77	80	8	8	8	8	10	10
6	Super Express	65	65	70	70	77	77	77	80	80	85	10	10	12	12	13	13
8	Super Deluxe Service	75	75	80	80	90	90	90	90	90	95	20	20	25	25	28	28
9	A/C Air Bus	90	90	100	100	110	110	110	110	110	115	30	30	30	30	40	40
10	High Tech (Volvo)	110	110	120	120	130	130	130	130	130	135	30	30	30	30	40	40

Kerala State Planning Board

Economic Review 2016

Appendix 5.17						
District Wise Operational Statistics of KSRTC during 2015-16						
Sl. No.	Unit	Number of buses held daily	Average Kms run per day per Bus	Average Route length (Km)	Earning per Vehicle on road per day (in ₹)	Earning per Km of buses operated (in PS)
1	2	3	4	5	6	7
1	Thiruvananthapuram					
	Aryanad	36	279	32.2	9470	34.02
	Attinngal	99	305	29.7	10867	35.6
	Kaniyapuram	50	272	32.54	9788	35.88
	Kattakkada	72	272	45.42	9170	33.47
	Kilimanoor	74	307	36.25	10109	32.73
	Nedumangad	66	305	52.39	10095	32.88
	Neyyattinkara	89	305	56.28	9717	31.63
	Palode	32	293	58.30	9867	33.45
	Pappanamcode	84	210	15.44	7779	37.24
	Parassala	68	318	62.3	11593	36.17
	Peroorkkada	62	205	16.81	8588	41.88
	Poovar	59	300	34.58	11075	37.52
	TVPM City	109	210	18.1	9440	44.83
	TVPM Central	120	488	384.75	24151	37.75
	Vellanadu	49	245	31.91	9210	37.63
	Vellarada	45	291	52.41	10059	34.89
	Venjarammoodu	45	266	39.20	9634	36.16
	Vikas Bhavan	73	211	23.9	8814	41.96
	Vithura	44	286	52.3	9185	31.77
	Vizhinjam	65	300	38.41	11004	37.26
	Sub Total	1341			209615	
2	Kollam					
	Aryankavu	19	298	86	10151	32.98
	Chadayamangalam	56	295	44.7	10160	34.46
	Chathannur	55	305	56.32	10650	34.56
	Karunagappally	79	299	74.2	10714	35.71
	Kollam	126	327	67.3	10856	33.29
	Kottarakkara	116	337	58.40	11684	34.6
	Kulathupuzha	33	320	59.30	10802	33.58
	Pathanapuram	47	306	47.1	10016	32.71
	Punalur	68	308	58	9907	32.25
	Sub Total	599			94940	
3	Pathanamthitta					
	Adoor	96	316	59.7	10730	33.83
	Konni	77	317	75.6	10460	32.51
	Mallappally	90	314	79.9	10637	33.87
	Pandalam	25	265	52.4	9503	34.93
	Pathanamthitta	40	334	50.25	11380	34.53
	Ranni	70	323	63.5	11013	34.44
	Thiruvalla	41	372	68.3	12408	33.46
	Sub Total	439			76131	
4	Alappuzha					
	Alappuzha	63	337	80.89	10693	31.36
	Chenganoor	11	315	52.21	8841	29.12
	Cherthala	36	303	43.6	9354	31.05
	Edathuva	21	291	68.4	9876	33.35

	Harippad	86	368	75.9	10785	29.43
	Kayamkulam	17	341	79.37	9776	28.33
	Mavelikkara	79	330	86.3	10638	31.99
	Sub Total	313			69963	214.63
5	Kottayam					
	Changanasserry	61	312	74.1	9912	31.2
	Erattupettah	61	310	85.32	10632	34.37
	Erumeli	37	341	86.8	10725	29.71
	Kottayam	136	375	91.82	12507	33.23
	Pala	94	394	84.5	11563	29
	Ponkunnam	47	394	63.2	10859	27.71
	Vaikom	53	329	83	10237	30.88
	Sub total	489			76435	
6	Idukki					
	Kattappana	47	386	96.5	12201	31.59
	Kumily	57	371	63.22	11201	30.25
	Moolamattom	26	329	79.31	9978	29.90
	Munnar	39	385	52.7	12784	33.09
	Nedumkandam	8	260	92.6	10191	21.09
	Thodupuzha	70	333	92.7	11231	33.25
	Sub total	247			67586	
7	Ernakulam					
	Aluva	79	297	48.74	9316	31.95
	Ankamali	51	320	53.42	10907	33.87
	Ernakulam	128	344	62.60	11405	31.32
	Koothattukulam	16	282	53.86	7461	25.57
	Kothamangalam	47	319	75.72	9900	30.85
	Muvattupuzha	71	322	73.8	10702	33.10
	North Paravur	51	298	56.8	9127	30.62
	Perumbavoor	49	312	47.32	10878	34.8
	Piravam	49	351	58.72	9967	28.36
	Sub Total	541			89663	
8	Trissur					
	Chalakkudy	54	353	75.3	11209	32.04
	Guruvayoor	64	415	69.7	13320	31.61
	Irinjalakkuda	28	376	73.8	11267	29.4
	Kodungalloor	39	358	61.8	11031	30.94
	Mala	41	320	65.4	10687	33.54
	Puthukkad	28	320	57.6	9770	31.19
	Sub Total	254			67284	188.72
9	Palakkad					
	Chittur	46	416	47.6	13196	31.41
	Mannarkkad	37	361	82.3	11352	30.8
	Palakkad	93	454	93.7	15683	33.71
	Vadakkancherry	32	390	67.90	11746	30.18
	Sub Total	208			51977	
10	Malappuram					
	Malappuram	56	417	52.8	13375	30.85
	Nilambur	52	381	51.7	11165	28.68
	Perinthalmanna	50	418	76.8	13389	31.41
	Ponnani	44	397	87.3	12265	30.52
	Sub Total	202			50194	
11	Kozhikkode					
	Kozhikkode	66	422	78	16813	34.96

	Thamarassery	66	356	83.4	11438	31.37
	Thiruvambady	29	341	82	10073	29.93
	Thottilpalam	43	372	69.1	11147	29.82
	Vadakara	26	356	56.79	10430	29.81
	Sub Total	230			59901	
12	Wayanad					
	Kalpetta	62	352	81.3	11092	31.29
	Mananthavady	91	326	68.3	11682	33.49
	Sulthanbathery	100	366	95.3	12663	32.1
	Sub total	253			35437	
13	Kannur					
	Kannur	120	331	74.45	11396	31.38
	Payyannur	88	338	41.66	10947	32.52
	Thalassery	63	341	94.45	11119	30.64
	Sub Total	271			33462	
14	Kasargode					
	Kanhangad	53	319	79.4	10206	32.28
	Kasaragod	94	361	58.00	13336	36.8
	Sub total	147			23542	
	Grand total	5534			1006130	

Source : KSRTC

Appendix 5.18		
Buses Owned by KSRTC		
Year	Total Number of Buses	Number of New Buses (*)
2008 March	4893	517
2009 March	5115	701
2010 March	5402	630
2011 March	5741	714
2012 March	5803	209
2013 March	5812	485
2014 March	5860	332
2015 March	5629	173
2016 March	5682	609

(*) Up to one year

Source :KSRTC

Appendix 5.19 (A)									
Details of Flights operated by various agencies from Thiruvananthapuram International Airport									
Sl. No.	Airlines	2011-15				2015-16			
		Number of Flights		No of Passengers		Number of Flights		No of Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India		207		519345		208		50918
2	Sri Lankan Airways		668		97770		750		10687
3	Gulf Air		590		86903		732		108275
4	Indian Airlines-Domand Int	2912	1580	297736	152186				
	Air India (NB)						1486	294458	131631
5	Kuwait Airways		418		67141		446		68635
6	Oman Airways		730		93152		730		98920
7	Qatar Airways		730		119851		732		123177
8	Silk Air		396		39852		486		45951
9	Emirates		1254		308423		1420		336614
10	Air india Express		2552		344598		2555		364738
11	Air Arabia		1460		234560		1460		243600
12	Etihad		730		89905		1158		121368
13	Jet Airways	1574	1457	198149	206432	1464	1922	216471	244194
14	Maldivian		814		45476				
15	Mihin Lanka		0		0				
16	Air Deccan		0		0				
17	Indigo Air	3354	730	457406	10852	3475	730	496768	109857
18	Air Sahara/Jetlite		0						
19	Paramount		0						
20	King Fisher		0						
21	Air Asia		0						
22	Spicejet		0						
23	Non Scheduled	168	48	608	174	282	52	994	149
	Total	8008	14364	953899	2416620	5221	14867	1008691	2058714

Source: Thiruvananthapuram International Airport

Appendix 5.19 (B)									
Details of flights operated by various agencies from Kozhikode Airport									
Sl. No.	Airlines	2011-15				2015-16			
		Number of Flights movements		Passengers		Number of Flights movements		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India	252	852	6198	285342	222	800	2315	236092
2	Air India Express	1308	4136	52249	614793	1213	4437	329922	660693
6	Eithad Airways		796		95606		1377		162654
7	Emirates		1146		323616		1148		330497
8	Indian Airlines	740	1459	55571	208753	735	1453	55186	225131
9	Jetlite	660		94370		246		34456	
10	Jet Airways	70		8925		485	521	366499	69883
11	Spice Jet	1198		68342		1436		82729	
13	Oman Air		730		103051		730		97605
14	Qatar Airways		729		120736		730		122265
15	Rak Airways		546		71689				
16	Saudia Airways		846		237117		830		236961
17	Air Arabia		846		118469		731		120655
Total		4228	12086	285655	2179172	4337	12757	871107	2262436

Source: Kozhikode International Airport

Appendix 5.19 (C)									
Details of flights operated by various agencies from Cochin International Airport									
Sl. No	Airlines	2011-15				2015-16			
		Number of Flights		Passengers		Number of Flights		Passengers	
		DOM	INT	DOM	INT	DOM	INT	DOM	INT
1	2	3	4	5	6	7	8	9	10
1	Air India		6606		555843		2178		198308
2	Air India Express		15456		1577678		3707		463250
3	Indian Airlines		3072		297595		611		70640
4	Oman Air		2924		389346		732		97063
5	Silk Air		3184		353054		796		91628
6	Kuwait Airways		2494		460741		734		128482
7	Emirates Airlines		5858		1738673		1470		438045
8	Qatar Airways		4386		754380		1154		288635
9	Saudi Arabian Airlines		1704		535488		568		138444
10	NAS Air		286		29578		0		0
11	Gulf Air		2924		382619		730		109373
12	Air Arabia		5852		907881		1464		236389
13	Ethihad Airways		2997		446975		1342		196514
14	Bahrain Air		1438		160120		0		0
15	Flydubai		0		0		258		35254
16	Jet Airways		9638		1247102		3615		518677
17	Air Asia		3002		406112		1042		135690
18	Tiger Airways		816		97354		406		48023
19	kingfisher Airlines		72		922		0		0
20	SriLankan Airlines		3566		394106		1458		165406
21	InterGlobe Aviation		1165		173122		684		100303
22	SpiceJet Limitd		1923		183837		1436		134314
23	Malasia Airlones		422		47579		730		76660
24	Malindo Air		0		0		652		70441
25	Non Scheduled Flights		440		13636		203		2441
	Total								
20	Indian Airlines	14657		1107201		3017		308539	
21	Allianz Air	3440		81622		1558		44240	
22	Jet Airways	21980		1931794		5580		481884	
23	Jet Lite	2193		298196		0		0	
24	King Fisher Airlines	8908		559095		0		0	
	Air Asia (India) Pvt Ltd	0		0		932		122737	
25	Go Air	4242		534009		1448		189766	
26	InterGlobe Aviation	15355		1824568		7372		930098	
27	Spice Jet Limited	15389		1847231		5484		585285	
28	Pawan Hans- Kavaratti	1690		8385		692		3151	
29	PH to ONGC	501		2374		0		0	
30	Jyothi Aviation	410		731		130		346	
31	Sobha Puravankara	59		161		37		108	
32	Kalyan Jewllers	382		957		239		490	
33	Chipsan/Kalyan	145		307		41		69	
34	Heligo to ONGC	0		0		0		0	
35	Heligo Charters	10		63		0		0	
36	Deccan Cargo	0		0		0		0	
37	United Helicharters	26		39		0		0	
38	Defence Movements	116		156		60		61	
39	Non Scheduled Flights	1248		4392		233		957	
	Total	95006	87673	8898968	12538847	27901	29861	3129658	4641127

Source :Kochi International Airport

Appendix 5.20							
Cargo Traffic in major ports of South India.							
Year	Visakha patnam	Chenn ai	New Mangalore	V.O. Chidambar anar	Kamarajar (Ennore)	Cochin	Total
2010-11	68041	61460	31550	25727	11009	17873	215660
2011-12	67420	55707	32941	28105	14956	20091	219220
2012-13	59040	53404	37036	28260	17885	19845	215470
2013-14	58503	51105	39365	28642	27337	20887	225839
2014-15	58004	52541	36566	32414	30251	21595	231371
2015-16	57033	50058	35582	36849	32206	22099	233827
Total	368041	324275	213040	179997	133644	122390	1341387

Source : Ministry of Shipping

Appendix 5.21									
Commodity Wise Cargo Handled At The Intermediate And Minor Ports Of Kerala During 2015-16									
Sl. No.	Name of port	Commodity	Imports			Exports			Grant total
			Coastal	Foreign	Total	Coastal	Foreign	Total	
1	2	3	4	5	6	7	8	9	10
1	Kollam	General Cargo	528	0	528	0	0	0	528
		Cashew	5468	0	5468	0	0	0	5468
		Machinery	1170	0	1170	1065	0	1065	2235
		Soda ash	398	0	398	0	0	0	398
		Building Materials	616	0	616	0	0	0	616
2	Vizhinjam	vegetables and Fruits					4612.15	4612.15	4612.15
		Buil.Meterials							
		Spices					3.58	3.58	3.58
		LMV							
		Machinery					1069.59	1069.59	1069.59
		Animal Packing					1895.28	1895.28	1895.28
3	Azhikkal	Miscellaneous	177	0	177	225	0	225	402
		Building Materials	0	0	0	170	0	170	170
4	Kozhikode	Machinery	628	0	628	1100	0	1100	1728
		POL	5	0	5	19164	0	19164	19169
		LPG	0	0	0	440	0	440	440
		TilesandBricks	4	0	4	2806	0	2806	2806
		Miscellaneous	97473	0	97473	0	0	0	97473
		Timber	0	0	0	107	0	107	107
Animal	196	0	196	4142	0	4142	4338		
Grand Total			106663	0	106663	29219	7580.58	36799.58	143458.58

(Source : Director of Ports)

Appendix 5.22 (a)															
No. and Tonnage of steamers and sailing vessels which called at the intermediate and minor ports of Kerala during 2009-15 and 2015-16															
Name of Port	Coastal/ Foreign	Steamers				Sailing Vessels				Total Number of Vessels			Total Tonnage		
		Number		Tonnage		Number		Tonnage		2009-15	2015-16	2009-15	2015-16	2009-15	2015-16
		2009-15	2015-16	2009-15	2015-16	2009-15	2015-16	2009-15	2015-16	2009-15	2015-16	2009-15	2015-16	2009-15	2015-16
Azhikkal	Coastal	9	3	6804	393	21	1	4411	179	30	4	11215	572		
	Foreign	0	0	0	0	8	0	6581	0	0	0	6581	0		
Kozhikode	Coastal	1291	155	999644	108943	2356	289	989784	68115	2356	289	199420	177058		
	Foreign	0	0	0	0	0	0	0	0	0	0	0	0		
Kollam	Coastal	85	18	93992.98	36172	0	0	0	0	85	18	93992.98	36172		
	Foreign	5	3	22066	16035	0	0	0	0	5	3	22066	16035		
Vizhinjam	Coastal	22	3	21363		28		5680		51	3	27043			
	Foreign	210	39	155882	7580.983	28		13498	0	236	39	176960.983	7580.983		
Total		1622	221	1299751.98	169123.983	2441	290	1019954	68294	2763	356	537278.963	237417.983		

(Source : Director of Ports)

Appendix 5.22(b)												
Category-wise break up of Revenue collected at the intermediate and Minor Ports of Kerala a during 2015-2016												
Sl. No.	Name of Port /Office	Port dues	Export and Import Dues	Tughire charges	Pilotage fees	Registration and other fees	Lease land	Merchant Overtime	Dredged Material	Miscellaneous	Total	
1	Vizhinjam	214416	245840			109440				1021804	1591500	
2	Valiyathura									391520	391520	
3	Kollam	247126	476099	479400		498403				3945291	5046319	
4	Ncendakara									51298	51298	
5	Kayamkulam										0	
6	Alappuzha					7677643				573414	8251057	
7	Kodungallur					2368801				11830916	14199717	
8	Ponnani									55080	55080	
9	Kozhikode				147128					1596258	1743386	
10	Bey pore	324701	3046055	2430000	448670	210109		1827804	46832794	8004711	63124844	
11	Thalassery									146140	146140	
12	Azhikkal	119549	236941		151510	127195	55240	773335	357863726	430938	359758434	
13	Kannur									402572	402572	
14	Badakara					166100		1827804	49058605	65047	51117556	
15	Kasargode					1035280	33000	113505	93102255	22000	94306040	
16	Cheruvathur										0	
17	Manjeswaram										0	
	Total	905792	4004935	2909400	747308	12192971	88240	4542448	546857380	28536989	600785463	

(Source : Director of Ports)

Appendix 5.23								
Operational Statistics of Inland Water Transport Agencies in Kerala								
Particulars	State Water Transport Department				Kerala Shipping and Inland Navigation Corporation Ltd.			
	2012-13	2013-14	2014-15	2015-16	2012-13	2013-14	2014-15	2015-16
Number of Jhankars	Nil	Nil	Nil	Nil	2	2	2	2
Number of Jhankars in Operation	Nil	Nil	Nil	Nil	1 no. on lease and 1 no. under repair	1 no. on lease and 1 no. under repair	1	1
Number of Boats	95	97	95	98	Nil	Nil	Nil	Nil
Number of Boats in operation	51	52	51	51	Nil	Nil	Nil	Nil
Number of Trips on Schedule	270100	275210	275940	297812	Nil	Nil	Nil	Nil
Number of Passengers carried (in lakh)	163.94	142.86	130.54	138.48	Nil	Nil	Nil	Nil
Number of Barges	Nil	Nil	Nil	Nil	8	6	8	8
Number of Tourist Boats	4	4	4	3	4	2	2	2
Total Distance Cargo (in KM-approximate)	NA	NA	NA	NA	28,646	28,344	29114	32754
Volume of cargo carried (Tonnes)	Nil	Nil	Nil	Nil	356411	208253	179585	278926
Total Revenue Receipts on Inland Transports (in Lakh) (Collection from Tourists Boats + Barges + Jhankars)	35.06	35.02	36.66	69.87	764.82	569.01	536.32	811.14
Total Revenue Receipts on Inland Transports (in Lakh)	444.46	659.73	761.1	765.81	1048.44	569.01	810.45	1227.84
Total Revenue Receipts on other business (in lakh)	23.17	32.82	42.3	29	538.21	312.67	396.93	416.71
Total Revenue Expenditure on other business (in lakh)	Nil	Nil	Nil	Nil	828.41	611.22	563.85	228.65
Number of Employees (Total)	919	927	890	873	162	143	132	121

source -SWTD and KSINC

Appendix 5.24						
Energy Source in Kerala from 2011-2016						
Sl. No.	Source of Energy	Installed Capacity (MW)				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	Hydel: KSEBL	2008.80	2007.40	2008.60	2024.15	2046.15
2	Thermal: KSEBL	234.60	234.60	234.60	159.96	159.96
3	Wind: KSEBL	2.03	2.03	2.03	2.03	2.025
4	Solar:KSEBL					1.156
5	Solar other than KSEBL (Solar connected to Grid other than KSEBL)					13.00
6	NTPC	359.60	359.60	359.60	359.6	359.60
7	Thermal: IPP	198.93	198.93	198.93	198.93	198.90
8	Hydel: Captive	33.00	33.00	33.00	33.00	33.00
9	Hydel: IPP	10.00	10.00	22.11	25.16	25.16
10	Wind: IPP	32.85	32.85	32.85	32.85	41.25
Total		2879.81	2878.70	2891.72	2835.68	2880.20

Source: KSEBL

Appendix 5.25						
Total Installed Capacity in Kerala from 2011-2016						
Sl. No.	Sector	Installed Capacity (MW)				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	State Sector	2245.40	2244.30	2245.23	2186.14*	2209.29
2	Central Sector	359.60	359.60	359.60	359.60	359.60
3	Private Sector	274.78	274.78	286.89	289.94	311.31
Total		2879.8	2878.68	2891.72	2835.68	2880.20

* Note: Unit 2 and 3 of BDPP and Unit 1 and 4 of KDPP having capacities of 21.32 MW and 16 MW each are de-commissioned

Source: KSEBL

Appendix 5.26						
Details of Power Availability						
Sl. No.	Particulars	Internal Generation (MU)				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	Hydel Generation	8058.01	4848.76	7995.43	7134.00	6639.02
2	KSEBL - Thermal Generation	290.7	532.7	220.87	207.7	150.63
3	Wind	2.03	1.763	1.8	1.06	1.38
4	Solar	0	0	0	0	0.81
5	Solar other than KSEBL	0	0	0	0	5.92
6	Total Internal Generation	8350.75	5389.62	8218.10	7342.88	6791.85
7	Less : Auxiliary Consumption	60.84	55.35	55.07	55.97	52.60
8	Net Generation	8289.91	5334.27	8163.03	7286.91	6739.25
9	Power Purchase (CGSs, IPPs, Traders)	11263.21	14908.82	14070.42	14996.43	16448.36
10	External PGCIL line losses	413.21	364.96	293.69	357.98	550.60
11	Energy Available for sale within the State	19139.9	19878.13	21939.76	21925.81	22944.45
12	Energy Requirement	18938.81	19877.16	20525.16	21914.17	22583.53
13	Surplus/Deficit	201.09	0.97	1414.60	11.64	360.92

Source: KSEBL

Appendix 5.27				
Projects in the Pipeline				
Sl. No.	Name of the Project	Installed Capacity (MW)	Energy Potential (MU)	Present Status
I	Hydro projects			
1	Olikkal	5	10.18	Procedures for land acquisition in progress.
2	Poovaramthode	3	5.88	Procedures for land acquisition in progress.
3	Chembukadavu 3	6	14.92	Private land is to be acquired.
4	Ladrum	4	12.13	Private land is to be acquired.
5	Peechad	3	7.74	Private land is to be acquired.
6	Western Kallar	5	17.41	Private land is to be acquired.
7	Marmala	7	16.72	Private land is to be acquired.
8	Pazhassi sagar	15	42.14	Land to be acquired from Irrigation Dept.
9	Mankulm	40	82.00	Procedures for land acquisition in progress.
10	Peruvannamoozhi	6	24.70	Procedures for land acquisition in progress.
11	Chinnar	24	76.45	Land to be acquired
12	Upper Sengulam	24	59.20	Land to be acquired

Source: KSEBL

Appendix 5.28							
Pattern of power consumption and revenue collected during 2015-16							
Sl. No	Category	No of consumers as on 31.03.2016	% of consumers to total	Consumption (MU)	Consumption as % of total	Revenue collected (₹ lakh)	Revenue as % of total
1	Domestic						
a	Paying group	9124747	78.20	9943.5	51.45	374410.00	35.84
b	Non paying group						
2	Commercial including general	1923402	16.48	2735.36	14.15	244850.00	23.44
3	Industrial LT	136693	1.17	1103.23	5.71	74663.00	7.15
4	HT and EHT	5005	0.04	4106.00	21.25	281690.00	26.97
5	Public lighting	4281	0.04	366.62	1.90	15636.00	1.50
6	Railway Traction	9	0	212.83	1.10	12086.00	1.16
7	Agricultural Pumping	473882	4.06	279.48	1.45	6562.00	0.63
8	Licenseses (Bulk Supply)	12	0.00	578.08	2.99	34704.00	3.32
9	Others			0.00	0.00	0.00	0.00
10	Outside Supply			0.00	0.00	0.00	0.00
Total		11668031	100.00	19325.10	100	1044601.00	100.00

Source: KSEBL

Appendix 5.29						
Power Purchase Agreement with Stations						
Sl. No	Name of the Stations	(Firm)Allocation MW				
		2011-12	2012-13	2013-14	2014-15	2015-16
I	CGS					
A	Nuclear Power Station					
1	Kaiga 1-4	38.00	35.00	76.12	73.88	72.99
2	MAPS	18.00	23.00	23.43	23.10	23.01
3	Koodamkulam				133	133
B	Thermal Power Stations					
1	NLC Stage2-1	64.00	64.00	64.38	63.38	63
2	NLC Stage2-2	90.00	92.00	91.84	90.55	89.964
3	NLC Stage1 Exp.	58.80	69.00	68.80	68.80	67.07
4	NLC Stage 2 Exp.	70.00	70.00			79.95
5	NLC New	32.38	32.00			
6	Ramagundam 1and2	245.00	250.00	251.66	246.75	245.07
7	Ramagundam 3	61.00	62.00	62.63	61.40	61
8	Talcher 2	247.00	430.00	428.98	427.40	427
9	RGCCP	180.00	358.00	359.58		
10	Simhadri Stage 2	80.90	93.00	87.12	90.80	89.1
11	Vallur	49.90	34.00	34.40	50.70	
12	Tutucorin	72.50	72.50	72.50	72.50	
13	NTECL, Vallur					49.95
14	NTPL					72.5
II	IPPs					
A	Thermal					
1	BSES Kerala Power Ltd	157	157	157	157	
2	KPCL	20.44	20.00	21.93	21.93	
3	MP Steel	10	8	10	10	10
4	Philips Carbon	10	10	10	10	
5	RGCCPP, Kayamkulam					359.58
B	Hydro					
1	Meenvallam	3	3	3	3	3
2	Iruttukkanam	3	3	3	3	3
3	Karikkayam			10.50	10.50	10.5
4	Ullunkal				7	7
5	Mankulam mini hydro				0.11	
6	Iruttukkanam					4.5
C	Wind					
1	Agali	18.60	17.40	18.60	18.60	18.6
2	Ramakkalmedu	14.25	14.25	14.25	14.25	14.25
III	Contracted Powers					
Sl. No.	Generator	Contracted Power (MW)				
A	Long Term Contracts for 25 years					
1	Maithon Power Ltd			150(RTC)		150
2	DVC			100(RTC)		
3	DVC			150(RTC)		
4	Maithon Power Ltd			150(RTC)		
5	Bharat Aluminium Company Ltd			100(RTC)		
6	Jhobua Power Ltd			100(RTC)		
7	Jindal Power Ltd			200(RTC)		
7R1	Jindal Power Ltd			200(RTC)		
8	Jindal Power Ltd			150(RTC)		

9	Jindal India Thermal Power Ltd		100(RTC)	100
10	Jhobua Power Ltd		115(RTC)	115
11	East Coast Energy Private Ltd		100(RTC)	
12	Mejia TPS Unit 7 and 8			100
13	Redhunathpur TPS			150
14	2x300MW of 1200MWTPP, Balco Ltd, Chattisgarh in WR			100
15	Unit 1, Jhabua Power Ltd, Madhya Pradesh			100
16	1200 MW of OP Jindal STPP Phase - 1 Tanmar, Raigarh			200
17	1200 MW of OP Jindal STPP Phase - 1 Tanmar, Raigarh			150
18	Phase 1, Bhavanapedu TPP, East Coast Energy Pvt Ltd			100
19	Maithon Rt bank TPP (MPPL)			150
B	Medium Term Contracts for 3 years			
1	PTC India Ltd		100(RTC)	
2	NVVN		300(RTC)	
3	BALCO			100
4	CSPDCL			300
C	Short Term Contracts for 1 years			
1	PTC India Ltd		100(RTC)	
2	PTC India Ltd		200(RTC)	
3	Lanco Kondapalli Power Ltd		210(RTC)	
4	Jindal Power Ltd			200

Source: KSEBL

Appendix 5.30					
Transmission Infrastructure (2015-16)					
Sl. No	Item	Target	Achievement	Unit	Percentage of Achievement
1	220 kV Substations	1	0	Numbers.	
2	110 kV Substations	12	8	Numbers.	67.0%
3	66 kV Substations	4	3	Numbers.	75.00%
4	33kV Substations	13	3	Numbers.	23.08%

Source: KSEBL

Appendix 5.31			
Transmission Infrastructure owned by KSEBL (as on 31.3.2016)			
Sl. No	Capacity	Substations Numbers.	Lines in ckt.km
1	400 kV	1	571.96
2	220 kV	20	2801.89
3	110 kV	142	4345.52
4	66 kV	81	2220.56
5	33 kV	134	1826.66
Total		378	11064.00

Source: KSEBL

Appendix 5.32				
Impact of AT and C loss reduction				
Year	Energy sold (MU)	Total energy available for sale within the State (MU)	AT and C Loss %	T and D Loss %
2011-12	15980.53	18938.81		15.62
2012-13	16838.24	19877.16		15.29
2013-14	17454.05	20525.16		14.96
2014-15	18426.27	21556.19	16.96	14.52
2015-16	19325.07	22568.11	16.04	14.37

Source: KSEBL

Appendix 5.33						
Targets and achievements of distribution infrastructure during 2015-16						
Sl. No.	Item	Target	Unit	Achievement	Unit	Percentage of achievement
1	11kV lines	2377	km	2022	km	85.07%
2	Distribution Transformer	3574	Numbers.	2389	Numbers.	66.84%
3	LT lines	4826	km	3312	km	68.63%
4	Service connections	459020	Numbers.	381247	Numbers.	83.06%

Source: KSEBL

Appendix 5.34
Financial and Physical Progress of Implementation of RGGVY

year	Financial (₹lakh)				Physical								
	Allocation	Amount Released	Expenditure	11 kV line Constrn. (KM)	Target				Achievement				
					25 KVA trfr. installation (Numbers)	LT 3 Phase Line (KM)	LT 1 Phase Line (KM)	BPL S/c	11 kV line Constrn. (KM)	25 KVA trfr. installation (No)	LT 3 Phase Line (KM)	LT 1 Phase Line (KM)	BPL S/c
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2011-12		0.000	2167.156	200	500	100	300	14000	157.773	104	73.287	277.5	31735
2012-13		3027.362	2444.664	300	500	100	400	14000	285.049	262	63.032	433.453	6169
2013-14		2327.038	5814.188	800	600	300	700	15000	802.406	535	402.67	1427.19	30009
2014-15		1714.567	4719.180	312	704	182	500	15000	320.533	640	116.81	483.297	24296
2015-16		0.000	6571.204						139.144	15	0	223.379	3973
Total		7068.967	21716.392	1612	2304	682	1900	58000	1704.905	1556	655.797	2844.822	96182

source: KSEBL

Appendix .5.35					
Status of implementation of the projects under KSUDP					
(₹ in crore)					
Sl. No	Component	Total No. of Civil work Packages	Contract Value	No. of Projects Completed / short closed	Cumulative Expenditure as on 31.10.2016
1	Urban Roads	10	146.27	10	142.77
2	Water Supply	10	103.18	10	93.45
3	Sewerage	14	459.13	11	141.61
4	Storm Water Drainage	9	77.28	9	75.79
5	Solid Waste Management	31	32.58	31	27.17
6	Deferred Schemes**	28	0	-	0
7	Community Infrastructure fund	-	76.29	-	71.64
8	Poverty Social Fund	-	10.17	-	9.31
9	Low Cost Sanitation	-	3.34	-	1.15
10	Incremental Administration, Consultancy fee, surveys, trainings, e-tendering, tax etc.	-	132.21	-	126.32
Grand Total		102	1040.45	71	689.21

**28 packages deferred due to various reason

Source-KSUDP

Appendix.5.36				
Details of major projects undertaken by the capital Region Development Programme (CRDP Phase 1 and 11) (as on 31.10.2016)				
(₹ in lakh)				
Year	Major Project	Estimated cost (Original)	Cumulative Expenditure	Physical achievement
1	2	4	5	6
2012-13	Implementation of Water Supply Scheme	1000	475.55(For works)	95% completed
	Bus Terminal	1157.93	475.93(For Land acquisition)	Land Acquisition completed (Acquired 5.79 Acres)
	City Road improvement programme	7718	8560	98% Acquisition completed
2013-14	Implementation of Water Supply Scheme	1000	491.09(For works)	95%completed
	Bus Terminal	1157.93	975.93(For Land acquisition)	Land Acquisition completed (Acquired 5.79 Acres)
	City Road improvement programme	7718	8560	98% Acquisition completed
2014-15	Implementation of Water Supply Scheme	1000	506.42 (For works)	95%completed
	Bus Terminal	1157.93	3225.93 (For land acquisition)	Land Acquisition completed (Acquired 5.79 Acre of land)
	City Road improvement programme	7718	8560	98% Acquisition completed
2015-16	Implementation of Water Supply Scheme	1000	506.42	95%completed
	Bus Terminal	1157.93	3225.93	Land Acquisition completed (Acquired 5.79 Acre of land)
	City Road improvement programme	7718	8560	98% Acquisition completed)
2016-17 (as on 31.10.2016)	Implementation of Water Supply Scheme	1000	506.42	95% completed
	Bus Terminal	1157.93	3225.93	Land Acquisition completed (Acquired 5.79 Acre of land)
	City Road improvement programme	7718	8560	98% Acquisition completed)
Total		49379.65	54488.14	

Source- KSUDP

Appendix.5.37				
Projects Approved for Implementation under JnNURM (as on 31.10.2016)				
(₹ in lakh)				
Sl. No	Components	Year of getting Administrative Sanction	Approved Cost	Cumulative Expenditure
1	2	3	4	5
Thiruvananthapuram				
1	Improvement of Water Supply	2007	8716	7512.02
2	Sewerage Phase I	2007	21541	7763.72
3	Solid Waste Management	2008	2456	1152.29
4	Storm Water Drainage	2009	4039	1951.25
5	Sewerage Phase II	2009	12115	3782.09
6	e-Governance	2012	1348	37.2
7	Procurement of Buses	2009	5340	5572.32
Total			55555	27770.89
Kochi				
1	Improvement of Water Supply	2007	20117	21077.88
2	Sewerage Scheme	2007	7481	12.5
3	Solid Waste Management	2007	8812	4594.16
4	Storm Water Drainage	2007	978	770.82
5	Traffic and Transportation	2009	10964	3087.08
6	e-Governance	2009	870.5	340.5
7	Procurement of Buses	2009	7100	7192.01
8	Heritage	2010	2210	--
Total			58532.5	37074.95

Source KSUDP

Appendix. 5.38						
Status of implementation of the ongoing projects of the 1 st phase of UIDSSMT						
(₹ in lakh)						
Name of ULB	Project title	Approved Cost	Expenditure for the year 2016-17 Up to 31.10.2016	Cumulative Expenditure up to 31.10.2016	Physical Progress (%)	Remarks
Ottappalam	Water Supply	1800	0	2836.9	100	Commissioned
Thiruvalla,		627.90	114.8	1059.42	100	Completed
Vadakara		2291.75	0	2475.56	100	Commissioned
Payyannur		4019.00	236.23	5067.65	85	Partially completed
Alappuzha		9194.00	2304	12708.91	95	
Changanassery		391.90	128.43	590.55	97	
Chittoor Thathamangalam		650.00	64.52	917.33	100	Commissioned
Guruvayoor - Chavakkad		5045.00	0	4966.29	78	
Malappuram		1976.00	0	2020.92	100	Commissioned
Thalassery		4120.00	1213	4343.72	78	
Perinthalmanna		811.00	3.72	1666.82	100	Commissioned
Kalpetta		3217.00	469.18	5096.98	95	Partially commissioned
Attingal	Solid Waste Management	306	0	195.35	88	
Perinthalmanna		522.00	0	279.95	70	
Total		34971.55	4533.88	44226.35		

Source:- KSUDP

Appendix.5.39				
Financial Progress of projects sanctioned under BSUP				
				(In lakh)
Thiruvananthapuram Corporation				
Housing				
		Expenditure 2015-2016	Expenditure 2016-2017 (up to 31-10-2016)	physical achievement (in Numbers)
1	House	461.38	179.32	282
2	Flat	472.72	6849.98	187
Total		934.1	7029.31	469
Infrastructure				
3	Destitute	25.9	NIL	1
4	Old age home	8.62	NIL	1
5	Streetlight	3.45	NIL	109
6	Anganwadi and Library	25.53	NIL	1
7	Drain and Slab	9.46	NIL	2
8	Health centre	0.03	NIL	1
9	Electricity	0.4	159.92	2
10	community hall	44.8	17.87	3
11	water Connection	58.9	0.04	1
Total		177.09	177.83	121
Kochi Corporation				
	New House		30.5	122

Source:-Kudumbashree

Appendix - 5.40	
Physical Achievement of Basic Services to the Urban Poor (BSUP)	
Scheme Components	Achievements (Up to 31-10-2016)
New Houses	16550
Improvement of houses	1158 on going and 668 completed
Infrastructure works	194

Source: Kudumbashree

Appendix 5.41					
Projects Sanctioned Under Rajiv Awas Yojana(RAY) (as on 31-10-2016)					
₹in lakh					
Sl. No.	Name of Project	Components	Project Cost	Cumulative Expenditure	Physical Achievement
1	Thiruvananthapuram Mathippuram	Flat, Upgradation, Physical and social infrastructure	7186	1393	83 newhouse Units completed 457 New house Unit ongoing
2	Kochi Thuruthy colony	New house, rowhouse, Upgradation, Physical and social infrastructure	6762	156	15 new house Completed 49 Ongoing
3	Kollam SMP palace	Flat, Upgradation, Physical and social infrastructure	1785		temporary shelter completed.
4	Thrissur Nellankara Lakshamveedu	New house Upgradation, Physical and social infrastructure	154		tendering process started
5	Kozhikkode Maloorkkunnu	Flat, Upgradation, Physical and social infrastructure	188		tendering process started
Total			16075	1549	

Source:- Kudumbashree

Appendix 5.42							
Physical Achievement of IHSDP (Up to 31-10-2016) (in Numbers)							
Sl. No.	ULB Name	Work Sanctioned(beneficiaries/ Schemes			Work completed		
		New Houses	Improvement of Houses	Infrastructure works	New Houses	Improvement of Houses	Infrastructure works
1	Alappuzha	657	293	11	394	257	8
2	Aluva	13	96	6	12	93	6
3	Angamaly	91	358	32	69	352	28
4	Attingal	111	287	10	101	224	6
5	Chalakydy	166	368	29	134	327	8
6	Changanassery, Ph-I	119	306	44	43	279	34
7	Changanassery, Ph-II	269	581	144	49	530	14
8	Chavakkad	97	38	61	92	33	60
9	Cherthala	205	433	33	149	371	3
10	Chittur- Thathamangalam	424	637	85	381	613	79
11	Guruvayoor	50	73	320	15	54	320
12	Irinjalakuda, Ph-I	45	110	10	30	108	8
13	Irinjalakuda, Ph-II	135	259	25	64	187	19
14	Kalpetta	31	47	12	29	45	11
15	Kanhangad, Ph-I	152	69	29	113	50	29
16	Kanhangad, Ph-II	261	594	32	213	519	23
17	Kannur	179	127	21	46	126	7
18	Kasaragod	88	86	15	63	71	13
19	Kodungallur	217	53	66	157	49	11
20	Koothuparamba	30	13	49	30	13	49
21	Kothamangalam	71	190	16	63	151	9
22	Kottayam	364	467	18	88	391	9
23	Koyilandi	284	151	17	201	146	16
24	Kozhikode	477	0	27	127	0	5
25	Kunnamkulam	106	114	8	65	110	3
26	Malappuram, Ph-I	822	407	58	813	402	57
27	Malappuram, Ph-II	272	454	51	181	410	44
28	Mattannur, Ph-I	82	44	20	66	37	15
29	Mattannur, Ph-II	280	340	40	197	322	24
30	Muvattupuzha	243	910	56	176	733	3
31	Nedumangad	246	264	70	211	246	15
32	Neyyattinkara	549	195	53	265	170	37
33	North Paravoor, Ph-I	176	259	29	135	184	18
34	North Paravur, Ph-II	249	600	70	165	618	11
35	Ottappalam, Ph-I	256	360	56	244	360	56
36	Ottappalam, Ph-II	279	340	21	203	332	20
37	Palakkad	1626	375	44	275	329	10
38	Pathanamthitta	369	700	76	229	647	1
39	Payyannur	220	94	10	62	63	2
40	Perinthalmanna, Ph-I	363	137	89	287	136	74
41	Perinthalmanna, Ph-II	271	608	38	252	588	35
42	Perumbavoor	52	543	18	23	437	13
43	Ponnani	229	0	0	120	0	0
44	Punalur	596	236	158	445	234	155
45	Shoranur	203	418	87	164	392	87
46	South Paravoor	192	181	8	136	120	5

47	Taliparamba	118	150	23	77	90	23
48	Thalassery	76	28	13	26	28	4
49	Thodupuzha	245	210	43	118	96	43
50	Thrissur	246	0	12	120	0	3
51	Tirur	133	124	29	39	107	27
52	Vadakara	35	27	16	28	24	10
53	Varkala	328	333	25	72	281	16
Total		13398	14087	2333	7857	12485	1586

Source:-Kudumbashree

Appendix 5.43						
Financial Details of projects under IHSDP						
Sl. No.	Receipts					Expenditure
	Name of urban local body	Central share	State share	ULB share	Beneficiary Share	
1	Alappuzha	602.31	75.29	31.81	24.946	713.61
2	Aluva	42.5	2.83	7.11	4.21	55.95
3	Angamaly	224.14	16.46	16.47	14.3776	217.33
4	Attingal	106.36	7.85	9.24	8.92	120.14
5	Chalakydy	198.72	14.12	38	26.491	35.51
6	Changanassery, Ph-I	268.8	34.71	23.97	5.6382	194.66
7	Changanassery, Ph-II	322.21	28.66	8.5	0	283.63
8	Chavakkad	127.11	10.83	21.93	7.813	140.71
9	Cherthala	172.33	8.38	21.68	25.8	311
10	Chittur-Thathamangalam	732.94	63.49	84.65	47.71	717.11
11	Guruvayoor	67.62	6.71	28.43	0	113.1
12	Irinjalakuda, Ph-I	87.34	7.35	24.15	5.21	93.21
13	Irinjalakuda, Ph-II	125.87	10.1	16.79	14.7603	357.42
14	Kalpetta	58.82	9.47	28.23	0	133.57
15	Kanhangad, Ph-I	164.58	20.57	15.38	3.50831	187.4
16	Kanhangad, Ph-II	309.66	22.37	43	0	372.63
17	Kannur	78	8.55	2.78795	0	75.03
18	Kasaragod	76.53	6.09	8.12	5.785	88.96
19	Kodungallur	174.19	29.82	61	0	281.97
20	Koothuparamba	65.84	7.84	5.39	3.207	1435
21	Kothamangalam	146.62	11.12	11.6	6.37	139.55
22	Kottayam	267.15	17.94	69.58	0	342.71
23	Koyilandi	246.48	16.27	16.125	15.882	273.53
24	Kozhikode	136.87	24.88	22.88	0	161.21
25	Kunnamkulam	107.18	13.4	6.35	8.01456	126.11
26	Malappuram, Ph-I	836.46	104.56	32.69	71.849	1145.31
27	Malappuram, Ph-II	537.39	45.91	53.38877	17.831	456.4
28	Mattannur, Ph-I	104.88	13.11	2.897	8.699	109.24
29	Mattannur, Ph-II	426.21	31.62	109.21	33.45	37.76
30	Muvattupuzha	475.02	40.35	40.36	23.85123	498.54
31	Nedumangad	216.07	18.5	37	28.28	299.85
32	Neyyattinkara	297.43	23.21	83.42	10	274.45
33	North Paravoor, Ph-I	176.27	12.8	11.09437	12.96	207.7
34	North Paravur, Ph-II	406.26	28.58	34.09449	36	468.81
35	Ottappalam, Ph-I	717.28	68.32	68.33	33.9	700.01
36	Ottappalam, Ph-II	417.5	32.93	80	0	172.91
37	Palakkad	346.93	62.31	0	0	465.09
38	Pathanamthitta	261.85	20.2	43.69	26	394.67
39	Payyannur	115.22	7.66	54.68	0	141.08
40	Perinthalmanna, Ph-I	445.98	51.48	44.79	25.844	395.24
41	Perinthalmanna, Ph-II	476.73	40.65	95	20.2805	599.81
42	Perumbavoor	183.98	14.58	19.45	5.6062	186.34

43	Ponnani	263.84	24.795	33.06	0	289.16
44	Punalur	625.08	70.77	34.7825	47.3925	717.81
45	Shoranur	709.335	90.1275	145	18.65883	388.6
46	South Paravoor	190.314	14.913	16.57	15.8025	140.59
47	Taliparamba	80.54	9.115	18.23	6.09	165.07
48	Thalassery	171.36	19.76	7.847	4.4142	108.3
49	Thodupuzha	206.19	18.34	16.278	0	283.94
50	Thrissur	157.14	17.61			275.03
51	Tirur	188.02	16.965	80.81	0	234.57
52	Vadakara	45.735	3.6225	14.06581	0	60.15
53	Varkala	309.29	21.92	33	19.258	268.68
Total		14298.47	1399.81	1832.91	694.81	16456.16

Source:-Kudumbashree

Appendix 5.44				
Physical Achievement of National Urban Livelihoods Mission NULM (SJSRY) (2008-09 to 2016-17) (Restructured scheme of SJSRY)				
Year	Individual Enterprises Developed	Group Enterprises Developed	Persons Trained	Man days created under Wage Employment Programme
2008-09	1329	528	6587	4875
2010-11	2054	647	7859	5400
2011-12	2845	658	8472	6254
2012-13	2478	745	8856	6750
2013-14	2154	685	7895	6452
2014-15	2602	861	9402	6800
2015-16	9	1	0	0
2016-17	100	12	87	
Total	13571	4137	49158	36531

Source - Kudumbashree

Appendix.5.45						
Financial Achievement of National Urban Livelihoods Mission (NULM) (2010-11 to 2016-17) (Restructured scheme of SJSRY)						
(₹ in lakh)						
Year	Fund released		Total	Expenditure as on 31-10-2016	% of expenditure	Remarks
	Central	State				
1	2	3	4	5	6	
2010-11	474.03	158.01	632.04	993.7	157.22	
2011-12	1376.53	593.84	1970.37	644.89	32.73	
2012-13	2634.58	1343.8	3978.38	1606.95	40.39	
2013-14	3056.78	4145.87	7202.65	4389.8	60.95	
2014-15	Nil	750	750	418.33	55.78	
2015-16	Nil	Nil	0	1551.33		
2016-17(up to 31-10-2016)	Nil	167.51	167.51	459.11		Balance fund of SJSRY is being utilised for programme implementation
Total	7541.92	7159.03	14700.95	10064.11	68.46	

Source - Kudumbashree

Appendix.5.46						
District wise Urban Thrift and Credit Operation under NULM as on 31.10.2016 (Restructured scheme of SJSRY)						
(₹ in lakh)						
Sl. No.	Name of Districts	No of NHGs	No of ADS	No of CDS	Amount of Thrift	Amount of Loan
1	Thiruvananthapuram	5259	247	10	6324.62	16804.16
2	Kollam	3077	183	7	2193.06	5994.07
3	Pathanamthitta	995	121	5	493.30	765.01
4	Alappuzha	2378	196	8	1823.02	2852.54
5	Kottayam	1816	180	7	1439.14	4190.13
6	Idukki	723	60	2	201.43	442.63
7	Eranakulam	5419	462	19	5191.52	13289.02
8	Thrissur	3732	326	14	3030.43	16125.28
9	Palakkad	2051	202	8	1716.01	6016.42
10	Malappuaram	3990	437	16	2550.55	6111.67
11	Kozhikode	6096	274	12	4193.62	15287.16
12	Wayanad	1188	73	3	261.29	893.66
13	Kannur	5721	320	15	2104.60	5882.14
14	Kasaragod	1170	113	4	1105.88	3165.11
	Total	43615	3194	130	32628.48	97819.00

Source:-Kudumbashree

Appendix 5.47		
List of towns prepared Master plans under phase I, phase II and phase III		
Phase I Towns	Phase II Towns	Phase III Towns
Paravoor	Karunagapally	Kottarakkara
Changanassery	Perinthalmanna	Wadakkanchery
Vaikom	Mattannur	Guruvayoor
Thalassery	Punalur	Piravom
Malappuram	Sulthan Bathery	Koothattukulam
Pathanamthitta	Shornur	Kattappana
Trissur	Kunnamkulam	Harippad
Adoor	Kodungalloor	Erattupetta
Pala	Cherthala	Mananthavady
Kollam	Ottappalam	Pattambi
North Paravoor	Kottakkal	Kannur Corporation
Muvattupuzha	Kanhangad	Tanur
Kalpetta	Nedumangad	Parappanangadi
Kasaragod	Irinjalakuda	Mukkom
Thiruvananthapuram	Ponnani	
Guruvayoor	Tirur	
Kannur	Chalakkudy	
Kozhikode	Koyilandi	
Kothamangalam	Chittur – Thathamangalam	
Vadakara	Chavakkad	
Kayamkulam	Payyanur	
Perumbavoor	Thaliparamba	
Alappuzha	Koothuparamba	
Aluva	Pandalam	
Kottayam	Attingal	
Palakkad	Nilambur	
Angamaly	Mavelikkara	
Thiruvalla	Nileshwaram	
Kochi	Chengannur	
Thodupuzha	Manjeri	
Neyyattinkara	Varkala	
Idukki - Vazhathoppu		

Source:-Town and Country Planning Department

Appendix 5.48				
Details of major Projects undertaken by TRIDA (Up to 31.10.2016)				
₹ in lakh				
Sl. No.	Major Projects	Year of starting	Amount of administrative sanction	Physical achievements/Remarks
1	Construction of 'A' Block at Palayam	2015-16	3500	Tendering process is progressing
2	Construction of 'M' Block at Palayam	2015-16	2100	Awaiting approval of tender from Government
3	Construction of Bus stand and commercial complex at Kazhakootam	2015-16	1200	Work shall be commenced immediately on getting permission from the local bodies
4	Construction of commercial complex at Chalai	2015-16	1500	The work has been tendered and it is in the stage of approval
5	Construction of Bus stand and Rehabilitation block at Attakulangara	2015-16	3000	Project has not been started due to stay from Hon'ble High Court of Kerala
6	Construction of Bus stand at Medical college	2014-15	102	Construction of Bus stand at Medical college has been completed in 2015-16.
7	'C' Block at Palayam-Erection of lift and fire fighting	2015-16	125	The erection of 2 nos. of lift are completed.

Source:-TRIDA

Appendix 5.49					
Growth of Post Offices in Kerala During the Last Eight Years					
Year	HOs	DSOs	EDSOs	EDBOs	Total
2009	51	1453	467	3098	5069
2010	51	1452	2	*3563	5068
2011	51	1455	2	3559	5067
2012	51	1455	2	3560	5068
2013	51	1455	0	3558	5064
2014	51	1457	0	3559	5067
2015	51	1457	0	3560	5068
2016	51	1457	0	3559	5067

* 465 EDSOs were downgraded as EDBOs

Source : Chief Postmaster General, Kerala Circle

Appendix 5.50									
Urban/Rural Split of Post Offices as on 31-3-2016									
Name of Division	Head Office		DSO		EDBO		Grand Total		Total
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	
Thiruvananthapuram (North)	2	0	27	41	5	143	34	184	218
Thiruvananthapuram (South)	2	0	32	43	17	102	51	145	196
Kollam	1	2	24	67	6	145	31	214	245
Pathanamthitta	3	0	8	69	8	225	19	294	313
Thiruvalla	2	0	11	53	6	87	19	140	159
Total Southern Region	10	2	102	273	42	702	154	977	1131
Alappuzha	2	0	25	23	18	56	45	79	124
Mavelikara	2	0	7	45	3	70	12	115	127
Changanacherry	1	1	4	42	2	115	7	158	165
Idukki	3	0	21	58	10	166	34	224	258
Kottayam	1	1	6	46	2	237	9	284	293
Ernakulam	2	0	51	19	19	44	72	63	135
Aluva	0	0	6	3	0	1	6	4	10
Thrissur	3	0	29	42	11	170	43	212	255
Irinjalakuda	2	0	23	40	16	111	41	151	192
Lakshadweep	2	1	36	69	29	156	67	226	293
Total Central Region	18	3	208	387	110	1126	336	1516	1852
Palakkad	2	1	17	66	6	144	25	211	236
Ottapalam	1	0	7	48	10	153	18	201	219
Manjeri	2	0	7	39	13	198	22	237	259
Tirur	2	0	7	45	7	112	16	157	173
Kozhikode	3	0	48	23	42	188	93	211	304
Vadakara	2	0	6	34	11	172	19	206	225
Thalassery	1	0	28	16	36	127	65	143	208
Kannur	2	0	40	26	52	111	94	137	231
Kasargode	2	0	9	20	7	190	18	210	228
Total	17	1	169	317	184	1395	370	1713	2083
Grand Total	45	6	479	977	336	3223	860	4206	5066
	51		1457		3558		5066		

Source : Chief Postmaster General, Kerala Circle

Appendix 5.51						
Division-wise and Category - wise Post Offices under Kerala Circle as on 31.03.2016						
Sl. No.	Name of Division	Head Offices	Sub Offices			
			SO	EDSO	EDBO	Total
1	2	3	4	5	6	7
1	Trivandrum (N)	2	68	0	148	218
2	Trivandrum (S)	2	75	0	119	196
3	Quilon	3	91	0	151	245
4	Pathanamthitta	3	77	0	233	313
5	Thiruvalla	2	64	0	93	159
6	Alappuzha	2	48	0	74	124
7	Mavelikara	2	52	0	73	127
8	Changanacherry	2	46	0	117	165
9	Idukki	2	52	0	239	293
10	Kottayam	3	79	0	176	258
11	Ernakulam	2	71	0	62	135
12	Aluva	3	71	0	181	255
13	Thrissur	3	105	0	185	293
14	Irinjalakuda	2	63	0	127	192
15	Lakshadweep	0	9	0	1	10
16	Palakkad	3	83	0	150	236
17	Ottappalam	1	55	0	163	219
18	Manjeiri	2	46	0	211	259
19	Tirur	2	52	0	119	173
20	Kozhikode	3	71	0	230	304
21	Vadakara	2	40	0	183	225
22	Thalassery	1	44	0	163	208
23	Kannur	2	66	0	163	231
24	Kasaragod	2	29	0	197	228
Total - (Kerala Circle)		51	1457	0	3558	5066

Source : Chief Postmaster General, Kerala Circle

Appendix 5.52					
District - wise details of area and population served by one post office during 2015-16					
Name of district	Post Office (Numbers)	Area (Sq.Km.)	Area served by One post office (Sq.Kms)	Population (2001 census)	Population served by one post office
1	2	3	4	5	7
Kasargod	233	1992	8.51	1302600	5591
Kannur	382	2966	7.76	2525637	6612
Wayanad	162	2131	13.15	816558	5040
Kozhikode	410	2344	5.72	3089543	7535
Malappuram	437	3550	8.12	4110956	9407
Palakkad	455	4480	9.85	2810892	6178
Thrissur	486	3032	6.24	3110327	6400
Ernakulam	390	3068	7.85	3279860	8410
Idukki	296	4358	14.72	1107453	3741
Kottayam	408	2208	5.41	1979384	4851
Alappuzha	300	1414	4.71	2121943	7073
Pathanamthitta	315	2637	8.37	1195537	3795
Kollam	364	2491	6.84	2629703	7224
Thiruvananthapuram	414	2192	5.29	3307284	7989
Total	5052	38863	7.69	33387677	6609
UT of Lakshadweep	10	32	3.20	64429	6443
UT of Pondichery (Mahe only)	4	9	2.25	41934	10484

Source: Chief Postmaster General, Kerala Circle

Appendix 5.53							
District - Wise details of Telephone network during 2015-16							
Sl. No.	Name of District	Number of Exchanges	Equipped Capacity	Working connections	Area (sq.Kms)	Number of Telephone (Sq. Kms)	Number of Telephone per 1000 population
1	2	3	4	5	6	7	8
1	Alleppy	82	246031	156724	1414	110.83	73.65
2	Calicut	90	282749	164492	2206	74.566	62.93
3	Kannur	131	299227	202262	2961	68.3	80.08
4	Ernakulam	117	421654	277802	3063	90.7	84.63
5	Idukki	79	110823	54159	5105.22	10.61	48.84
6	Kasaragod	72	123163	75980	1989	38.2	58.3
7	Kottayam	115	285885	151788	2206	68.81	76.87
8	Lakshadweep	10	12208	4998	32	156.19	76.34
9	Malappuram	93	294419	171774	3550	48.39	47.33
10	Palakkad	123	163322	111461	4480	24.88	40
11	Pahanamthitta	74	206584	111520	2642	42	139
12	Kollam	90	314104	171038	2491	68.6	66.18
13	Thrissur	97	395850	272687	3032	90	92
14	Thiruvnanthapuram	114	377665	209459	2192	95.5	63
15	Wayanad	34	51640	29781	2132	13.969	44.37
Total		1321	3585324	2165925	39495.22	66.77	70.235

Source: BSNL

Appendix 5.54							
Details of AKSHYA Centres in Kerala							
Sl. No	Name of District	Number of AKSHAYA centres as on 31.10.2016	Number of persons employed as on 31.10.2016	Turnover (₹ crore)			
				2013-14	2014-15	2015-16	2016-17 (as on 31.10.2016)
1	Thiruvananthapuram	262	786	4.80	5.20	6.10	4.33
2	Kollam	156	400	3.40	4.80	5.30	5.90
3	Pathanamthitta	113	263	1.58	1.20	2.93	2.54
4	Alappuzha	213	426	4.68	5.20	6.00	4.20
5	Kottayam	185	410	2.23	3.33	4.73	3.41
6	Idukki	121	204	1.45	0.85	1.33	0.90
7	Eranakulam	247	852	0.65	3.02	2.30	1.49
8	Thrissur	220	680	2.77	3.15	4.57	3.69
9	Palakkad	238	432	1.62	0.86	1.94	1.59
10	Kozhikode	174	609	6.85	7.61	8.46	5.94
11	Malappuram	291	960	3.18	3.57	4.27	3.12
12	Wayanad	65	203	0.80	0.77	0.69	0.73
13	Kannur	219	876	1.50	1.53	3.47	0.93
14	Kasaragod	124	375	1.94	0.65	0.99	0.96
Total		2628	7476	37.45	41.74	53.08	39.73

Source : KSITM

Appendix 5.55			
Physical Achievements of Techno Park			
Sl. No.	Particulars	Land/Area/₹crore	
1	Total Land (Phases I,II,III)	Phase I - 153.54 acres	
		Phase II - 86 acres	
		Phase III - 90 acres	
2	Land for Techno city	424 acres	
3	Land for Techno park, Kollam	4.45 acres	
4	Total Built up space for Industries	32,51,500 sq.ft	
5	Total space for support facilities	1,81,750 sq.ft	
6	Total built up space by companies		
		a) Total built up spaces	1,28,59,700 sq.ft
		b) Completed	61,20,000 sq.ft
7	Number of companies in Techno park(31/10/2016)	390 companies	
8	Total Employment (31/10/2016)	51,865	
9	Total investment (up to 3/2016)	₹ 4,900 crore	
10	Total turnover (up to 3/2016)	₹ 5,000 crore	
11	Total Export (up to 3/2016)	₹ 6250 crore	
12	Total SEZ area	289.46 acres	
13	Total Non SEZ area	467 acres	

Source: Techno Park

Appendix 5.56				
Growth of Techno Park from 2011-12 to 2015-16				
Year	Number of Companies in Techno Park	Export Revenue (in Cr)	Employees strength	Built up Space (in Sq.ft)
2011-12	265	2171	38000	6000000
2012-13	285	3493	40521	7100000
2013-14	336	4250	45395	7200000
2014-15	355	5100	47100	7200000
2015-16	390	6250	51865	7200000

Source: Techno Park

Appendix 5.57		
Physical Achievements of Info Park		
Sl. No.	Particulars	Land/Area/₹crore
	Land	
1	Infopark Kochi Phase I	100.86 acres
	Infopark Kochi Phase II	125 acres
	Infopark Cherthala	66 acres
	Infopark Thrissur	30 acres
2	Total Built up IT space	5.7million sq.ft
3	Total built up space by IT companies in SEZ	3 million sq.ft
4	Number of companies in Info park	285 companies
5	Total number of entrepreneurs through incubator	31
6	Total number of student entrepreneurs through incubator	12
7	Women entrepreneurs through incubator	2
8	Total Employment (up to 10/2016)	32,800
9	Total turnover (up to 10/2016)	3200 crore (includes exports from SEZ and STPI)
10	Total SEZ area	261.18 acres
11	Total Non SEZ area	61.82 acres

Source : Info Park

Appendix 5.58		
Physical Achievements of Cyber Park		
Sl. No.	Particulars	Land/Area/₹ crore
1	Total Land (Phases I)	
	a) Land for Cyber Park – Kozhikode	41.52 acres
	b) Land for Cyber Park – Kannur	25 acres
	c) Land for Cyber Park - Kasaragod	100 acres
2	Total Built up space for IT Industries	i) CFC Building - 3500 sq.ft
		ii) 1st IT building - 2.88 lakh sq.ft
3	Total space for support facilities	CFC Building - 0.70 acres
		KSEB - 0.97 acres
4	Total built up space by companies	NA
5	Total built up space by companies in SEZ	NA
6	Number of companies in Cyber park	4
7	Total Employment	55
8	Total investment (₹)(Up to 10/2016)	0.334 crore
9	Total turnover (up to 10/2016) (₹)	3.956 crore
10	Total Export (up to 10/2016) (₹)	3.956 crore
11	Total SEZ area	30 acres (only Kozhikode)
12	Total Non SEZ area	11.52 acres (only Kozhikode)

Source : Cyber Park

Appendix 5.59

Achievements Under Major Housing Schemes By Different Housing Agencies In Kerala

Sl.No	Dept/ Scheme	Nodal Agency	Implementing Agency	No. of Houses Constructed During the Years						2016-17 Up to Sep 30, 2016	Total	Dept. Total
				2011-12	2012-13	2013-14	2014-15	2015-16				
Govt. of Kerala Schemes												
Housing Dept												
1	Suraksha Housing Scheme	KSHB	KSHB	414	114	112	29	19	Nil	688		
2	One Lakh Housing Scheme -Renovation	KSHB	KSHB	0	0	190	582	Nil	Nil	772		
3	MN One Lakh Re-construction HS	KSHB	KSHB	1460	498	142	61	38	7	2206		
4	Innovative Housing Scheme(Flats)	KSHB	KSHB	0	24	24	88	24	0	160		
5	Grihasree HS	KSHB	KSHB	0	0	0	372	709	Nil	1081		
6	Saphalyam HS (Flats)	KSHB	KSHB	0	0	0	0	48	24	72		
7	Rehabilitation HS in Shanthi Nagar (Bangladesh Colony) Kozhikode	KSHB	KSHB	0	146	72	0	0	0	218		
Dept. Total												
II. Local Self Govt. Department												
II. I. Kudumbasree												
8	IHSDP (Integrated Housing and Slum development Programme)	Kudumbasree	ULB	1100	1139	1433	1266	313	350	5601	No. of new houses constructed doesn't included no. of renovated houses	
9	BSUP (Basic Service for Urban poor)	Kudumbasree	ULB	2100	2112	2156	199	1375	135	8077		
10	RAY (Rajiv Gandhi Awas Yojana)	Kudumbasree	ULB	0	0	0	83	7	8	98		
II. ii. Commissionerate of Rural Development												

11	IAY (Indira Awas Yojana)	CRD	Block Panchayat	54513	43607	55996	50545	49551	18957	273169
II.iii. Directorate of Urban Affairs										
12	Asraya			25	9	239	82	35	2	392
13	Plan fund			570	399	1704	3778	1574	16	8041
14	VAMBAY			44	36	24	0	0	3	107
15	EMS			959	1521	1522	441	272	27	4742
16	Mythri			12	17	1	0	0	0	30
17	ShihabThangal Housing Scheme			0	0	0	922	50	0	972
18	Suvarna Jubilee			0	0	0	18	10	4	32
19	Bhavanastee			0	0	0	0	46	21	67
20	12 th FYP			0	0	0	0	101	0	101
21	IAY			0	0	0	0	67	0	67
22	Jawahar Housing Scheme			0	0	0	0	85	0	85
II. iv. Directorate of Panchayat										
23	EMS	Directorate of Panchayat		34938	23497	22274	25006	18772	N.A	124487
Department Total										
III. Scheduled Tribe Development Department (STD Dept)										
24	General Housing	STD Dept		915	533	659	391	0		2498
25	Corpus fund	STD Dept		18	0	5				23
26	Pooled fund	STD Dept		0						0
27	AdiyaPaniya Project	STD Dept		14	21					35
28	CCD-PTG	STD Dept		0						0
29	Unwed Mother	STD Dept		38						38
30	FRC	STD Dept				8				8
31	Special order	STD Dept				1				1
32	HUDCO	STD Dept						62		62
33	Additional Tribal Sub Plan	STD Dept						30		30
Dept. Total										
										2695

IV. Kerala Labour Department										
		Labour Welfare Organisation	Labour Welfare Organisation							
34	Revised Integrated Housing Scheme for Beedi Workers	Labour Welfare Organisation	Labour Welfare Organisation	318	36	25	12	0	0	391
V.	Fisheries Department									
35	NFWF (50% State Govt. Fund)	DEPT of Fisheries	DEPT of Fisheries	0	783	765	800	0	0	2348
36	13th Finance Commission assisted HS- other fishing villages at 2 lakh per unit	DEPT of Fisheries	DEPT of Fisheries	0	0	2787	0	0	0	2787
37	13th Finance Commission assisted Housing Schemes- Model fishing villages at 2.5 lakh per unit	DEPT of Fisheries	DEPT of Fisheries	0	0	1878	0	0	0	1878
38	Housing Scheme under Basic Infrastructure Facilities and Human Development of Fisher folk (BIF & HDF)	DEPT of Fisheries	DEPT of Fisheries	0	0	0	0	3660	Not available	3660
39	Integrated Development of Fishing Villages (IDFV)	DEPT of Fisheries	DEPT of Fisheries	0	0	0	1612	0	“	1612
40	13th Finance Commission assisted – Fishermen Colony rewaping- New houses @ 2 lakh per unit	DEPT of Fisheries	DEPT of Fisheries	0	0	0	485	0	“	485
										Total No. of Houses Constructed from 2009 to 2016

41	Housing Scheme 2015-16	Dept. of Fisheries	Dept. of Fisheries							28	“	28
42	Safe dwelling to landless fishermen	DEPT	KSCADC							8 individual flat units		8
Total- Fisheries Dept.												
VI. Scheduled Caste Development Dept.												
43	House to Houseless Scheme	Scheduled Caste Devt. Dept.	Scheduled Caste Devt. Dept.	3500	5000	6397	4500	5197	NA	24594		
44	Development Programme for Vulnerable Communities	Scheduled Caste Devt. Dept.	Scheduled Caste Devt. Dept.	131	96	261	140	102	NA	730		
Dept. Total												
VII. Directorate Of Sainik Welfare												
45	House Building Grant	Directorate of Sainik Welfare	Directorate of Sainik Welfare	3	1	10	3	4	1	22		
VIII. Directorate Of Minority Welfare												
46	Housing Scheme for Divorced/Abandoned women and widows from minority communities	Directorate of Minority Welfare	District Collector	0	0	950	749	798	Implementation under process	2497		
IX Kerala State Development Corporation for Christians Converts from Scheduled Castes and the Recommended Communities												
47	House Construction Scheme			360	420	295	68	250	96	1489		
48	Landless Houseless Scheme			1	0	4	0	2	2	9		
Dept. Total												
Total Number of houses constructed through different departments												
											1498	476490

Appendix- 5.60				
Interest rates of different financial institutions on housing loan as on 30 September 2016				
Sl. No.	Name of Bank	Loan limit	Repayment Period	Rate of interest 2016
I	House fed			
1	EWS	Up to 1 lakh	15 Years	11%
2	LIG	Up to 3 lakh	15 years	12%
3	MIG	Up to 5 lakh	15 years	12.5%
4	HIG	₹ 5,00,001 to 15,00,000	15 years	13%
5	Repair 1	Up to 1 lakh	10 Years	11%
6	Repair 2	Up to 3 lakh	10 years	12%
7	Repair 3	Up to 5 lakh	10 years	12.5%
8	Repair 4	Up to ₹ 5,00,001/- to 7,50,000	10 years	14 %
II	Kerala State Co-operative Agricultural and Rural Development Bank Ltd.			
	KSCARDB	20 lakh	15 years	Up to 50,000 - 12.20% Above 50,000 – 13.15%
III	State Bank of India (SBI)			
1	Home Loan Her Ghar	Per lakh	30 years	9.25%
2	Home Loan Others	Per lakh	30 years	9.25%
3	Maxgain (₹20 lakh to Rs.75 lakh)	Per lakh	30 years	Women-9.35% Others-9.40%
4	Maxgain (Above ₹ 75 lakh)	Per lakh	30 years	Women-9.60% Others-9.65%
5	CRE Maxgain	Per lakh	30 years	Women-9.80% Others-9.85%
IV	Bank of Baroda			
	Baroda Home Loan	1000 lakh	30 years	9.55% - 10.55%
V	Bank of India			
	Bank of India Housing loan	Max. limit ₹.300 lakh	Maximum 30 years	9.70% as on 30-09-2016 and 9.30% as on 24-11-2016

Appendix 6.1											
Export of Commodities through Cochin Port during 2011-12 to 2015-16											
Sl. No.	Commodity	2011-12		2012-13		2013-14		2014-15		2015-16	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Tea	11137	1150.13	94165	1234.24	96681	1371.79	90348	1236.19	67103	987.05
2	Cashew Kernels	71187	2215.8	67067	1982.68	64897	2657.14	67273	2754.16	50054	1568.07
3	Sea Foods	207107	2673.11	210986	2803.95	222794	3999.96	185922	3337.30	139980	3019.64
4	Coir Products	122521	400.49	140882	556.47	124116	385.37	125523	389.12	124305	374.03
5	Spices	114669	873.54	92570	374.55	95540	655.19	84388	582.28	49706	315.91
6	Coffee	115359	1146.29	80674	902.18	75631	872.03	65216	1121.05	54720	858.16
7	Miscellaneous includes POL	3568925	12110.34	3147631	14118.4	3570686	14341.5	3439808	13662.1	3428249	19316.15
	Total	4310905	20569.7	3833975	21972.4	4250345	24283	4058478	23082.2	3914117	26439.01

Source: Cochin Port Trust, Coffee Board & Tea board

Appendix 6.2											
Commodity-wise Import through Cochin Port during 2011-12 to 2015-16 (Quantity in M.T)											
Sl. No.	Commodity	2011-12		2012-13		2013-14		2014-15		2015-16	
		Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)	Quantity	Growth rate (%)
1	2	3	4	5	6	7	8	9	10	11	12
1	Fertilizers & Raw materials	430797	-30.49	353104	-18.03	307531	-12.91	445632	44.91	252285	-43.39
2	Food grains	17058	93.90	0	0	0	0	0	0	95475	0.00
3	Iron, Steel & Machinery	43724	-78.58	12915	-70.46	8761	-32.16	26922	207.29	38894	44.47
4	Newsprint	132725	10.73	100881	-23.99	26964	-73.27	0	-100	0	0.00
5	Cashew nut	252771	-20.33	249755	-1.19	201955	-19.14	206542	2.27	160107	-22.48
6	Miscellaneous*	14920069	13.04	15294460	2.51	16091282	5.21	16857440	4.76	17637431	4.63
	Total	15780086	9.06	16011115	1.46	16636493	3.91	17536536	5.41	18184192	3.69

Source: Cochin Port Trust

* includes P O L

Appendix 6.3							
Item wise Exports of Marine Products from India & Kerala during 2015-16 (Qty. in MT, Value ₹ in crore)							
Sl. No.	Item	Kerala		India		Kerala Share %	
		Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8
1	Frozen Shrimp	50461	2381.93	373866	20045.50	13.50	11.88
2	Frozen fish	26633	433.13	228749	3462.25	11.64	12.51
3	Frozen Cuttle	25816	706.34	65596	1636.11	39.36	43.17
4	Frozen Squid	27636	605.90	81769	1615.21	33.80	37.51
5	Dried Items	611	30.36	43320	725.58	1.41	4.18
6	Live Items	353	46.84	5493	308.81	6.43	15.17
7	Chilled Items	6255	229	33150	809.5	18.87	28.29
8	Others	11375	210.92	113949	1817.87	9.98	11.60
Total		149140	4644.42	945892	30420.83	15.77	15.27

Source: The Marine Products Exports Development Authority.

Appendix 6.4						
Exports of Cashewnut shell Liquid / Cardanol from India & Kerala during 2010- 11 to 2015-16 (Qty in MT & Value ₹ in crore)						
Year	Kerala		India		Kerala Share (%)	
	Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7
2010-11	2624	6.17	12051	33.77	21.77	18.27
2011-12	1243	4.82	13528	59.46	9.19	8.11
2012-13	1575	4.17	9192	29.84	17.13	13.97
2013-14	872	2.66	9480	38.61	9.19	6.89
2014-15	818	2.7	10938	55.81	7.48	4.83
2015-16	111	0.27	11677	57.59	0.95	0.46

Source: Cashew Export Promotion Council of India.

Appendix 6.5		
District wise number of Emigrants from Kerala		
District	2008	2014
Thiruvananthapuram	308481	241727
Kollam	207516	199933
Pathanamthitta	120990	141343
Alappuzha	131719	93096
Kottayam	89351	107931
Idukki	5792	23967
Ernakulam	120979	191373
Thrissur	284068	230081
Palakkad	189815	70506
Malappuram	334572	455696
Kozhikode	199163	226499
Wayanad	13996	22568
Kannur	119119	291321
Kasaragod	67851	104334
Kerala	2193412	2400375

Source : Report on Kerala Migration Survey 2014 (Draft)

Appendix 6.6		
District wise number of return emigrants		
District	2003	2014
Thiruvananthapuram	103059	218945
Kollam	69314	127978
Pathanamthitta	83502	36285
Alappuzha	43109	70104
Kottayam	28368	33898
Idukki	3766	3242
Ernakulam	74435	69545
Thrissur	86029	103803
Palakkad	55008	12383
Malappuram	141537	299857
Kozhikode	109101	107491
Wayanad	3852	12581
Kannur	45394	109145
Kasaragod	47468	47212
Kerala	893942	1252469

Source : Report on Kerala Migration Survey 2014 (Draft)

Appendix 6.7			
District Wise Working NRKs			
District	Female	Male	Total
Thiruvananthapuram	6067	104353	110420
Kollam	6871	109595	116466
Pathanamthitta	14395	63407	77802
Alappuzha	8731	71749	80480
Kottayam	22585	48714	71299
Idukki	3598	7361	10959
Ernakulam	16322	63204	79526
Thrissur	6433	143381	149814
Palakkad	2169	81608	83777
Malappuram	1751	276645	278396
Kozhikode	3413	144583	147996
Wayanad	1332	14328	15660
Kannur	4419	139269	143688
Kasaragod	1240	59330	60570
Total	99326	1327527	1426853

Source: Economic and Statistics Department, GoK

Appendix 7.1

Sl. No.	Name of Institution	ITI wise details of seat strength and enrolment in government ITIs																													
		Total Seat Strength						Total Enrolment						Women						SC						ST					
		2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17															
1	ITI D'Putam	931	857	900	900	848	862	145	147	127	140	90	152	0	3	0															
2	Aryanad	294	273	304	294	236	291	32	38	13	127	57	119	46	14	34															
3	Chakkai	991	990	1038	961	889	1011	94	88	109	128	121	134	5	3	2															
4	Kazhakkuttam(w)	529	524	540	461	424	418	461	424	418	102	66	107	1	0	1															
5	Attungal	694	562	610	691	472	594	144	64	85	122	89	37	2	2	1															
6	(W) Parassala	73	73	73	73	73	73	73	73	73	11	9	18	0	1	0															
7	Malayinkeezhu	32	74	53	31	73	53	0	0	3	5	8	7	0	0	0															
8	Chandanathope, Kollam	842	721	805	833	675	663	115	129	135	144	106	144	6	2	1															
9	Kollam(w)	571	597	486	455	469	369	455	469	369	118	113	84	0	1	0															
10	Chathannoor	58	179	158	58	179	158	5	50	50	14	25	19	0	0	0															
11	Basic Training Centre, Kollam	63	147	304	60	147	283	4	30	42	14	28	64	0	0	0															
12	Elamad	68	68	68	68	68	65	4	0	1	7	12	19	0	0	0															
13	Thevalakkara	95	95	116	95	94	116	6	7	14	25	14	16	0	0	0															
14	Chenneerkara	385	367	377	367	304	309	44	51	47	126	60	135	2	1	2															
15	Mezhuvelli(W)	63	84	84	63	54	41	54	54	41	32	27	19	0	0	0															
16	Chengannur	839	789	837	794	773	762	93	84	47	189	251	180	4	3	5															
17	(W) Chengannur	115	220	276	115	111	213	111	111	213	45	84	96	0	1	0															
18	Purakkad	74	74	74	74	72	68	8	2	4	8	8	14	0	0	0															
19	Kayamkulam	73	73	73	73	73	73	42	24	21	17	10	4	0	0	0															
20	Vayalar	42	42	42	42	42	42	8	10	8	6	4	5	1	0	0															
21	Ertumanoor	770	700	800	743	661	740	78	79	70	109	107	120	10	8	5															
22	Pallikkathode	601	761	672	514	593	524	47	46	30	53	71	75	10	13	9															
23	Peruva	94	94	92	94	84	49	32	20	12	23	22	6	0	0	0															
24	Thiruvappu	63	63	63	63	63	63	0	0	0	9	8	6	0	0	0															
25	Kattappana	326	352	352	326	314	317	12	23	7	50	40	40	7	16	8															
26	Rajakkad	21	74	74	21	48	58	0	0	0	3	8	7	1	2	3															
27	Kalamassery	774	799	784	745	685	669	81	88	79	143	145	115	9	9	3															
28	(W) Kalamassery	220	220	220	204	220	224	204	220	224	48	32	61	5	0	2															
29	Arakkuzha	63	63	63	58	63	41	6	5	0	9	22	11	1	1	1															
30	Meenad	53	53	74	53	52	74	8	11	5	18	15	22	0	1	0															
31	Vengoor	94	94	94	94	69	92	28	17	21	32	15	26	0	0	1															
32	Chalakyady	758	684	763	736	627	629	81	55	62	137	97	121	13	10	12															
33	(W)Chalakyady	136	199	199	133	115	168	133	115	168	36	39	55	5	2	0															

34	Mala	446	509	450	425	404	358	48	29	40	67	79	78	0	0	0
35	Eriyad	73	73	73	73	73	73	23	26	19	4	7	7	2	0	0
36	Desamangalam	42	42	42	42	42	0	13	11	7	7	7	7	0	0	0
37	Cherpu	42	42	63	42	42	63	12	11	17	6	11	18	0	0	0
38	Manaloor	42	42	42	42	42	42	5	9	6	7	6	4	0	0	0
39	Kuzhalmannam	137	74	179	137	74	179	30	4	33	28	12	28	0	0	1
40	Malampuzha	648	816	689	642	783	678	155	170	122	143	129	172	16	2	15
41	(W) Malampuzha	199	204	183	176	182	171	176	182	171	39	28	49	1	2	1
42	Attappadi	116	158	137	107	135	136	6	14	14	10	19	20	56	67	61
43	Vaniyankulam	63	63	63	62	63	63	39	33	30	27	19	22	0	1	1
44	Nenmara	105	105	105	105	105	105	26	38	33	18	13	22	1	0	1
45	Arecode	326	473	441	324	436	433	73	38	89	58	41	104	3	1	9
46	Nilambur	116	116	116	115	115	116	15	6	21	89	55	81	8	6	14
47	Maranchery	63	63	63	63	63	63	10	14	8	19	14	18	0	0	0
48	Puzhakattiti	42	42	42	42	42	42	11	13	6	5	4	6	0	0	0
49	Cheriamundam	84	84	84	84	84	84	21	24	20	10	9	10	1	0	0
50	Kozhikode	636	662	584	629	660	592	66	70	63	76	100	72	11	4	8
51	(W)Kozhikkode	366	403	382	359	349	353	359	349	353	47	36	68	2	10	3
52	Quilandy	294	262	324	286	203	267	44	47	40	33	22	45	2	2	0
53	Valayam	42	42	42	42	42	42	14	20	20	4	4	3	0	1	1
54	Beyyore	73	73	73	73	72	71	40	30	35	10	9	9	0	0	0
55	Thiruvambadi	84	84	84	83	84	84	11	0	7	12	13	13	0	1	0
56	Vadakara	84	84	84	83	84	84	14	7	11	9	8	8	0	0	0
57	Maniyoore	74	74	74	74	74	74	12	17	12	7	9	8	0	0	0
58	Kalpetta	168	231	231	165	126	110	26	20	18	28	7	26	20	9	15
59	Nenmeni (W)	84	63	63	62	49	63	62	49	63	3	4	3	11	13	11
60	Kannur	716	716	685	668	703	625	230	113	91	65	80	67	12	13	11
61	(W) Kannur	183	183	156	183	183	148	183	183	148	15	19	20	3	0	0
62	Peravoor	42	42	42	42	42	42	21	20	14	3	3	3	1	1	3
63	Kurumathoor	42	42	42	42	42	42	7	3	3	5	7	5	1	0	2
64	Peringom vayakkara	32	53	53	21	53	53	0	0	0	2	3	5	0	1	4
65	Madai	94	94	104	94	94	81	51	32	26	27	17	16	0	1	0
66	Kasargode	422	378	408	401	370	290	121	98	63	56	32	29	22	11	21
67	Kayyur	363	409	388	352	392	282	91	89	41	37	31	25	14	11	13
68	Pullur	42	42	42	41	42	42	0	3	0	2	5	2	0	2	3
69	Madikkai	53	53	53	50	53	53	11	9	11	1	1	3	2	3	3
70	Seethangoli	32	37	53	17	36	50	0	3	7	3	7	5	3	2	2
71	Ranni	42	42	42	42	42	42	6	10	5	7	10	9	3	0	1
72	Maradu	42	74	74	42	74	74	5	4	4	4	12	12	0	0	0

73	Pallippad	42	42	63	42	41	61	12	11	13	5	6	8	0	0	0
74	(W) Thazhicode	42	42	42	42	40	39	42	40	39	8	4	11	0	0	0
75	(W) West Eleri	73	115	105	73	95	87	73	95	87	1	0	0	27	38	55
76	Kanjiuzhy	42	73	63	42	61	40	15	10	10	3	1	3	10	5	4
77	(W) Changanassery	21	21	21	18	21	21	18	21	21	6	4	7	0	0	1
78	Elambulasserri	0	0	52	0	0	41	0	0	5	0	0	5	0	0	1
79	Kozhinjanpara	0	0	21	0	0	21	0	0	0	0	0	5	0	0	2
80	Koothuparambu	0	0	21	0	0	21	0	0	10	0	0	1	0	0	1
81	Koduvali	0	0	21	0	0	21	0	0	1	0	0	4	0	0	0
82	Narippatta	0	0	47	0	0	41	0	0	0	0	0	3	0	0	0
Total		17579	18307	18779	16841	16482	16675	4805	4509	4355	3066	2710	3187	360	300	358

Source: Industrial Training Department

Appendix 7. 2														
Trade wise intake and out turn in Government ITIs during 2015-16 as on 30-09- 2016(1 Year Course)														
Sl. No.	Name of trade	Students admitted in 2015(Numbers)					Students passed (Numbers)							
		Total		SC		ST		Total		SC		ST		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
1	Architectural Assistant	147	169	20	55	1	1	38	67	2	1	0	0	
2	Fashion Design Technology	22	337	9	75	0	29	9	133	0	3	0	0	
3	BAKER and CONFECTIONER	42	0	10	0	0	0							
4	Carpenter	531	2	119	2	2	0	26	0	1	0	1	0	
5	Catering and Hospitality Assistant	38	0	9	0	0	0							
6	Computer Hardware and Network Maintenance	160	30	37	12	5	1							
7	Computer Operator and Programming Assistant	535	657	85	157	9	4	74	84	3	3	1	0	
8	Craftsman Food Production (General)	104	25	36	27	0	0	43	2	0	0	0	0	
9	Desktop Publishing Operator	117	156	43	14	2	23	23	35	0	3	0	0	
10	Digital Photographer	40	0	8	0	0	0	22	0	0	0	0	0	
11	Dress Making	0	128	0	41	0	0	0	18	0	1	0	0	
12	Fire and Safety Engineering	31	0	3	0	1	0							
13	Food and Beverage Service Assistant	21	0	4	0	0	0	10	0	0	0	0	0	
14	Front Office Assistant	9	47	5	17	0	0	0	26	1	0	0	0	
15	Hospital House keeping	75	120	14	39	0	0	30	28	1	1	0	0	
16	Interior Decoration and Designing	62	106	11	22	0	0	0	60	0	2	0	0	
17	Mech.Diesel	486	14	93	0	44	0	72	1	3	0	0	0	
18	Mechanic Auto Electrical and Electronics	80	3	15	1	1	0							
19	Mechanic Lense and Prsm Gringing	29	0	10	0	0	0	11	0	0	0	0	0	
20	Milk and Milk Products	0	4	0	1	0	0							
21	Plumber	999	1	195	1	29	1	119	0	3	0	1	0	
22	Pump operator cum Mechanic	28	0	6	0	0	0							
23	Secretarial Practice	0	67	0	15	0	0							
24	Sheet Metal Worker	315	23	41	15	2	0							
25	Stenographer and Secretarial Assistant (English)	85	221	14	66	2	3							
26	Surveyor	243	149	51	46	4	0							
27	Upholster	21	0	3	0	0	0							

28	Welder	1478	5	286	4	14	17	211	0	3	0	2	0
29	Foundryman	87	0	17	0	0	0						
30	Stenographer and Secretarial Assistant (Hindi)	0	17	0	3	0	0						
31	PPO (Plastic Processing Operator)	55	19	12	6	0	0						
32	Mech. Tractor	74	3	17	2	2	0						
33	Tourist Guide	11	0	0	0	0	0						
34	Diarying	32	0	4	0	2	0						
35	Horticulture	7	6	1	3	0	0						
36	Surface ornamentation technician	0	21	0	0	0	0	0	20	0	0	0	0
Total		5964	2330	1178	624	120	79	688	474	17	14	5	0

Source: Industrial Training Department

Appendix 7.3													
Trade wise intake and out turn in government ITIs during 2015-16 as on 30-09- 2016 (6 months course)													
Sl. No.	Name of trade	Students admitted in 2015 (Numbers)						Students passed (Numbers)					
		Total	SC	Boys	Girls	Boys	Girls	ST	Total	SC	Boys	Girls	ST
1	Driver-cum Mechanic	116	0	20	0	2	0	97	0	28	0	1	0

Source: Industrial Training Department

Appendix 7.4													
Trade wise intake and out turn in government ITIs during 2015-16 as on 30.09.2016 (two year course)													
Sl. No.	Name of Trade	Students admitted in 2015 (Numbers)						Students passed (Numbers) 2014-16					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	D/Civil	576	659	81	104	23	30						
2	D/Mech	84	36	6	8	0	0						
3	Electrician	1004	163	139	51	21	4						
4	Electronic Mechanic	553	250	95	107	12	2						
5	Electroplater	16	5	2	1	0	0						
6	Fitter	907	70	115	26	18	1						
7	Instrument Mechanic	100	25	14	7	2	0						
8	Machinist	379	33	44	22	2	0						
9	Mach. Machine Tool Maintenance	21	0	5	0	0	0						
10	Mechanic (Medical Electronics)	33	16	5	5	0	0						
11	Mechanic (Motor Vehicle)	246	3	26	0	3	0						
12	Mechanic (Refrigeration and Air Conditioning)	348	39	44	16	2	0						
13	Mech. Agriculture Machinery	34	8	9	3	1	0						
14	Painter General	68	13	18	10	3	0						
15	TDM (Dies and Moulds)	84	13	25	7	0	0						
16	TDM (Jigs and Fixtures)	75	1	7	0	0	0						
17	Turner	416	30	50	15	2	0						
18	Wireman	538	36	66	14	9	1						
19	Attendant Operator (Chemical plant)	11	10	0	4	0	0						
20	Information and Communication Technology System Maintenance	0	60	0	14	0	0						
21	Instrument Mechanic (Chemical Plant)	15	6	3	2	0	0						
22	Laboratory Assistant (Chemical Plant)	10	11	0	4	0	0						
23	Lift and Escalator Mechanic	21	0	5	0	0	0						
24	Maintenance Mechanic (Chemical Plant)	21	0	2	0	0	0						
25	Mechanic consumer Electronics Appliances	118	28	41	13	0	0						
26	Mechanic Mechatronics	19	2	1	0	0	0						
27	Technician Power Electronic appliances	172	23	39	8	2	0						
	Total	5869	1540	842	441	100	38						

Result not declared

Source: Industrial Training Department

Appendix 7.5													
Trade wise intake and out turn in government ITIs during 2015-16 as on 30.09.2016 (3 year course)													
Sl. No.	Name of Trade	Students admitted in 2015 (Numbers)						Students passed (Numbers) 2012-15					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Tool Die Maker (Dies and Moulds)	0	0	0	0	0	0	55		3	0	0	0
2	Tool Die Maker (Jigs and Fixtures)	0	0	0	0	0	0	32		10	0	0	0
	Total	0	0	0	0	0	0	87	0	13	0	0	0

Source: Industrial Training Department

Appendix 7.6													
Trade wise intake and out turn in government ITIs during 2015-16 as on 30.09.2016 (COE course)													
Sl. No.	Name of Trade	Students admitted in 2015 (Numbers)						Students passed (Numbers) 2014-16 Feb					
		Total		SC		ST		Total		SC		ST	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1	Automobile Sector	239	8	22	7	2	0	159	6	6	1	1	2
2	Hospitality Management Sector	108	18	12	5	8	1	42	11	1	2	0	3
3	Production and Manufacturing Sector	120	0	22	0	0	0	93	8	10	4	0	0

Source: Industrial Training Department

Appendix 7.7			
New trades introduced during the last 2 years as part of modernisation-2014 and 2016			
Sl. No.	Name of ITI	Trade	Unit
1	ITI Dhanuvachapuram	Mechanic consumer electronics Appliances	4
		Computer Hardware and Network maintenance	1
		Welder (GMAW and GTAW)	2
2	ITI Chackai, Thiruvananthapuram	1. Mechanic consumer electronic Appliances	4
		Pump operator cum mechanic	2
3	ITI Kollam(W)	Computer Hardware and Network maintenance	2
		Technician Power Electronic systems	1
		Mechanic Consumer Electronics Appliances	2
		Agro processing	2
		Fruits and Vegetables Processing	2
		Milk and Milk Products	2
4	ITI Chengannur	Computer Hardware and Network maintenance	2
		Mechanic consumer electronics Appliances	2
		Technician Power Electronics systems	2
5	ITI Ettumanoor	Technician Power Electronics systems	4
6	ITI Pallickathode	Technician Power Electronics systems	2
		Computer Hardware and Network maintenance	2
		House keeper	2
7	ITI Areacode	Technician Power Electronics systems	2
8	ITI Kozhikode	Mechanic consumer electronics Appliances	2
		Welder (GMAW and GTAW)	2
		Welder (Structural)	2
		Welder (Welding and Inspection)	2
9	ITI(W) Kozhikode	Computer hardware and Network maintenance	2
10	ITI Kannur	Technician Power Electronics System	4
		Welder (GMAW and GTAW)	2
		Welder (Structural)	2
		Welder (Welding and Inspection)	2
11	ITI (W) Kazhakuttom	Technician power electronics system	2
		Sewing Technology	2
		Computer aided Embroidery and Designing	2
12	ITI Chennerkkara	Technician Power Electronics systems	2
13	ITI Mala	Computer hardware and Network maintenance	2
		Technician Power Electronics System	2
14	ITI Elamad Kollam	Computer hardware and Network maintenance	2

Source: Industrial Training Department

Appendix 7.8							
Institution wise details of Apprentices under Industrial Training Department							
Sl. No.	Name of Institute	Seat Strength (Numbers)		Apprentices Trained (Numbers)			
		2015	2016	2015		2016	
				Boys	Girls	Boys	Girls
1	Thiruvananthapuram R.I.C	2202	2243	320	195	345	166
2	Kollam „	349	294	239	110	197	97
3	Allapuzha „	742	736	253	90	252	91
4	Kottayam „	662	668	140	48	163	41
5	Kalamassery „	358	325	319	39	305	20
6	Thrissur „	585	587	177	42	183	50
7	Palakkad „	539	550	444	95	450	100
8	Kozhikode „	305	383	163	92	136	60
9	Kannur „	330	384	119	78	159	105
10	Chenneerkara I.T.I	268	338	11	10	20	12
11	Kattappana „	270	270	40	8	14	19
12	Areacode „	26	39	24	2	23	16
13	Kalpatta „	56	56	12	3	25	4
14	Kasaragode „	117	117	5	15	5	15
Total		6809	6990	2266	827	2277	796

Source: Industrial Training Department

Appendix 8.1 a

Source Wise Funding of LSGs Plan for 2014-15

Type of LSGs	Grant - in - Aid (Plan fund)		Own Fund		State Sponsored		Centrally Sponsored		Loan from Co-Operative		Externally Aided		Institutional Finance		Voluntary Contribution		Beneficiary contribution		Others		Total	
	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																						
GPt	3183.84	2185.05	711.99	280.94	176.62	20.45	256.11	60.31	104.25	7.8	75.8	7.21	356.1	11.85	17.99	2.2	243.45	70.66	1319.45	889.45	6445.59	3535.91
BPt	677.58	567.1	18.54	7.11	178.59	13.08	365.1	37.52	2.68	0.08	23.15	1.24	22.68	0.14	1.74	0.00	24.59	1.38	409.28	72.69	1723.92	700.34
DPt	856.46	574.11	66.51	28.57	40.88	0.07	116.98	2.56	0	0	10.12	1.78	4.5	0	2.4	0.02	23.61	0.27	620.80	303.06	1742.16	910.43
MN	633.45	406.15	69.08	9.1	29.68	0.35	95.51	15.7	17.02	0	9.03	0.46	99.11	1.89	5.9	0	21.96	0.71	208.88	151.61	1189.6	585.97
CR	563.55	301.54	22.71	0.48	7.35	0.04	9.73	0.18	0	0	0.3	0	21.27	0.02	0.02	0	17.27	0.04	173.90	99.93	816.01	402.22
Total	5914.80	4033.94	888.82	326.19	433.12	33.99	843.42	116.27	123.95	7.89	118.30	10.68	503.66	13.91	28.06	2.22	330.87	73.06	2732.30	1516.73	11917.30	6134.87

Appendix 8.1 b
Source Wise Funding of LSGs Plan for 2015-16

Type of LSGs	Grant - in - Aid (Plan fund)		Own Fund		State Sponsored		Centrally Sponsored		Loan from Co-Operative		Externally Aided		Institutional Finance		Voluntary Contribution		Beneficiary contribution		Others		Total	
	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.	Fund Allocated	Expn.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																						
GPT	3000.31	2386.2	785.11	334.89	143.32	16.95	276.24	61.99	149.73	15.12	68.83	8	290.89	30.44	10.76	1.61	211.74	54.34	1407.34	999.16	6344.28	3908.7
BPT	732.53	624.7	22.06	7.78	212.53	5.68	370.27	8.84	0.86	0.05	36.06	0.72	13.75	0	0.76	0	28.89	0.75	400.59	61.38	1818.31	709.9
DPT	906.49	593.52	56.21	22.16	19.5	0.44	136.74	10.15	0	0	6.05	0.45	4.84	0	2.73	0.39	8.67	0.48	660.46	347.87	1801.68	975.47
MIN	755.05	518.23	165.13	54.26	39.81	1.13	60.27	3.73	27.81	0.02	89.44	0.46	108.37	1.46	3.69	0	26.89	1.69	294.94	205.64	1571.39	786.61
CR	674.8	345.12	39.18	9.41	4.87	0.03	6.43	0.74	4.69	0	1.54	0.04	12.88	0.08	8.64	0	13.97	0.19	220.68	136.13	987.7	491.65
Total	6069.18	4467.76	1067.69	428.51	420.04	24.23	849.95	85.44	183.10	15.19	201.92	9.67	430.73	31.90	26.58	2.00	290.16	57.46	2984.02	1750.18	12523.37	6872.33

Appendix 8.2 (a)																
Grant-in-Aid to LSGs - Category wise Outlay and Expenditure for 2014-15																
Type of LSGs	General				SCP				TSP				Total			
	Budgeted Outlay	Fund Available	Expenditure	%	Budgeted Outlay	Fund Available	Expenditure	%	Budgeted Outlay	Fund Available	Expenditure	%	Budgeted Outlay	Fund Available	Expenditure	%
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1																
Grama Panchayats	2162.45	2443.04	1706.38	69.85	478.63	628.14	409.50	65.19	82.37	112.66	69.17	61.39	2723.45	3183.84	2185.05	68.63
Block Panchayats	433.99	472.33	396.95	84.04	159.54	175.79	144.45	82.17	27.46	29.46	25.70	87.23	620.99	677.59	567.10	83.69
District Panchayats	430.39	575.05	398.02	69.21	159.54	240.99	151.09	62.69	27.46	40.33	25.00	62.00	617.39	856.37	574.11	67.04
Municipalities	427.88	517.88	343.20	66.27	71.42	112.60	61.19	54.35	1.94	2.97	1.74	58.63	501.23	633.45	406.15	64.12
Corporations	335.2	467.08	256.21	54.85	58.43	96.45	45.33	47.00	0	0.08	0.00	0.00	393.64	563.55	301.54	53.51
Total	3789.90	4475.39	3100.77	69.28	927.58	1253.97	811.56	64.72	139.22	185.44	121.61	65.58	4856.70	5914.80	4033.94	68.20

Appendix 8.2 (b)
Grant-in-Aid to LSGs - Category wise Outlay and Expenditure for 2015-16

Type of LSGs	General				SCP				TSP				Total			
	Release Amount	Fund Available	Expenditure	%	Release Amount	Fund Available	Expenditure	%	Release Amount	Fund Available	Expenditure	%	Release Amount	Fund Available	Expenditure	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Grama Panchayats	1473.79	2197.84	1866.67	84.93	461.13	670.98	436.95	65.12	79.09	131.49	82.57	62.80	2014	3000.31	2386.20	79.53
Block Panchayats	435.48	504.26	436.24	86.51	159.54	192.49	157.63	81.89	27.46	35.78	30.83	86.17	622.46	732.53	624.70	85.28
District Panchayats	435.98	608.61	412.08	67.71	159.54	248.96	149.58	60.08	27.46	48.92	31.85	65.11	622.97	906.49	593.52	65.47
Municipalities	477.43	601.01	441.89	73.52	85.55	145.59	71.82	49.33	5.2	8.46	45.24	53.47	568.17	755.04	518.23	68.64
Corporations	383.8	562.32	304.06	54.07	61.81	112.44	41.06	36.52	0.01	0.04	0.00	0.00	445.62	674.80	345.12	51.14
Total	3206.48	4474.04	3460.94	77.36	927.58	1370.46	857.04	62.54	139.21	224.68	149.78	66.66	4273.28	6069.18	4467.76	73.61

Appendix 8.3(a)

Grant-in-Aid to LSGs - Sector wise Allocation and Expenditure for 2014-15

Type of LSGs	Productive			Service			Infrastructure			Total		
	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%
	2	3	4	5	6	7	8	9	10	14	15	16
Grama Panchayats	297.40	220.03	73.99	1729.92	1290.37	74.59	1156.53	674.65	58.33	3183.84	2185.05	68.63
Block Panchayats	63.80	44.87	70.34	383.56	340.65	88.81	230.23	181.57	78.87	677.59	567.09	83.69
District Panchayats	88.09	54.85	62.27	450.36	331.69	73.65	317.93	187.57	59.00	856.37	574.11	67.04
Municipalities	33.90	20.89	61.41	318.76	218.67	68.60	280.79	166.66	59.35	633.45	406.15	64.12
Corporations	28.49	12.16	42.67	289.75	145.38	50.18	245.31	144.00	58.70	563.55	301.54	53.51
Total	511.66	352.73	68.94	3172.35	2326.77	73.35	2230.79	1354.45	60.72	5914.80	4033.94	68.20

Appendix 8.3(b)

Grant-in-Aid to LSGs - Sector wise Allocation and Expenditure for 2015-16

Type of LSGs	Productive			Service			Infrastructure			Total		
	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%	Fund Allocated	Expenditure	%
	2	3	4	5	6	7	8	9	10	14	15	16
Grama Panchayats	270.16	210.11	77.77	1622.27	1269.77	78.27	1107.89	906.31	81.81	3000.31	2386.20	79.53
Block Panchayats	65.58	49.48	75.46	415.15	371.24	89.42	251.81	203.98	81.01	732.53	624.70	85.28
District Panchayats	79.34	41.13	51.85	497.41	358.68	72.11	329.74	193.70	58.74	906.49	593.52	65.47
Municipalities	42.99	27.33	63.58	390.35	266.23	68.20	321.70	224.67	69.84	755.05	518.23	68.64
Corporations	33.26	14.85	44.64	353.07	167.70	47.50	288.47	162.56	56.35	674.80	345.12	51.14
Total	491.32	342.91	69.79	3278.25	2433.63	74.24	2299.61	1691.22	73.54	6069.18	4467.76	73.61

Appendix 8.4 a
Grant-in-Aid to LSGs - Production Sector - Allocation and Expenditure for 2014-15

Development Sector	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
	(₹ in lakh)																	
Agriculture	11754.27	10330.66	87.89	1719.19	1452.09	84.46	2714.07	1908.26	70.31	1271.95	1082.50	85.11	380.72	216.77	56.94	17840.19	14990.29	84.03
Irrigation	1898.56	949.76	50.03	1279.76	752.86	58.83	1612.07	905.94	59.92	312.42	181.85	58.21	313.29	149.57	47.74	5416.11	2999.97	55.39
soil-water conservation, Environment afforestation	1104.00	684.59	62.01	421.24	285.08	67.68	559.47	246.40	44.04	303.83	112.16	36.91	43.52	13.79	31.68	2432.05	1342.02	55.18
Animal Husbandry	8259.54	6221.26	75.32	862.33	711.18	82.47	552.94	491.60	88.91	601.79	400.67	66.58	602.87	272.92	45.27	10879.46		74.43
Dairy development	1759.87	1649.78	93.74	455.92	442.88	97.14	176.84	169.41	95.80	86.34	71.85	83.23	56.20	53.56	95.31	2535.16	2387.49	94.17
Fisheries	451.13	215.83	47.84	52.63	28.39	53.94	137.28	109.99	80.12	221.82	81.83	36.89	605.56	212.08	35.02	1468.42	648.12	44.14
Industry, Self-employment enterprises, marketing promotion	4228.06	1803.42	42.65	1519.73	760.60	50.05	2743.16	1300.74	47.42	458.79	143.61	31.30	831.52	296.91	35.71	9781.25	4305.29	44.02
Energy generation	207.29	86.26	41.61	63.77	49.02	76.87	312.71	292.44	93.52	133.08	7.46	5.61	15.10	0.00	0.00	731.95	435.17	59.45
Financial contribution as per Government Order (Productive Sector)	76.89	61.70	80.25	5.00	5.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.89	66.70	81.46
Total	29739.61	22003.26	73.99	6379.56	4487.10	70.34	8808.53	5484.78	62.27	3390.01	2081.94	61.41	2848.78	1215.61	42.67	51166.49	35272.69	68.94

Appendix 8.4 b

Grant-in-Aid to LSGs - Production Sector - Allocation and Expenditure for 2015-16

Development Sector	₹ in lakh)																	
	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
Agriculture	11647.11	10534.78	90.45	1851.21	1599.82	86.42	3009.08	2148.72	71.41	1722.66	1394.71	80.96	867.78	451.86	52.07	19097.83	16129.90	84.46
Irrigation	1410.78	832.12	58.98	1188.13	696.17	58.59	1900.05	517.18	27.22	428.02	187.40	43.78	384.54	218.24	56.75	5311.52	2451.11	46.15
soil-water conservation Environment, afforestation	857.77	552.62	64.43	570.47	395.71	69.37	521.54	236.41	45.33	307.31	239.65	77.98	70.46	13.21	18.75	2327.55	1437.61	61.77
Animal Husbandry	7404.15	5520.12	74.55	772.51	616.20	79.77	205.84	122.34	59.43	871.10	480.49	55.16	567.20	257.83	45.46	9820.80	6996.98	71.25
Dairy development	1925.08	1819.11	94.50	832.77	822.63	98.78	357.40	301.58	84.38	170.54	153.98	90.29	117.25	69.99	59.70	3403.04	3167.30	93.07
Fisheries	363.43	247.36	68.06	6.50	4.47	68.78	84.89	69.72	82.13	217.39	73.93	34.01	581.90	270.96	46.56	1254.12	666.44	53.14
Industry, Self-employment enterprises, marketing promotion	3252.85	1373.74	42.23	1308.66	786.06	60.07	1619.95	509.77	31.47	568.94	196.47	34.53	736.72	202.64	27.51	7487.13	3068.67	40.99
Energy generation	72.76	58.45	80.34	22.30	22.25	99.75	235.27	207.73	88.30	6.40	0.00	0.00	6.40	0.00	0.00	336.73	288.43	85.66
Financial contribution as per Govt.Order (Productive Sector)	81.64	72.94	89.34	5.00	5.00	100.00				6.32	6.32	100.00				92.96	84.25	90.64
Total	27015.56	21011.24	77.77	6557.56	4948.32	75.46	7934.03	4113.46	51.85	4298.67	2732.95	63.58	3325.85	1484.73	44.64	49131.67	34290.69	69.79

Appendix 8.5 a

Grant - in - Aid to LSGs - Service Sector - Allocation and Expenditure for 2014-15

Development Sector	(₹ in lakh)																	
	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
Education	14698.90	12029.92	81.84	1267.99	734.61	57.94	9263.33	6117.27	66.04	2840.59	2244.87	79.03	2900.33	1641.96	56.61	30971.15	22768.62	73.52
Continuing education/literacy	363.65	206.84	56.88	47.40	34.92	73.67	63.40	31.69	49.98	58.19	40.13	68.97	32.58	13.51	41.46	565.22	327.08	57.87
Reading Rooms, Libraries and Grama sabha/ward sabha/centres	891.83	359.83	40.35	44.33	30.85	69.60	395.80	231.84	58.57	157.60	115.86	73.51	140.51	56.79	40.42	1630.07	795.18	48.78
Arts, Culture and sports development, Youth welfare	3086.64	1340.81	43.44	687.64	413.48	60.13	1846.87	906.81	49.10	1349.13	621.52	46.07	1803.16	911.69	50.56	8773.44	4194.31	47.81
Health	8159.03	5587.09	68.48	1476.42	974.62	66.01	2723.63	1625.25	59.67	1182.81	892.00	75.41	1277.01	807.48	63.23	14818.91	9886.45	66.72
Drinking water	14250.93	8112.18	56.92	2499.54	1650.34	66.03	6356.59	3286.10	51.70	1923.65	1184.09	61.55	2409.04	957.35	39.74	27439.74	15190.06	55.36
Sanitation, Waste processing	4463.70	1623.52	36.37	270.54	185.35	68.51	603.04	214.64	35.59	2257.96	1107.22	49.04	2929.45	485.89	16.59	10524.70	3616.62	34.36
Housing, House Electrification	44784.22	30537.67	68.19	7629.40	7440.69	97.53	3283.00	2996.29	91.27	13672.34	9311.69	68.11	9646.05	5071.76	52.58	79015.01	55358.09	70.06
Social welfare, social security	13868.12	10072.82	72.63	2390.62	1755.57	73.44	3375.51	2138.83	63.36	2158.54	1726.67	79.99	2331.58	1508.63	64.70	24124.37	17202.52	71.31
Nutrition	17340.31	17011.79	98.11	21.34	18.12	84.91	161.20	133.36	82.73	2008.51	1963.80	97.77	1553.00	1477.51	95.14	21084.37	20604.58	97.72
Anganwadis	7319.99	3519.39	48.08	998.38	549.13	55.00	914.87	212.95	23.28	1010.03	651.01	64.45	2047.71	736.11	35.95	12290.98	5668.59	46.12
Vocational Expertisation	578.31	189.99	32.85	364.88	192.03	52.63	631.29	186.79	29.59	20.63	7.61	36.88	212.63	12.86	6.05	1807.74	589.28	32.60
Energy protection	627.62	238.52	38.00	228.02	107.98	47.36	31.10	29.33	94.34	296.79	149.80	50.47	302.94	0.00	0.00	1486.47	525.63	35.36
Electric line, Transformer	787.73	507.15	64.38	48.02	41.40	86.21	120.11	112.34	93.53	178.18	143.84	80.73	6.91	5.91	85.51	1140.95	810.63	71.05
Tourism	140.26	44.42	31.67	5.00	0.00	0.00	35.94	11.19	31.12	500.70	78.84	15.75	6.35	0.00	0.00	688.26	134.45	19.53
Computerisation	13427.07	11752.56	87.53	986.85	903.34	91.54	441.25	314.71	71.32	932.17	538.15	57.73	645.39	269.53	41.76	16432.73	13778.30	83.85
Plan formulation, implementation	898.34	714.99	79.59	197.55	137.00	69.35	47.76	25.39	53.15	181.52	128.20	70.63	45.37	28.40	62.59	1370.55	1033.97	75.44

Appendix 8.5 b																		
Grant - in - Aid to LSGs - Service Sector - Allocation and Expenditure for 2015-16																		
Development Sector	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
Education	14565.10	11473.92	78.78	1514.29	1022.23	67.51	11660.77	7217.88	61.90	3447.41	2505.43	72.68	3616.79	1788.55	49.45	34804.36	24008.01	68.98
Continuing education/literacy	445.89	324.82	72.85	47.22	30.40	64.38	62.43	22.27	35.68	125.78	86.61	68.86	41.42	36.20	87.40	722.74	500.31	69.22
Reading Rooms, Libraries and Grama sabha/ward sabha centres	909.12	491.98	54.12	153.09	150.37	98.22	311.63	177.08	56.82	323.23	204.04	63.12	149.09	39.65	26.60	1846.16	1063.11	57.58
Arts, Culture and sports and development, Youth welfare	2543.28	1404.32	55.22	614.77	386.93	62.94	2636.43	1362.66	51.69	1077.82	661.37	61.36	1736.76	636.71	36.66	8609.05	4452.00	51.71
Health	7208.71	6153.55	85.36	1494.46	1168.49	78.19	3459.66	2377.87	68.73	1533.92	1229.05	80.12	1159.45	678.59	58.53	14856.21	11607.56	78.13
Drinking water	11260.24	6473.34	57.49	2860.14	1645.29	57.52	5957.16	2653.79	44.55	1888.70	1156.71	61.24	1652.63	723.85	43.80	23618.88	12652.98	53.57
Sanitation, Waste processing	3326.45	1459.78	43.88	311.33	196.73	63.19	497.16	130.37	26.22	2337.10	1204.42	51.53	3033.51	722.00	23.80	9505.55	3713.30	39.06
Housing, House Electrification	52526.85	37798.90	71.96	10015.11	9762.67	97.48	4090.28	3735.53	91.33	17838.50	11021.33	61.78	15235.50	6488.85	42.59	99706.26	68807.28	69.01
Social welfare, social security	13284.88	9941.12	74.83	2735.14	2233.86	81.67	3508.07	2336.05	66.59	2809.31	1955.50	69.61	2450.89	1743.18	71.12	24788.30	18209.73	73.46
Nutrition	16795.82	16528.88	98.41	40.59	37.17	91.58	185.34	161.92	87.36	2755.42	2688.57	97.57	2238.88	1723.42	76.98	22016.05	21139.95	96.02
Anganwadis	5836.94	4007.18	68.65	1429.18	1000.64	70.02	1398.16	544.05	38.91	1023.46	668.42	65.31	1956.32	834.56	42.66	11644.05	7054.86	60.59
Vocational Expenditure	361.72	152.16	42.07	473.95	219.17	46.24	617.14	242.08	39.23	65.44	19.44	29.70	150.90	64.03	42.43	1669.16	696.87	41.75
Energy protection	501.24	223.98	44.68	131.57	113.81	86.51	224.05	215.22	96.06	164.91	116.67	70.74	242.45	174.05	71.79	1264.22	843.72	66.74
Electric line, Transformer	572.44	466.00	81.41	78.02	71.60	91.78	88.73	45.19	50.94	208.37	168.66	80.94	145.38	58.88	40.50	1092.95	810.34	74.14

Tourism	104.61	46.14	44.10	11.14	8.00	71.84	21.11	5.18	24.52	180.16	112.15	62.25	5.00	0	0.00	322.01	171.46	53.25
Computerisation	3251.60	2413.14	74.21	292.20	229.28	78.47	288.39	212.84	73.80	725.53	508.29	70.06	715.71	315.35	44.06	5273.43	3678.90	69.76
Plan formulation, implementation and monitoring	809.40	655.63	81.00	162.74	109.42	67.24	55.20	23.65	42.85	188.20	137.85	73.25	57.91	35.94	62.06	1273.46	962.49	75.58
Financial contribution as per Government Order (Service Sector)	27034.54	26136.92	96.68	18973.48	18578.55	97.92	14554.23	14299.55	98.25	1874.56	1713.22	91.39	532.31	529.58	99.49	62969.11	61257.81	97.28
Financial contribution as per Gov. Order / Other order (Service Sector)	888.18878	825.75167	92.97	176.574	158.9652	90.03	125	105	84.00	467.6214	465.102	99.46	185.91436	177.09	95.25	1843.2985	1731.9088	93.96
Total	162227.04	126977.49	78.27	41515.00	37123.60	89.42	49740.94	35868.17	72.11	39035.46	26622.83	68.20	35306.80	16770.48	47.50	327825.23	243362.57	74.24

Appendix 8.6 a																		
Grant - in - Aid to LSGs - Infrastructure Sector - Allocation and Expenditure for 2014-15																		
Development Sector	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
Street light, Office electrification	7149.97	4173.94	58.38	57.32	30.79	53.72	388.66	151.62	39.01	1618.19	927.34	57.31	1885.27	771.41	40.92	11099.41	6055.10	54.55
Transport	81012.29	52589.21	64.92	20393.81	16492.39	80.87	27316.59	16667.82	61.02	17854.30	11547.67	64.68	15023.06	8486.22	56.49	161600.05	105783.30	65.46
Public Buildings which are not included in productive and service sectors	25507.31	9464.98	37.11	1751.44	1139.16	65.04	2709.28	1233.15	45.52	7533.21	3262.59	43.31	7241.96	4900.38	67.67	44743.20	20000.25	44.70
Other construction works	998.70	471.87	47.25	648.46	359.38	55.42	1219.11	550.78	45.18	200.40	139.37	69.54	229.58	167.47	72.95	3296.25	1688.87	51.24
Purchase of vehicles	449.27	305.25	67.94	84.70	59.18	69.86	118.12	112.80	95.50	176.28	106.09	60.18	140.27	64.32	45.85	968.64	647.63	66.86
Financial contribution as per Government Order (Infrastructure Sector)	196.64	185.78	94.48	51.28	40.55	79.07	40.76	40.76	100.00	41.98	41.23	98.21	7.57	7.57	100.00	338.23	315.89	93.39
Financial contribution as per Government Order / Other order (Infrastructure Sector)	338.45	273.49	80.81	36.04	35.99	99.85				654.55	641.31	97.98	2.97	2.97	100.00	1032.00	953.76	92.42
Total	115652.61	67464.50	58.33	23023.05	18157.44	78.87	31792.52	18756.92	59.00	28078.91	16665.60	59.35	24530.69	14400.34	58.70	223077.78	135444.80	60.72

Appendix 8.6 b																		
Grant - in - Aid to LSGs - Infrastructure Sector - Allocation and Expenditure for 2015-16																		
Development Sector	Grama Pts			Block Pts			District Pts			Municipalities			Corporations			Total		
	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%	Fund Allocated	Exp.	%
Street light, Office electrification	5793.60	4568.42	78.85	37.37	30.31	81.09	125.00	73.84	59.07	1836.33	1333.80	72.63	1702.15	747.84	43.93	9494.45	6754.21	71.14
Transport	88041.26	75126.82	85.33	22380.05	18414.66	82.28	27475.38	16878.66	61.43	22113.16	16081.07	72.72	19317.31	11946.69	61.84	179327.16	138447.91	77.20
Public Buildings which are not included in productive and service sectors	15298.73	9644.50	63.04	1819.20	1189.91	65.41	3930.83	1665.12	42.36	7064.00	4148.50	58.73	7512.36	3352.23	44.62	35625.12	20000.26	56.14
Other construction works	887.43	608.48	68.57	829.03	676.15	81.56	1424.79	746.03	52.36	179.27	69.73	38.90	191.66	124.13	64.76	3512.18	2224.51	63.34
Purchase of vehicles	251.30	167.49	66.65	43.84	29.45	67.18	8.29	6.54	78.87	169.14	127.31	75.27	75.28	36.91	49.03	547.86	367.70	67.12
Financial contribution as per Government Order (Infrastructure Sector)	42.98	41.87	97.42	45.44	32.19	70.85	10.00	1.00	0.00	1.00	1.00	100.00				99.42	75.06	75.50
Financial contribution as per Government Order /Other order (Infrastructure Sector)	473.27	473.27	100.00	25.70	25.56	99.47		705.34	87.35	807.47	48.64	100.00	48.64	48.64	100.00	1355.08	1252.82	92.45
Total	110788.57	90630.85	81.81	25180.63	20398.24	81.01	32974.29	19370.18	58.74	32170.38	22466.76	69.84	16256.44	28847.41	56.35	229961.28	169122.47	73.54

Appendix 8.7 a														
Allocation and Expenditure of Special Sector Plans for 2014-15														
Type of LSGs	Women Component Plan		Special programme for children		Special programme for old age		Differently abled		Other Vulnerability		Palliative		Youth Welfare Programs (SCP,TSP)	
	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.
GPt	296.03	212.43	114.99	106.57	14.06	9.73	49.2	40.17	48.99	32.05	25.74	23.61	78.52	40.86
BPt	111.36	98.22	6.8	4.62	7.45	5.15	18.91	14.71	5.43	5.06	5.3	4.13	22.1	12.12
DPt	89.82	56.81	18.76	10.85	4.5	3.05	21.95	15.22	22.74	21.43	3.83	3.16	25.15	14.1
MN	71.91	51.85	20.07	18.11	3.42	2.74	9.37	8.04	21.22	13.26	2.75	2.22	13.08	5.28
CR	44.05	22	13.73	9.4	3.21	1.79	15.89	10.21	40.75	20.98	0.44	0.32	7.47	1.71
Total	613.16	441.32	174.36	149.55	32.65	22.46	115.33	88.36	139.12	92.78	38.06	33.43	147.22	74.07

Appendix 8.7 b														
Allocation and Expenditure of Special Sector Plans for 2015-16														
Type of LSGs	Women Component Plan		Special programme for children		Special programme for old age		Differently abled		Other Vulnerability		Palliative		Youth Welfare Programs (SCP,TSP)	
	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.	Fund Allocated	Exp.
GPt	266.75	196.5	103.17	95.91	11.41	8.52	47.72	39.46	49.45	33.21	28.75	27.22	86.11	43.9
BPt	118.58	107.18	8.7	6.53	6.99	5.03	21.85	18.85	7.15	6.55	5.2	4.46	24.86	15.7
DPt	78.99	47.18	17.89	11.1	3.57	0.86	19.57	13.68	32.63	30.43	3.3	2.61	29.29	14.58
MN	93.45	60.9	24	21.13	3.99	2.94	10.43	8.76	18.5	11.16	4.23	3.79	16.02	7.88
CR	46.8	21.78	23.88	15.37	2.43	1.93	12.39	9.46	60.4	20.76	1.31	1.14	8.01	2.08
Total	604.57	433.43	177.64	150.04	28.39	19.28	111.96	90.21	168.13	102.11	42.79	39.22	164.29	84.14

Appendix 9.1					
National and State foreign tourist arrivals and annual growth rates from 2005-2015					
Year	India (Numbers)	Percentage Change	Kerala (Numbers)	Percentage Change	Kerala's share (%) in Country's Tourism
1	2	3	4	5	6
2005	39,15,324	13.2	3,46,499	0.28	8.8
2006	44,47,167	13.6	4,28,534	23.68	9.6
2007	50,81,504	14.3	5,15,808	20.37	10.2
2008	53,66,966	5.6	5,98,929	16.11	11.2
2009	51,08,579	-4	5,57,258	-6.96	10.9
2010	57,75,692	11.8	6,59,265	18.31	11.8
2011	62,90,319	8.9	7,32,985	11.18	11.7
2012	65,77,745	4.57	7,93,696	8.28	12.1
2013	69,67,601	5.9	8,58,143	8.12	12.3
2014	76,79,099	10.2	9,23,366	7.6	12.0
2015	80,27,133	4.53	9,77,479	5.86	12.2

Source: Department of Tourism, Government of Kerala

Appendix 9.2		
Share of Major International source Markets of Kerala Tourism 2015		
Sl. No	Country	Total
1	U.K	166792
2	FRANCE	91598
3	U.S.A	75773
4	GERMANY	76791
5	SAUDI ARABIA	51149
6	RUSSIA	32725
7	AUSTRALIA	35244
8	CANADA	26216
9	MALAYSIA	28047
10	SWITZERLAND	26115
11	OTHERS	367029
Total		977479

Source: Department of Tourism, Govt. of Kerala

Appendix 9.3		
District wise Foreign Tourist Arrivals during 2014 and 2015		
District	Number of Foreign Tourists	
	2014	2015
1	2	3
Thiruvananthapuram	289612	310223
Kollam	12467	14100
Pathanamthitta	1379	1667
Alappuzha	60337	63838
Kottayam	44366	49976
Idukki	77905	83894
Ernakulam	372997	383643
Thrissur	7391	7874
Palakkad	2093	2232
Malappuram	21613	23409
Kozhikode	11313	12251
Wayanad	11795	12377
Kannur	7563	9022
Kasaragod	2535	2973
Total	923366	977479

Source: Department of Tourism, Govt. of Kerala

Appendix 9.4		
Flow of Domestic Tourist to Kerala		
(2005 -2015)	State	
Year	Number of Tourists	Percentage variation over the previous year
2005	59,46,423	-0.43
2006	62,71,724	5.47
2007	66,42,941	5.92
2008	75,91,250	14.28
2009	79,13,537	4.25
2010	85,95,075	8.61
2011	93,81,455	9.15
2012	100,76,854	7.41
2013	108,57,811	7.75
2014	116,95,411	7.71
2015	124,65,571	6.59

Source: Department of Tourism, Govt. of Kerala

Appendix 9.5			
State wise domestic tourist arrivals 2015			
SI. No.	State	Number of Tourist	Percentage share
1	Kerala	94,44,412	75.76
2	Tamil Nadu	9,99,281	8.02
3	Karnataka	5,74,526	4.61
4	Maharashtra	3,57,231	2.87
5	Andhra Pradesh	2,27,821	1.83
6	Gujarat	1,60,092	1.28
7	Delhi	1,27,425	1.02
8	Uttar Pradesh	1,14,028	0.91
9	Lakshadweep	93,114	0.75
10	West Bengal	74,558	0.6
11	Punjab	38,951	0.31
12	Madhya Pradesh	55,900	0.45
13	Goa	25,168	0.2
14	Rajasthan	51,918	0.42
15	Pondicherry	9,834	0.08

Source: Department of Tourism, Govt. of Kerala

Appendix 9.6		
District wise Domestic Tourist Arrivals during 2014 and 2015		
District	Number of Domestic Tourists	
	2014	2015
1	2	3
Thiruvananthapuram	1707199	1861470
Kollam	257097	277109
Pathanamthitta	112548	126132
Alappuzha	246156	270507
Kottayam	413182	458101
Idukki	635621	668537
Ernakulam	2724718	2897894
Thrissur	2545376	2659897
Palakkad	475361	502244
Malappuram	449420	470261
Kozhikode	769425	811538
Wayanad	564274	607335
Kannur	584343	613199
Kasaragod	210691	241347
Total	11695411	12465571

Source: Department of Tourism, Govt. of Kerala

Appendix 9.7				
Details of availability of Accommodation Facility in Classified Hotels in KERALA 2015 and 2014				
Category of Hotels	2015		2014	
	Number of Hotels	Number of Rooms	Number of Hotels	Number of Rooms
1	2	3	4	5
5 Star Deluxe	8	950	9	979
5 Star	12	1095	17	1516
4 Star	78	2224	78	2330
3 Star	204	4428	263	5898
2 Star	22	382	30	469
Heritage / Resort	10	145	12	195
Apartment hotel				
Total	334	9224	409	11387

Source: Department of Tourism, Govt. of Kerala

Appendix 9.8			
Earnings from Tourism 2005-2015			
Year	Foreign Exchange Earnings (₹ in crore)	Earnings from Domestic Tourists (₹ in crore)	Total Revenue generated from Tourism (Direct & Indirect) (₹ in crore)
2005	1,552.31	4,281.42	7,738.00
2006	1,998.40	4,891.94	9,126.00
2007	2,640.94	5,978.65	11,433.00
2008	3,066.52	6,832.13	13,130.00
2009	2,853.16	7122.18	13,231.00
2010	3,797.37	9282.68	17,348.00
2011	4,221.99	10131.97	19,037.00
2012	4,571.69	10,883.00	20,430.00
2013	5,560.77	11,726.44	22,926.55
2014	6,398.93	12,981.91	24,885.44
2015	6,949.88	13,836.78	26,689.63

Source: Department of Tourism, Govt. of Kerala